3300 North Central Avenue, Suite 1400

Phoenix, Arizona 85012

# The 49th

# **Comprehensive Annual Financial Report**

of the

**Arizona State Retirement System** 

**A Component Unit** 

of the

State of Arizona

For the Year Ended June 30, 2002

Mr. Jim Bruner, Chairman

Mr. Norman Miller, Vice Chairman

Arizona State Retirement System Board

Report prepared by the Arizona State Retirement System Staff

LeRoy Gilbertson, Director

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# **INTRODUCTORY SECTION**





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LeRoy Gilbertson Director

December 5, 2002

The Honorable Jane Hull Governor of Arizona State Capitol 1700 W. Washington St. Phoenix, Arizona 85007

#### Dear Governor Hull:

On behalf of the Arizona State Retirement System Board (ASRS), it is my pleasure to present you the 49th Comprehensive Annual Financial Report (CAFR) of the ASRS. This CAFR includes pertinent financial statements, investment information, actuarial data and statistical data. The CAFR also includes 10-year summaries of a variety of indicators that affect or reflect the ASRS operations.

The actuarial valuation performed by Watson Wyatt Worldwide at June 30, 2001 indicated that the ASRS, through proper management and prudent investment practices, maintained a fully-funded status throughout the year. During the fiscal year (FY) ended June 30, 2002, the total rate of return on investments was -8.2 percent.

The contribution rate is determined in a biennial actuarial study. The actuarially recommended rate for 2001-2002 fiscal year, for both the employer and employee, as determined by Gabriel, Roeder, Smith & Company was 2 percent. This contribution rate will continue for the 2002-2003 fiscal year.

Respectfully submitted,

James Bruner Chairman Arizona State Retirement System Board



3300 NORTH CENTRAL AVENUE • PO BOX 33910 • PHOENIX, AZ 85067-3910 • PHONE (602) 240-2000 7660 EAST BROADWAY BOULEVARD • SUITE 108 • TUCSON, AZ 85710-3776 • PHONE (520) 239-3100 TOLL FREE OUTSIDE METRO PHOENIX AND TUCSON 1-800-621-3778

LeRoy Gilbertson

December 5, 2002

Mr. James Bruner Arizona State Retirement System Board 3300 North Central Avenue, 14th Floor Phoenix, Arizona 85012

Dear Mr. Bruner:

I am pleased to present the 49th Comprehensive Annual Financial Report (CAFR) of the Arizona State Retirement System (ASRS), a Component Unit of the State of Arizona, for the fiscal year ended June 30, 2002. Title 38 of the Arizona Revised Statutes requires the ASRS Board to submit an annual report to the governor and the legislature within eight months of the close of each fiscal year. This report complies with all legal requirements governing the preparation and content of annual reports.

This CAFR consists of five sections. The Introductory Section includes the Board chairman's letter to the governor, this Letter of Transmittal, our Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting Award for last year's report, a summary of the ASRS administration structure, a list of consultants providing service to the ASRS, an organizational chart of the ASRS, and a summary of the 2002 retirement legislation. The Financial Section includes the Independent Auditors' Report, The Management Discussion and Analysis, the ASRS combined financial statements including footnotes, and supplemental schedules. The Investment Portfolio Section presents a listing of ASRS investments as well as supplemental schedules. The Actuarial Section includes the independent consulting actuary's certification statement, a summary of benefit provisions, the results of the most recent actuarial valuation, the ASRS financing objective, and general actuarial information. The Statistical Section includes information concerning the membership, benefit payments, and additional financial data. The management of the ASRS is responsible for the information presented in the CAFR.

Accounting Principles Generally Accepted in the United States of America (GAAP) requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement MD&A and should be read in conjunction with it. ASRS' MD&A can be found immediately following the Independent Auditors' Report.

#### **History and Overview**

The ASRS was created in 1953 to provide defined contribution retirement benefits to employees of state, university and political subdivisions in Arizona. Arizona teachers voted to join the ASRS in 1954, effective January 1, 1955. In 1970, the state legislature authorized the creation of

a defined benefit plan contingent upon the election to transfer at least 70 percent of the ASRS membership. More than 80 percent voted to transfer to the "plan" effective July 1, 1971. At the end of fiscal year 2001-2002, total ASRS membership, including active, inactive, and retired members is 373,643, and the number of ASRS employer members is 513, including school districts, state colleges and universities, and local, county and state governments. In addition to pension benefits, the ASRS provides a health insurance premium benefit and sponsors medical and dental coverage for retired members. Active members receive long-term disability insurance coverage equal to two-thirds of pay at the time of disablement.

The ASRS staff provides administrative support to the ASRS Board to carry out the ASRS statutory mandates. More than 64,000 retired annuitants, their survivors, and disabilitants receive a monthly benefit totaling in excess of \$75 million. More than 40,000 retired members are enrolled in the ASRS-sponsored medical or dental plans.

#### Fiscal Year 2002 Developments

The ASRS Board members are appointed for three-year terms by the governor and confirmed by the Arizona State Senate. Four members of the Board must have a minimum of 10 years investment experience. There is no limit on the number of terms that a Board member may serve. During FY2002, the following Board members were appointed or reappointed:

- Ms. Charlotte Borcher, appointed as a representative for retirees; term to expire on January 17, 2005
- Mr. N. Carl Tenney, appointed as a representative of political subdivisions; term to expire on January 17, 2005
- Mr. Jim Bruner, reappointed as a representative of the public, term to expire on January 21, 2005

Mr. LeRoy Gilbertson, Executive Director of the ASRS, announced his retirement, effective January 2003. Mr. Gilbertson has been Executive Director of the ASRS since January 1994.

#### **Information Technology Plan**

The total membership of the ASRS has grown over 60% in the last decade. An additional 70,000 members will become eligible for retirement in the next decade. To address past growth and prepare for the future, the ASRS has prepared and received funding for a 5-year Information Technology (IT) Plan effort. The major components of the Information Technology Plan include:

- ⇒ Completion of the Public Employee Retirement Information System (PERIS), a customized database built specifically to deliver ASRS services
- ⇒ New Internet Applications Development
- ⇒ Implementation of an Electronic Document Imaging Management System (EDIMS)
- ⇒ Ongoing maintenance and upgrades to Telephone and Network technology
- ⇒ Implementation of a Financial Accounting System

Implementation of the IT Plan began in July 2002. Once completed, the IT Plan is expected to:

- Consolidate all ASRS services to operate from a single database (telephone staff currently must query as many as five separate databases to answer a single call)
- Create a near paperless office (an 80% or higher reduction in the need for filing or paper handling to perform services)
- Automate and re-engineer the delivery of services to achieve "best practice" service levels
- Create a platform by which electronic data transfers (contributions, name, social security number, and address changes) can be sent from employers to update ASRS records automatically
- Create a platform by which members can access their account information over the internet and request changes when necessary
- Give members the opportunity to speak directly with a benefit advisor over the internet
- Connect the telephone and computer systems, resulting in faster service to members
- Create retirement and financial planning tools that link with Deferred Compensation and Social Security Administrators
- Utilize videoconferencing to transmit seminars, workshops, group meetings, and board meetings to remote locations throughout the state
- Post pre-recorded seminars, workshops, and group meetings over the internet which members can view anytime or anyplace
- Give members the opportunity to enroll in a person-to-person seminar, workshop, or group meeting automatically over the internet
- Give members the opportunity to request or receive service over the internet some services will be fully automated and will not require the assistance of a benefit advisor
- Create a system that is flexible enough to handle the complexity and portability of today's pension funds
- Create a system that has the capability to handle multiple types of retirement plans

#### **Investment Management**

The ASRS met or outperformed established benchmarks for investment returns for four of its five internally managed portfolios for Fiscal Year ended June 30, 2002:

- E1 Stock Portfolio Outperformed benchmark by 20 basis points

E2 Stock Portfolio Outperformed benchmark by 4 basis points

E3 Stock Portfolio Outperformed benchmark by 90 basis points

F1 Bond Portfolio Underperformed benchmark by 70 basis points

- F2 Bond Portfolio Met performance benchmark

In addition, 8 of 18 externally managed portfolios met or outperformed established benchmarks for investment returns for Fiscal Year ended June 30, 2002.

Other accomplishments for the investment management division include:

- Issuing an RFP for Custody, Benefits Payables and Security Lending; analyzing all responses and awarding the fully bundled contract to Mellon Bank
- Issuing an RFP for Mid Cap Manager Search, analyzing and interviewing prospective managers, awarding and funding contracts to six Mid Cap Manager portfolios (two internally managed portfolios and four externally managed portfolios)
- Transitioning all portfolios for the Mid Cap mandate
- Issuing an RFP for Small Cap Manager Search, analyzing and interviewing prospective managers, awarding and funding contracts to three Small Cap Manager portfolios
- Transitioning all portfolios for the Small Cap mandate
- Developing guidelines for implementation and funding of a fourth Internal Equity Portfolio (E4)

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

An actuarial valuation of the ASRS is performed annually. The date of the most recent valuation information is June 30, 2001. A statutory change effective in 1998 requires that an actuarial valuation be performed only following even-numbered years, rather than annually. This biennial valuation recommends contribution rates for a two-year period. Valuations are prepared annually as of June 30 of each year, the last day of the Plan's plan year and ASRS' fiscal year.

Any excess of additions over deductions is accumulated by the ASRS in order to meet future benefit obligations when due. According to the actuarial valuation as of June 30, 2001, the actuarial present value of the assets of the ASRS was \$22.855 billion. (This value includes an asset valuation method upward adjustment of \$2.961 billion from the book value of the assets.) This figure corresponds to the calculated actuarial accrued liabilities of \$20.268 billion. Thus, the asset side of the actuarial balance sheet exceeds the amount of the actuarial liabilities by \$2.587 billion. A detailed discussion of funding is provided in the Actuarial Section of this report. Funding status and progress for the ASRS based on the most current valuation is presented in the required supplementary information, Schedule of Funding Progress.

#### **Financial Information**

The management of the ASRS is responsible for maintaining a system of adequate internal controls. The system of internal controls at the ASRS is designed to provide reasonable assurance that the assets of the ASRS are protected and that financial transactions are executed in accordance with state policy and statute, to ensure management's responsibility to the retirement fund, and to facilitate the timely preparation of financial statements in accordance with accounting principles generally accepted in the United States of America.

Responsibility for the accuracy, completeness and fair presentation of the information, and all disclosures rests with the ASRS. The basic financial statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis as promulgated by the Government Accounting Standards Board (GASB) and its predecessor; the National Council on Government Accounting. The basic financial statements are presented in accordance with the guidelines established by GASB Statement No. 25, Financial Reporting for

Defined Benefit Plans, GASB No. 34 Basic Financial Statements-Management Discussion and Analysis-for state and Local Governments and other GASB statements as appropriate control procedures and responsibilities are documented and are reviewed periodically by the ASRS Internal Audit department. The Chief Auditor submits all audit reports to the ASRS Audit Committee. An audit plan is prepared biennially based on a risk analysis performed by the Internal Audit Department.

The Audit Committee, a committee appointed by the Board Chairman, monitors operations and controls throughout the year. The ASRS is audited annually by an independent accounting firm. The current contract for external audit services is with Deloitte & Touche llp.

#### Other Information

An independent accounting firm audited the financial statements contained in this CAFR. The auditors' report for this year is unqualified, which is the best designation attainable. It means that in the opinion of our independent auditor, our financial statements present fairly, in all material respects, the financial position of the ASRS for the period under audit and the results of its operations for that period are in conformity with accounting principles generally accepted in the United States of America.

The GFOA awards the highest recognition achievable for financial reporting for state and local governments. The ASRS has received the GFOA Certificate of Achievement for Excellence in Financial Reporting in each of the last 13 years. We believe that this year's report also conforms to the requirements for the certificate and we will, therefore, be submitting it to the GFOA for consideration.

This report reflects the efforts of the many dedicated ASRS employees under the direction of the ASRS Board. It is intended to provide complete and reliable information for decision making, to insure compliance with legal requirements, and is a means of measuring the responsible stewardship of the assets of the ASRS.

As we enter our 50<sup>th</sup> anniversary year, I would like to express my gratitude to my staff, the ASRS Board and the many other individuals who have been instrumental in maintaining the quality of service and performance which has become the standard for the ASRS.

Respectfully submitted,

Le Loy Stillerteon

LeRoy Gilbertson

Director

# Certificate of Achievement for Excellence in Financial Reporting

Presented to

# The Arizona State Retirement System

For its Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2001

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.



Amuth Greve President Iffrey L. Essey

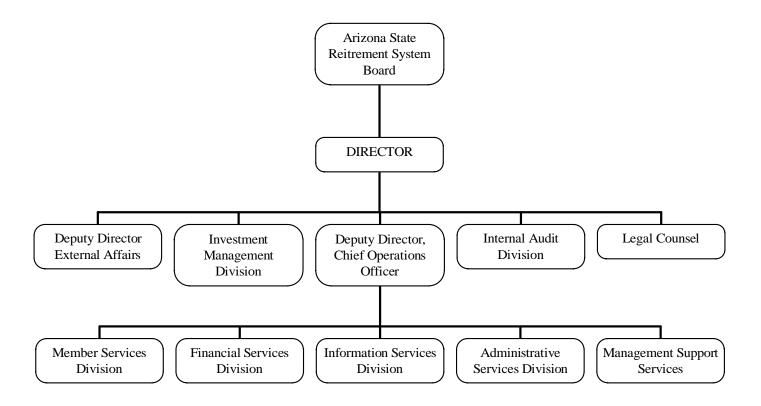
Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to Arizona State Retirement System for its comprehensive annual financial report for the fiscal year ended June 30, 2001. This was the 14th consecutive year that the government has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both accounting principles generally accepted in the United States of America and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

## **Administrative Organization**

#### **ORGANIZATIONAL CHART**



#### **BOARD MEMBERS**



James Bruner, Chairman Public, Scottsdale (Member since January 1998)



Norman Miller, Vice Chairman Public, Phoenix (Member since March 1998)



Charlotte Borcher Retirees, Chandler (April 2002)



Dr. Chuck Essigs Educators, Mesa (May 1995)



Bonnie Gonzalez State Employees, Flagstaff (March 2000)



Alan Maguire At-Large, Phoenix (January 1998)



Karl Polen, Jr. Public, Phoenix (May 1995)



Ray Rottas Public, Paradise Valley (July 1993)



N. Carl Tenney
Political Subdivisions
Chino Valley
(April 2002)

#### **EXECUTIVE STAFF**



LeRoy Gilbertson, Director



Anthony Guarino Deputy Director Chief Operations Officer



Paul Matson Chief Investment Officer



Richard Stephenson Deputy Director External Affairs

#### **SENIOR STAFF**

Vacant, Assistant Director, Financial Services Prudence Lee, Acting Assistant Director, Member Services Bernard Glick, Chief Internal Auditor Kent Smith, Assistant Director, Information Services Fred Stork, Legal Counsel

#### PROFESSIONAL CONSULTANTS

#### **Actuary**

Buck Consultants, Chicago, IL Gabriel, Roeder, Smith & Company, Dallas, TX

#### **Benefits**

VPA, Calabasas, CA

#### **Custodial Bank**

Mellon Trust, Pittsburgh, PA

#### **Independent Auditors**

Deloitte & Touche LLP, Phoenix, AZ

#### **Investment Advisors**

Callan Associates, Inc., San Francisco, CA William M. Mercer Investment Consulting Inc., Los Angeles, CA

#### **Investment Managers**

Investment managers are listed in the Schedule of Total Investment Expenses by Manager on page 57.

#### **Summary of 2002 Retirement Legislation**

#### SB 1095 Conforming Changes Return to Work

Permits retired members of the ASRS to return to work and still be eligible to receive retirement benefits if they have been terminated from employment for a period of 12 months.

The members who take this option will not be eligible for LTD benefits nor will they contribute to the ASRS or accrue additional benefits during the period of re-employment. This act is repealed June 30, 2003.

This is similar to the bill passed last session allowing retired teachers to return to work, and it does not affect the requirements of that program.

# **FINANCIAL SECTION**



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#### INDEPENDENT AUDITOR'S REPORT

Arizona State Retirement System Board Auditor General of the State of Arizona Phoenix, Arizona

We have audited the accompanying combined financial statements of the Arizona State Retirement System ("ASRS") as of June 30, 2002 and for the year then ended, listed in the foregoing table of contents. These financial statements are the responsibility of the management of the ASRS. 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 of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinions.

In our opinion, such combined financial statements present fairly, in all material respects, the net assets of the ASRS as of June 30, 2002 and the changes in its net assets for the year then ended in conformity with accounting principles generally accepted in the United States of America.

As described in Note 1 to the combined financial statements, in fiscal year 2002, ASRS adopted Governmental Accounting Standards Board ("GASB") Statement No. 34, Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments, GASB Statement No. 37, Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments: Omnibus, and GASB Statement No. 38, Certain Financial Statement Note Disclosures.

The Management's Discussion and Analysis on pages 23 through 27 is not a required part of the basic financial statements but is supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise ASRS's combined financial statements. The Introductory Section, Required Supplementary Information and Additional Supplemental Schedules, Investment Section, Actuarial Section and Statistical Section as listed in the foregoing table of contents are also presented for purposes of additional analysis and are not a required part of the combined financial statements. The Required Supplementary Information and Additional Supplemental Schedules as listed in the

foregoing table of contents under the Financial Section have been subjected to the auditing procedures applied in the audit of the combined financial statements and, in our opinion, are fairly stated in all material respects in relation to the combined financial statements taken as a whole. The Introductory Section, Investment Section, Actuarial Section and Statistical Section, have not been subjected to the auditing procedures applied in our audit of the combined financial statements and, accordingly, we express no opinion on them.

In accordance with Government Auditing Standards, we have also issued our report dated December 5, 2002 on our consideration of the ASRS' internal control over financial reporting. That report is an integral part of an audit performed in accordance with Government Auditing Standards and should be read in conjunction with this report in considering the results of our audit.

December 5, 2002

Deloitte + Touche LLP

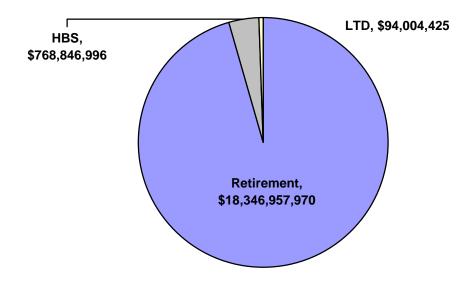
#### **Management's Discussion and Analysis**

Management of the Arizona State Retirement System (ASRS) presents a discussion and analysis of the financial position and performance for the fiscal year ended June 30, 2002. This, in conjunction with the letter of transmittal, provide an overview of the ASRS. This section is presented as a narrative.

#### The Funds

The ASRS administers retirement, health and long term disability benefits for teachers, state, county and other public municipal employees. The ASRS is made up of 3 funds: Retirement, Health Benefit Supplement (HBS) and Long Term Disability (LTD).

As of June 30, 2002, the fair value of the ASRS funds (includes retirement, health benefits, and disability funds) was \$19.2 billion. According to statutory restrictions, no more than 80 percent of the fund may be allocated to domestic and international equity securities, no more than 20 percent of the fund may be allocated solely to international equity securities. The respective fair value of the ASRS funds was as follows:



During the fiscal year ended June 30, 2002, the ASRS funds remained broadly diversified with investments in domestic and international equities, domestic fixed income, and cash equivalent securities.

#### **Financial Highlights**

• As of June 30, 2002, the ASRS funds consisted of 51.4 percent domestic equity securities, 32.4 percent domestic fixed income securities, including mortgages and short-term investments, and 16.2 percent international equity securities.

- During Fiscal Year 2001-2002, the ASRS funds returned –8.2 percent. The combined fixed income investments returned 8.4 percent versus the Lehman Brothers Aggregate Bond Index of 8.6 percent. The domestic equity securities returned –16.3 percent versus the –18.0 percent return for the Standard & Poor's 500 Equity Index. The international equity investments returned –8.5 percent versus –9.2 percent for the Morgan Stanley Capital International Europe, Australia, and Far East Gross Index.
- The net assets of ASRS decreased by \$2.5 billion, or 11.6 percent. The decrease was due primarily to a down turn in the US equity markets, enhanced benefits and a low contribution rate.
- As of June 30, 2002, according to the most recent actuarial valuation the fund is 106.4 percent funded compared to 115.2 percent in 2001.

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

This discussion and analysis is intended to serve as an introduction to the ASRS financial reporting which is comprised by the following components: 1) financial statements, 2) notes to the financial statements, 3) required supplementary information and 4) other supplementary schedules.

Collectively, this information presents the combined net assets held in trust for pension benefits for each of the funds administered by the ASRS as of June 30, 2002. The financial information also summarizes the combined changes in net assets held in trust for pension benefits for the year then ended. The information available in each of these sections is briefly summarized as follows:

- 1) Financial statements. For the year ended June 30, 2002, financial statements are presented for the funds administered by the ASRS. Fiduciary funds are used to account for resources held for the benefit of parties outside of the ASRS.
  - The combined statement of plan net assets is presented as of June 30, 2002 with combined total comparative information as of June 30, 2001. These financial statements reflect the resources available to pay benefits to members, including retirees and beneficiaries, at the end of the years reported. Investments totaled \$21,054,703,516 compared to \$23,246,642,414. The 9.4 percent decrease is primarily due to the loss in US stocks. Receivables or \$312,382,150 compared to last years \$239,726,191 and liabilities of \$2,170,288,392 compared to \$1,830,412,593 are due to timing of the trades and settlement.
  - The combined statement of changes in plan net assets is presented for the pension trust fund for the year ended June 30, 2002 with comparative information for the year ended June 30, 2001. These financial statements reflect the change resources available to pay benefits to retirees and other beneficiaries for the fiscal year 2002, and 2001.

- 2) Notes to the Financial Statements. The notes to the Financial Statements provide additional information that is essential to a full understanding of the data provided in the basic financial statements. Information in the Notes to the Financial Statements is described below.
  - Note 1 provides a general description of ASRS, as well as descriptions the funds, reporting relationships, the participating employers and the benefits administered.
  - Note 2 provides a summary of significant accounting policies, including the basis of accounting, new accounting pronouncements, investment accounting policies, management use of estimates, tax status and comparative data.
  - Note 3 describes information about cash, investments, investing authority, and investment risk categories.
  - Note 4 describes the security lending program.
  - Note 5 describes derivatives and the investment managers' use of derivatives.
  - Note 6 provides information about the actuarial assumptions, funding status and progress for the defined benefit program.
  - Note 7 provides information about the contributions required and made to the ASRS.
  - Note 8 describes the additional benefits of the health insurance premium benefit program and the long term disability program.
  - Note 9 describes information about litigation.
  - Note 10 describes transfers to and from other funds.
  - Note 11 describes the liquidation of a previous investment line.
  - Note 12 describes required supplementary schedules.
- 3) Required Supplementary Information. The required supplementary information consists of two schedules and related notes concerning actuarial information, funded status and required contributions of the defined benefit pension systems administered by ASRS.
- 4) Other Supplementary Schedules. Other schedules including detailed information on administrative expenses incurred by the ASRS administered funds, as well as investment and professional and outside expenses.

#### **Additions and Deductions**

The ASRS provides retirement benefits to covered State of Arizona, county, local governments and public education employees. The primary expenses of the ASRS are the payment of retirement and disability benefits to beneficiaries, the refund of contributions to former members and the cost of administering the ASRS.

The net assets held in trust for benefits on June 30, 2002 were \$19,209,809,392 compared to \$21,730,542,658 last year. The decrease of \$2,520,733,266 equates to 11.6 percent drop. The decrease is primarily due to the negative US stock return, enhanced benefits and low contribution rate. Additions to the ASRS net assets held in trust for benefits include employer and member contributions, service purchase or reinstatements, member transfers and investment income. In fiscal year 2002, contributions received were \$336,425,073 compared to \$326,883,364 in 2001. The contributions rates remained the same for both fiscal years. The 2.9 percent increase is due to an increase in membership. Liabilities for the year ended 2002, were \$2,170,288,222 compared to \$1,830,412,593 for 2001. The increase of 18.5 percent is securities that have been purchased but not yet paid for.

The following table shows the principal ASRS additions and deductions for fiscal years 2002 and 2001, in millions of dollars:

				%
_	2002	2001	Variance	Variance
Additions Type:	<u> </u>			
Member contributions	\$ 168	\$ 163	5	3.1%
Employer contributions Member reimbursements or	168	163	5	3.1%
transfers	51	40	11	27.5%
Investments and other income	(1,707)	(1,421)	(286)	20.1%
Investment Expense	<u>62</u>	<u>108</u>	(46)	(42.6)%
Total	<u>\$(1382)</u>	<u>\$(1,163)</u>	<u>\$(311)</u>	<u>26.7%</u>
Deductions				
Benefits	\$1,069	\$910	159	17.5%
Refunds	43	99	(56)	(56.6)%
Transfer to other plans	9	10	(1)	(10.0)%
Administration	19	12	7	58.3%
Other	<u>1</u>	<u>2</u>	<u>(1)</u>	(50.0)%
Total	<u>\$1,140</u>	<u>\$1,033</u>	<u>\$108</u>	10.4%

Benefit payments and other deductions for fiscal year 2002 were \$1,139,914,184, compared to \$1,032,790,022 in fiscal year 2001. Net assets for the year ended June 30, 2002 were \$19,209,809,392 compared to \$21,730,542,658 last year. The biggest dollar increase was in benefit payments, which was due to benefit enhancements such as an increase in health benefit supplements of \$35.4 million over last year and \$115.0 million in increased pension payments. Investment loss of \$286 million was primarily in US stocks.

#### **Financial Analysis of the ASRS Funds**

The retirement and Health Benefit Supplement (HBS) fund are combined in a commingled investment pool. The long term disability fund is a separate fund. Income is allocated to the HBS fund in accordance with respective ownership share of the total. Retirement, HBS and LTD are reported in separate columns in the Statement of Plan Net Assets. Investment gains and losses are reported in the Statement of Changes in Plan Net Assets.

#### **Total Investments**

On June 30, 2002, the ASRS held total investments of \$19.2 billion, a decrease of \$2.5 billion from the fiscal year 2001. The combined investment portfolio experienced a loss of - 8.2 percent compared to the benchmark return of -8.4 percent. The benchmark is comprised of 53 percent S&P 500, 30 percent Lehman Brother Aggregate and 17% EAFE indices.

#### **Equities**

On June 30, 2002, the ASRS held \$10 billion in domestic equities and \$3.1 billion in international equities. The rate of return was - 16.3 percent compared to the S&P 500 return of - 18.0 percent for domestic equities. International rate of return for the year ended June 30, 2002 was -8.5 percent compared to EAFE, -9.2 percent.

#### **Domestic Fixed Income**

The ASRS had \$6.3 billion in debt securities for the period ended June 30, 2002, compared to \$7.0 billion last year. The rate of return was 8.4 percent compared the Lehman Aggregate rate of 8.6 percent.

#### **Security Lending**

The ASRS earns additional investment income by lending investment securities to brokers. This is done on a pooled basis by our custodian bank, Mellon Trust. The brokers provide collateral and generally use the borrowed securities to cover short sales and failed trades. Security lending income for fiscal year ended June 30, 2002 was \$7,306,455 compared to \$8,453,680 for the year ended June 30, 2001.

# Combined Financial Statements June 30, 2002 with Comparative Totals for June 30, 2001

	Retirement	Health Benefit Supplement (Note 8)	Long-Term Disability (Note 8)	Combined June 30, 2002	Combined June 30, 2001		
ASSETS:							
Cash (Note 3)	\$10,083,462	\$28,474	\$2,900,012	\$13,011,948	\$74,586,646		
RECEIVABLES:							
Accrued interest & dividends	71,063,385	2,980,361	6,051	74,049,797	76,529,868		
Securities sold (Note 3)	181,265,783	7,602,192		188,867,975	129,082,349		
Forward contract receivable	36,143,159	1,515,825		37,658,984	16,948,869		
Contributions (Note 7)	7,502,257		1,708,194	9,210,451	8,356,616		
Due From Other Funds	1,027,400		569,478	1,596,878	5,145,724		
Miscellaneous receivables	848,986	149,079		998,065	3,662,765		
Total receivables	297,850,970	12,247,457	2,283,723	312,382,150	239,726,191		
INVESTMENTS AT FAIR VALUE (Note 3):							
Temporary Investments:							
ASRS Investments	605,807,278	25,407,239	1,500	631,216,017	479,529,097		
Collateral for Security Lending	1,606,162,231	67,361,601		1,673,523,832	1,528,313,442		
U.S. gov't obligations	3,805,089,854	159,583,472	27,921,850	3,992,595,176	3,122,251,298		
Corporate & Convertible bonds	1,555,301,775	65,228,540		1,620,530,315	1,845,960,746		
Common and preferred stocks	12,519,441,766	525,058,818	62,125,092	13,106,625,676	16,037,444,361		
Valley Ventures (Note 11)					24,531		
Real estate mortgages & contracts	28,996,405	1,216,095		30,212,500	233,118,939		
Total investments	20,120,799,309	843,855,765	90,048,442	21,054,703,516	23,246,642,414		
TOTAL	20,428,733,741	856,131,696	95,232,177	21,380,097,614	23,560,955,251		
LIABILITIES:							
Payable for securities purchased (Note 3)	436,944,522	18,325,224		455,269,746	280,019,334		
Payable for securities lending collateral (Note 4)	1,606,162,231	67,361,601		1,673,523,832	1,528,313,442		
Forward contracts payable	38,099,540	1,597,875		39,697,415	16,388,576		
Due to other funds	569,478	1,001,010	1,027,400	1,596,878	5,145,724		
Other	000, 110		200,351	200,351	545,517		
Total liabilities	2,081,775,771	87,284,700	1,227,751	2,170,288,222	1,830,412,593		
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS							
======================================	\$18,346,957,970	\$768,846,996	\$94,004,426	\$19,209,809,392	\$21,730,542,658		

(A Schedule of Funding Progress is presented on page 42)

The accompanying notes are an integral part of these statements.

# Combined Statement of Change in Plan Net Assets for the Year Ended June 30, 2002 with Comparative Totals for the Year Ended June 30, 2001

	Retirement	Health Benefit Supplement	Long-Term Disability	Combined June 30 2002	Combined June 30 2001
ADDITIONS					
Contributions					
Member contributions (Note 7)	\$135,274,945		\$32,937,592	\$168,212,537	\$163,441,640
Employer contributions (Note 7)	131,234,295	\$4,040,650	32,937,591	168,212,536	163,441,724
Transfers from other plans	1,467,434			1,467,434	1,847,846
Member reimbursements	49,365,487			49,365,487	37,687,091
Total Contributions	317,342,161	4,040,650	65,875,183	387,257,994	366,418,301
Investment (loss) income					
Market value (depreciation)	(2,202,829,306)	(17,863,128)	(7,701,718)	(2,228,394,152)	(2,038,932,396)
Interest	297,642,222	13,387,710	181,743	311,211,675	340,912,591
Dividends	143,007,628	6,432,369	2,006	149,442,003	163,767,793
Security loan program (Note 4)	41,763,537	1,878,491		43,642,028	90,469,022
Real Estate	5,631,703	253,310		5,885,013	10,313,167
Other	11,317,873	371,673	(7.547.000)	11,689,546	12,627,122
Total investment income (loss)	(1,703,466,343)	4,460,425	(7,517,969)	(1,706,523,887)	(1,420,842,701)
Less investment expenses					
Investment management fees and monitor servi	17,229,962	774,991		18,004,953	20,543,096
Security loan interest expense (Note 3)	34,771,575	1,563,998		36,335,573	82,015,342
Real estate	6,902,207	310,456		7,212,663	5,289,690
Total investment expenses	58,903,744	2,649,445		61,553,189	107,848,128
Net investment (loss) income	(1,762,370,087)	1,810,980	(7,517,969)	(1,768,077,076)	(1,528,690,829)
TOTAL ADDITIONS	(1,445,027,926)	5,851,630	58,357,214	(1,380,819,082)	(1,162,272,528)
DEDUCTIONS					
Retirement and disability benefits	924,171,815	75,989,584	54,804,374	1,054,965,773	895,481,649
Death benefits	14,077,910	,,	- 1, 1, 1	14,077,910	14,133,500
Refunds to withdrawing members, including interest	42,765,105			42,765,105	98,535,274
Administrative expenses	15,799,870		2,731,901	18,531,771	12,168,828
Transfers to other plans	8,616,817			8,616,817	10,156,958
Other	910,010	46,798		956,808	2,313,813
TOTAL DEDUCTIONS	1,006,341,527	76,036,382	57,536,275	1,139,914,184	1,032,790,022
NET (DECREASE) INCREASE	(2,451,369,453)	(70,184,752)	820,939	(2,520,733,266)	(2,195,062,550)
Net assets held in trust for pension benefits:					
Beginning of year	20,798,327,423	839,031,748	93,183,487	21,730,542,658	23,925,605,208
End of year	\$18,346,957,970	\$768,846,996	\$94,004,426	\$19,209,809,392	\$21,730,542,658

The accompanying notes are an integral part of these statements.

#### Notes to the Financial Statements for the Year Ended June 30, 2002

#### 1. DESCRIPTION OF THE SYSTEM

*Organization* – The Arizona State Retirement System (ASRS) is a component unit of the State of Arizona. The ASRS is a cost-sharing, multiple-employer, defined benefit pension plan established by the State of Arizona to provide pension benefits for employees of the State and employees of participating political subdivisions and school districts. The ASRS is administered in accordance with Title 38, Chapter 5 of the Arizona Revised Statutes (A.R.S.).

The ASRS administers the Arizona State Retirement System (the "System") and the Arizona State Retirement Plan (the "Plan"). The System was established by the Arizona Legislature in 1953 to provide retirement and other benefits for state employees and teachers, together with employees of political subdivisions that elected coverage. In 1943, the Legislature had established the Arizona Teachers' Retirement System (the "Teachers' System") to provide benefits for teachers. After the establishment of the ASRS, teachers who were, or later became, eligible through employment to be covered by the Arizona State Retirement System were transferred to the "System". The Teachers' System then became inactive, except for continuation of retirement benefits already being paid and obligations to teacher members who did not become eligible for the Arizona State Retirement System.

The Plan, enacted by the Legislature in 1970, became effective July 1, 1971. Effective July 1, 1981, all non-retired members of the System became members of the Arizona State Retirement Plan as prescribed by Laws of 1980, Chapter 238.

A.R.S. 38-783 and A.R.S. 38-797 require separate accounts be established for health insurance premium benefits and long-term disability benefits, respectively. Effective July 1, 1995, the ASRS has established an account for each benefit program and has reported those funds in the combined financial statements.

**Reporting Entity** – The financial statements of the ASRS include the financial activities of all the above funds. The ASRS Retirement Board (the "Board"), appointed by the governor and confirmed by the Arizona State Senate, manages the ASRS.

Contributions – Participating employers and their employees contribute percentages of employees' salaries for retirement annuities and survivor annuities in accordance with Arizona Revised Statutes. The laws of 1998, Chapter 238, are applicable for the plan year beginning July 1, 1998. Contributions are excluded from gross income for federal and state income tax purposes. Contributions are collected by employers and remitted to the Plan. Contributions earn interest at the rate of 8 percent per annum.

The ASRS laws allow the purchase of eligible service credit for which no benefit could be paid by another qualified plan. Purchasable services include active duty military service, other qualified plan service and refunded service.

At June 30, 2002 and 2001, the number of participating employers and employees totaled:

	2002	2001
EMPLOYER UNITS:		
School Districts	226	222
Charter Schools	138	119
Cities and Towns	65	64
Counties	14	14
Special Districts	59	51
Community College Districts	10	10
State Government	1	1
TOTAL	513	481
EMPLOYEE MEMBERS:		
Retirees (including Beneficiaries)	60,346	60,333
Terminated employees entitled to future benefits	109,942	105,098
Long-Term Disability recipients	4,485	4,031
CURRENT EMPLOYEES:		
Fully Vested*	198,870	191,988
TOTAL	373,643	361,450

<sup>\*</sup> Plan members are deemed fully vested when retirement contributions are made. The fully vested members are currently contributing.

**Benefits** – The Arizona State Retirement Plan provides benefits under formulas and provisions described in the law. Benefits and Administrative expenses are paid from funds contributed by members and employers and from earnings on the invested funds. The Plan provides for retirement, disability, health insurance premium benefits, and death and survivor benefits.

Retirement benefits are calculated on the basis of age, average monthly compensation, and service credit, which is established on a fiscal year basis (July 1 to June 30). Members are eligible for full retirement benefits on (a) their 65th birthday, (b) their 62nd birthday and completion of at least 10 years of credited service, or (c) the first day that the sum of their age plus total credited service equals 80. The benefit is based on a percentage of average monthly compensation multiplied by the years of service credit.

The years of service credit is a graded multiplier based on years of service according to the following schedule 0-19.99 years – 2.1 percent, 20-24.99 years – 2.15 percent, 25-29.99 years – 2.2 percent, 30 or more years of service 2.3 percent. Average monthly compensation is defined as the period of 36 consecutive months during which a participant receives the highest compensation within the last 120 months of service during which the employee made retirement contributions as required by law. The compensation does not include lump sum payments on termination of employment for accumulated vacation or annual leave, sick leave, compensatory time or any other form of termination

pay. Members who began participation in the Plan prior to January 1, 1984, may choose to have average monthly compensation determined upon the period of 60 consecutive months during which the member receives the highest compensation within the last 120 months of service, including lump sum payments as described above. Persons who attain age 50 with at least five years of total credited service may take an early retirement, but at a reduced retirement benefit.

Effective July 1, 1988, members of the Plan are eligible for a LTD benefit in the event they become unable to perform their work. The monthly benefit is equal to 66 and 2/3 percent of the monthly rate of compensation. A participant continues to earn service credit not to exceed 30 years during the period of disability.

The Retiree Group Insurance Program offers health insurance coverage for retired and disabled members who are no longer eligible for coverage administered by their former member employers. Commencing January 1, 1989, retired and disabled members of the ASRS and Plan became eligible for a health insurance premium subsidy benefit. A detailed explanation of both programs is presented in the additional benefits section (Note 8).

**Termination** – Upon termination of employment, member contributions made to the Plan, plus accrued interest at 8 percent compounded monthly per annum, are refundable. Effective August 6, 1999 members may be eligible to receive a percentage of employer contributions to the plan based on years of service prorated as follows:

5 to 5.9 years of service receives 25 percent of employer contributions

6 to 6.9 years of service receives 40 percent of employer contributions

7 to 7.9 years of service receives 55 percent of employer contributions

8 to 8.9 years of service receives 70 percent of employer contributions

9 to 9.9 years of service receives 85 percent of employer contributions

10 or more years of service receives 100 percent of employer contributions

Withdrawal of such accumulated contributions results in forfeiture of the member's accrued benefits in the Plan; however, state law provides for reinstatement of a member's forfeited service upon repayment of the accumulated contributions plus interest if a former member returns to covered service.

#### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Basis of Accounting** – The financial statements are prepared using the accrual basis of accounting under which expenses are recorded when the liability is incurred and revenues are recorded in the accounting period in which they are earned and become measurable. Employee contributions are recognized in the period in which contributions are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Contributions from employees and employers for service through June 30 are accrued. These contributions are considered to be fully

collectible and, accordingly, no allowance for uncollectible receivables is reflected in the financial statements.

Benefit and refund payments are recognized when due and payable in accordance with the terms of the plan.

Investment income is recognized when earned and benefit payments and refunds and other expenditures are recorded when incurred.

New Accounting Pronouncements – In June 1999 the Governmental Accounting Standards Board (GASB) issued a statement No. 34, Basic Financial Statements – Management's Discussion and Analysis – for State and Local Governments (GASB 34). In June 2001, the GASB issued statement No. 37, Basic Financial Statements and Management's Discussion and Analysis – for State and Local Governments: Omnibus, which amended certain provisions of GASB Statement No. 34. GASB Statement No. 34 requires ASRS to adopt this pronouncement for the fiscal year ended June 30, 2002. The adoption of GASB Statement No. 34 required the addition of Management's Discussion and Analysis (MD&A). The MD&A is considered to be required supplementary information and precedes the financial statements. The adoption of GASB Statement No. 34 did not have an impact on the net assets of ASRS Funds.

*Investments* – Investments include U.S. government and government agency obligations, real estate, commercial mortgages, corporate bonds and equity obligations. Investments are reported at fair value.

Security transactions and any resulting gains or losses are accounted for on a trade date basis.

Investments other than real estate and commercial mortgages are reported at fair values determined by the custodial agents. The agents' determination of fair values includes, among other things, using pricing services or prices quoted by independent brokers at current exchange rates.

Commercial mortgages have been valued on an amortized cost basis, which approximates fair value. No allowance for loan loss has been provided as all loans are considered by management to be fully collectible. Short-term investments are reported at cost plus accrued interest, which approximates fair value. For investments where no readily ascertainable fair value exists, management, in consultation with their investment advisors, has determined the fair values for the individual investments based on anticipated maturity dates and current interest rates commensurate with the investment's degree of risk.

Net investment income includes net depreciation in the fair value of investments, interest income, dividend income and total investment expense, which includes investment management and custodial fees and all other significant investment related costs.

There are certain market risks, credit risks, liquidity risks, foreign currency exchange risks, and event risks which may subject ASRS to economic changes occurring in certain

industries, sectors, or geographies. HBS and retirement investments are pooled. Allocation of unrealized and realized gains is based on the fund's net asset balance at year-end.

*Fixed Assets* – The ASRS does not record property and equipment (principally office furniture and fixtures) as assets, but includes the cost of such items in administrative expenditures in the year purchased due to the insignificant total cost.

Federal Income Tax Status – During the year ended June 30, 2002, the ASRS qualified under Section 401(a) of the Internal Revenue Code ("IRC") and was exempt from federal income taxes under Section 501(a) of the IRC.

Actuarial Valuation – The information included in the required supplemental schedules is based on the actuarial valuations performed as of June 30, 2001, which is the latest available information significant actuarial assumptions used in the valuations are included in the notes to the required supplemental schedules.

*Use of Estimates* – The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. ASRS utilizes various investment instruments including U.S. Government Securities, corporate debt instruments, and corporate stocks. Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the combined statements of net plan assets.

Comparative Data – The accompanying financial statements include certain prior-year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the ASRS' financial statements for the year ended June 30, 2001, from which the summarized information was derived.

### 3. CASH AND INVESTMENTS

*Cash* – At June 30, 2002, the carrying amount of the ASRS' cash deposits with financial institutions was \$13,011,948 and the bank balance was \$4,066,112. Of the bank balances for the years ended June 30, 2002, \$100,000 was covered with federal depository insurance funds and \$3,966,112 was collateralized with securities held by the pledging bank's trust department in the ASRS' name.

*Investments* – Statutes enacted by the Arizona State Legislature (the "Statutes") authorize the ASRS to make investments in accordance with the "Prudent Expert" rule. Section 38-719 (B) of the Arizona Revised Statutes interprets the rule to be that Investment

Management shall discharge the duties of their position with the care, skill, prudence and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity and familiar with the same matters would use in conduct of an enterprise of a like character and with like aims as that of the system, subject to certain statutory limitations and restrictions. Within this broad framework, the ASRS has chosen to invest in short-term securities, obligations of the U.S. government or agencies of the U.S. government, corporate bonds, common and preferred stocks (domestic and foreign) and mortgages.

The Statutes place the following restrictions on the ASRS' investment fund portfolio:

- 1. No more than 80 percent of the ASRS' total assets may be invested at any given time in corporate stocks or equity equivalents, based on cost value of the stocks or equity equivalents irrespective of capital appreciation.
- 2. No more than 5 percent of the ASRS' assets may be invested in securities issued by any one institution, agency or corporation, other than securities issued as direct obligations of or fully guaranteed by the U.S. government or mortgage backed securities and agency debentures issued by federal agencies.
- 3. No more than 5 percent of the voting stock of any one corporation may be owned.
- 4. No more than 20 percent of the ASRS' assets (based on cost value of the total fund) may be invested in foreign equity securities, and those investments shall be made only by investment managers with demonstrated expertise in such investments.
- 5. No more than 10 percent of the ASRS' assets may be invested in bonds or other evidences of indebtedness of those multinational development banks in which the United States is a member nation, including the International Bank for Reconstruction and Development, the African Development Bank, the Asian Development Bank, and the Inter-American Development Bank.
- 6. No more than 1 percent of ASRS assets may be invested in economic development projects authorized as eligible for such investment by the Arizona State Department of Commerce. During fiscal year 2002 the ASRS had no investments in economic development projects.

GASB Statement No. 3 requires government entities to categorize investments for the purpose of giving an indication of the level of credit risk assumed by the entity at year-end. The following table presents the investments at June 30, 2002, categorized to give an indication of the level of risk assumed by ASRS.

#### The categories are:

- 1. Insured or registered investments, or securities held by ASRS or its agent in the ASRS' name.
- 2. Uninsured or unregistered investments, with securities held by the counterparty's trust department or agent in ASRS' name.

3. Uninsured and unregistered investments, with securities held by the counterparty in ASRS' name or held by the counterparty's trust department or agent but not in ASRS' name.

Investments not evidenced by securities are not categorized.

The fair value of investments was as follows:

	2002					
	Category					Fair
		1		2		Value
Investments – Categorized						
Preferred and Common Stock – Domestic	\$	9,923,288,898			\$	9,923,288,898
Preferred and Common Stock – Foreign			\$	2,873,498,003		2,873,498,003
U. S. Government Obligations		2,768,340,879				2,768,340,879
Corporate Obligations – Domestic		1,406,424,341				1,406,424,341
Convertible Bonds - Domestic		7,641,275				7,641,275
Foreign Currency				18,751,708		18,751,708
		14,105,695,393		2,892,249,711		16,997,945,104
Investments - Not Categorized						
Short-Term Investments*						2,285,988,141
Real Estate						30,212,500
Investments held by Broker/Dealers under						
Security Loan Program:						
U. S. Government Obligations						1,224,254,297
Corporate Obligations – Domestic						206,464,699
Preferred and Common Stock- Domestic						39,330,452
Preferred and Common Stock -Foreign						270,508,323
TOTAL INVESTMENTS AT FAIR VALUE		14,105,695,393		2,892,249,711		21,054,703,516
Obligations Under Security Loans						(1,673,523,832)
INVESTMENTS AT FAIR VALUE – NET	\$	14,105,695,393	\$	2,892,249,711	\$	19,381,179,684

<sup>\*</sup> Short-term Investments represent investable cash balances swept daily into the custodian bank's Short-Term Investment Fund, which is comprised of various commercial paper and short-term government securities.

If available, quoted fair value prices have been used to value investments as of June 30, 2002. Securities not having a quoted fair value have been valued on yields currently available on comparable securities of issuers with similar credit ratings. The fair value of investments in foreign securities totaled \$3,162,758,034 at June 30, 2002, and is included in common and preferred stocks and foreign currency. Net foreign securities and currency market depreciation are included in determining the net decrease for the year ended June 30, 2002 of \$-340,654,102.

Due to the flow of securities to and from transfer agents and the security lending program, securities occasionally cannot be delivered for a sale or received for a purchase,

resulting in a "failed" transaction. Securities with trade dates in June and settlement dates in July result in "outstanding" transactions. Since these securities have contractually changed ownership, receivables and payables result from these transactions. Such transactions resulted in a receivable for securities sold of \$188,867,975 and a payable for securities purchased of \$455,269,746 at June 30, 2002.

#### 4. SECURITIES LENDING PROGRAM

Arizona Revised Statutes Section 38-715(D)(3) allow the ASRS to participate in a securities lending program. The ASRS' custody bank enters into agreements with counterparts to loan securities and have the same securities redelivered at a later date. All securities are eligible for loan (U.S fixed income securities, U.S equities, international equities) with a higher percentage of U.S. Treasuries on loan than most other security types. The ASRS currently receives as collateral at least 102 percent of the market value of the loaned securities and maintains collateral at no less than 100 percent for the duration of the loan. At year-end, the ASRS had no credit risk exposure to borrowers because the amount the ASRS owes the borrowers exceeds the amount the borrowers owe the ASRS. During fiscal year 1998, statutes were amended to allow for other than cash collateral. Securities loaned are initially fully collateralized by cash (USD and Euro), irrevocable letters of credit, U.S. Government or Agency securities, or sovereign debt. Initial cash collateral may be reinvested (under certain constraints) in (a) instruments issued or fully guaranteed by the U.S. Government, Federal agencies, or sponsored agencies or sponsored corporations; (b) instruments issued by domestic corporations including corporate notes and floating rate notes; (c) obligations of approved domestic and foreign banks; (d) U.S. dollar-denominated instruments issued by sovereigns, sovereign supported credits, and instruments of foreign banks and corporations; (e) yankee securities; (f) repurchase agreements; (g) insurance company funding agreements, guaranteed investment contracts and bank investment contracts; (h) asset-backed securities and (i) money market mutual funds. The ASRS records the cash collateral received and the same amount as an obligation for securities on loan. Any cash collateral received is invested in short-term investments. The ASRS receives a spread for its lending activities. Investments made with cash collateral are classified as an asset on the Combined Statements of Plan Net Assets. A corresponding liability is recorded as the ASRS must return the cash collateral to the borrower upon expiration of the loan. At June 30, 2002 and 2001, the ASRS had \$1,673,523,832 and \$1,528,313,442, respectively, outstanding as payable for securities on loan. The ASRS does not have the ability to pledge or sell the collateral unless there is a borrower default. There are no restrictions on the dollar amount of security loans that may be made by the ASRS. The ASRS is indemnified against gross negligence and borrower default by the lending agents. There were no defaults during the current fiscal year.

#### 5. DERIVATIVES

Derivatives are instruments (securities or contracts) whose value is dependent on such things as stock or bond prices, interest rate levels, or currency exchange rates. ASRS Managers use derivatives to hedge currency risk, reduce transaction costs, obtain market exposure, and enhance returns.

The principal categories of derivatives employed and their uses during the year were as follows:

Category	Purpose
Foreign exchange forward contracts	Hedge currency risk of investments denominated in foreign currencies.
Futures	Reduce transaction costs; obtain market exposure; enhance returns.
SWAPS	Interest rate risk management; enhance returns

Generally, derivatives are subject to both market risk and counterparty risk. The derivatives utilized by ASRS managers typically have no greater market risk than their physical counterparts, and in many cases are offset by exposure elsewhere in the portfolio.

The ASRS believes that it is unlikely that any of the derivatives used by its Managers could have a material adverse effect on the financial conditions of the ASRS.

#### 6. FUNDING STATUS AND PROGRESS

Significant actuarial assumptions used include: (a) a rate of return on investment of present and future assets of 8 percent, compounded annually, (b) projected salary increases ranging from 4.50 percent to 9.50 percent per year, (c) rates of disability, (d) rates of withdrawal, (e) rates of retirement, (f) mortality rates – 1983 group annuity mortality table with setback of one year for males, (g) mortality rates after disability, (h) valuation of assets using market value less five-year phase-in of excess (shortfall) investment income, and (i) projected unit-credit funding method. For the current year, there were no changes in the actuarial funding or the actuarial assumptions and methods.

#### 7. CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

The A.R.S. provide statutory authority for determining the employees' and employers' contribution amounts as a percentage of covered payrolls. Employers are required to contribute at the same rate as employees. Although the statutes prescribe the basis of making the actuarial calculation, the Arizona State Legislature is able to legislate a contribution rate other than the actuarially determined rate. The actuarial computation is made two years in advance based on the June 30 information (the rate for 2002 was based on June 30, 2000 information). The actuarial assumptions used in this measure are those adopted by the ASRS' Board on November 20, 1996. The contribution rates were actuarially determined using the Projected Unit Credit ("PUC") funding method, the use of which was established by legislative action in 1989. The employee and employer contribution rate is determined as one-half of the percent of pay needed to pay the normal cost of the Plan and a factor to amortize the under-funded past service liability based on the criteria of the A.R.S., not to exceed an amortization period of 30 years. This change is being phased-in over the next 14 years. Since the Plan is overfunded, the percent of pay needed to amortize the Unfunded Actuarial Accrued Liability ("UAAL") is negative.

The contribution rates, as actuarially determined, for the years ended June 30, 2001 and 2000 were as follows (the most recent actuarial information available was as of June 30, 2001). However, the contribution rate is determined biennially.

	Amount	Percent of Covered Payroll	Amount	Percent of Covered Payroll
Normal cost	\$ 747,218,041	11.75%	\$ 616,431,588	10.72%
Amortization of over-funded past service liability	(256,174,962)	(4.03)%	(310,516,301)	(5.40)%
Total* Contributions made as a percentage of the current year covered payroll:	\$ 491,043,079	7.72 %	\$ 305,915,287	5.32%
Employers' share Employees' share	\$ 163,441,640 163,441,721	2.49 % 2.49 %	\$ 152,957,838 152,957,449	2.66% 2.66%
Total	\$ 326,883,361	4.98 %	\$ 305,915,287	5.32%

The statutory contribution rate for the year ended June 30, 2002 and 2003 is 2.49 percent (2.00 percent retirement and .49 percent long-term disability) for both the employers' and employees' portion. This was determined by the 2000 actuarial valuation. The actuarially determined contribution rate for the year ended June 30, 2000 was 2.66 percent (2.17 percent retirement and .49 percent long-term disability) for both the employers' and employees' portion. This rate is applied to the covered payroll to determine the employee and employer contributions. GASB Statement No. 25 defines covered payroll as all elements included in compensation paid to active employees on which contributions to a pension plan are based.

#### 8. ADDITIONAL BENEFITS

In addition to the pension benefits described, the ASRS offers the Retiree Group Insurance Program and the Health Insurance Premium Benefit Program to eligible retired and disabled members. A retired member is defined as a member actively receiving an annuity benefit and a disabled member is defined as a member receiving a Long-Term Disability ("LTD") benefit through the LTD program administered by the ASRS or through their former member employer's group LTD plan.

Pursuant to A.R.S. 38-782, the Retiree Group Insurance Program makes available group health insurance coverage to eligible retired and disabled members and their dependents. Retired and disabled members of the ASRS, the Public Safety Personnel Retirement System, the Elected Officials Retirement Plan, and the Corrections Officers Retirement

<sup>\*</sup>Information is based on the actual actuarial numbers of 2001.

Plan may participate if they are no longer eligible for health insurance benefits through their former employer. More than 38,000 coverage agreements currently exist for retired and disabled members and their dependents.

Pursuant to A.R.S. 38-783, retired and disabled members with at least five years of credited service are eligible to participate in the Health Insurance Premium Benefit (subsidy) Program. This assistance is provided to those members that elect group coverage through either the Retiree Group Insurance Program or their former member employer. The following chart illustrates the maximum amount of the monthly available benefit for eligible members and their dependents:

		Without Medicare		With Medicare A & B		<u>Combin</u>	<u>nations</u>
Years of Credited <u>Service</u>	Percent of Premium <u>Benefit</u>	Retiree Only	Retiree & Dependents	Retiree Only	Retiree & <u>Dependents</u>	Retiree & Dependent One with Medicare, the other without	Retiree & Dependent with Medicare, other dependent without
5.0-5.9	50 percent	\$75	\$130	\$ 50	\$85	\$107.50	\$107.50
6.0-6.9	60 percent	90	156	60	102	129.00	129.00
7.0-7.9	70 percent	105	182	70	119	150.50	150.50
8.0-8.9	80 percent	120	208	80	136	172.00	172.00
9.0-9.9	90 percent	135	234	90	153	193.50	193.50
10.0+	100 percent	150	260	100	170	215.00	215.00

For qualified retirees who are participating in a medical program provided by the ASRS or an ASRS employer and who live in areas of Arizona where no managed care (HMO) program is offered, the 2001 Arizona Legislature passed, and the Governor signed, legislation to provide an additional temporary premium benefit effective July 1, 2001 through June 30,2003. These additional increases are listed in the table below.

		<b>Without Medicare</b>		With Medic	are A & B	<b>Combinations</b>	
Years of Credited <u>Service</u>	Percent of Premium <u>Benefit</u>	Retiree Only	Retiree & Dependents	Retiree Only	Retiree & Dependents	Retiree & Dependent One with Medicare, the other without	Retiree & Dependent with Medicare, other dependent without
5.0-5.9	50 percent	\$150	\$300	\$ 85	\$175	\$235	\$235
6.0-6.9	60 percent	180	360	102	210	282	282
7.0-7.9	70 percent	210	420	119	245	329	329
8.0-8.9	80 percent	240	480	136	280	376	376
9.0-9.9	90 percent	270	540	153	315	423	423
10.0+	100 percent	300	600	170	350	470	470

The ASRS reimbursed approximately \$76.0 million and \$40.5 million towards the cost of group health insurance coverage for the years ended June 30, 2002 and 2001, respectively.

#### 9. CONTINGENT LIABILITIES

The ASRS is also a party in various litigation matters. While the final outcome cannot be determined at this time, management is of the opinion that the final obligation, if any, for these legal actions will not have a material adverse effect on the ASRS' financial position or results of operations.

#### 10. TRANSFERS TO AND FROM OTHER FUNDS

Due to/from other funds includes LTD cash deposits held at Bank of America at year end and amounts that need to be transferred after the year end contribution reconciliation.

#### 11. VALLEY VENTURES

On June 30, 2001, the ASRS held an interest in Valley Ventures, an Arizona-based Venture Capital company. The ASRS's interest in Valley Ventures was disposed during fiscal year 2002.

#### 12. REQUIRED SUPPLEMENTARY SCHEDULES

Historical trend information designed to provide information about the ASRS' progress in accumulating sufficient assets to pay benefits when due is required supplementary information. Required supplementary information for the years available in accordance with the parameters of GASB Statement No. 25 is included immediately following the notes to the financial statements.

# Required Supplemental Information Six-Year Comparison

#### **Schedule of Funding Progress – Retirement Fund**

Actuarial Valuation Date June 30	Actuarial Value of Assets a	Actuarial Accrued Liability (AAL) Projected Unit-Credit b	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a/b)	Covered Payroll c	UAAL as a Percentage of Covered Payroll [(b-a)/c]
1996	\$12,579	\$11,111	(1,468)	113.2%	\$4,632	(31.7)%
1997	\$13,692	\$11,694	(1,998)	117.1%	\$4,836	(41.3)%
1998	\$15,577	\$12,910	(2,667)	120.7%	\$5,164	(51.6)%
1999	\$18,043	\$15,476	(2,567)	116.6%	\$5,488	(46.8)%
2000	\$20,291	\$16,854	(3,437)	120.4%	\$5,894	(58.3)%
2001	\$21,888	\$19,012	(2,876)	115.2%	\$6,357	(45.2)%

NOTE: Dollar amounts in millions. Values shown for valuation dates on or after June 30, 1996 are for the 401(a) pension plan only. The June 30 2001 accrued actuarial liability for the Health Benefit Supplement of \$967 million, has been excluded from this presentation.

#### **Schedule of Employer Contributions**

Year Ended June 30	Employer Contributions Required*	Percentage Contributed
1996	\$172,848,417	100 percent
1997	173,508,019	100 percent
1998	176,768,738	100 percent
1999	179,086,635	100 percent
2000	152,957,449	100 percent
2001	163,441,724	100 percent
2002	168,212,536	100 percent

<sup>\*</sup>Includes contributions for long-term disability.

Information is shown only for the years available in accordance with the parameters of GASB No. 25. Additional years will be added as data becomes available. See notes to required supplemental information.

## Notes to Required Supplemental Information for the Year Ended June 30, 2002

### 1. ACTUARIAL METHODS AND ASSUMPTIONS FOR VALUATIONS PERFORMED

The information presented in the required supplemental schedules was determined as part of the actuarial valuations at the dates indicated.

The Projected Unit Credit ("PUC") is the actuarial cost method used in the valuation for the period ended June 30, 2001. The amortization method used for the June 30, 2001 valuation was the Level Dollar method, 15 years grading to 30. This is a closed amortization period. A five-year smoothed market value method is used to determine the actuarial value of assets. The investment return rate used is 8 percent per year, compounded annually. The inflation rate assumption used is 4.25 percent per year. Projected salary increase assumptions are based on 4.50 percent to 9.50 percent per year. The cost-of-living adjustment reserve is \$1,692 million as of June 30, 2001.

#### Significant Factors Affecting Identification of Trends – 1989

#### PUC Funding Method

Beginning with the June 30, 1989, actuarial valuation of the total employee and employer contributions payable beginning July 1, 1990, shall be determined using the Projected Unit Credit ("PUC") funding method replacing the Entry-Age-Normal ("EAN") method.

#### \$12,000 Minimum Average Compensation for Current Retirees

Recalculation of the retirement benefit for all plan members retired before June 30, 1989 who had 10 years of credit service using a minimum average compensation of \$1,000 per month.

#### 2.0 percent Ad Hoc COLAs

Effective July 1, 1989, all members retired on or before June 30, 1988, shall receive a 2.0 percent permanent benefit increase to their June 30, 1990, base benefit.

#### Early Retirement Window

During the period of May 15, 1989 through November 14, 1989, a member who is eligible for Normal Retirement or Early Retirement with age plus credited service at least equal to 80, may retire and receive a benefit calculated using a 2.2 percent multiplier instead of 2.0 percent.

#### 3.0 percent Tax Equity Allowance

Retroactive to the later of January 1, 1989, or the date payments commence, each member retiring on or before September 14, 1989 shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0 percent in his or her January , 1989, base benefit.

#### Rule of 82

Effective May 1, 1990, the number of points (sum of member's age and years of service) required to be eligible for normal retirement shall be reduced from 85 to 82. Also, the early retirement reduction factor for employees with 77 or more points but less than 82 points shall be 3 percent for each point or fraction thereof less than 82.

#### 3.0 percent Tax Equity Allowance

Each member who retires between September 15, 1989 and September 14, 1990, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0 percent in his or her base benefit, retroactive to the date of retirement.

#### Graded Vesting for Health Insurance Premium Supplement

The Health Insurance Premium Supplement is extended to those qualifying members with between five and nine years of service. The member will be eligible to receive 10 percent of the benefit for each completed year of service (i.e., 50 percent to 90 percent).

#### Significant Factors Affecting Identification of Trends – 1991

#### 3.0 percent Tax Equity Allowance

Each member who retires between September 15, 1990 and September 14, 1991, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0 percent in his or her base benefit, retroactive to the date of retirement.

#### Recalculation of Retiree Benefits Using 2.0 percent Benefit Multiplier

Each retired member with at least 10 years of service who retired prior to June 30, 1985, shall have his or her benefit recomputed. The recomputed benefit shall be equal to 2 percent times final average earnings times credited service plus an additional \$2 for each year of service. The retired member will receive the larger of the recalculated benefit or his/her current benefit. This increase is effective October 1, 1991.

#### 2.3 percent Ad Hoc Increase

Effective July 1, 1991, all members retired on or before June 30, 1990, shall receive a 2.3 percent permanent benefit increase in their June 30, 1991, base benefit.

#### Rule of 80

Effective July 1, 1992, the number of points (sum of member's age and years of service) required to be eligible for normal retirement shall be reduced from 82 to 80. (For continuation purposes, this legislation is not reflected until the 1993/94 fiscal year).

#### Pop-up Option

A pop-up option is added for retiring members who first participate in the Plan on or after December 31, 1991.

#### 3.0 percent Tax Equity Allowance

Each member who retires between September 15, 1991 and September 14, 1992 shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0 percent in his or her base benefit, retroactive to the date of retirement.

#### Minimum Retiree Benefit

Each retiree of the Plan who is at least age 75 on December 31, 1992, and who had at least 10 years of service upon retirement from the Plan shall be eligible for a minimum benefit. If the eligible retiree had at least 10 years of service but less than 15 years, his minimum benefit is \$350 a month. If the eligible retiree had at least 15 years of service but less than 20, the retiree's minimum benefit is \$500. If the eligible retiree had at least 20 years of service the retiree's minimum benefit is \$600. The minimum benefit shall be compared to the retiree's current benefit (including all ad hoc increases).

#### 5 percent Ad Hoc Increase

Effective November 1, 1992, all members retired on or before October 31, 1992, shall receive a 5 percent permanent benefit increase in their October 31, 1992, benefit.

#### Forfeited Service Repurchase

Any present active member who has previously forfeited service has until December 31, 1994, to repurchase the forfeited service by paying the plan the employee and employer contributions (accumulated with interest), which would have been contributed during the member's period of forfeited service.

#### Repurchase of Service Due to Reduction in Force

Any currently active member who was terminated prior to December 31, 1992, as a result of a required reduction in force may purchase the credited service for the following period of unemployment if the member had five or more years of service at the time of termination and resumed employment with a participating employer within two years of termination. The cost of the repurchase is the total of the employee and employer contribution (accumulated with interest), which would have been contributed during the member's period of unemployment.

#### Change in Section 38-781.05 Funding Method

Section 38-781.05 of the Plan was amended so that the funding period for the plan would continue to be the period between the valuation and June 30, 2002, as long as the plan has a negative Unfunded Actuarial Accrued Liability ("UAAL"). If the Plan were to have a positive UAAL, then the old funding mechanism would apply.

No benefit changes were passed by the 1993, Arizona State Legislature. However, the legislature passed legislation to reduce the required contribution rate of 4.09 percent to 3.14 percent.

#### Significant Factors Affecting Identification of Trends – 1994

#### Minimum Long-term Disability (LTD) Benefit

Each member on LTD will receive a minimum monthly benefit of \$50.

#### Minimum Retiree Benefit

Each retiree of the Plan who is at least age 75 and who had 20 or more years of service at retirement will receive a minimum monthly benefit of \$600.

#### Pop-up Benefit

Members who retired prior to January 1, 1992 and who elected a Joint and Survivor option shall receive a "Pop-up" in their retirement income if their beneficiary pre-deceases them.

#### Excess Investment Earnings (COLA)

Retirees at least age 55 who have been retired at least one year and members on LTD are eligible to receive a cost-of-living adjustment (COLA) equal to one-half the increase in CPI for the prior calendar year. The COLA will be paid from a reserve of Excess Investment Earnings. If there are no Excess Investment Earnings in reserve, no COLA will be granted.

#### Change in Section 38-737 Funding Period

Section 38-737 was amended to change the funding period of the plan to a rolling 30-year period. The change is to be phased-in over the next 19 years. If the Plan should cease to be overfunded, the funding period would immediately go to 30 years.

#### Significant Factors Affecting Identification of Trends – 1995

Change in Maximum Increase Provided by Excess Investment Earnings COLA
The maximum COLA payable from Excess Investment Earnings was increased from 50 percent to 100 percent of the increase in the CPI.

#### Removal of LTD Benefit from the Plan

The legislature established a new LTD program and removed the LTD benefit from the plan. Liabilities for current LTD recipients were transferred to the new LTD program effective October 1, 1995.

Creation of Separate Account for the Health Premium Supplement

The Health Premium Supplement benefit is to be separated into a 401(h) account. The assets and liabilities associated with the Health Premium Supplement will be accounted for separately.

#### Significant Factors Affecting Identification of Trends – 1996

No material changes.

#### Significant Factors Affecting Identification of Trends – 1997

Creation of Family Health Supplement

Allows unused portion of the Health Supplement of a member or dependent to be used to pay the other recipients' health insurance premium.

The calculation methodology for the Excess Investment Earnings COLA was modified.

The contribution rate will be determined on a biennial cycle beginning with the 1999/2000 fiscal year.

#### Significant Factors Affecting Identification of Trends – 1998

No material changes.

#### Significant Factors Affecting Identification of Trends – 1999

#### Enhanced Refund Option

Employees who terminate prior to eligibility for retirement may elect to receive a refund of their employee contributions with interest. If the employee has at least five years of service, the employee is also entitled to a share of the employer contributions with interest. The share is 25 percent with five years of service and increases 15 percent for each additional year of service to a maximum of 100 percent for 10 or more years of service.

#### Benefit Multiplier Increased to 2.1 percent

The benefit multiplier increased from 2.0 percent to 2.1 percent effective July 1, 2000.

#### 5 percent Ad Hoc Increase

A 5 percent retiree ad hoc increase for retirees and beneficiaries effective July 1, 2000.

#### Increase in Maximum Service While on LTD

Increase in the maximum amount of service that may be accrued while on LTD from 25 to 30 years.

#### Changes in Permanent Benefit Increase COLA

A. The maximum aggregate COLA was increased from 3 percent to 4 percent.

- B. The threshold for determining "Excess Earnings" was lowered from 9 percent to 8 percent.
- C. The limitation of the COLA to the increase in the CPI was removed.

The age restriction on eligibility for the Permanent Benefit Increase (PBI) was removed.

#### Significant Factors Affecting Identification of Trends – 2001

#### Return to Work

Permits retired members of the ASRS to return to work and still be eligible to receive retirement benefits if they have been terminated from employment for a period of 12 months. The members who take this option will not be eligible for LTD benefits nor will they contribute to the ASRS or accrue additional benefits during the period of reemployment. This act is repealed June 30, 2003.

This is similar to the bill passed in 2000 allowing retired teachers to return to work, and it does not affect the requirements of that program.

#### Transferring Credits

Permits an inactive member who has not retired to transfer credited service from one state plan to their current or former retirement plan if the inactive member is not eligible for membership in the ASRS and has not withdrawn contributions from the ASRS.

#### Health Insurance Premium Benefit

Increases the health insurance premium benefit for members of the eligible state retirement systems by the following amounts:

- Medicare eligible member from \$65 to \$100
- Non-Medicare eligible member from \$95 to \$150
- Non-Medicare family coverage from \$175 to \$260
- Medicare eligible family coverage from \$115 to \$170
- Combination Medicare and non-Medicare eligible from \$145 to \$215

#### Rural Health Insurance Premium Benefit

In addition to the premium benefit paid to ASRS retired and disabled members, provides for retired and disabled members who live in areas of the state not served by a managed care program (HMO) and who have 10 years of credited service in the following amounts:

- Medicare eligible member \$170 per month
- Non-Medicare eligible member \$300 per month
- Non-Medicare family coverage \$600 per month
- Medicare eligible family coverage \$350 per month
- Combination Medicare and non-Medicare eligible \$470 per month

Also provides that a retired or disabled member may elect to purchase individual coverage and receive a payment of the increased subsidy through the member's employer if the employer assumes the administrative function associated with the payment including verification that the payment is used for health insurance.

#### Supplemental Defined Contribution (DC) Plans

Repeals the provisions for the alternate DC retirement programs established in 1998 for exempt state employees (non-merit service employees), legislative agency employees and certain term limited elected officials. Persons already participating in those programs are grandfathered into them.

Provides that the ASRS, the Public Safety Personnel Retirement System (PSPRS) and their employers may establish a 401(a) defined contribution supplementary program. Employers may elect to match contributions to the supplementary program on an annual basis. Employer and member contributions to the supplement are vested immediately with the member.

#### Modified Deferred Retirement Option Plan (DROP) Program

Permits an employer to offer a member who has reached normal retirement (80 points, age 62 with 10 years, or age 65) a contract to work up to an additional three years. Retirement contributions are not made to ASRS during the contract period; however LTD contributions still continue to be paid to the ASRS. During the contract period, the member and employer contribute to a supplemental defined contribution (DC) Plan at a rate negotiated between the member and the employer. Upon completing the additional service, the employee must purchase an equivalent amount of service from the ASRS in order to receive credit for the three years worked.

#### Partial Lump Sum Option

Beginning July 1, 2002, a member may elect a partial lump sum payment at retirement equal to not more than 36 months of the member's calculated retirement benefit. The life annuity amount then would be adjusted actuarially to a reduced amount to offset the lump sum payment.

#### Graded Multiplier

Provides a variable multiplier in the retirement benefit formula, increasing with years of service according to the following:

0.00 to 19.99 Years of Service	2.10 %
20.00 to 24.99 Years of Service	2.15 %
25.00 to 29.99 Years of Service	2.20 %
30.00 or More Years of Service	2.30 %

#### Supplemental Defined Contribution (DC) Retirement Plan

Permits the four state retirement plans to establish a 401(a) defined contribution program as a supplement to the state defined benefit programs. Repeals the alternative DC programs for term-limited state elected officials and state employees exempted from state

personnel rules. Employees may make contributions to IRS limits with a match by the employer. Each employer member of the ASRS would be permitted to choose its own match rate.

#### Permanent Benefit Increase (PBI) Enhancement

Provides that interest at a rate of 8 percent be paid on the funds held in reserve for the PBI. The interest accrued to the reserve is used to fund an enhanced PBI based on the number of years a member has been retired. A member who has at least 10 years of service would be eligible for an incremental increase for each five years of retirement.

#### PSPRS membership; park rangers

Transfers state and county park rangers from the ASRS to the PSPRS.

#### Community colleges; optional retirement; contributions

Permits a community college that has an optional retirement program to increase employer and employee contributions to seven percent. It provides a window for ASRS members to transfer to the optional programs from October 1, 2001 through December 31, 2001. The ASRS shall transfer their contributions plus interest to the optional program.

Removal of requirement that purchase of military service be only for which the member is not receiving a benefit.

Allows for ASRS members to purchase military service time for which they may already be receiving benefits.

#### Pop-Up for members choosing a life certain option

Allows for retirees that choose the 5, 10, or 15 period certain options to rescind the election of and thereafter, receive a straight life annuity, including postretirement increases. The member may again elect a period certain and life annuity subject to the same provision previously elected by the member.

### **Additional Supplemental Schedules**

## SCHEDULE OF ADDITIONS AND DEDUCTIONS TEN-YEAR COMPARISON

	Additions by Source								
Year	Employee Contribution Made	Actuarial Employee Contribution	Employer Contribution Made	Actuarial **** Employer Contribution	Percent of Covered Payroll	Actuarially Determined Rate	Net Investment Income	Member Reimbursements and Other *****	Total
1993*	135,644,868	135,644,868	135,644,868	135,644,868	3.59%	3.59%	2,037,437,881	6,870,755	2,315,598,372
1994*	124,763,806	162,510,817	124,763,806	162,510,817	3.14%	4.09%	725,271,172	7,319,048	982,117,832
1995*	158,559,931	158,559,931	158,559,931	158,559,931	3.75%	3.75%	2,409,804,569	9,429,152	2,736,353,583
1996***	172,848,417	172,848,417	172,848,417	172,848,417	3.85%	3.85%**	2,063,877,940	4,376,224	2,413,950,998
1997	173,508,080	173,508,080	173,508,019	173,508,080	3.69%	3.69%	2,832,718,071	11,480,946	3,191,215,116
1998	176,768,737	176,768,737	176,768,738	176,768,738	3.54%	3.54%	3,405,203,114	15,461,646	3,774,202,235
1999	179,086,642	179,086,635	179,086,635	179,086,635	3.34%	3.34%	2,848,321,337	46,170,568	3,252,665,182
2000	152,957,449	152,957,449	152,957,838	152,957,838	2.17%	2.17%	2,035,312,005	35,347,830	2,376,575,122
2001	163,441,640	163,441,640	163,441,640	163,441,640	2.17%	2.17%	(1,528,690,829)	37,687,091	(1,164,120,458)
2002	168,212,537	168,212,537	168,212,537	168,212,536	2.00%	2.00%	(1,768,077,075)	49,365,487	(1,382,286,514)

<b>Deductions</b>	by Type	
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				Administration	
Year	Benefits	Refunds	Investment	and Other****	Total
1993	422,183,217	21,444,985	29,599,274	6,210,761	479,438,237
1994	454,118,381	22,650,297	28,934,542	5,521,389	511,224,609
1995	495,150,932	24,516,184	32,403,873	5,970,049	558,041,038
1996	542,524,729	26,376,393	37,535,223	8,244,791	614,681,136
1997	596,308,127	31,282,457	45,248,028	12,307,628	685,146,240
1998	652,567,322	29,769,046	51,199,408	12,541,091	746,076,867
1999	713,870,779	26,108,152	65,886,652	15,352,673	821,218,256
2000	787,553,386	70,754,497	86,931,784	19,743,695	964,983,362
2001	909,615,149	98,535,274	107,848,128	24,639,599	1,140,638,150
2002	1,069,043,683	42,765,105	61,553,189	28,133,269	1,201,495,246

- \* Other income includes Chapter 137 reimbursements of \$7,505,005, \$5,739,521 and transfers \$5,482,267 for 1995, 1994 and 1993, respectively, which are outlined by State Statute for members buying back service into ASRS. For the fiscal year ended 1994, the legislature set the contribution rate below the actuarially determined rate as noted under "Percent of Covered Payroll" above. The change to an actuarially determined rate became effective in 1985.
- \*\* The initial actuarial calculation indicated a total contribution rate of 7.90 percent in 1996. However, this was prior to separating LTD from retirement contributions. The effect of reporting LTD separately resulted in a new total contribution rate of 7.70 percent, 3.36 percent retirement and 0.49 percent LTD, for both employee and employer.
- \*\*\* Investment income restated at market value for 1996. Investment income reported at market value for subsequent years.

## SCHEDULE OF ADMINISTRATIVE EXPENSES (Retirement Fund) YEARS ENDED JUNE 30, 2002 AND JUNE 30, 2001

	<u>2002</u>		2001	<u>l</u>
	Budget	Actual	Budget	Actual
Personnel Services:	A = <b>70</b> 1 <b>2</b> 00	A - 155 020	<b>47.000.000</b>	<b>47.77</b> 0.000
Salaries	\$6,521,300	\$6,457,838	\$5,382,300	\$5,558,000
Retirement Contributions	130,426	127,423	233,592	231,723
Insurance	1,248,274	1,080,688	912,408	770,065
Total Personnel Services	7,900,000	7,665,949	6,528,300	6,559,788
Professional Services:				
Computer Support		12,100		9,312
Audit, Consulting & Legal Fees	222,600	304,341	57,000	68,605
Actuary\Benefit Consulting	100,000	197,141	125,000	67,000
Miscellaneous Outside Services	3,091,661	2,787,695	965,000	911,461
<b>Total Professional Services</b>	3,414,261	3,301,277	1,147,000	1,056,378
Communications:				
Postage	350,000	333,350	250,000	287,507
Printing	260,500	140,058	30,000	62,695
Telephone	350,000	339,757	230,000	307,472
Total Communications	960,500	813,165	510,000	657,674
Miscellaneous:				
Board & Council	20,000	4,750	2,000	5,292
Office Rent	904,000	1,544,015	904,000	904,904
Equipment	412,400	267,744	212,000	262,698
Furniture	137,000	106,833	·	106,822
Repair & Maintenance	220,000	267,971	150,000	143,336
Equipment Rental	15,000	5,629	5,000	2,449
Travel	49,900	57,195	49,900	35,845
Supplies	220,000	187,988	80,000	96,948
Insurance	87,300	87,300	75,900	75,900
Dues & Subscriptions	35,000	30,636	25,000	23,394
Education & Training	60,000	61,855	35,000	32,874
Miscellaneous	7,800	841	246,299	8,887
PERIS Development	1,436,939	1,396,721	169,000	162,414
Total Miscellaneous	3,605,339	4,019,478	1,954,099	1,861,763
TOTAL	\$15,880,100	\$15,799,870	\$10,139,399	\$10,135,603

<sup>\*\*\*\*</sup> Information is shown only for the years available in accordance with the parameters of GASB No. 25. Additional years will be added as data becomes available.

<sup>\*\*\*\*\*</sup> Transfers are not included in the table.

## SCHEDULE OF LONG-TERM DISABILITY EXPENSES YEARS ENDED JUNE 30, 2002 AND 2001

	2002	<u>2</u>		<u>2001</u>
	Budget	Actual	Budge	t Actual
Professional services:				
LTD management fee Total professional services	\$2,760,128	\$ 2,731,901	\$2,286	\$2,033,261
	2,760,128	2,731,901	2,286	,700 2,033,261
TOTAL	\$2,760,128	\$2,731,901	\$ 2,286	,700 \$2,033,261

Effective in fiscal year 1998, the legislature began appropriating funding for the administrative costs of several ASRS programs, including LTD, Health Insurance, Outreach Education, actuarial expenses, and legal costs. Because administration of the these programs is fully commingled with administration of the overall ASRS, separate budgets were not approved for each program. The amounts shown in the actual column for fiscal year 2002 and 2001 represent only those specifically assigned to the LTD Program.

## SCHEDULES OF CASH RECEIPTS AND CASH DISBURSEMENTS YEARS ENDED JUNE 30, 2002 AND 2001

		2002		2001
CASH BALANCE, beginning of year	\$	74,586,646	\$ 8	8,672,950
RECEIPTS:				
Member contributions		167,728,882	16	5,670,329
Employer contributions		167,728,883	16	5,670,413
Purchase of back service (membership reimbursements)		49,365,487	3	7,687,091
Transfers from other retirement systems		1,467,433		1,847,846
Short-term securities matured and sold	:	5,537,414,425	6,55	9,662,051
Investments matured and sold	1:	5,341,083,843	22,04	4,658,528
Real estate sold		182,273,996		576,978
Mortgage principal payments and sales		6,017,850		6,810,859
Building revenue		8,324,163		7,323,625
Securities lending program		43,767,682	9	0,440,699
Interest		319,925,871	30	3,427,840
Dividends		147,422,368	16	3,487,690
Miscellaneous		11,902,919	1	3,687,000
TOTAL RECEIPTS	2	1,984,423,802	29,56	0,950,949
DISBURSEMENTS:				
Retirement, disability and subsidy payments		1,054,965,770	89	5,481,651
Death benefits		14,077,910	1	4,133,500
Refunds to withdrawing members		42,765,105	9	8,535,274
Transfers to other retirement systems		8,616,818	1	0,156,958
Short-term investments purchased	(	5,030,899,498	6,48	4,040,041
Investment purchases	14	4,813,473,395	21,95	0,237,354
Securities lending program charges		36,335,573	8	2,015,342
Investment manager fees		17,407,241	2	0,543,096
Building expenses		7,212,663		4,914,732
Administrative expenses		18,504,866	1	2,168,828
Miscellaneous		1,739,661		2,810,477
TOTAL DISBURSEMENTS	22	2,045,998,500	29,57	5,037,253
CASH BALANCE, end of year	\$	13,011,948	\$ 7	4,586,646

## SCHEDULE OF PROFESSIONAL CONSULTANT FEES YEAR ENDED JUNE 30, 2002

Professional/Consultant	Nature of Service	Expenses
Mellon Bank Trust & Investments	Pension Payment Services	\$ 885,470
Capitol Systems Corp	Temporary Agency	750,450
Kelly Services Inc	Temporary Agency	307,626
Staffmark Inc	Temporary Agency	298,361
Comsys Information Technology	Consulting Services	133,232
Buck Consultants Inc	Actuary Services	97,273
Keane Inc	Consulting Services	81,159
Spherion Corporation	Temporary Agency	80,608
Watson Wyatt & Company	Actuary Services	74,368
SCB Computer Technology Inc	Temporary Agency	74,250
ICC International	Consulting Services	65,025
Randstad US	Temporary Agency	62,625
Charles W Whetstine	Legal Services	61,318
Deloitte & Touche	Audit Services	60,000
R B Balch & Associates	Temporary Agency	57,676
State Of Arizona	Miscellaneous Services	50,650
Glotel	Consulting Services	50,310
West Group Research	Consulting Surveys	36,065
Cost Effectiveness Measurement Inc	Pension Consultants	25,000
Greenbrier & Russell Inc	Consulting Services	11,408
Sheridan IT Resources LLC	Temporary Agency	11,154
Data Site Consortium Inc	Call Center Consulting	9,653
Periscope Holdings Inc	Consulting Services	4,875
Camp - Com	Microfische Services	3,285
Danelowitz & Associates	<b>Executive Salary Survey</b>	2,598
Achieve Global Inc	Phone Center Training	2,447
Goodmans Inc	Space Planning Services	1,909
Frontrange Solutions USA	Temporary Agency	1,266
Gabriel, Roeder, Smith & Company	Actuary Services	500
Catholic Community Services	<b>Deaf Transcription Services</b>	460
Freelance Interpreting Services	Sign Language Seminar	172
Pima County Superior Court	Miscellaneous Services	84_
Total		\$ 3,301,277

## SCHEDULE OF NET INVESTMENT INCOME EXPERIENCE BY MANAGER YEAR ENDED JUNE 30, 2002

The following chart will serve to show the amount of investment income produced during the year by each of the investment managers.

Manager/Fund	Dividends, Interest and Other	Market Appreciation (Depreciation)	Management Fees	Net Investment Income Produced
ASRS-Internal	\$ 234,016,775	\$ (748,820,151)		\$ (514,803,376)
Axe-Houghton Domestic/Byram	2,181,117	11,711,510	\$ 288,755	13,603,872
Axe-Houghton International/Bank of New York	17,787,848	(110,758,322)	798,947	(93,769,421)
Bank of Ireland International	16,495,613	(67,817,212)	1,208,140	(52,529,739)
Bank One	6,200,113	(3,986,474)	228,191	1,985,448
Barclays Global Investors (BGI)-Core	11,919	(273,833,980)	279,324	(274,101,385)
BGI-International	2,006	(23,625,789)	195,719	(23,819,502)
BGI- Tactical		(365,650,434)	2,232,073	(367,882,507)
Blackrock	46,892,096	18,391,016	1,260,908	64,022,204
Brandes International	19,215,059	(59,911,483)	2,837,437	(43,533,861)
Brandywine	1,273,569	(1,658,871)	336,115	(721,417)
Capital Guardian International	11,904,475	(78,541,295)	2,853,751	(69,490,571)
Columbia Mgmt Co.	290,368	(30,893,091)	597,713	(31,200,436)
Cash Management	7,044,702	(9,995,862)		(2,951,160)
Dimensional Fund	2,997,108	7,191,166	573,206	9,615,068
Forstmann-Leff Assoc		562,746		562,746
Franklin Portfolio		3,821,092		3,821,092
Frontier Capital		777,770		777,770
J P Morgan	45,156,971	(249,095,269)	1,785,014	(205,723,312)
Mellon Domestic	20,904,020	(241,368,154)	1,689,646	(222,153,780)
State Street	154,203	(14,771,945)	91,967	(14,709,709)
Valley Ventures (Note 12)	16	(5,974)		(5,958)
Wellington Mgmt Co		1,349,333		1,349,333
Western Asset Mgmt Co	41,475,781	8,535,523	748,047	49,263,257
TOTAL	\$ 474,003,759	\$ (2,228,394,150)	\$ 18,004,953	\$ (1,772,395,344)

NOTE: Not included above are non investment interest, fees and other items which are netted against income.

For Fiscal Year 2001-2002 the total rate of return was -8.20 percent, the yield on cost will be provided in the fiscal year 2002 actuarial evaluation. The net effective yield was 1.77 percent.

## SCHEDULE OF TOTAL INVESTMENT EXPENSES BY MANAGER YEAR ENDED JUNE 30, 2002

Manager/Fund	Management Fees	Real Estate	Security Loan Program	Total Investment Expenses
ASRS-Internal				
Axe-Houghton Domestic/Byram	\$288,755			\$288,755
Axe-Houghton International/Bank of New York	798,947			798,947
Bank of Ireland International	1,208,140			1,208,140
Bank One	228,191	\$7,212,663		7,440,854
BGI-Core	279,324			279,324
BGI-International	195,719			195,719
BGI- Tactical	2,232,073			2,232,073
Blackrock	1,260,908			1,260,908
Brandes International	2,837,437			2,837,437
Brandywine	336,115			336,115
Capital Guardian International	2,853,751			2,853,751
Columbia Mgmt Company	597,713			597,713
Cash Management			\$36,335,573	36,335,573
Dimensional Fund	573,206			573,206
J P Morgan	1,785,014			1,785,014
Mellon Domestic	1,689,646			1,689,646
State Street	91,967			91,967
Western Asset Mgmt Co	748,047			748,047
Total	\$18,004,953	\$7,212,663	\$36,335,573	\$61,553,189

### **ARIZONA STATE RETIREMENT**

## SCHEDULE OF INVESTMENT MANAGER EXPENSES YEARS ENDED JUNE 30, 2002 AND 2001

	2002	2001
Axe-Houghton Associates	\$ 463,889	\$ 1,105,594
Bank Of Ireland Asset Management	1,208,140	1,848,148
Bank Of New York Company	399,127	
Bank One AZ N.A. Invest Management	228,191	294,353
Barclays Global Investors	2,707,116	3,169,636
Blackrock Financial Management	1,260,908	1,145,662
Brandes Investment Partners	2,837,437	3,131,638
Brandywine Asset Management	336,115	726,958
Byram Capital Management	224,686	
Capital Guardian Trust Co	2,853,751	2,889,267
Columbia Mgmt Company	597,713	
Conseco Capital Management		290,076
Dimensional Fund Advisors	573,206	480,753
Duff & Phelps Investment		12,081
J.P. Morgan Investment Management	1,785,014	2,462,046
Mellon Capital Mgmt Corp.	83,035	83,088
Mellon Equity Associates	1,606,611	1,866,892
State Street Bank And Trust	91,967	92,454
Western Asset Management	748,047	944,450
Total Money Managers	\$ 18,004,953	\$ 20,543,096

### **INVESTMENT PORTFOLIO SECTION**



## COMPREHENSIVE ANNUAL FINANCIAL REPORT INDEX – INVESTMENT SECTION

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# INVESTMENT REPORT BY PAUL MATSON, CHIEF INVESTMENT OFFICER, AND KARL POLEN, INVESTMENT REVIEW BOARD COMMITTEE CHAIRMAN

#### **Economic Climate**

The fragile U.S. economy suffered a severe setback following the World Trade Center and Pentagon tragedies. Third quarter 2001 GDP contracted at an annual rate of 1.3 percent, its worst performance in more than a decade. The unemployment rate rose to 4.9 percent in the third quarter. A net of 265,000 jobs were lost during the quarter with layoffs in September reaching a ten-year high. The Federal Reserve cut interest rates twice in the third quarter, including an emergency half-point ease after the attacks of September 11 in the attempt to ward off a recession and shore up investor and consumer confidence. The federal funds rate ended the third quarter at 3 percent, its lowest level in seven years.

During the fourth quarter of 2001 the unemployment rate climbed to a six-year high of 5.8 percent, as employers cut a record 923,000 jobs during the fourth quarter. 2001 saw the largest single-year loss of jobs since 1982. The National Bureau of Economic Research reported that the economy sank into recession in March after 10 years of growth, the longest expansion on record. Fourth quarter GDP unexpectedly grew at a 1.7 percent annual rate, bucking many analysts' expectations of further economic declines. The Federal Reserve cut interest rates three times in the fourth quarter which reduced the federal funds rate to 1.75 percent, its lowest level in forty years. The Federal Reserve cut interest rates a record eleven times in calendar year 2001 for a total of 4.75 percent or 475 basis points.

In the first quarter 2002, GDP grew at a brisk annual rate of 5.0 percent, as businesses slowed inventory cuts and consumers continued to spend. The unemployment rate fell slightly to 5.7 percent due to an overall increase in jobs during March. Based on signs of stabilization in manufacturing and consumer sentiment, the Federal Reserve ended it rate-cutting campaign during it first meeting in 2002.

In the second quarter 2002, GDP growth slowed relative to the previous quarter, rising at an annual rate of 1.3 percent. The Federal Reserve held interest rates at 1.75 percent due to a loss of momentum in the economic recovery. The housing market remained resilient, as new home sales and mortgage applications increased at a record pace.

#### **Capital Markets**

The U.S. equity markets tumbled in the third quarter of 2001, engulfed by a wave of profit warnings and economic uncertainty. Large Cap stocks as measured by the S&P 500 Index, suffered the greatest quarterly loss since the market crash of 1987, posting a -14.7 percent return. The S&P 400 Index (MidCap) posted a return of -16.6 percent. Small Cap stocks as measured by the Russell 2000 Index, saw its worst quarter in eleven years posting a -20.8 percent return. The international equity market as measured by the MSCI EAFE (Net) Index, posted a loss for its eighth consecutive quarter at a -14.0 percent return. The U.S. fixed income market as measured by the Lehman Brothers Aggregate Index was up 4.6 percent in the third quarter, its largest gain in over seven years.

The U.S. equity market posted positive returns in the fourth quarter of 2001. Returns for the major U.S. stock indices were: 10.7 percent for the S&P 500 Index, 18 percent for the S&P 400 Index, and 21.1 percent for the Russell 2000 Index. The international equity market as measured by the MSCI EAFE (Net) Index also experienced positive performance in the fourth quarter, posting a 7.0 percent return. The U.S. fixed income market as measured by the Lehman Brothers Aggregate Index posted a 0.0 percent return.

The first quarter of 2002 saw a continuation of the worldwide positive equity returns. Returns posted for the U.S. equity market during this first quarter of 2002 were: 0.3 percent for the S&P 500 Index, 6.7 percent for the S&P MidCap Index, and 4.0 percent for the Russell 2000 Index. Returns posted for the international equity markets as measured by the MSCI EAFE (Net) Index were 0.5 percent. The U.S. fixed income market as measured by the Lehman Brothers Aggregate Index posted a 0.1 percent return.

The second quarter of 2002 saw a reversal of the worldwide positive equity returns as seen in the first quarter of 2002. Returns posted for the U.S. equity market during this second quarter were: -13.4 percent for the S&P 500 Index, -9.5 percent for the S&P MidCap Index and -18.3 percent for the Russell 2000 Index. Returns posted for the international equity markets as measured by the MSCI EAFE (Net) Index were -1.9 percent. The U.S. fixed income market as measured by the Lehman Brothers Aggregate Index posted a 3.7 percent return.

#### **ASRS Investment Results**

The ASRS acted on several occasions to adjust the asset allocation to remain within the allocation parameters established by the ASRS Board. The asset allocation policy adopted by the ASRS Board during the fourth quarter of 1999 (implemented January 1, 2000) of 30 percent U.S. fixed income, 53 percent U.S. equities, and 17 percent International equities allows the ASRS to prudently diversify investment risk exposure among various asset classes. The target mix reflects the need for the Fund to be well-positioned to generate a long-term annual return of at least the actuarial rate of 8 percent.

The ASRS Total Fund returned -8.2 percent in the fiscal year ending June 30, 2002.

#### **Performance Accounting/Computation Standards**

The ASRS investment performance rates of return are calculated on a total return basis, using time-weighted rates of return which are based upon market values. Performance is calculated on an accrual basis provided that the accrual information is available from the custodian or record-keeper. The rates of return are generated by asset class and include cash holdings.

#### **Investment Policies**

The ASRS adheres to all statutory requirements set forth by Arizona state law, which applies upper limits to the portions of the fund that may be invested in any single entity, international equities, or total equities. The ASRS has also established investment guidelines for its external investment managers and a complete set of policies, procedures, compliance requirements, and oversight of internal investment management to ensure that investment assets are prudently managed. Both internal and external audit procedures are in place. Oversight and direction responsibilities are ensconced with the Board.

#### **Investment Goals**

The ASRS adheres to the following five investment goals:

- 1. Retain safety as the principal consideration in the investment of the ASRS assets.
- 2. Achieve the actuarial investment return of 8 percent.
- 3. Maintain a minimum funded status of 100 percent.
- 4. Support excess earnings Permanent Benefit Increase (PBI) (formerly known as Cost or Living allowance or COLA).
- 5. Maintain a relatively stable contribution rate.

The ASRS is well positioned to achieve the above-listed investment goals.

### SCHEDULE OF INVESTMENTS YEAR ENDED JUNE 30, 2002

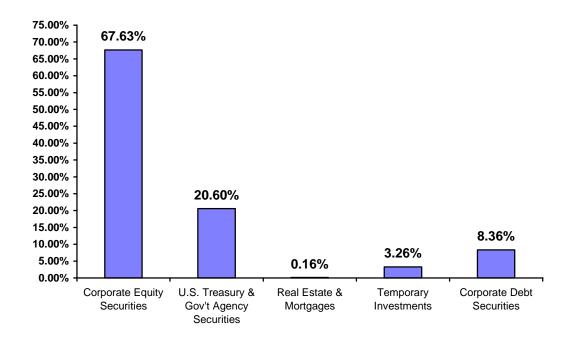
	Fair Value
Corporate Equity Securities	\$ 13,106,625,676
Fixed Income Securities:	
Corporate Debt Securities	1,620,530,315
U.S. Treasury & Government Agency Securities	3,992,595,176
Real Estate and Mortgages	30,212,500
Temporary Investments	 631,216,017
Total Fixed Income Securities	6,274,554,008
Net Payable on Transactions	 (193,505,814)
TOTAL PORTFOLIO	\$ 19,187,673,870

## PERFORMANCE ACCOUNTING/COMPUTATION STANDARDS YEAR ENDED JUNE 30, 2002

The ASRS investment performance rates of return are calculated on a total return basis, using time-weighted rates of return which are based upon market values. Performance is calculated on an accrual basis provided that the accrual information is available from the custodian or record-keeper. The rates of return are generated by asset class and include cash holdings.

## INVESTMENT PORTFOLIO COMPONENTS

(at fair value)



Note: A Detail Listing Of Investments Available Upon Request. Direct Your Request To The ASRS, 3300 N. Central Ave., Phoenix, AZ

# **EQUITY PORTFOLIO PROFILE** YEAR ENDED JUNE 30, 2002

Ten Largest Domestic Equity Holdings	Percent Of Domestic Equity Portfolio
Microsoft Corp Com	2.74%
General Elec Co Company	2.54%
Exxon Mobil Corp	2.39%
Citigroup Inc Company	2.09%
Wal Mart Stores Inc Company	1.92%
PFIZER Inc Company Stk USD 0.05	1.81%
John son & Johnson Company	1.44%
Intel Corp	1.19%
IBM Corp Company	1.18%
American Intl Group Inc Company	1.14%
Total	18.43%

Ten Largest Foreign Equity Holdings	Percent Of Foreign Equity Portfolio
Total FINA ELF EUR10	2.11%
Swiss Reinsurance CHF 0.1	1.61%
Nestle SA CHF 1	1.53%
E. ON AG NPV	1.52%
BAE Systems ORD GBP 0.025	1.52%
Vodafone Group PLC ORD USD 0.10	1.48%
BBVA EUR0.49	1.44%
Unilever ORD 1.4P	1.41%
Telecom Italia Spa ORD EUR 0.55	1.34%
ENI EUR1	1.32%
Total	15.29%

### **Distribution By Market Sector**

		ASRS Domestic	
Market Sector		Equity	S&P 500
Basic Materials		4.4%	3.4%
Consumer (cyclical)		10.3%	9.2%
Consumer (non-cyclical)		8.0%	9.4%
Consumer services		5.7%	5.2%
Commercial Services		2.1%	1.8%
Energy		6.4%	7.8%
Financial		23.8%	23.2%
Health Care		13.5%	12.6%
Industrials		3.3%	2.9%
Technology		15.5%	15.9%
Telecommunications		2.8%	4.1%
Transport		1.3%	0.9%
Utility		2.9%	3.8%
	Total	100.0%	100.0%

# **Summary Of Broker Commissions**

Investment Type Commissions

Domestic Equity \$5,018,648

Foreign Equity \$1,329,936

Note: A Detail Listing Of Investments Available Upon Request. Direct Your Request To The ASRS, 3300 N. Central Ave., Phoenix, AZ

# FIXED INCOME PORTFOLIO PROFILE YEAR ENDED JUNE 30, 2002

Ten Largest Fixed Income Holdings	Coupon	Maturity	Par Value	Market Value	Percent of Fixed Income Portfolio
U S Treasury Bonds	8.13%	8-15-19	78,415,000	100,433,934	2.05%
U S Treasury Bonds	10.38%	11-15-12	69,845,000	89,764,093	1.83%
U S Treasury Bonds	11.25%	2-15-15	48,000,000	74,640,000	1.52%
U S Treasury Bonds	12.75%	11-15-10	50,000,000	64,204,499	1.31%
Federal Home Loan Mtg Debs	7.00%	7-15-05	57,000,000	62,328,929	1.27%
US Treasury Notes	5.75%	11-15-05	58,000,000	61,902,238	1.26%
Federal Natl. Mtg Assn Debs	5.75%	2-15-08	53,500,000	56,405,585	1.15%
Federal Home Loan Mtg Corp	5.25%	1-15-06	52,000,000	54,158,521	1.11%
FNMA Pool #0323427	6.50%	11-1-28	47,260,294	48,423,423	0.99%
U S Treasury Bonds	12.00%	8-15-13	33,500,000	46,832,664	0.96%
					13.45%
				•	

Distribution by Coupon	Percent
0.00% - 6.5%	57.2 %
6.51% - 7.5%	24.5 %
7.51% - 9.0%	11.0 %
9.01% and over	7.3 %
	100.0 %
Duration	Percent
0 to 2 years	2.5 %
2 to 3 years	4.0 %
3 to 4 years	7.2 %
4 to 5 years	6.5 %
5 to 6 years	2.3 %
6 to 8 years	6.1 %
8 years and above	71.4 %
	100.0 %
Distribution by Issue	Percent
US Treasury & Government Agency	29.0 %
Mortgage Backed Securities	38.1 %
Corporates	32.9 %
	100.0 %

Note: A Detail Listing Of Investments Available Upon Request. Direct Your Request To The ASRS, 3300 N. Central Ave., Phoenix, AZ

Broker Name	No. of Shares	Commission Per Share	Total Dollar Amount of Trades	Commission
A B Watley Inc, New York	164,648	0.043	\$ 1,626,719	\$ 7,140
A G Edwards & Sons Inc, St. Louis	11,500	0.030	594,671	345
Abel Noser Corp, New York	454,400	0.015	14,250,468	6,816
ABN AMRO Chicago Corp, Chicago	127,387	0.030	3,997,092	3,822
ABN AMRO SECS LLC, New York	48,800	0.035	2,077,830	1,722
Adams Harkness & Hill Inc, Boston	114,525	0.050	1,210,432	5,726
Advest Co, Hartford	42,800	0.030	2,109,342	1,284
Ansbacher (Jersey) Limited, Jersey	47,200	0.050	752,054	2,360
Archipelago BCC Cap, Chicago	40,000	0.020	1,013,549	800
Arnhold & S Bleichroeder, New York	19,800	0.030	790,782	594
Autranet Inc, New York	16,000	0.040	51,840	640
B Trade Svcs LLC, New York	5,899,228	0.023	126,028,995	136,506
Baird, Robert W & Co Inc, Milwaukee	100,800	0.047	2,355,742	4,705
Bancboston Robertson Stephens, San Francisco	452,000	0.050	14,310,873	22,621
Bear Stearns & Co Inc, New York	20,237,531	0.022	518,577,363	438,115
Bear Stearns & Co Inc, New York	284,100	0.037	8,012,099	10,454
Bernstein Sanford C & Co, New York	357,200	0.036	16,944,105	12,914
Boston Institutional Svcs Inc, Boston	8,154,652	0.050	251,407,814	407,733
Bridge Trading Co, St. Louis	1,527,208	0.048	36,526,474	72,923
Broadcourt Cap Corp/Sub of MLPF&S, New York	81,400	0.050	1,499,419	4,070
Brooks Securities Inc, Cleveland	309,100	0.050	12,052,838	15,562
Buckingham Research Grp Inc, Brooklyn	21,100	0.030	723,955	633
Cantor Fitzgerald & Co Inc, New York	950,142	0.047	20,273,710	44,274
Capital Instl Investors, Dallas	4,560,644	0.055	103,617,483	252,038
Citation Group, New York	76,513	0.050	2,180,418	3,826
Correspondent Svcs Corp, New York	11,300	0.050	249,165	565
Credit Suisse First Boston Corp, New York	4,632,411	0.048	148,979,798	221,907
Cruttenden & Co, Santa Barbara	23,800	0.060	361,523	1,428
CSFB & Donaldson Lufkin, New York	341,847	0.031	2,850,024	10,438
Dain Rauscher Inc, Minn	517,400	0.045	13,499,936	23,425
Davidson (D A) & Co Inc, New York	15,700	0.050	135,085	785
Deutsche Banc Alex Brown Inc, New York	7,606,356	0.027	213,476,629	202,386
Dresdner Kleinwort Benson, New York	191,100	0.045	3,297,275	8,631
Execution Services Inc, New York	1,276,520	0.048	14,101,802	61,404
Factset Data Systems Inc, New York	2,196,295	0.057	47,120,250	124,340
Fidelity Cap Mkts (Div of NFSC), Boston	795,980	0.050	34,008,013	39,858
First Albany Corp, Albany	83,400	0.033	2,473,985	2,747
First Analysis Securities Corp, Chicago	138,100	0.030	6,674,353	4,143
First Clearing Corp, Richmond	70,200	0.060	1,295,562	4,212
First Tennessee Secs Co, Jersey City	123,160	0.053	1,626,223	6,526
First Union Cap Mkts, Charlotte	489,200	0.050	11,153,829	24,663
Fleet Sec (US Clearing), New York	109,000	0.030	6,372,365	3,270
Fox-Pitt Kelton Inc	144,700	0.030	3,999,427	4,341
Friedman Billings, Washington DC	7,700	0.050	113,539	385
Frost Sec, Dallas	7,800	0.050	227,031	390

TEAR ENDED JUNE 30, 2002				
Broker Name	No. of Shares	Commission Per Share	Total Dollar Amount of Trades	Commission
Gerard Klauer Mattison & Co	130,850	0.036	5,768,103	4,667
Goldman Sachs & Co, New York	2,643,769	0.047	70,554,163	124,799
Green Street Advisors	47,300	0.050	918,564	2,365
Heflin & Co LLC, New York	193,466	0.060	5,085,667	11,608
Hoenig & Co Inc, Jersey City	10	0.030	196	0
Instinet Corp, New York	1,700	0.051	29,977	87
Instinet Corp, New York	6,452,790	0.017	151,668,169	107,786
Investment Technology Groups, New York	9,164,221	0.019	152,519,487	171,867
ISI Group Inc, New York	268,706	0.030	5,868,412	8,061
Jackson Partners & Assoc Inc, New York	348,600	0.025	10,836,177	8,646
Janney Montgomery Scott, Philadelphia	24,200	0.060	749,706	1,452
Jefferies & Co Inc, New York	1,006,496	0.050	19,293,207	50,791
Johnson Rice & Co, New Orleans	89,400	0.030	2,990,485	2,682
Jones & Assoc, WestLake Village	2,087,061	0.047	45,346,248	98,069
Kalb Voorhis & Co LLC, New York	137,600	0.045	4,121,086	6,212
Keefe Bruyette & Woods Inc, New York	57,544	0.046	3,639,076	2,649
Keefe Bruyetter & Woods, Jersey City	176,000	0.050	5,145,826	8,800
King C L & Assoc, Albany	200,400	0.030	3,879,911	6,012
Knight Sec Broadcort, Jersey City	46,500	0.053	1,451,637	2,442
Labranche Finl Svcs Inc, New York	64,600	0.053	1,404,421	3,397
Lazard Freres & Co, New York	568,308	0.031	15,808,816	17,335
Legg Mason Wood Walker Inc, Baltimore	82,825	0.046	1,912,434	3,787
Lehman Bros Inc, New York	7,012,939	0.031	190,330,482	220,701
Liquidnet Inc, Brooklyn	645,679	0.020	11,639,363	12,914
Lynch Jones & Ryan Inc, Houston	6,560,565	0.050	149,693,633	327,015
McDonald	86,140	0.058	1,580,880	4,986
Merrill Lynch Pierce Fenner Smith Inc, New York	4,643,032	0.050	142,438,423	231,939
Merrill Lynch Prof. Clrg, Purchase	91,700	0.038	4,140,788	3,481
Montgomery Securities, San Francisco	4,540,201	0.036	149,640,691	165,701
Morgan J P Secs Inc, New York	1,800,500	0.050	62,497,369	89,285
Morgan Keegan & Co Inc	376,400	0.051	10,658,895	19,117
Morgan Stanley & Co Inc, New York	5,678,767	0.044	158,372,220	248,578
Morgan Stanley Intl, London	100	0.030	1,188	3
National Secs Corp, Seattle	41,700	0.060	935,530	2,502
Needham & Co, New York	174,400	0.030	5,323,422	5,232
Nutmeg Securities, Westport	300,400	0.060	3,615,298	18,024
Oppenheimer & Co Inc, New York	250,250	0.052	5,894,220	13,072
Paulsen, Dowling Secs, Boston	21,300	0.030	1,630,747	639
Piper Jaffray & Hopwood, Inc	199,200	0.050	7,831,174	9,960
Prudential Sec Inc, New York	501,563	0.041	20,289,652	20,528
Putnam Lovell, Brooklyn	5,800	0.050	69,719	290
Raymond James & Assoc Inc, St Petersburg	459,000	0.044	16,441,529	20,013
Robinson Humphrey	64,300	0.034	2,586,826	2,198
Sanders Morris Mundy, Houston	39,000	0.051	294,305	1,990
Sandler O'Neill & Partners, New York	48,700	0.050	1,537,083	2,435
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## SCHEDULE OF BROKER COMMISSIONS DOMESTIC EQUITY TRADES YEAR ENDED JUNE 30, 2002

Broker Name	No. of Shares	Commission Per Share	Total Dollar Amount of Trades	Commission
Schwab Charles & Co Inc, San Francisco	15,800	0.051	124,510	809
Scott Stringfellow Inc, Richmond	89,400	0.050	1,800,515	4,470
SEI Financial Services Co, New York	35,100	0.050	2,034,787	1,755
Seidler Cos Inc, Los Angeles	35,700	0.060	393,034	2,142
SG Cowen Secs Corp, New York	635,470	0.051	23,450,581	32,479
SK International Secs, New York	25,200	0.060	574,372	1,512
Smith Barney Inc, New York	4,431,916	0.040	132,669,637	177,355
Soundview Finl Group, Stanford	209,100	0.042	3,711,928	8,736
Spear Leeds & Kellogg, New York	7,586,939	0.016	146,470,783	119,197
Standard & Poors Sec Inc, New York	1,378,002	0.055	42,074,880	76,053
Standard & Poors Sec Inc, New York	59,900	0.030	1,084,871	1,797
State Street Brokerage Svcs, Boston	945,200	0.025	33,998,044	23,408
Stephens Inc, Little Rock	46,550	0.050	803,504	2,328
Sutro and Co Inc, San Francisco	27,700	0.060	1,000,267	1,662
Thomas & Weisel Inc, San Fran	302,125	0.050	7,084,020	15,090
Thomson Institutional Svcs Inc, New York	278,050	0.050	10,246,806	13,925
Troster Singer Stevens, Jersey City	787,640	0.052	11,381,779	40,574
UBS Painewebber Inc, Weehawken	89,900	0.041	4,357,985	3,721
Van Kasper & Co, San Francisco	160,900	0.054	2,145,675	8,658
Veritas Securities, New York	193,000	0.050	2,098,301	9,650
W R Hambrecht & Co LLC, San Francisco	22,800	0.050	199,367	1,140
Wachovia Sec Inc, Charlotte	677,525	0.049	23,806,535	33,112
Warburg Dillon Read LLC, New York	1,623,697	0.042	36,235,265	68,624
Wedbush Morgan Secs Inc, Los Angeles	47,200	0.050	1,126,052	2,360
Weeden & Co, New York	916,146	0.049	36,996,174	44,519
Westminster Res Asoc/Broadcort, New York	820,375	0.050	25,331,834	41,019
William Blair & Co, Chicago	174,300	0.042	2,646,609	7,327
Williams Cap Group LP, New York	2,200	0.060	36,272	132
Wilshire Associates, Santa Monica	150,200	0.050	8,794,082	7,510
TOTAL	141,982,664		\$3,674,115,555	\$ 5,018,648

Note: A Detail Listing Of Investments Available Upon Request. Direct Your Request To The ASRS, 3300 N. Central Ave., Phoenix, AZ

Broker Name	No. of Shares	Commission Per Share	Total Dollar Amount of Trades	Commission
ABN AMRO Aust, Sydney	27,200	0.016	\$ 168,225	\$422
ABN AMRO Bank NV, Chicago	119,600	0.104	6,210,793	12,397
ABN AMRO EQ Aust LTD, Sydney	16,650	0.023	259,543	390
ABN AMRO Hoare Govett, London	132,600	0.021	1,394,960	2,805
Arnhold & S Bleichroeder, New York	15,314	0.020	90,811	306
B Trade Svcs LLC, New York	4,100	0.015	90,807	62
Bank AM Bellevue, Zurich	6,500	0.073	237,160	475
Bank J Vontobel & Co LTD, Zurich	105	0.520	28,792	55
Bank Julius Baer, Frankfurt	800	0.059	23,553	47
Bank of America, London	24,725	0.068	845,670	1,688
Banque Paribas, London	67,500	0.039	1,321,493	2,652
Baring Securities LTD, Hong Kong	14,000	0.014	80,934	202
Bear Stearns & Co Inc, New York	117,205	0.027	2,022,973	3,112
BHF Sec Corp, New York	299,600	0.024	3,549,502	7,085
BNP Paribas Secs Svcs, London	74,700	0.032	1,194,248	2,384
BNP Paribas Securities Corp, New York	38,068	0.069	1,313,725	2,633
BNP Paribas, London	105,516	0.008	512,569	842
BNP Secs, New York	575,357	0.027	7,777,103	15,534
Broadcourt Cap Corp/Sub of MLPF&S, New York	197,600	0.050	4,552,744	9,880
Brockhouse and Cooper, Montreal	55,700	0.015	546,465	814
Burns Fry Hoare Govette Inc, New York	154,300	0.050	1,757,863	7,715
C S First Boston, Hong Kong	376,101	0.023	7,212,224	8,518
Cantor Fitzgerald & Co Inc, New York	7,000	0.050	186,739	350
Carnegie Intl, London	56,300	0.031	886,872	1,770
Cazenove & Co Overseas, Hong Kong	75,000	0.020	598,848	1,501
Cazenove & Co, London	1,331,401	0.006	7,917,799	8,560
Cazenove Inc, New York	3,700	0.071	176,388	264
Chevreux de Virieu SA, Paris	553,584	0.041	11,679,259	22,765
CI Nordic Sec AB, Stockholm	3,600	0.048	69,549	174
CIBC World Mkts Inc, Toronto (T079 WGDB)	107,900	0.038	1,192,123	4,136
CIBC World Mkts-A Unit of CIBC OPCO, New York	2,400	0.050	70,465	120
Commerzbank, London	796,370	0.002	1,081,202	1,621
Courtil LTD, Guernsey	20,250	0.012	166,566	249
Credit Lyonnais Sec (USA) Intl, New York	38,346	0.048	926,201	1,856

		Commission	Total Dollar Amount of	
Broker Name	No. of Shares	Per Share	Trades	Commission
Credit Lyonnais Secs (Asia), Hong Kong	231,500	0.009	793,925	1,989
Credit Lyonnais Secs (USA) Inc, New York	155,654	0.025	1,932,269	3,858
Credit Lyonnais Secs, Singapore	48,000	0.014	276,812	694
Credit Lyonnais, Hong Kong	308,000	0.005	537,221	1,425
Credit Suisse FB/Sec Lending, London	416,215	0.007	1,842,088	2,761
Credit Suisse First Boston (Europe)	367,137	0.032	6,809,001	11,649
Credit Suisse First Boston (Europe), London	612,113	0.027	9,235,817	16,284
Credit Suisse First Boston Corp, New York	426,239	0.039	16,967,700	16,539
Credit Suisse First Boston, Hong Kong	9,000	0.034	304,304	304
Credit Suisse First Boston, Tokyo	305,100	0.010	2,582,517	3,042
CS First Boston Equities, London	1,051,546	0.008	9,957,297	8,433
Daiwa Europe LTD, London	425,200	0.006	3,047,614	2,618
Daiwa Secs SB CAP Mkts Co LTD, Japan	49,635	0.022	1,008,645	1,100
Davy Stockbrokers, Dublin	37,100	0.023	425,882	842
Deutsche Banc Alex Brown Inc, New York	2,060,111	0.012	16,339,492	25,312
Deutsche Bank AG, New York	795,599	0.004	2,256,587	3,363
Deutsche Bank Cap Mkts (Asia), Tokyo	3,000	0.014	30,607	43
Deutsche Bank Sec Inc, New York	4,329,448	0.014	31,818,839	59,517
Deutsche Bank, Hong Kong	166,000	0.007	495,167	1,242
Deutsche Bank, Sydney	22,080	0.012	177,798	266
Deutsche Morgan Grenfell Aus LTD, London	56,536	0.048	1,353,761	2,699
Deutsche Morgan Grenfell Sec, Sydney	317,099	0.011	1,550,360	3,427
Deutsche Sec Australia LTD	62,540	0.004	152,334	228
Dresdner Kleinwort Benson, New York	196,879	0.070	7,644,357	13,782
Enskilda Secs AB, London	190,000	0.008	807,563	1,612
Exane, New York	85,325	0.024	1,036,669	2,069
Exane, Paris	23,233	0.072	794,242	1,684
First Pacific Stockbrokers, Melbourne	193,697	0.012	997,804	2,281
First Union Cap Mkts, Charlotte	16,900	0.050	134,350	845
G K GOH Stockbrokers PTE LTD, Singapore	32,000	0.017	183,907	550
Goldman Sachs (Asia) Finance, Hong Kong	245,700	0.016	1,567,279	3,928
Goldman Sachs & Co, New York	1,974,844	0.016	19,548,527	32,050
Goldman Sachs Intl, London	2,228,881	0.018	23,842,879	40,886
Goldman Sachs Japan LTD, Tokyo	477,370	0.008	5,602,761	4,025
Goldman Sachs, London	2,829,400	0.002	3,565,348	5,313
Goodbody Stockbrokers, Dublin	3,800	0.024	46,101	91
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Broker Name	No. of Shares	Commission Per Share	Total Dollar Amount of Trades	Commission
HG Asia Clearing Svcs LTD Kulala Lumper	105,000	0.011	463,522	1,155
Hoare Govett Secs LTD, London	760,211	0.015	7,815,317	11,358
Hong Kong & Shanghi Bank, London	33,400	0.013	281,604	420
HSBC Secs (Japan) LTD, Tokyo	289,813	0.006	1,865,489	1,879
HSBC Secs Inc, New York	664,400	0.043	14,439,616	28,899
Hypovereins Bank, New York	19,600	0.063	622,104	1,242
Indosuez WI Carr Secs Hong Kong LTD	46,800	0.022	1,373,444	1,009
ING Baring Secs Japan LTD, Tokyo	98,100	0.011	976,055	1,063
ING Barings Corp/Intl Equity, New York	1,599,000	0.015	9,766,344	24,355
Instinet Corp, London	1,800	0.046	55,156	83
Instinet Corp, New York	1,714,160	0.006	10,414,108	10,381
Investment Technology Groups, New York	6,200	0.015	208,160	94
ITG (Europe) LTD, Dublin	1,600	0.015	23,280	23
J B Were Son & Son LTD, Melbourne	457,640	0.013	2,818,296	5,744
J P Morgan Sec, Sydney	76,700	0.019	586,640	1,470
J P Morgan Secs, London	938,151	0.023	14,183,338	21,970
James Capel Asia LTD, Hong Kong	25,800	0.005	213,794	126
James Capel Inc, New York	3,978,300	0.013	31,012,828	50,420
James Capel Secs Inc, New York	102,714	0.064	3,316,551	6,620
James Capel, London	648,887	0.013	7,587,427	8,539
Jefferies & Co Inc, New York	6,200	0.010	31,805	62
Kleinwort Benson LTD, London	436,945	0.029	6,301,798	12,629
Kleinwort Benson Secs LTD, London	652,339	0.023	9,206,859	14,973
Lehman Bros Inc, New York	250,000	0.069	8,558,998	17,152
Lehman Bros Japan, Tokyo	144,526	0.027	3,304,919	3,842
Lehman Bros Secs Asia LTD, Hong Kong	44,293	0.016	837,303	701
Lehman Bros, London	4,063,409	0.008	22,617,052	31,637
M M Warburg Brinckmann, Hamburg	7,900	0.125	493,656	986
Macquarie Invt Mgmt LTD, Sydney	271,500	0.019	2,079,581	5,200
Merrill Lynch Far East LTD, Hong Kong	6,214,500	0.003	7,113,353	20,875
Merrill Lynch Intl (2L), London	4,577,956	0.010	26,388,720	44,798
Merrill Lynch Japan Inc, Japan	175,150	0.043	6,348,785	7,472
Merrill Lynch Pierce Fenner Smith Inc, New York	5,074,552	0.017	60,597,804	88,754
Merrill Lynch Pierce Fenner, Wilmington	677,668	0.015	6,587,758	9,937
Merrill Lynch, New York	160,496	0.041	4,998,482	6,513

Broker Name	No. of Shares	Commission Per Share	Total Dollar Amount of Trades	Commission
Merrill Lynch, Sydney	223,600	0.015	1,358,122	3,404
Merrion Capital Group, Dublin	27,700	0.027	303,789	750
Montgomery Securities, San Francisco	2,200	0.050	122,179	110
Morgan Grenfell Equities, London	1,969,785	0.012	12,969,532	23,548
Morgan Grenfell, London	2,663,727	0.015	27,925,090	41,161
Morgan J P Secs Inc, New York	199,083	0.017	3,067,582	3,443
Morgan Stanley & Co Inc, New York	1,842,079	0.030	31,936,799	55,099
Morgan Stanley Asia LTD, Hong Kong	254,300	0.012	1,132,995	3,005
Morgan Stanley Dean Witter Japan LTD, Japan	738,300	0.008	5,473,830	5,576
Morgan Stanley Intl, London	1,844,324	0.023	27,199,926	42,615
Morgan Stanley Secs, London	1,551,400	0.013	13,336,347	20,035
Morgan Stanley, Sydney	64,000	0.021	543,035	1,354
NCB Stockbroker, Dublin	31,500	0.021	341,884	676
Nesbitt Burns, Toronto (T009,NTDT)	170,000	0.038	2,657,331	6,510
Nikko Salomon Smith Barney LTD, Tokyo	508,100	0.009	3,925,459	4,771
Nomura International, Hong Kong	246,000	0.020	1,603,409	4,811
Nomura Secs Intl Inc, New York	146,200	0.005	1,207,815	800
Nomura Securities Co, Tokyo	502,192	0.010	4,552,767	5,013
Non-Broker Corp Actions	424,637	0.001	72,164	326
ODDO Secs, New York	290,000	0.024	3,469,530	6,937
ORD Minnett LTD (Inc IN UK), London	218,840	0.007	957,319	1,436
Potter Warburg Sec	153,926	0.020	1,231,663	3,087
RBC Dominion Secs Corp, New York	49,400	0.042	643,589	2,051
Salomon Bros Asia LTD, Hong Kong	556,300	0.007	1,555,537	3,890
Salomon Bros Inc, New York	3,154,594	0.012	23,406,114	36,338
Salomon Bros Intl LTD, London	1,806,875	0.013	16,198,349	22,962
Salomon Bros, Tokyo	10,700	0.068	574,440	728
Salomon Smith Barney Sec, Sydney	210,100	0.018	1,475,004	3,688
SBC Warburg Dillon Read Asia, Hong Kong	772,968	0.019	5,100,592	14,376
SBC Warburg, London	2,677,754	0.014	21,626,770	36,893
Scotia Mcleod (USA) Inc, New York	255,500	0.038	5,381,509	9,789
SG Sec (London) LTD, London	1,950	0.025	24,842	50
Smith Barney Inc, New York	255,200	0.050	4,244,199	12,822
Societe Generale Strauss, London	56,000	0.108	2,998,437	6,054
State Street Brokerage Svcs, Boston	900	0.050	49,905	45

# SCHEDULE OF BROKER COMMISSIONS FOREIGN EQUITY TRADES YEAR ENDED JUNE 30, 2002

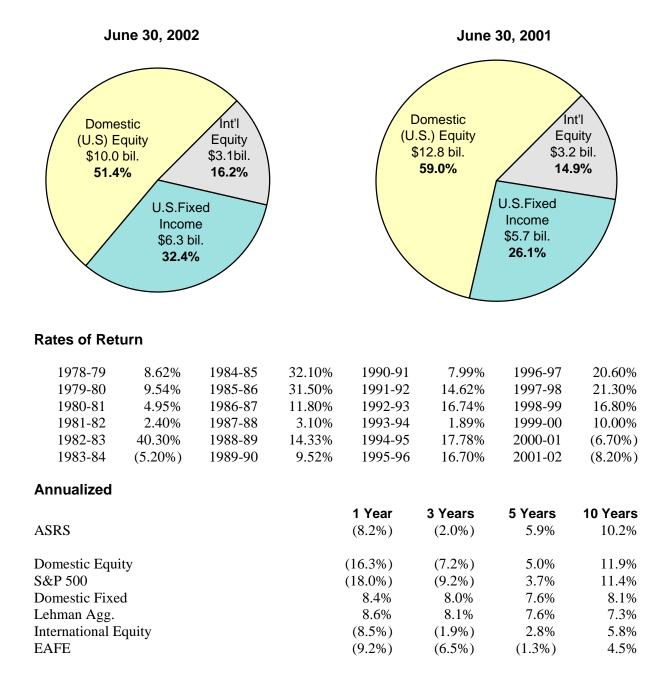
Broker Name	No. of Shares	Commission Per Share	Total Dollar Amount of Trades	Commission
Svenska International, London	5,700	0.068	195,005	389
UBS (Australia) LTD, Sydney	65,737	0.020	523,554	1,312
UBS AG, London	145,500	0.056	4,708,226	8,177
UBS Bunting Warburg Inc, Toronto (T015,BWIT)	86,900	0.049	700,544	4,238
UBS Equities, London	70,364	0.055	2,418,095	3,859
UBS Limited, Sydney	385,420	0.009	1,497,810	3,479
UBS Securities LTD, Tokyo	756,200	0.007	7,727,110	5,665
Union Bank Switzerland Secs, London	2,406,861	0.006	13,443,013	15,570
Warburg Dillon Read (Asia) LTD, London	189,000	0.029	2,702,627	5,394
Warburg Dillon Read LLC, New York	20,619,268	0.002	31,114,747	45,950
Warburg Secs, Hong Kong	646,631	0.014	8,111,602	9,234
TOTAL	\$109,755,398	:	\$817,112,125	\$1,329,936

Note: A Detail Listing Of Investments Available Upon Request. Direct Your Request To The ASRS, 3300 N. Central Ave., Phoenix, AZ

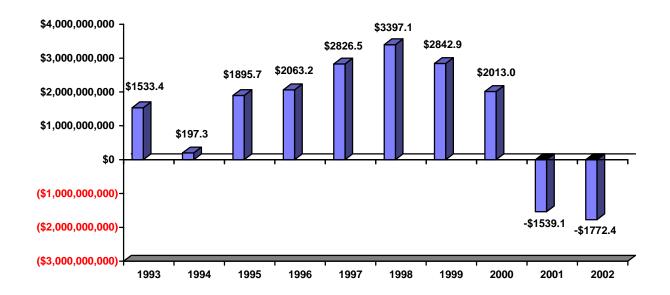
# INVESTMENT ALLOCATION YEAR ENDED JUNE 30, 2002

#### PERFORMANCE ACCOUNTING/COMPUTATION STANDARDS

The ASRS investment performance is calculated on a total return basis using time-weighted and dollar-weighted rates of return. Moreover, performance is calculated on an accrual basis provided that the accrual information is available from the custodian or record keeper. Performance is generated by asset class, including cash holdings, and aggregated for the total fund.



# NET INCOME FROM INVESTMENTS (In Millions) YEAR ENDED JUNE 30, 2002



Year Ended June 30, 2002 Ten Year Review of Investment Income (All figures rounded to nearest \$1,000)

Fiscal Year	Investment Income	Market Appreciation (Depreciation)	Investment Expenses	Net Income* from Investments
1992-93	\$ 497,409,000	\$ 1,052,531,000	\$ 16,555,000	\$ 1,533,385,000
1993-94	477,384,000	(265,397,000)	14,703,000	197,284,000
1994-95	509,614,000	1,401,325,000	15,257,000	1,895,682,000
1995-96	523,566,000	1,562,575,000	22,990,000	2,063,151,000
1996-97	566,750,000	2,282,015,000	22,264,000	2,826,501,000
1997-98	325,329,000	3,094,012,000	22,377,000	3,396,964,000
1998-99	394,337,000	2,474,779,000	26,215,000	2,842,901,000
1999-00	416,594,000	1,625,595,000	28,273,000	2,013,916,000
2000-01	527,329,000	(2,038,932,000)	27,525,000	(1,539,128,000)
2001-02	478,228,000	(2,228,394,000)	25,218,000	(1,768,077,000)

<sup>\*</sup>Net income has been restated to reflect unrealized gains and losses

# **ACTUARIAL SECTION**



# COMPREHENSIVE ANNUAL FINANCIAL REPORT INDEX – ACTUARIAL SECTION

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#### **Actuarial Certification**

#### ARIZONA STATE RETIREMENT PLAN

#### **Actuarial Certification Statement**

This is to certify that Watson Wyatt Worldwide has prepared an actuarial valuation of the Arizona State Retirement Plan (the "Plan") as of June 30, 2001.

Actuarial calculations have been made with respect to a total of 350,269 members, comprised of 191,252 active employees, 96,193 inactive members, and 58,920 retired members and beneficiaries, and 3,904 members on long term disability. In addition, there are 912 System retirees receiving ad hoc benefits from Plan assets.

The actuarial calculations establish a total benefit cost of 7.72 percent of the annual compensation of employees. The total normal cost rate is 11.75 percent of compensation, and the required amortization payment determined in accordance with Section 38-737 is -4.03 percent compensation.

The actuarial costs of factors as of June 30, 2001 are as follows:

I.	Acti	uaria	lacci	rued liabilities				
	A. Liabilities due to members' benefits							
		1.	Act	tive members				
			a.	Retirement benefits	\$8,424,685,300			
			b.	Health Insurance				
				premium supplement	822,162,500			
			c.	Disability deferred				
				retirement benefits	140,782,300			
			d.	Pre-retirement death				
				benefits	241,221,027			
			e.	Withdrawal benefits	351,261,840			
			f.	Total active members		\$9,980,112,967		
		2.		ctive members		698,838,565		
		3.		ired members and benefic		7,674,814,500		
		4.		abled members (deferred		210,715,400		
		5.		nefit increases for other-th		12,464,700		
	_	6.		al present value of benefit			\$18,576,946,132	
	В.			iscellaneous liabilities and	reserves		0	
	C.			for future PBI COLA's			1,691,568,312	
	D.			tuarial accrued liability				\$20,268,514,444
II.				ie of assets				\$22,855,143,539
III.				uarial accrued liability				
** *	`	n I -		,	111 1111			(\$2,586,629,095)
IV.				s of unfunded actuarial acc	crued liability		(0.5 < 15 + 0 < 0)	
17	,			38-737)			(\$256,174,962)	
V.				for the year	7 . T. T.		747,218,041	Φ401 042 0 <del>7</del> 0
VI.				ations for the year (Item IV				\$491,043,079
VII.				payroll (projected to 200)				\$6,356,698,800
VIII.				ition for fiscal years 2001/	2002 and 2002/2003	401 ( ) A	401 (1) 4	Tr. 4.1
				ge of covered payroll		401 (a) Account	401 (h) Account	Total
	A. D			ee portion		2.00%	0.00%	2.00%
	В. С.	Em Tot		er portion		1.94% 2.04%	0.06%	2.00% 4.00%
	C.	101	al			3.94%	0.06%	4.00%

The assumptions applied in the actuarial valuation were adopted November 15, 1996 by board action, to be effective for the valuations on and after June 30, 1996. These assumptions are as follows:

1. Investment yield – 8 percent per annum.

# 2. Salary increases

Years of	Merit	<b>Total Salary</b>
Service	Component	Increase
1	5.00%	9.50%
2	4.00	8.50
3	2.50	7.00
4	1.80	6.30
5	1.40	5.90
6	1.25	5.75
7	1.00	5.50
8	0.80	5.30
9	0.75	5.25
10	0.50	5.00
11 to 19	0.25	4.75
20 or more	0.00	4.50

# 3. Rates of disability

Age	Males	Females
22	0.08%	0.10%
32	0.11	0.16
42	0.20	0.31
52	0.66	0.73
62	1.67	1.25

# 4. Rates of withdrawal – Sample ages and years of service

Years of Service Male Members						
1	2	5	8	10+		
33.24%	25.31%	12.68%	6.60%	11.04%		
18.87	14.03	8.76	4.80	4.67		
16.93	9.82	6.24	3.80	2.01		
16.18	8.54	4.43	3.10	1.38		
19.05	10.18	3.73	2.50	1.10		
	33.24% 18.87 16.93 16.18	1 2 33.24% 25.31% 18.87 14.03 16.93 9.82 16.18 8.54	Male Members           1         2         5           33.24%         25.31%         12.68%           18.87         14.03         8.76           16.93         9.82         6.24           16.18         8.54         4.43	1     2     5     8       33.24%     25.31%     12.68%     6.60%       18.87     14.03     8.76     4.80       16.93     9.82     6.24     3.80       16.18     8.54     4.43     3.10		

# Years of Service Female Members

Age	1	2	5	8	10+
22	26.86%	23.58%	18.08%	12.31%	18.04%
32	18.51	15.39	9.69	7.30	6.47
42	16.44	11.05	6.20	4.14	2.08
52	14.31	9.09	5.05	2.68	1.52
62	14.57	9.71	4.65	2.41	0.83

5. Rates of retirement – Sample ages and years of service

			Years of Service			
Age	10-14	20	25	30	35+	
50	5.00%	5.00%	5.00%	10.00%	12.50%	
55	5.00	6.00	16.25	18.75	12.50	
60	9.00	26.25	25.00	30.00	30.00	
62	34.00	42.00	44.00	50.00	50.00	
65	55.00	55.00	60.00	60.00	60.00	
66 and above	55.00	60.00	60.00	60.00	60.00	

- 6. Mortality rates 1983 Group Annuity Mortality Table (with margins, set back one year for males and with no setback for females.
- 7. Mortality rates after disability Post disablement mortality rates are based on experience of other large public sector system, grading into post-retirement mortality rates at age 83.
- 8. Valuation assets Market value less five year phase-in of Excess (Shortfall) Investment income.
- 9. Funding method Projected unit-credit.

The actuarial calculations have been performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Retirement Plan and on the actuarial assumptions adopted by the Retirement Board.

All trend data schedules in the financial section and the supporting schedules in the actuarial section of ASRS's Comprehensive Annual Financial Report were prepared by ASRS.

W. Michael Carter, FSA, MAAA, EA, Senior Consultant

January 4, 2002

Retirement Board Arizona State Retirement System 3300 North Central Avenue 14<sup>th</sup> Floor Phoenix, Arizona 85012

Dear Retirement Board Members:

## Subject: Actuarial Valuation as of June 30, 2001

We certify that the information contained in the 2001 actuarial valuation report is accurate and fairly presents the actuarial position of the Arizona State Retirement Plan (the Plan) as of June 30, 2001.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the results presented comply with the requirements of the Arizona Statues and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned actuary is an independent actuary. He is an Enrolled Actuary and a Member of the American Academy of Actuaries, and is experienced in performing valuations for large public retirement systems.

#### Actuarial valuations

The primary purpose of the valuation report is to determine the required employee and employer contribution rates, to describe the current financial condition of the Plan, and to analyze changes in the Plan's condition. In addition, the report provides information required by the ASRS in connection with Governmental Accounting Standards Board Statement No. 25 (GASB No. 25), and it provides various summaries of the data.

Valuations are prepared annually, as of June 30<sup>th</sup> of each year, the last day of the Plan's plan year and the ASRS's fiscal year.

## Financing objectives

The member contribution rate and the employer contribution rate are calculated by the actuarial valuation. The calculated rates are applicable for the two plan years beginning July 1 of the calendar year that begins after the valuation date of even numbered years. The state and the employer contributions, when combined with the contributions made by members, are intended to provide for the normal cost and to amortize the Unfunded Actuarial Accrued Liability (UAAL). The rate that will be contributed for the fiscal year beginning July 1, 2002 was determined by the 2000 valuation and is 2.00% of pay.

# Progress toward realization of financing objectives

The actual contribution rate of the fiscal years 2001/2002 and 2002/2003 is 2.00% of compensation as determined by the 2000 valuation. Based on this actuarial valuation as of June 30, 2001, the hypothetical matching employee and employer contribution rates would be 3.86% for the fiscal year 2002/2003. This rate does not include the contribution to the LTD program. This hypothetical rate would have provided for the normal cost and would have amortized the UAAL over the required 16 years from June 30, 2001. Employees and employers contributed the recommended rate for the 2000/2001 fiscal year and are contributing the recommended rate for the 2001/2002 fiscal year. It is expected that they will continue to contribute the recommended rates as determined by the actuarial valuations. Therefore, all financing objectives are being realized.

Section 38-737 specifies that the unfunded actuarial accrued liability is amortized over a rolling 30-year period. This change is being phased-in by increasing the funding period for every even year valuation by 2 years. The amortization period for the 2001 valuation is 16 years and the amortization period for 2002 valuation will be 17 years. Beginning with the 2014 valuation the amortization period will be 30 years and will remain at that level.

## Benefit provisions

The 2001 legislature enacted several benefit enhancements to the ASRS statutes. These enhancements included the following items:

- Health Insurance Premium Benefit Increase: Increases the health insurance premium benefit for eligible members as follows:
  - ❖ Medicare eligible member with member only coverage form \$65 to \$100
  - ❖ Non-Medicare eligible member with member only coverage from \$95 to \$150
  - ❖ Member and dependent are both non-Medicare eligible with family coverage from \$175 to \$260
  - ❖ Member and dependent are both Medicare eligible with family coverage from \$115 to \$170
  - ❖ Member is Medicare eligible and beneficiary is non-Medicare eligible with family coverage from \$145 to \$215
  - ❖ Member is non-Medicare eligible and dependent is Medicare eligible with family coverage from \$145 to \$215

• Graded Multiplier: The benefit multiplier was changed from a flat 2.1% to a graded multiplier which increases with service as follows:

00.00 to 19.99 Years of Service 2.10% 20.00 to 24.99 Years of Service 2.15% 25.00 to 29.99 Years of Service 2.20% 30.00 or More Years of Service 2.30%

- Employer Option Service Purchase Incentive: Permits an employer to offer a member who is eligible to retire under the Rule of 80 a three year contract that if completed would provide the member an additional three years of service and an option to purchase an additional three years of service. The ASRS receives no contributions during this contract.
- Permanent Benefit Increase Enhancement: Provides that interest at a rate of 8% be credited on the funds held in reserve for the permanent benefit increase (PBI). This interest will be used to fund an additional benefit. A member who has at least 10 years of service and who has been retired for at least five years would be eligible for an incremental increase for each five years of retirement.
- Rural Health Insurance Premium Benefit: In addition to the premium benefit paid to ASRS retired and disabled members, the ASRS provides a temporary benefit in the following amounts to retired and disabled members who live in areas of the state not served by the managed care program (HMO) and who have 10 years of credited service:

Medicare eligible member: \$170 per month Non-Medicare eligible member: \$300 per month Non-Medicare family coverage: \$600 per month Medicare eligible family coverage: \$350 per month

Combination Medicare

and non-Medicare eligible: \$470 per month

This benefit will cease in 2003.

 Partial Lump Sum Option: Allows a retiring member to receive a portion of his benefit in a lump sum.

See Table 18 of this report for more details on the benefit provisions.

#### Assumptions and methods

The actuarial assumptions were adopted on November 15, 1996 by the Board, to be effective as of June 30, 1996, as recommended by the actuary. Further detail on the assumptions and methods may be found in Table 19 of this report and in the Experience Study report dated November 15, 1996. The assumptions are internally consistent and are reasonably based on the actual experience of the Plan. These assumptions are in full compliance with all parameters established by GASB No. 25.

#### Data

Member data for retired, active and inactive participants was supplied as of June 30, 2001, by the ASRS staff. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. Asset information was supplied by the ASRS staff.

# Trend Data and Supporting Schedules

All trend data schedules in the financial section of the ASRS's Comprehensive Annual Financial Report (CAFR) were prepared by the ASRS. Additionally, all supporting schedules in the actuarial section of the ASRS CAFR were prepared by the ASRS.

We look forward to discussing this report with you at your convenience.

Sincerely,

Gabriel, Roeder, Smith & Company

W. Michael Carter, FSA, MAAA, EA

Lewis Word

Senior Consultant

Lewis Ward

Consultant

# ARIZONA STATE RETIREMENT PLAN

### **GENERAL ACTUARIAL INFORMATION**

The following charts will serve to indicate some of the more important statistics regarding the retirement program; each chart will identify each membership category separately where possible.

As of June 30, 2001

	State		Political Subdivision	
Non-Retired Members	Employees	Teachers	Employees	Total
Number of members (active)	44,261	59,153	87,838	191,252
Average age	44.0	43.5	43.4	43.0
Average years of service	8.2	10.4	6.8	8.2
Average annual salary	\$32,392	\$36,634	\$27,116	\$31,281

As of June 30, 2001

	State		Political Subdivision	
Retired Members	Employees	Teachers	Employees	Total
Number of retirees	14,836	20,049	21,184	56,069
Average age	65.7	64.1	65.5	65.0
Average monthly benefit	\$1,075	\$1,482	\$920	\$1,162
Average years of service	16.7	22.0	15.6	18.2

Of all plan and system retirees at July 1, 2001, 45.1 percent received annuities of more than \$1,000 per month. Less than 1.8 percent receives less than 100 per month. All other annuity ranges were between 4.9 and 7.1 percent. Of the retirees 12.4 percent are less than 60 years old and 68.0 percent are less than 75.

One of the most critical factors bearing on retirement costs is that of changes in the average salary level of active participants. The following chart will show, for five fiscal years (fiscal year ending June 30, 2001), the average salary level for state employees, for teachers, and for political subdivision employees other than teachers, and the average for all groups combined.

	1996-97	1997-98	1998-99	1999-00	2000-01
State employees	\$ 27,463	\$ 29,027	\$30,316	\$31,380	\$32,392
Teachers	33,136	33,995	33,970	35,356	36,634
Political subdivision employees	23,699	24,050	25,257	25,924	27,116
All groups	27,695	28,457	29,329	30,163	31,281

#### FINANCING OBJECTIVE

The financing objective of the Arizona State Retirement System is to maintain a funding ratio of 100 percent, as measured by the ratio of Retirement Plan actuarial assets to actuarial liabilities. As of June 30, 2001, the date of the most recent actuarial valuation, this funding level is 112.8 percent. When the present actuarial asset of \$22,855 billion is compared to the actuarial liabilities, the asset side of the actuarial balance sheet exceeds the amount of actuarial liabilities by the amount of \$2,586.6 billion.

A statutory change effective in 1998 requires that an actuarial valuation be performed only following evennumbered years, rather than annually. This biannual valuation recommends contribution rates for a two-year period. The contribution rates recommended in the valuation for the fiscal year ended June 30, 2000 will remain in effect through the fiscal year that ends June 30, 2003. These rates are described below.

## **Normal Costs and Required Contribution Rates**

The Plan's normal cost for fiscal year (FY) 2000-2002 and for FY 2000-2001 is 10.72 percent. The normal cost represents the present value cost, expressed as a percentage of pay, of the current level of benefits provided by the Plan. The Plan has a negative unfunded actuarial accrued liability (an actuarial surplus), which is treated as a credit on the Plan's required contribution rate. Because of the actuarial surplus, the required contribution rate is lower than the normal cost. If the actuarial value of assets and liabilities was equal, the required contribution rate would be the same as the normal cost. Because assets exceed liabilities, the required contribution rate is lower than the normal cost.

Pursuant to Arizona statute, the ASRS consulting actuary recommends a contribution rate that will result in a funding level of 100 percent at the end of the actuarial funding period. The actual contribution rate (including long-term disability (LTD) for FY 2000-01 was 2.66 percent of pay (2.17 percent pension and health insurance, 0.49 percent LTD). In fiscal year 2001-02 the rate is 2.49 percent of pay (2.00 percent pension and health insurance, 0.49 percent LTD). This rate was determined by the 2000 valuation. Both employee and employer members contribute this rate.

Components of the normal cost are as follows:

Retirement benefits	9.62%
Health insurance premium supplement	0.72
Survivor benefits	0.32
Withdrawals	0.79
Long-term disability benefit	<u>0.30</u>
Total, normal cost	11.75
Amortization of the UAAL	<u>(5.88)</u>
Required contribution rate for FY 2000/1999	3.94
Shared by employee and employer	
Required contribution rate for FY 2001/2002	3.94%
Shared by employee and employer	2.0%
Required matching contribution rate	<u>1.97%</u>

(Due to a minimum contribution rate established by ASRS statutes, the actual contribution rate will be 2.00%)

#### **Asset Valuation**

The methodology used by the ASRS consulting actuary to value assets phases in gains and losses over a five-year period. This results in a "smoothing" effect, minimizing year-to-year volatility in the contribution rate. By deferring some investment gains, the asset valuation methodology also results in some unrealized investment gains.

## **Long-Term Disability Benefit**

In addition to pension, health insurance, and survivor benefits, the ASRS also offers a long-term disability benefit. The financing objective of the long-term disability (LTD) program is to achieve a funding level of 100 percent by the end of 2010.

Effective October 1, 1995, to comply with Internal Revenue Code requirements, liabilities associated with the long-term disability benefit were separated from the Plan. Because no assets were transferred to the new LTD fund, the required contribution rate contains two components: 1) to fund current liabilities, and 2) to amortize the liabilities transferred from the Plan in 1995.

The LTD contribution rate for fiscal year 2002 and fiscal year 2001 is 1.00 percent, shared equally by employees and employers. Of this amount, 0.66 percent funds current liabilities, and 0.32 percent amortizes the liabilities transferred from the Plan in 1995. The program's liabilities are scheduled to be amortized each twelve-month period through fiscal year 2010.

As of June 30, 2002 and June 30, 2001, LTD assets were \$94.0, \$93.1 respectively. Benefit payments were 54.8 for fiscal year 2002 and 45.8 for fiscal year 2001.

•

# SUMMARY OF THE BENEFIT PROVISIONS OF THE ARIZONA STATE RETIREMENT PLAN – EXCERPT FROM TABLE 18 ACTUARIAL VALUATION, JUNE 30, 2001

The Plan makes provision for the retirement, disability, and death and survivor benefits to all employees of the State, instrumentalities of the State and certain political subdivisions. The major provisions of the Plan may be summarized as follows:

#### A. RETIREMENT BENEFITS

#### 1. Normal Retirement Date (the earliest of the following)

- (a) an employee's 65th birthday,
- (b) an employee's 62nd birthday and completion of at least 10 years of credited service, or
- (c) the first day immediately following the day that the sum of an employee's age and his years of total credited service equal eighty.

# 2. Monthly Life Annuity

The product of the participant's best 36-month average compensation (in last 120 months) multiplied by his or her years of total credited service multiplied by the benefit multiplier.

## 3. Normal Retirement Benefits

The product of a benefit multiplier (as determined in table)
and the participant's best 36-month average compensation
(in last 120 months) multiplied by his or her years of total
credited service.

**Note:** Members hired after the effective date of the adoption of the graded multiplier have a maximum benefit equal to 80% of their 36-month final average earnings.

Years of Credited	Benefit
Service	Multiplier
Less than 20	2.10%
20.0 to 24.99	2.15%
25.0 to 29.99	2.20%
30 or more	2.30%

#### 4. Early Retirement

Age 50 with 5 or more years of credited service.

#### 5. Early Retirement Benefits

If not eligible for normal retirement and at least age 50 with 5 years of total credited service, normal retirement benefit earned to the date of retirement, reduced according to the following table:

#### AGE AT DATE OF RETIREMENT

YEARS OF																
SERVICE	<b>50</b>	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
5 – 10	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	88%	91%	94%	97%	100%
10 - 25	44%	49%	54%	59%	64%	69%	74%	79%	84%	89%	94%	97%	100%	100%	100%	100%
25 or more	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	100%	100%	100%	100%	100%

Provided, however, that if the employee meets the Rule of 77 (but not the Rule of 80), the reduction will be 3 percent for each unit below 80.

# STATEMENT OF ACTUARIAL METHODS AND ASSUMPTIONS USED IN DETERMING COST EXCERPT FROM TABLE 19 ACTUARIAL VALUATION, JUNE 30, 2001

### 1983 Group Annuity Mortality Table

### **Rates of Mortality (Active)**

Age	Male Participants	Female Participants
20	.000365	.000189
25	.000444	.000253
30	.000572	.000342
35	.000785	.000476
40	.001128	.000665
45	.001932	.001010
50	.003513	.001647
55	.005660	.002541
60	.008384	.004241
65	.013868	.007064
70	.019296	.012385

#### 6. Normal Form of Benefit

Straight life annuity payable monthly with benefits commencing on the day following the date of termination of employment.

## 7. Optional Forms

- Joint and contingent annuity (with Pop-up) with either 100 percent, 66-2/3 percent or 50 percent of the reduced retirement income payable for the life of the contingent annuitant upon the death of the retiring participant,
- Period certain and life annuity with either five, ten, or fifteen years of payments guaranteed, or
- A social security leveling option combined with any of the other forms of payment.

#### 8. Minimum Benefit

The minimum monthly benefit payable to a retired member who is at least age 75 and who has 20 or more years of service is \$600.

#### B. DISABILITY BENEFITS (for disability after June 30, 1988)

#### 1. Long-Term Disability

Monthly benefit equal to two-thirds of monthly compensation, reduced by any social security disability or workers' compensation benefits, payable commencing six months after date of disability until the earlier of:

- Date of cessation of total disability, or
- Normal retirement date.

This benefit is paid by a separate LTD plan.

### 2. Disability Payments if Participant Remains Disabled Through Normal Retirement Date

Monthly benefit participant would have received if service had continued to normal retirement date assuming the participant's salary remained at the level it was at his or her date of disability, also provided that the amount of total credited service is limited to 25 years unless he or she had more than 25 years at date of disability.

3. The minimum monthly benefit payable to a disabled participant is \$50.00.

### C. DISABILITY BENEFITS (for disability before July 1, 1988)

### 1. Eligibility

Age 50 with 5 years of service.

### 2. Benefit Amount

A life annuity that can be provided by the employee's contribution account. Disability payments after normal or early retirement eligibility are reduced by the actuarial value of the disability payments made up to the date of normal or early retirement eligibility.

#### D. PRE-RETIREMENT DEATH BENEFITS

#### 1. Eligibility

Applicable if death occurs prior to retirement.

### 2. Benefit

Any one of the following, at the option of the beneficiary:

- (a) A lump sum equal to the sum of (i) and (ii):
  - (i) two times participant's contributions to the plan, with interest, and
  - (ii) the amount of the participant's employee and employer accounts, along with supplemental credits, if any, transferred from the ASRS to the Plan, with interest
- (b) If (a) is greater than \$5,000, the beneficiary may elect to receive a monthly income for five, ten, or fifteen years certain and life thereafter which is actuarially equivalent to the amount in (a).

# 3. Death of an Active Participant After 15 Years of Credited Service or After Eligibility for Early Retirement

Beneficiary receives a benefit in the form of a survivor annuity equal to the present value of the benefit that would have been payable to the beneficiary if the participant had retired on the date of his or her death and elected to receive an annuity payable in the form of joint and 100 percent survivor with the beneficiary named as the joint pensioner.

#### **E. VESTING OF BENEFITS**

- 1. **Vesting** A participant is fully vested in his or her accrued benefit.
- 2. **Benefits upon Vesting** A fully vested participant is entitled to either:
  - (a) return of contributions with interest, or
  - (b) the retirement benefit payable at normal retirement earned to the date of participant's termination.

The enhanced refund option allows employees who terminate prior to eligibility for retirement to receive a refund of their employee contributions with interest. In addition if the employee has at least five years of service, the employee is also entitled to a share of the employer contributions with interest. The share is 50% for employees with five years of service and increases 10% for each additional year of service up to a maximum of 100% for ten or more years of service.

#### F. RETIREE HEALTH INSURANCE PREMIUM SUPPLEMENT

#### 1. Eligibility

Retirement or disability after 5 years of credited service and covered by an employer-sponsored group insurance program for which the retired or disabled member must pay part of the cost.

#### 2. Benefit

The benefit is payable only with respect to allowable health insurance premiums for which the participant is responsible. The maximum benefits for participants with 10 or more years of service are:

- (a) with respect to premiums paid for the retiree's own coverage:
  - -\$150 per month if the retiree is under age 65
  - -\$100 per month if the retiree is 65 or over
- (b) with respect to premiums paid for retirees with family coverage:
  - \$260 per month if the dependent is under age 65
  - \$170 per month if the dependent is 65 or over
  - \$215 per month if the member is over age 65 and the dependent is under age 65
  - \$215 per month if the member is under age 65 and the dependent is over age 65

For employees with five to nine years of service the benefits are the same dollar amounts as above multiplied by a vesting fraction equal to 10% for each completed year of service (i.e., 50% to 90%).

#### G. AUTOMATIC COST OF LIVING ADJUSTMENT BASED ON EXCESS INVESTMENT EARNINGS

### Permanent Benefit Increase (PBI)

Retirees at least age 55 who have been retired one year and LTD members are eligible for a COLA up to a maximum of a 4% increase. The COLA is paid from a reserve of "Excess Investment Earnings." If there are no "Excess Investment Earnings" in reserve then no COLA is paid.

#### Permanent Benefit Increases Enhancement

Provides retired members with at least ten years of service who have been retired five or more years an additional benefit. For each complete 5-year period the member has been retired an incremental benefit is paid if monies to pay the benefit are available. This benefit is funded by an interest credit of 8.0% of the reserve for future PBIs.

#### H. EMPLOYEE AND EMPLOYER CONTRIBUTIONS

The contribution rate for the biennium beginning on July 1<sup>st</sup> of the odd numbered plan year is based on the results of the actuarial valuation as of the last day of the even numbered plan year preceding the biennium. Participants' contribution rate is equal to the required employer contribution rate. For the biennium July 1, 1999- June 30, 2001, the required contribution rate is 2.17%. For the biennium July 2001- June 30, 2003, the required contribution rate is 2.00%

# I. LEGISLATED PLAN CHANGES ENACTED BY THE 1989 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. PUC Funding Method

Beginning with the June 30, 1989 actuarial valuation, the total employee and employer contributions payable beginning July 1, 1990, shall be determined using the Projected Unit-Credit (PUC) funding method.

#### 2. \$12,000 Minimum Average Compensation for Current Retirees

Recalculation of the retirement benefit for all plan members retired before June 30, 1989, who had 10 years of credited service using a minimum average compensation of one thousand dollars per month.

### 3. **2.0 % Ad Hoc COLAs**

- Effective July 1, 1989, all members retired on or before June 30, 1988, shall receive a 2.0 percent permanent benefit increase to their December 31, 1988, base benefit.
- Effective July 1, 1990, all members retired on or before June 30, 1989, shall receive a 2.0 percent permanent benefit increase to their June 30, 1990, base benefit.

### 4. Early Retirement Window

During the period of May 15, 1989 through November 14, 1989, a member who is eligible for either Normal Retirement or Early Retirement with age plus credited service at least equal to 80, may retire and receive a benefit calculated using a 2.2 percent multiplier instead of 2.0 percent.

### 5. 3.0% Tax Equity Allowance

Retroactive to the later of January 1, 1989, or the date payments commence, each member retiring on or before September 14, 1989, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0 percent in his or her January 1, 1989, base benefit.

# J. LEGISLATED PLAN CHANGES ENACTED BY THE 1990 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Rule of 82

Effective May 1, 1990, the number of points (sum of member's age and years of service) required to be eligible for normal retirement shall be reduced from 85 to 82. Also, the early retirement reduction factor for employees with 77 or more points but less than 82 points shall be 3 percent for each point or fraction thereof less than 82.

#### 2. 3.0 percent Tax Equity Allowance

Each member who retires between September 15, 1989, and September 14, 1990, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0 percent in his or her base benefit, retroactive to the date of retirement.

### 3. Graded Vesting for Health Insurance Premium Supplement

The Health Insurance Premium Supplement is extended to those qualifying members with between five and nine years of service. The member will be eligible to receive 10 percent of the benefit for each completed year of service (i.e., 50 percent to 90 percent).

# K. LEGISLATED PLAN CHANGES ENACTED BY THE 1991 LEGISLATION OF THE STATE OF ARIZONA

#### 1. 3.0 percent Tax Equity Allowance

Each member who retires between September 15, 1990, and September 14, 1991, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0 percent in his or her base benefit, retroactive to the date of retirement.

#### 2. Recalculation of Retiree Benefits Using 2.0 percent Benefit Multiplier

Each retired member with at least 10 years of service who retired prior to June 30, 1985, shall have his or her benefit recomputed. The recomputed benefit shall be equal to 2 percent times final average earnings times credited service plus an additional \$2 for each year of service. The retired member will receive the larger of the recalculated benefit or his/her current benefit. This increase is effective October 1, 1991.

### 3. 2.3 percent Ad Hoc Increase

Effective July 1, 1991, all members retired on or before June 30, 1990, shall receive a 2.3 percent permanent benefit increase in their June 30, 1991, base benefit.

# 4. Rule of 80

Effective July 1, 1992, the number of points (sum of member's age and years of service) required to be eligible for normal retirement shall be reduced from 82 to 80. (For continuation purposes this legislation is not reflected until the 1993/94 fiscal year).

### 5. Pop-up Option

A pop-up option is added for retiring members who first participate in the Plan on or after December 31, 1991.

# L. LEGISLATED PLAN CHANGES ENACTED BY THE 1992 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. 3.0 percent Tax Equity Allowance

Each member who retired between September 15, 1991 and September 14, 1992, shall receive a tax equity benefit allowance consisting of a permanent increase of 3.0 percent in his or her base benefit, retroactive to the date of retirement.

#### 2. Minimum Retiree Benefit

Each retiree of the Arizona State Retirement Plan who is at least age 75 on December 31, 1992, and who had at least 10 years of service upon retirement from the plan shall be eligible for a minimum benefit. If the eligible retiree had at least 10 years of service but less than 15 years, his minimum benefit is \$350 a month. If the eligible retiree had at least 15 years of service but less than 20, his minimum benefit is \$500. If the eligible retiree had at least 20 years of service his minimum benefit is \$600. The minimum benefit shall be compared to the retiree's current benefit (including all ad hoc increases).

### 3. 5 percent Ad Hoc Increase

Effective November 1, 1992, all members retired on or before October 31, 1992, shall receive a 5 percent permanent benefit increase in their October 31, 1992 benefit.

#### 4. Forfeited Service Repurchase

Any present active member who has previously forfeited service has until December 31, 1994, to repurchase the forfeited service by paying the plan the employee and employer contributions (accumulated with interest) which would have been contributed during the members period of forfeited service.

#### 5. Repurchase of Service Due to Reduction in Force

Any present active member who was terminated prior to December 31, 1992 as a result of a required reduction in force may purchase the credited service for the following period of unemployment if the member had five or more years of service at the time of termination and resumed employment with a participating employer within two years of termination. The cost of the repurchase is the total of the employee and employer contribution (accumulated with interest) which would have been contributed during the member's period of unemployment.

## 6. Change in Section 38-781.05 Funding Method

Section 38-781.05 of the plan was amended so that the funding period for the plan would continue to be the period between the valuation and June 30, 2002 as long as the plan has a negative Unfunded Actuarial Accrued Liability. If the plan were to have a positive UAAL, then the old funding mechanism would apply.

# M. LEGISLATED PLAN CHANGES ENACTED BY THE 1993 LEGISLATURE OF THE STATE OF ARIZONA

No benefit changes were passed by the 1993 Legislature. However, the Legislature passed legislation to reduce the required contribution rate of 4.09 percent down to 3.14 percent.

# N. LEGISLATED PLAN CHANGES ENACTED BY THE 1994 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Minimum LTD Benefit

Each member on long-term disability will receive a minimum monthly benefit of \$50.

#### 2. Minimum Retiree Benefit

Each retiree of the Arizona State Retirement Plan who is at least age 75 and who had 20 or more years of service at retirement will receive a minimum monthly benefit of \$600.

# 3. Pop-up Benefit

Members who retired prior to January 1, 1992 and who elected a Joint and Survivor option shall receive a "Pop-up" in their retirement income if their beneficiary pre-deceases them.

#### 4. Excess Investment Earnings COLA

Retirees at least age 55 who have been retired at least one year and members on long-term disability are eligible to receive a cost-of-living adjustment equal to one-half the increase in CPI for the prior calendar year. The COLA will be paid from a reserve of Excess Investment Earnings. If there are no Excess Investment Earnings in reserve, no COLA will be granted.

#### 5. Change in Section 38-737 Funding Period

Section 38-737 was amended to change the funding period of the plan to a rolling 30-year period. The change is to be phased-in over the next 19 years. If the Plan should cease to be overfunded, the funding period would immediately go to 30 years.

# O. LEGISLATED PLAN CHANGES ENACTED BY THE 1995 LEGISLATURE OF THE STATE OF ARIZONA

### 1. Change in Maximum Increase Provided by Excess Investment Earnings COLA

The maximum COLA payable from Excess Investment Earnings was increased from 50 percent to 100 percent of the increase in the CPI.

## 2. Removal of LTD Benefit from the Plan

The Legislature established a new LTD program and removed the LTD benefit from the plan. Liabilities for current LTD recipients were transferred to the new LTD program effective October 1, 1995.

### 3. Creation of Separate Account for the Health Premium Supplement

The Health Premium Supplement benefit is to be separated into a 401(h) account. The assets and liabilities associated with the Health Premium Supplement will be accounted for separately.

# P. LEGISLATED PLAN CHANGES ENACTED BY THE 1996 LEGISLATURE OF THE STATE OF ARIZONA

1. No material changes.

# Q. LEGISLATED PLAN CHANGES ENACTED BY THE 1997 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Creation of Family Health Supplement

Allows unused portion of the Health Supplement of a member or dependent to be used to pay the other recipients' health insurance premium.

- 2. The calculation methodology for the Excess Investment Earnings COLA was modified.
- 3. The contribution rate will be determined on a biennial cycle beginning with the 1999/2000 fiscal year.

# R. LEGISLATED PLAN CHANGES ENACTED BY THE 1998 LEGISLATURE OF THE STATE OF ARIZONA

1. No material changes.

# S. LEGISLATED PLAN CHANGES ENACTED BY THE 1999 LEGISLATURE OF THE STATE OF ARIZONA

#### 1. Enhanced Refund Option

Employees who terminate prior to eligibility for retirement may elect to receive a refund of their employee contributions with interest. If the employee has at least five years of service, the employee is also entitled to a share of the employer contributions with interest. An employee with 5.0-5.9 years of service is entitles to 25%, 6.0-6.9 years 40%, 7.0-7.9 years 55%, 8.0-8.9 years 75%, 9.0-9.9 years 85% and with 10 or more years of service the member is entitled to 100% of the employer's portion with interest.

#### Benefit Multiplier Increased to 2.1 percent

The benefit multiplier will increase from 2.0 percent to 2.1 percent effective July 1, 2000.

#### 2. 5 % Ad Hoc Increase

A 5 % retiree ad hoc increase for retirees and beneficiaries effective July 1, 2000.

#### 3. Increase in Maximum Service While on LTD

Increase in the maximum amount of service that may be accrued while on LTD from 25 to 30.

#### 4. Changes in Permanent Benefit Increase COLA

- a) The maximum aggregate COLA was increased from 3 % to 4 %
- b) The threshold for determining "Excess Earnings" was lowered from 9 % to 8 %.
- c) The limitation of the COLA to the increase in the CPI was removed.

## T. LEGISLATED PLAN CHANGES ENACTED BY THE 2000 LEGISLATURE OF THE STATE OF ARIZONA

1. The age restriction on eligibility for the Permanent Benefit Increase was removed.

## U. LEGISLATED PLAN CHANGES ENACTED BY THE 2001 LEGISLATURE OF THE STATE OF ARIZONA

## 1. Health Insurance Premium Benefit Increase

Increases the health insurance premium benefit for eligible members as follows:

- Benefit for Medicare eligible member with member only coverage increase from \$65 to \$100
- Benefit for non-Medicare eligible member with member only coverage increased from \$95 to \$150
- Benefit for family coverage where member and dependent are non-Medicare eligible increase from \$175 to \$260
- Benefit for family coverage where member and dependent are Medicare eligible increased from \$115 to \$170
- Benefit for family coverage where member is Medicare eligible and dependent is non-Medicare eligible increased from \$145 to \$215
- Benefit for family coverage where member is non-Medicare eligible and dependent is Medicare eligible increased from \$145 to \$215

## 2. Graded Multiplier

Provides a graded multiplier in the retirement benefit formula, increasing with years of service according to the following:

0.00 to 19.99 Years of Service	2.10%
20.00 to 24.99 Years of Service	2.15%
25.00 to 29.99 Years of Service	2.20%
30.00 or More Years of Service	2.30%

### 3. Modified Deferred Retirement Option Plan (DROP) Program

Permits an employer to offer a member who has reached normal retirement (80 points, age 62 with 10 years, or age 65) a contract to work up to an additional three years. Retirement contributions are not made to ASRS during the contract period; however LTD contributions still continue to be paid to the ASRS. During the contract period, the member and employer contribute to a supplemental defined contribution (DC) Plan at a rate negotiated between the member and the employer. Upon completing the additional service, the employee must purchase an equivalent amount of service from the ASRS in order to receive credit for the three years worked.

## 4. Permanent Benefit Increase Enhancement

Provides that interest at a rate of 8% be credited on the funds held in reserve for the permanent benefit increase (PBI). This interest will then be used to fund an additional increase for retirees who have at least 10 years of service and who have been retired at least five years. The increase is incremental for each five years of retirement.

## 5. Temporary Rural Health Insurance Premium Benefit

In addition to the premium benefit paid to ASRS retired and disabled members, the Legislature granted a temporary benefit for retired and disabled members who live in areas of the state not served by a managed care program (HMO) and who have 10 years of credited service in the following amounts:

- Benefit for Medicare eligible member with member only coverage of \$170 per month
- Benefit for non-Medicare eligible member with member only coverage of \$300 per month
- Benefit for Medicare eligible members with Medicare eligible dependent with family coverage of \$350 per month
- Benefit for non-Medicare eligible members with non-Medicare eligible dependent with family coverage of \$600 per month
- Benefit for Medicare eligible members with non-Medicare eligible dependent with family coverage of \$470 per month
- Benefit for non-Medicare eligible members with Medicare eligible dependent with family coverage of \$470 per month

## 6. Partial Lump Sum Option

Allows a retiring member to receive a portion of his benefit in a lump sum payment. The lump sum is limited to a maximum of 36 monthly payments. The member's monthly annuity is actuarially reduced to reflect the lump sum payment.

## 7. Maximum Benefit

Members who are hired after the date the graded multiplier became law have a maximum benefit equal to 80% of the member's 36-month final average earnings.

## **ACTUARIAL VALUATION – JUNE 30, 2001**

## STATEMENT OF ACTUARIAL METHODS AND ASSUMPTIONS USED IN DETERMINING COST (ADOPTED BY BOARD ACTION ON NOVEMBER 15, 1996) EFFECTIVE AS OF JUNE 30, 1996

### A. ACTUARIAL ASSUMPTIONS

1. Investment Yield Rate

8% per annum, compounded annually

## 2. Mortality

## (a) Pre-retirement

1983 Group Annuity Mortality Table (with margins, set back one year for males and with no setback for females. Rates at representative ages are shown below.)

	Rates of Mortality (Active)				
Age	Male Participants	Female Participants			
20	0.000365	0.001890			
25	0.000444	0.000253			
30	0.000572	0.000342			
35	0.000785	0.000476			
40	0.001128	0.000665			
45	0.001932	0.001010			
50	0.003513	0.001647			
55	0.005660	0.002541			
60	0.008384	0.004241			
65	0.013868	0.007064			
70	0.019296	0.012385			

### (b) Post-retirement

Healthy rates are based on the 1983 Group Annuity Mortality Table with margins, setback one year for males, and with no setback for females. Disabled rates are based on the experience of other large public sector retirement systems through age 82; thereafter Non-Disabled Mortality is assumed. Rates at representative ages are shown below.

TABLE A

SCHEDULE OF PLAN ACTIVE MEMBER VALUATION DATA
LAST 6 YEARS

**Contributing Active Members** 

Valuation As of June 30	Number	Annual Payroll	Annual* Average Pay	% Increase in Average Pay
1996	159,572	4,632,282,200	29,029	1.8
1997	164,390	4,836,336,900	29,420	1.3
1998	170,864	5,164,127,700	30,224	2.7
1999	176,368	5,487,933,600	31,116	3.0
2000	183,924	5,750,294,662	31,265	0.0
2001	191,252	6,356,698,800	33,237	3.7

Table B

SCHEDULE OF PLAN RETIREES ADDED TO AND REMOVED FROM ROLLS LAST 6 YEARS

Year Ended June 30	Added to Rolls	Removed From Rolls	Rolls End of Year	Average Annual Allowances	% Increase in Annual Allowances
1996	3,845	1,248	45,975	11,040	4.8
1997	3,578		49,743	11,340	2.7
1998	3,353	1,179	51,917	11,784	3.9
1999	4,380	1,193	55,104	12,288	4.3
2000	4,822	1,888	58,038	13,500	9.9
2001	4,224	3,342	58,920	14,532	7.6

SCHEDULE OF UNFUNDED (OVER) ACCRUED LIABILITIES - PLAN LAST 10 YEARS

Table C

				Unfunded		
	Aggregate		Assets as a	(over)		UAL as a %
	Accrued	Actuarial	% of Accrued	Accrued	Active	of Active
Year Ended	Liabilities	Value of Net	Liabilities	Liabilities –	Member	Member
June 30	Plan	Plan Assets	Plan	Plan (UAL)	Payroll	Payroll
1992	8,209,797,700	8,841,715,700	108	(631,918,000)	3,674,258,800	(17.2)
1993	8,921,137,100	9,770,364,000	110	(849,226,900)	3,778,408,600	(22.5)
1994	9,668,031,500	10,540,457,100	109	(872,425,600)	3,973,369,600	(22.0)
1995	10,303,617,000	11,520,933,300	112	(1,217,316,300)	4,228,264,800	(28.8)
1996	11,110,688,400	12,578,870,100	113	(1,468,181,700)	4,465,496,000	(32.9)
1997	12,385,445,400	14,169,191,400	114	(1,783,746,000)	4,674,843,500	(38.2)
1998	13,638,356,506	16,168,476,400	119	(2,530,119,880)	4,968,476,529	(50.9)
1999	16,121,899,529	18,760,959,854	116	(2,639,060,325)	5,487,933,600	(48.1)
2000	17,548,523,131	21,126,877,491	120	(3,578,354,360)	5,750,294,662	(60.7)
2001	20,268,514,444	22,855,143,539	113	(2,586,629,095)	6,356,698,800	(40.7)

SOLVENCY TEST

LAST 10 YEARS

Table D

	Aggregate Accrued Liabilities for						
	(1)	(2)	(3) Active		Por	tion of Ac	crued
Year Ended	Active Member	Retirees and	Members (Employer Financed	Net Assets Available for	b	oilities Co y Net Ass able for B	ets
June 30	Contributions	Beneficiaries	Portion)	Benefits	(1)	(2)	(3)
1992	1,973,747,000	3,260,573,300	2,975,477,400	8,841,715,700	100	100	121.2
1993	2,072,034,100	3,736,129,000	3,112,974,000	9,770,364,000	100	100	127.3
1994	2,265,838,800	3,929,200,100	3,472,992,600	10,540,457,100	100	100	125.1
1995	2,465,878,000	4,257,018,600	3,580,720,400	11,520,933,300	100	100	134.0
1996	2,422,775,000	4,740,637,300	3,947,275,600	12,578,870,100	100	100	137.2
1997	2,442,205,300	5,122,420,700	4,820,819,400	14,169,191,400	100	100	137.0
1998	2,571,206,900	5,530,497,100	5,536,652,506	16,168,476,400	100	100	145.7
1999	2,679,011,640	6,454,089,795	6,988,798,093	18,760,959,854	100	100	137.8
2000	2,758,428,341	8,817,967,086	7,233,553,039	21,126,877,491	100	100	132.0
2001	2,876,445,119	9,589,562,912	7,427,960,808	22,855,143,539	100	100	139.8

Table E

ARIZONA STATE RETIREMENT SYSTEM

## SCHEDULE OF RECOMMENDED VS. ACTUAL PLAN CONTRIBUTIONS LAST 10 YEARS

Year Ended June 30	Active Member Payroll	Employee Contributions	Employer Retirement Contribution Rate – Actual	Actuary Recommended Contribution
1992	3,616,000,000	132,273,300	3.60%	3.60%
1993	3,748,000,000	135,644,900	3.59%	3.59%
1994	4,126,000,000	124,763,800	3.14%	4.09%
1995	4,432,000,000	158,559,900	3.75%	3.75%
1996	4,632,000,000	171,921,600 *	3.36%	3.95%
1997	4,836,000,000	172,602,900 *	3.20%	3.20%
1998	5,164,000,000	176,768,737 *	3.05%	3.05%
1999	5,488,000,000	179,086,642	2.85%	2.85%
2000	5,750,000,000	152,957,838	2.17%	2.17%
2001	6,564,000,000	163,441,640	2.00%	2.00%

 $<sup>^*</sup>$  Excludes contributions of \$884,669, \$905,200 and \$926,800 for ASRS System members who contributed 7.49 percent during 1998, 1997 and 1996, respectively.

## ANALYSIS OF FINANCIAL EXPERIENCE FOR THE PLAN (millions)

Year Ended June 30	Unfunded Actuarial Liability (UAAL), Prior Year	Normal Cost for the Year	Contri- butions for the Year	Interest at 8% on UAAL	On Normal cost	On Contri- butions	Total	Expected UAAL	Actual UAAL	Gain (Loss) for the Year
1992	(653.86)	352.49	(265.31)	(52.31)	28.20	(10.61)	(34.72)	(601.39)	(631.92)	30.52
1993	(631.92)	400.31	(278.16)	(50.55)	32.03	(11.13)	(29.65)	(539.42)	(849.23)	309.81
1994	(849.23)	423.20	(256.84)	(67.94)	33.86	(10.27)	(44.36)	(727.23)	(872.43)	145.20
1995	(872.43)	448.92	(324.93)	(69.79)	35.91	(13.00)	(46.88)	(795.31)	(1,217.32)	422.01
1996	(1,217.32)	460.39	(299.72)	(97.39)	36.83	(11.99)	(72.54)	(1,129.19)	(1,468.18)	338.99
1997	(1,468.18)	482.42	(309.39)	(117.45)	38.59	(12.38)	(91.24)	(1,386.39)	(1,783.75)	397.35
1998	(1,783.75)	506.17	(321.35)	(142.70)	40.49	(12.85)	(115.06)	(1,713.98)	(2,530.12)	816.14
1999	(2,530.12)	540.46	(347.97)	(202.41)	43.24	(13.92)	(173.09)	(2,510.72)	(2,639.06)	128.34
2000	(2,639.06)	601.15	(283.77)	(211.12)	48.09	(11.35)	(174.38)	(2,496.06)	(3,578.35)	1,082.29
2001	(3,578.35)	631.66	(367.20)	(286.27)	50.53	(14.69)	(250.42)	(3,564.30)	(2,586.63)	(977.67)

## STATISTICAL SECTION



# ARIZONA STATE RETIREMENT SYSTEM COMPREHENSIVE ANNUAL FINANCIAL REPORT

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## LIST OF EMPLOYERS

### **PUBLIC SCHOOLS**

Agua Fria UHS Dist. 216 Aguila Elem. Dist. 63 Ajo Unified Dist. 15 Alhambra Elem. Dist. 68 Alpine Elem. Dist. 7 Altar Valley Dist. 51

Amphitheater Unified Dist. 10 Antelope UHS Dist. 50 Apache Elem. Dist. 42

Apache Junction Unified Dist. 43 Arlington Elem. Dist. 47

Ash Čreek Elem. Dist. 53 Ash Fork Unified Dist. 31 Avondale Elem. Dist. 44 Bagdad Unified Dist. 20

Balsz Elem. Dist. 31

Beaver Creek Elem. Dist. 26

Benson Elem. Dist. 9 Benson UHS Dist. 9 Bicentennial UHS Dist. 76 Bisbee Unified Dist. 2 Blue Elem. Dist. 22

Blue Ridge Unified Dist. 32 Bonita Elem, Dist. 16 Bouse Elem. Dist. 26 Bowie Unified Dist. 14 Buckeye Elem. Dist. 33 Buckeye UHS Dist. 201

Bullhead City Elem. Dist. 15 Camp Verde Unified Dist. 28 Canon Elem. Dist. 50 Cartwright Elem. Dist. 83

Casa Grande Elem. Dist. 4 Casa Grande UHS Dist. 82

Catalina Foothills Unified Dist. 16

Cave Creek Unified Dist. 93 Cedar Unified Dist. 25 Chandler Unified Dist. 80 Chevelon Butte Elem. Dist. 5 Chinle Unified Dist. 24 Chino Valley Unified Dist. 51 Chloride Elem. Dist. 11

Clarkdale-Jerome Elem. Dist. 3 Clifton Unified Dist. 3

Cobre Valley Institute Cochise Elem. Dist. 26

Coconino Assoc of Vocational and Ind.Tech

Colorado City Unified Dist. 14 Colorado River Union H.S. Dist. 2 Combs (J.O.) Elem. Dist. 44

Concho Elem. Dist. 6 Congress Elem. Dist. 17 Continental Elem. Dist. 39 Coolidge Unified Dist. 21

Cottonwood-Oak Creek Elem. Dist. 6

Crane Elem. Dist. 13 Creighton Elem. Dist. 14 Crown King Elem. Dist. 41 Deer Valley Unified Dist. 97 Double Adobe Elem. Dist. 45 Douglas Unified Dist. 27 Duncan Unified Dist. 2 Dysart Unified Dist. 89 Eagle Elem. Dist. 45

East Valley Technical Institute

Elfrida Elem. Dist. 12 Eloy Elem. Dist. 11

Esperanza Academy Accommodation School

Fisher (Ruth) Elem. Dist. 90 Flagstaff Unified Dist. 1 Florence Unified Dist. 1 Flowing Wells Unified Dist. 8 Ft. Thomas Unified Dist. 7 Fountain Hills Unified Dist. 98

Fowler Elem. Dist. 45

Fredonia-Moccasin Unified Dist. 6

Gadsden Elem, Dist. 32 Ganado Unified Dist. 20 Gila Bend Unified Dist. 24 Gila Institute for Technology Gilbert Unified Dist. 41 Glendale Elem. Dist. 40 Glendale UHS Dist. 205 Globe Unified Dist. 1 Grand Canyon Unified Dist. 4

Hackberry Elem. Dist. 3 Hayden-Winkelman Unified Dist. 41

Heber Overgaard USD No. 6

Higley Elem. Dist. 60 Hillside Elem. Dist. 35 Holbrook Unified Dist. 3 Humboldt Unified Dist. 22 Hyder Elem. Dist. No. 16 Indian Oasis-Baboquivari 40

Isaac Elem. Dist. 5

Joseph City Unified Dist. 2 Kayenta Unified Dist. 27 Kingman Elem. Dist. 4 Kirkland Elem. Dist. 23 Klondyke School Dist. 09 Kyrene Elem. Dist. 28 Lake Havasu Unified Dist. 1 Laveen Elem. Dist. 59 Liberty Elem. Dist. 25 Litchfield Elem. Dist. 79 Littlefield Elem. Dist. 9

Littleton Elem. Dist. 65 Salome Cons. Elem. Dist. 30 Madison Elem. Dist. 38 San Carlos Unified Dist. 20 San Fernando Elem. Dist. 35 Maine Cons. Elem. Dist. 10 San Simon Unified Dist. 18 Mammoth-San Manuel Unified Dist. 8 Marana Unified Dist. 6 Sanders Unified Dist. 18 Maricopa Unified Dist. 20 Santa Cruz Elem. Dist. 28 Mayer Unified Dist. 43 Santa Cruz Valley Dist. 35 McNary Elem. Dist. 23 Santa Cruz Valley UHS Dist. 840 McNeal Elem. Dist. 55 Scottsdale Unified Dist. 48 Mesa Unified Dist. 4 Sedona - Oak Creek School Dist. 9 Miami Unified Dist. 40 Seligman Unified Dist. 40 Mingus UHS Dist. 4 Sentinel Elem. Dist. 71 Mobile Elem. Dist. 86 Show Low Unified Dist. 10 Mohave Educational Svcs Coop Sierra Vista Unified Dist. 68 Mohave UHS Dist. 30 Skull Valley Elem. Dist. 15 Mohave Valley Elem. Dist. 16 Snowflake Unified Dist. 5 Mohawk Valley Elem. Dist. 17 Solomonville Elem. Dist. 5 Morenci Unified Dist. 18 Somerton Elem. Dist. 11 Morristown Elem. Dist. 75 Sonoita Elem. Dist. 25 Murphy Elem. Dist. 21 Stanfield Elem. Dist. 24 Naco Elem. Dist. 23 Sunnyside Unified Dist. 12 Nadaburg Elem. Dist. 81 Superior Unified Dist. 15 Nogales Unified Dist. 1 Tanque Verde Unified Dist. 13 Oracle Elem. Dist. 2 Tempe Elem. Dist. 3 Osborn Elem. Dist. 8 Tempe UHS Dist. 213 Owens Whitney Elem. Dist. 6 Thatcher Unified Dist. 4 Page Unified Dist. 8 Tolleson Elem. Dist. 17 Tolleson UHS Dist. 214 Palo Verde Elem. Dist. 49 Paloma Elem. Dist. 94 Toltec Elem. Dist. 22 Palominas Elem. Dist. 49 Tombstone Unified Dist. 1 Paradise Valley Dist. 69 Tonto Basin School Dist. 33 Parker Unified Dist. 27 Topock Elem. Dist. 12 Patagonia Elem. Dist. 6 Tuba City Unified Dist. 15 Patagonia UHS Dist. 20 Tucson Unified Dist. 1 Union Elem. Dist. 62 Payson Unified Dist. 10 Vail Elem. Dist. 20 Peach Springs Elem. Dist. 8 Peach Springs High School 7 Valentine Elem. Dist. 22 Pearce Elem. Dist. 22 Valley UHS Dist. 22 Vernon Elem. Dist. 9 Pendergast Elem. Dist. 92 Peoria Unified Dist. 11 Villa Oasis Inter School Phoenix Elem. Dist. 1 Walnut Grove School District Phoenix UHS Dist. 210 Washington Elem. Dist. 6 Picacho Elem. Dist. 33 Wellton Elem. Dist. 24 Pima Unified Dist. 6 Wenden Elem. Dist. 19 Pine Elem. Dist. 12 Whiteriver Unified Dist. 20 Pinon Unified Dist. 4 Wickenburg Unified Dist. 9 Pomerene Elem. Dist. 64 Willcox Unified Dist. 13 Prescott Unified Dist. 1 Williams Unified Dist. 2 Ouartzsite Elem. Dist. 4 Williamson Valley Elem. Dist. 2 Oueen Creek Unified Dist. 95 Wilson Elem. Dist. 7 Ray Unified Dist. 3 Window Rock Unified Dist. 8 Red Mesa Unified Dist. 27 Winslow Unified Dist. 1 Red Rock Elem. Dist. 5 Yarnell Elem. Dist. 52 Riverside Elem. Dist. 2 Yavapai Cnty Accommodation School Dist #99 Young Elem. Dist. 5 Roosevelt Elem. Dist. 66 Round Valley Unified Dist. 10 Yuma County Accommodation School Yucca Elem. Dist. 13 Sacaton Elem. Dist. 18 Safford Unified Dist. 1 Yuma Elem. Dist. 1 Sahuarita Unified Dist. 30 Yuma UHS Dist. 70

St. David Unified Dist. 21 St. Johns Unified Dist. 1

### **CHARTER SCHOOLS**

Accelerated Learning Center

Accelerated Learning Center Laboratory

Acclaim Charter School Academy of Excellence, Inc.

Academy of Tucson

Adalberto Guerrero Middle School

American Heritage Academy Chart. School

Arizona Career Academy Arizona Charter Academy

Arizona Montessori Charter School

Arizona School for the Arts

Arizona School of Fine Arts and Science Arizona Southwest Preparatory Academy AZ Agribusiness & Equine Center Chart. Sch.

AZ Institue of Bus. and Technology (AIBT)

Aztec Academy Ball Charter School Basis Middle School Baurau Charter School Benchmark Elementary

Benjamin Franklin Charter School Benjamin Franklin School, Ltd.

Burke Basic Charter School Career Development Inc. Career Pathways Academy

Carmel Comm. Integrated Arts Chart. Sch.

Casey Country Day Charter School

Central Arizona Valley Inst of Technology

Challenge School, Inc. Charter Foundation, Inc. Children Reaching for the Sky

Central City Academy

Chester Newton Charter and Montessori Sch.

CI Wilson Academy

Country Gardens Charter School

Davis Education Center Desert Rose Academy

Desert Springs Academy Charter School

Destiny Schools, Inc.

Discovery Academy of St. Johns

Discovery Plus Academy Charter School

Dobson Academy

Dragonflye Charter School EAGLE Academy Charter School

Eagles Aerie Schools

East Valley Academy Charter School Ecotech Agricultural Charter School

Edge EDE Charter School

EDU Preneurship Charter School EDU-Prize Charter School

Enterprise Academy Charter School

Esperanza Montessori Academy

Excalibur Charter School
Excel Educations Centers Inc.

Excel Schools, Inc. Entity Z Accounts

Evergreen Charter School Corp Flagstaff Jr. Academy Charter School Franklin Phonetic Primary School

Future Development Corp.

Gan Yaladeem, the Looking Glass Genesis Academy Charter School Gila County Transition Charter School

G.R.A.D.E. Charter School Great Expectation Charter School

Happy Valley School, Inc.

Ha:San Preparatory and Leadership School

Heritage Academy Inc. Horizon Charter School

Humanities and Science Institute Inc.

Intelli-School Charter School

International Commerce Institute Inc.

JWJ Academy

James Sandoval Preparatory High School

Kingman Academy of Learning Lake Havasu Charter School Lake Powell Academy Inc.

Laurent Clerc Elem. Charter School Learning Crossroads Basic Academy

Learning Institute

Masada Charter School, Inc Mexicayotl Academy Mingus Mountain Academy Mingus Springs Charter School Mountain Rose Academy, Inc.

Mountain Oak School Charter School, Inc.

Multi-Dimensional Leteracy Corp

New School for the Arts New West Charter School Noah Webster Basic School

Northern Arizona Voc. Institute of Technology

Northland Preparatory Academy North Star Charter School

Painted Pony Ranch Charter School Pathways Charter Schools, Inc Park View Middle School

PCAE-Edge Peak School, Inc.

Phoenix School of Academic Excellence

Pimeria Alta Learning Center Pine Forest Charter School

Presidio School

Project YES Middle School, LLC

Renaissance Education Consort, Inc.

Salt River Pima-Maricopa Indian Chart. Sch

Scholars' Academy Charter School

Scottsdale Educational Enrichment School

Scottsdale Institute for the Arts

Sedona Charter School

Sedona-Oakcreek Airport Authority, Inc.

Self Development Charter School

Sequoia Charter School

Sequoia Choice School, LLLP

Sequoia School LLC Charter School

Sequoia Village School

Skyline Technical High School

Skyview Charter School

Sonoran Desert School

Southern AZ Community Academy Chart. Sch

Southside Community School

Stepping Stones Academy

Sunway Management Charter School

Superior School

Tag Elementary Inc.

Telani Lake Elementary Sch Academy

Telesis Center for Learning, Inc.

Tolchi' Kooh Charter School Inc.

Tri-City Prep High School Tucson Country Day School

**Triumphant Learning Center** Valley Academies Inc.

Valley Academy for Career & Technology Ed

Ventana Academic School Village Charter School

Visions Unlimited Academy Inc.

Westmark High Schools Westwind Academy

Young Scholars Academy Chart. School

### **COLLEGES**

Arizona Western College Central Arizona College

Cochise College

Coconino County Community College

Eastern Arizona College

Maricopa County Comm. Mohave Community College Northland Pioneer College Pima Community College

### **CITIES AND TOWNS**

City of Apache Junction

City of Avondale

City of Benson City of Bisbee

City of Casa Grande

City of Chandler

City of Coolidge

City of Cottonwood

City of Douglas

City of El Mirage

City of Eloy

City of Flagstaff

City of Glendale

City of Globe City of Goodyear

City of Holbrook

City of Kingman

City of Lake Havasu

City of Litchfield Park City of Mesa

City of Nogales

City of Peoria

City of Prescott

City of Safford

City of San Luis

City of Scottsdale

City of Show Low

City of Sierra Vista

City of Somerton

Yavapai College

City of South Tucson

City of Surprise

City of Tempe City of Tolleson

City of Tombstone

City of Willcox

City of Williams

City of Winslow

City of Yuma

Town of Buckeye

Town of Chino Valley

Town of Clarkdale

Town of Clifton

Town of Duncan

Town of Florence

Town of Fredonia

Town of Gila Bend

Town of Gilbert

Town of Guadalupe

Town of Hayden

Town of Kearny

Town of Miami

Town of ParadiseValley

Town of Parker

Town of Patagonia

Town of Pima

Town of Queen Creek

Town of Sahuarita

Town of Snowflake

Town of Springerville Town of Superior Town of Taylor Town of Thatcher Town of Wellton Town of Wickenburg Town of Youngtown

## **COUNTIES**

Apache County Cochise County Coconino County Gila County Graham County Greenlee County Maricopa County Mohave County Navajo County Pima County Pinal County Santa Cruz County Yavapai County Yuma County

### SPECIAL DISTRICTS

Apache Jct. Fire District Arizona Association of Counties Arizona City Sanitary District Arizona Counties Insurance Pool Arizona Interscholastic Association

Avra Valley Fire District

Black Canyon Water Improvement District Buckeye Water Conservation & Drainage Dist

Bullhead City Fire District Central Arizona Project Central Heights Fire District Chino Valley Fire District Christopher Kohls Fire District City of Eloy Housing Authority City of Yuma Housing Authority Colorado River Sewage System Cornville-Page Springs Fire Dist

County Supervisors Association of Arizona

Diamond Star Fire District Drexel Heights Fire District El Frida Fire District

Fire District of Sun City West Flagstaff Housing Authority

Fort Mojave Mesa Fire Department

Gila Resources

Grand Canyon Airport Authority Golder Ranch Fire District

Harquahala Valley Irrigation District Heber-Overgaard Fire District Kino Community Hospital Maricopa Integrated Health System

Maricopa Water District

Metropolitan Domestic Water Improve.

Dist.

New Magma Irrigation and Drainage District

Northwest Fire District Picture Rock Fire District Pima Home Health Pinayood Sanitary District

Pinewood Sanitary District Posada del sol Health Puerco Valley Fire District

Queen Valley Domestic Water Impr. Dist.

Queen Valley Sanitary District Roosevelt Irrigation District San Carlos Irrigation & Drain

State of Arizona Sun City Fire District Summit Fire District

Superstition Mtn Community Facilities Dist

Tourism and Sports Authority

Tri-City Fire District
Tucson Airport Authority
Tusayan Fire District
Verde Valley Fire District

Water Utilities Community District Western Arizona Council of Governments

Whetstone Fire District

Williams Gateway Airport Authority Yuma County Airport Authority Yuma Mesa Irrigation District

## **CONTRIBUTIONS RECEIVED**

(In Millions)



## ACTUAL CONTRIBUTION RATES In Percentage of Payroll

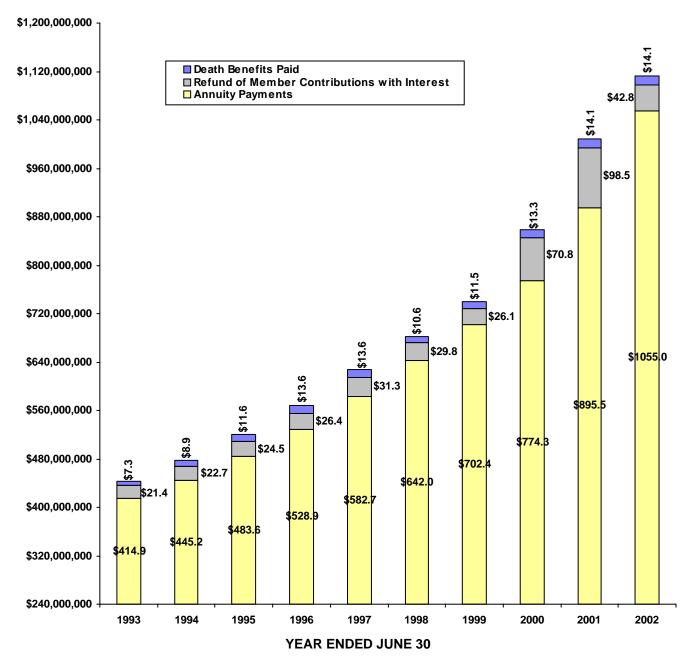
	1993	1994	1995	1996*	1997*	1998*	1999*	2000*	2001*	2002*
Employer	3.59	3.14	3.75	3.85	3.69	3.54	3.34	2.66	2.66	2.49
Employee	3.59	3.14	3.75	3.85	3.69	3.54	3.34	2.66	2.66	2.49

The contribution rates include long-term disability contributions.

<sup>\*</sup> Effective January 1, 1996, ASRS members (defined contribution) and their employers, each pays a 7.49 percent contribution rate (includes 0.49 percent for long-term disability).

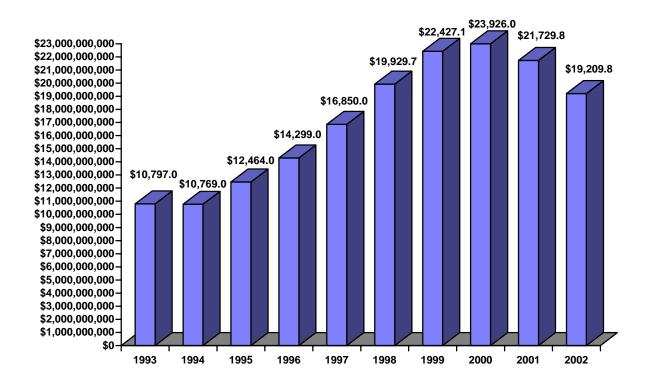
## TOTAL BENEFIT PAYMENTS

(In Millions)



Total benefit payments have increased from \$414.9 million in fiscal year 1993 to \$1,055.0 million in fiscal year 2001, an increase in excess of 154 percent over the nine-year period. This schedule does not include Social Security benefits.

## TOTAL RESERVES FOR BENEFITS\* At Market (In Millions)

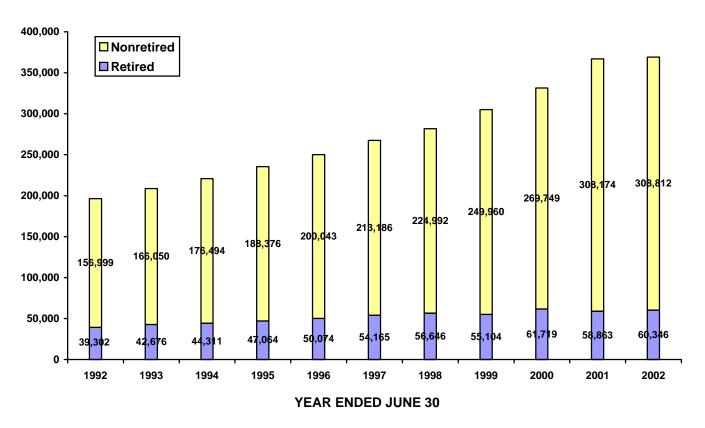


### **YEAR ENDED JUNE 30**

The increase in total reserves for benefits, nearly 77.9 percent in the past nine years, reflects the actuarial strength of the Retirement System.

<sup>\*</sup>Total Reserves for Benefits had been reported at cost in previous years.

## **NON-RETIRED & RETIRED MEMBERS**



The ASRS as it exists today has evolved from the consolidation of the original State Retirement System with the former Teachers' Retirement System in 1955. The category of retired members includes many survivors of former members, who have qualified for monthly benefit payments rather than for single death benefit payments.

## TEN YEAR HISTORICAL DATA

### **REVENUES BY SOURCE**

Fiscal Year	Employer/ Employee Contribution Rate	Employer/ Employee Long-Term Disability Rate**	Employee Contributions as a Percent of Covered Payroll	Employer Contribution Amount	Employee Contribution Amount	Member Reimburse- ments and Other	Net Investment Income	Total Additions
1992	3.60%	N/A	100.00%	\$132,273,316	\$132,273,316	\$ 945,836	\$ 1,513,686,627	\$ 1,779,179,095
1993	3.59%	N/A	76.80%	135,644,868	135,644,868	6,870,755	2,037,437,881	2,315,593,372
1994	3.14%	N/A	100.00%	124,763,806	124,763,806	7,319,048	725,271,172	982,117,832
1995	3.75%	N/A	85.10%	158,559,931	158,559,931	9,429,152	2,409,804,569	2,736,353,583
1996***	3.36%	0.49%	100.00%	172,848,417	172,848,417	4,376,224	2,063,877,940	2,413,950,998
1997	3.20%	0.49%	100.00%	173,508,019	173,508,019	11,480,946	2,832,718,071	3,191,215,116
1998	3.05%	0.49%	100.00%	176,768,738	176,768,737	15,461,646	3,405,203,114	3,774,202,235
1999	2.85%	0.49%	100.00%	179,086,635	179,086,642	46,170,568	2,848,321,337	3,252,665,182
2000	2.17%	0.49%	****	152,957,449	152,957,838	35,347,830	2,035,312,005	2,376,575,122
2001	2.17%	0.49%	100.00%	163,441,724	163,441,640	39,534,937	(1,528,690,829)	(1,162,272,528)
2002	2.00%	0.49%	100.00%	168,212,537	168,212,537	128,555,405	(1,768,077,076)	(1,303,096,598)

- \* The LTD Program was established effective July 1, 1995. ASRS members who were receiving LTD benefits prior to July 1, 1995 were transferred to the program on October 1, 1995. Contribution rates began July 1, 1995 and are paid 50 percent from employer funds and 50 percent by active members.
- \*\* The 1995 Legislature passed legislation to separate the Health Premium Supplement contributions into a separate account. This portion of the employer contribution rate is included here. This separation is effective at the benefit's inception June 20, 1989.
- \*\*\* Effective January 1, 1996, System members (defined contribution) and their employers, each pays a 7.49 percent contribution rate (includes .49 percent for long-term disability).

<sup>\*\*\*\*</sup> This information is shown only for the years available in accordance with the parameters of GASB No. 25. Additional years will be added as data becomes available.

## TEN YEAR HISTORICAL DATA

## **EXPENSES BY TYPE**

Fiscal Year	Benefit Payments	Administrative and Other	Total
1992	\$ 382,354,504	\$ 8,115,966	\$ 390,470,470
1993	443,628,202	6,210,761	449,838,963
1994	476,768,678	5,521,389	482,290,067
1995	519,667,116	5,970,049	525,637,165
1996	568,901,122	8,244,791	577,145,913
1997	627,590,584	12,307,628	639,898,212
1998	682,336,368	12,541,090	694,877,458
1999	739,978,931	15,352,673	755,331,604
2000	858,307,881	19,743,695	878,051,576
2001	1,008,150,423	24,639,599	1,032,790,022
2002	1,120,425,605	20,086,291	1,140,511,896

## **BENEFIT EXPENSES BY TYPE**

Fiscal Year	Retirement Benefits	Death Benefits	Long-Term Disability	Health Benefit Supplement	Refunds of Contributions	Total
1993	414,878,522	7,304,695			21,444,985	443,628,202
1994	445,185,700	8,932,681			22,650,297	476,768,678
1995	483,573,463	11,577,469			24,516,184	519,667,116
1996	480,697,236	13,593,283	\$ 20,280,929	\$ 27,953,281	26,376,393	568,901,122
1997	522,524,936	13,582,730	30,051,668	30,148,793	31,282,457	627,590,584
1998	574,229,820	10,557,739	35,112,054	32,667,709	29,769,046	682,336,368
1999	627,612,050	11,484,518	39,839,055	34,935,156	26,108,152	739,978,931
2000	695,425,997	13,255,861	41,220,028	37,651,498	70,754,497	858,307,881
2001	809,133,178	14,133,500	45,848,134	40,500,337	98,535,274	1,008,150,423
2002	924,171,815	14,077,910	54,804,374	75,989,584	42,765,105	1,111,808,788

**NOTE:** Effective July 1, 1995, the ASRS established separate accounts for LTD and Health Benefit Supplement.

## SCHEDULE OF AVERAGE BENEFIT PAYMENTS FOR RETIREES UNDER THE PLAN\*

Fiscal year 1992 Average monthly benefit \$ 124 \$ 207 \$ 377 \$ 588 \$ 839 \$ 1,292 \$ 1,650 \$ 1,521 \$ 1,112 \$ 936 \$ 703 Number of retirees 6,220 \$ 8,215 6,952 5,888 4,687 2,718 800 308 56 36,490 AVERAGE CREDITED SERVICE  Fiscal year 1993 Average monthly benefit \$ 125 \$ 223 \$ 427 \$ 671 \$ 979 \$ 1,482 \$ 1,862 \$ 1,747 \$ 1,254 \$ 1,066 \$ 812 Number of retirees 718 6,597 8,742 7,443 6,640 5,379 3,004 827 291 43 39,684 AVERAGE CREDITED SERVICE  Fiscal year 1994 Average monthly benefit \$ 126 \$ 229 \$ 445 \$ 701 \$ 1,032 \$ 1,555 \$ 1,980 \$ 1,880 \$ 1,335 \$ 1,105 \$ 852
Average monthly benefit \$ 124 \$ 207 \$ 377 \$ 588 \$ 839 \$ 1,292 \$ 1,650 \$ 1,521 \$ 1,112 \$ 936 \$ 703 Number of retirees 646 6,220 8,215 6,952 5,888 4,687 2,718 800 308 56 36,490 AVERAGE CREDITED SERVICE  Fiscal year 1993  Average monthly benefit \$ 125 \$ 223 \$ 427 \$ 671 \$ 979 \$ 1,482 \$ 1,862 \$ 1,747 \$ 1,254 \$ 1,066 \$ 812 Number of retirees 718 6,597 8,742 7,443 6,640 5,379 3,004 827 291 43 39,684 AVERAGE CREDITED SERVICE  Fiscal year 1994
Number of retirees 646 6,220 8,215 6,952 5,888 4,687 2,718 800 308 56 36,490 AVERAGE CREDITED SERVICE 17.9  Fiscal year 1993 Average monthly benefit \$ 125 \$ 223 \$ 427 \$ 671 \$ 979 \$ 1,482 \$ 1,862 \$ 1,747 \$ 1,254 \$ 1,066 \$ 812 Number of retirees 718 6,597 8,742 7,443 6,640 5,379 3,004 827 291 43 39,684 AVERAGE CREDITED SERVICE  Fiscal year 1994
AVERAGE CREDITED SERVICE  Fiscal year 1993  Average monthly benefit \$ 125 \$ 223 \$ 427 \$ 671 \$ 979 \$ 1,482 \$ 1,862 \$ 1,747 \$ 1,254 \$ 1,066 \$ 812 Number of retirees 718 6,597 8,742 7,443 6,640 5,379 3,004 827 291 43 39,684 AVERAGE CREDITED SERVICE  Fiscal year 1994
Average monthly benefit \$ 125 \$ 223 \$ 427 \$ 671 \$ 979 \$ 1,482 \$ 1,862 \$ 1,747 \$ 1,254 \$ 1,066 \$ 812 Number of retirees 718 6,597 8,742 7,443 6,640 5,379 3,004 827 291 43 39,684 AVERAGE CREDITED SERVICE  Fiscal year 1994
Average monthly benefit \$ 125 \$ 223 \$ 427 \$ 671 \$ 979 \$ 1,482 \$ 1,862 \$ 1,747 \$ 1,254 \$ 1,066 \$ 812 Number of retirees 718 6,597 8,742 7,443 6,640 5,379 3,004 827 291 43 39,684 AVERAGE CREDITED SERVICE  Fiscal year 1994
AVERAGE CREDITED SERVICE 18.0 Fiscal year 1994
Fiscal year 1994
·
Average monthly benefit \$ 126 \ 220 \ \ 405 \ \ 701 \ \ 1032 \ \ 1555 \ \ 1080 \ \ 1880 \ \ 1335 \ \ 1105 \ \ 852
Number of retirees 798 6,906 9,000 7,602 6,881 5,615 3,099 829 277 37 41,044 <b>AVERAGE CREDITED SERVICE</b> 17.9
Fiscal year 1995  Average monthly benefit \$ 125 \$ 232 \$ 454 \$ 717 \$ 1,069 \$ 1,598 \$ 2,034 \$ 2,004 \$ 1,399 \$ 1,135 \$ 878
Number of retirees 855 7,345 9,444 7,965 7,274 6,065 3,287 853 260 30 43,378
AVERAGE CREDITED SERVICE 17.9
Fiscal year 1996
Average monthly benefit \$ 123 \$ 239 \$ 470 \$ 741 \$ 1,118 \$ 1,669 \$ 2,119 \$ 2,125 \$ 1,506 \$ 1,230 \$ 920
Number of retirees 918 7,781 9,849 8,334 7,791 6,654 3,498 884 240 26 45,975
AVERAGE CREDITED SERVICE 17.9
Fiscal year 1997
Average monthly benefit \$ 123 \$ 244 \$ 481 \$ 759 \$ 1,151 \$ 1,719 \$ 2,172 \$ 2,197 \$ 1,613 \$ 1,270 \$ 945
Number of retirees 1,034 8,446 10,611 8,967 8,421 7,296 3,756 947 240 25 49,743 <b>AVERAGE CREDITED SERVICE</b> 18.0
Fiscal year 1998  Average monthly benefit \$ 122 \$ 254 \$ 499 \$ 789 \$ 1,196 \$ 1,785 \$ 2,248 \$ 2,318 \$ 1,749 \$ 1,565 \$ 982
Number of retirees 1,149 8,788 11,050 9,305 8,786 7,718 3,908 965 226 22 51,917
AVERAGE CREDITED SERVICE 18.0
Fiscal year 1999
Average monthly benefit \$ 120 \$ 259 \$ 511 \$ 806 \$ 1,230 \$ 1,846 \$ 2,332 \$ 2,448 \$ 1,969 \$ 1,771 \$ 1,024
Number of retirees 1,251 9,180 11,581 9,653 9,393 8,475 4,294 1,039 217 21 55,104
AVERAGE CREDITED SERVICE 18.2
Fiscal year 2000  Average monthly benefit \$ 125 \\$ 278 \\$ 550 \\$ 872 \\$ 1238 \\$ 2.012 \\$ 2.541 \\$ 2.732 \\$ 2.230 \\$ 2.011 \\$ 1.125
Average monthly benefit \$ 125 \$ 278 \$ 550 \$ 872 \$ 1,328 \$ 2,013 \$ 2,541 \$ 2,732 \$ 2,339 \$ 2,011 \$ 1,125 Number of retirees 1,321 9,454 12,076 10,061 9,944 9,169 4,683 1,106 207 17 58,038
AVERAGE CREDITED SERVICE 17.6
Fiscal year 2001
Average monthly benefit \$ 130 \$ 293 \$ 600 \$ 939 \$ 1,414 \$ 2,119 \$ 2,694 \$ 2,956 \$ 2,694 \$ 2,671 \$ 1,211
Number of retirees 1,338 9,450 12,164 10,033 10,115 9,611 4,891 1,120 180 18 58,920
AVERAGE CREDITED SERVICE  *Statistics are not available for System retirees of the ASPS

<sup>\*</sup>Statistics are not available for System retirees of the ASRS

### RETIREMENT BENEFIT OPTIONS

### LIFE ANNUITY - REFUND PROVISION

Provides member monthly benefit for life. If death occurs before all member contributions, plus interest, have been paid, the remaining balance will be paid in a lump sum or at the same monthly amount in effect at the time of the member's death to the designated beneficiary.

### LIFE ANNUITY - FIVE YEARS CERTAIN

Provides member monthly benefit for life. If death occurs before the retired member receives 60 monthly payments, the remaining monthly payments (or balance of the 60 payments) will be paid to the retired member's designated beneficiary. Members under the age of 103 at retirement are eligible to choose this option.

### LIFE ANNUITY - TEN YEARS CERTAIN

Provides member monthly benefit for life. If death occurs before the retired member receives 120 monthly payments, the remaining monthly payments (or balance of the 120 monthly payments) will be paid to the retired member's designated beneficiary. Members under the age of 91 are eligible to choose this option.

#### LIFE ANNUITY - FIFTEEN YEARS CERTAIN

Provides member monthly benefit for life. If death occurs before the retired member receives 180 monthly payments, the remaining monthly payments (or balance of the 180 monthly payments) will be paid to the designated beneficiary. Members under the age of 84 are eligible to choose this option.

## JOINT ANNUITY - 100 percent TO CONTINGENT SURVIVOR

Provides member monthly benefit for life then also provides a life annuity equal to 100 percent of the member's monthly benefit for one designated beneficiary should the beneficiary survive the member. Members may choose this option (1) if the beneficiary is the member's spouse, or (2) if the beneficiary is not the spouse and the member is not more than 10 years older than the beneficiary.

## JOINT ANNUITY – 66 2/3 percent TO CONTINGENT SURVIVOR

Provides member monthly benefit for life then also provides a life annuity equal to 66 2/3 percent of the member's monthly benefit for one designated beneficiary should the beneficiary survive the member. Members may choose this option (1) if the beneficiary is the member's spouse, or (2) if the beneficiary is not the spouse and the member is not more than 24 years older than the beneficiary.

### JOINT ANNUITY – 50 percent TO CONTINGENT SURVIVOR

Provides member monthly benefit for life then also provides a life annuity equal to 50 percent of the member's monthly benefit for one designated beneficiary should the beneficiary survive the member.

Members who choose a joint annuity payment option may rescind the option at any time and revert to the Life Annuity – Refund Provision or change the contingent annuitant. A member who reverted to the life annuity may later change back to the same joint annuity option originally elected and name the same or a new contingent annuitant. The member's benefit will be adjusted to reflect any change made.