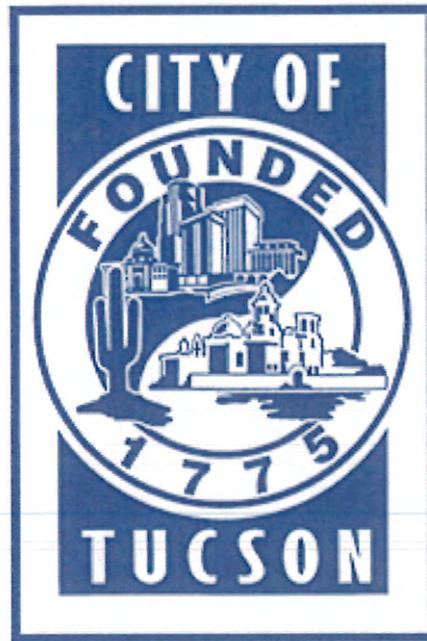


# **CITY OF TUCSON, ARIZONA**



## **Tucson Supplemental Retirement System** A Component Unit of the City of Tucson **Comprehensive Annual Financial Report**

**Fiscal Year July 1, 2012 - June 30, 2013**



**TUCSON SUPPLEMENTAL RETIREMENT SYSTEM  
(A Component Unit of the City of Tucson, Arizona)**

**Comprehensive Annual Financial Report  
For Fiscal Year Ended  
JUNE 30, 2013**

Issued by the City of Tucson, Human Resources Department, Retirement Division



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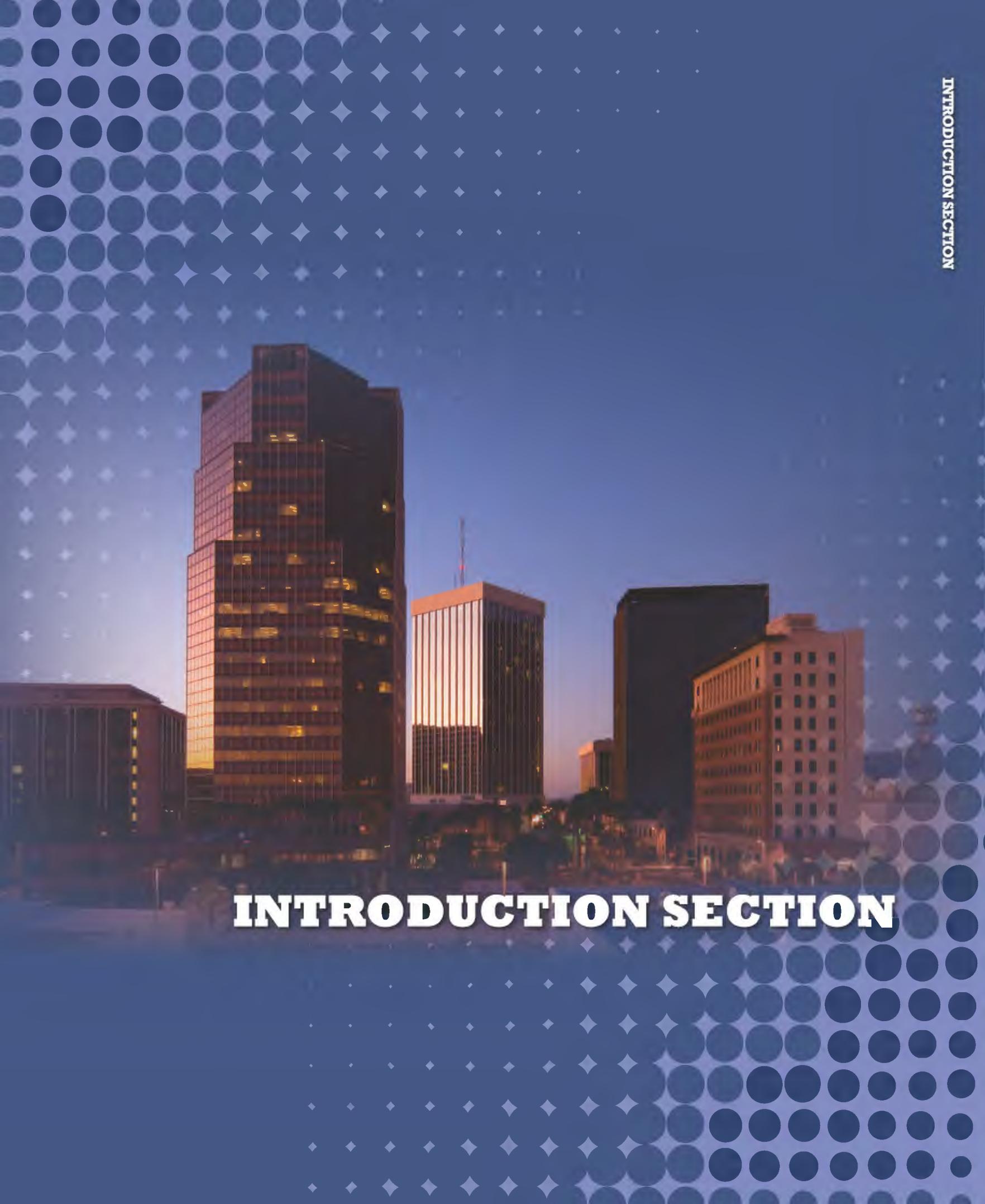
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# INTRODUCTION SECTION



Government Finance Officers Association

**Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting**

Presented to

**Tucson Supplemental  
Retirement System, Arizona**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2012**

A handwritten signature in black ink, appearing to read 'Jeffrey R. Egan'. The signature is written in a cursive, flowing style.

Executive Director/CEO



December 31, 2013

To the Chairman and Members of the Retirement Board,  
Tucson Supplemental Retirement System

The Comprehensive Annual Financial Report (CAFR) of the Tucson Supplemental Retirement System ("TSRS" or the "System") as of and for the year ended June 30, 2013, is herewith submitted. Responsibility for both the accuracy of the data and the completeness and fairness of the presentation rests with the management of TSRS. A narrative introduction to financial statement highlights, overview and analysis for FY 2013 can be found in the Management's Discussion and Analysis beginning on page 3 of the Financial Section.

The Tucson Supplemental Retirement System was established in 1953 to provide a monthly retirement supplement to social security benefits and to the personal retirement savings of its members. The benefits provided to members are supported by payroll contributions made by active members, City contributions and investment returns from retirement system asset portfolio.

The financial crisis of 2008 and the portfolio's investment performance experienced during the first decade of 2000 continue to impact the plan's funded ratio adversely. Despite a robust 14.84% investment return for year ended June 30, 2013; the plan's funded ratio (assets to liabilities) fell slightly from the prior year at 63.5% to 63.3%. In the years following the 2008 market collapse, the Board has aggressively sought solutions to both plan design and funding policies to improve the Plan's sustainability.

In 2011, the Board recommended adding a new benefit Tier, featuring a reduced cost benefit formula for all members hired after June 30, 2011. The new benefit Tier, referred to as "Tier 2", was designed to provide a retirement benefit that is reasonable and less expensive. In the plan year ended June 30, 2013, the Board asked the plan's actuary to recommend funding policy changes that would improve the predictability of the plan's required contributions. As a result, the Board recommended two significant changes in the TSRS funding policy that were adopted by Mayor and Council. The changes affect how future employee and employer contribution rates are determined in two ways: the amortization period used to determine the portion of the rate used to pay off unfunded liabilities was extended from 15 years to 20 years, and matches the average service period of our members; and, the member contribution rates will be based on 50% of the normal cost by membership Tier. Future funding policy recommendations also indicated a goal of reducing the unfunded liabilities of the plan and improving the funded ratio.

Record keeping is the responsibility of the Human Resource Department, Employee Benefits and Retirement Section. Preparation of financial statements and control over investment responsibilities for TSRS are performed by the Accounting and Treasury Divisions of the City's Finance Department. TSRS uses the accrual basis of accounting. This CAFR was prepared in conformance with principles of governmental accounting and reporting set forth by the Governmental Accounting Standards Board (GASB). Internal

control is the responsibility of management, with an objective that they are responsible for an accounting of their stewardship of the resources entrusted to their care. Internal accounting controls provide reasonable, but not absolute, assurance that the financial statements are free of any material misstatements.

Annually, the budget for the System must be approved by the Board of Trustees. The budget is also included in the City of Tucson annual budget which is recommended by the City Manager for adoption by the Mayor and Council.

Provisions of the Tucson City Code require unanimous approval of all System expenses by the Board of Trustees. Quarterly, the Board of Trustees reviews the financial report and expenses listing and ratifies all expenses.

Contributions to the System are based on principles of level-cost financing with current service financed as a level percent of payroll on a current basis and prior service amortized as a level percent of payroll over a fixed period of fifteen years.

### **Major Initiatives**

During the fiscal year ended June 30, 2013, the TSRS Board of Trustees recommended plan design changes to Article III, Chapter 22 of the Tucson City Code as described in some detail above. Similar to previous years, tight budgets continue to be the norm and has restricted the number of TSRS employees hired since 2008, reducing the number of employees hired to replace those lost from attrition.

### **Funding Status**

Analysis of the funding progress for TSRS measures the net position available for benefits against the actuarial accrued liability to arrive at the plan's percent funded ratio. As of June 30, 2013, the system's funded ratio decreased to 63.3% from the prior year 63.5% funded level on an actuarial valuation basis; on a market basis, the Plan's funded ratio increased from 61.7% to 67.6%. The actuarial accrued liability increased from \$940,938,722 to \$948,562,453; an increase of 0.810%; the actuarial value of assets allocated to funding and available for benefits increased by 0.540% from \$597,106,511 to \$600,330,066. The unfunded actuarial accrued liability increased by \$4,400,176 in the current plan year. Elements associated with the change in accrued liability include experience gains attributable to pay increases of \$11,490,892 and gains from retiree mortality of \$864,529, retirement incidence of \$1,947,378 and employee turnover, pre-retirement mortality, data and other factors of \$828,302. Offsetting those gains were losses from investment experience of \$22,189,089; and new entrants of \$935,747.

### **Investment Activities**

The Board of Trustees (the "Board") reviews manager reports and schedules investment manager meetings throughout the year to review performance, economic outlook, and investment strategy. The Treasury Division staff monitors the investment portfolios and provides monthly reports to the Board regarding target and actual allocation levels and any unusual investment activities.

Net investment income amounted to \$81,436,924. The net investment income or loss is comprised of bond interest, dividend income, real estate income, security lending income, investment expenses and realized and unrealized gains and losses on securities. The rate

of return for the total fund for the year was 14.8%. For the last five and ten years, the System had annualized returns of 5.0% and 7.4%, respectively.

TSRS asset allocation targets are 46% U.S. equities, 15% foreign equities, 8% real estate, 26% fixed income and 5% infrastructure. These percentages reflect the current diversification posture as of June 30, 2013 and represent the board's prudent judgment in the pursuit of maximum returns at acceptable levels of risk.

During the fiscal year the Board directed staff to send out a Request for Proposal (RFP) for a possible replacement to the current investment consultant, Hewitt EnnisKnupp (HEK). The RFP was sent to thirteen investment consultants, including HEK, in December, 2012. In the spring of 2013 a list of finalists was established and interviewed by the Board. The Board subsequently choose to replace HEK with Callan Associates, Inc., effective July 1, 2013.

There were no major concerns with the current investment manager line-up or the asset allocation structure during the fiscal year. Therefore, no managers were placed on watch and no new investment manager searches were conducted. Funding continues for the SteelRiver Infrastructure Fund North America account which was about 86% funded as of June 30, 2013.

In accordance with investment policy, the System's asset classes were rebalanced throughout the fiscal year. Due to ongoing liquidity requirements needed to pay retiree pensions, \$21.7 million was moved out of various asset classes, in monthly increments, to the City's investment pool account. This amount was utilized throughout the fiscal year to make up the shortfall between pension contributions and distributions. This movement of funds had a "self-balancing" effect between equities, fixed income, real estate and infrastructure which helped to keep those asset classes within their target allocation percentage ranges.

Hewitt EnnisKnupp (HEK) continued as investment consultant to the System through the end of the fiscal year. BNY Mellon continues to serve as master custodian.

### **Professional Services**

The Retirement Board retains money managers and other professionals to prudently discharge its fiduciary responsibility for the proper administration of the System. Opinions of the independent auditors and the actuary are included in this report. The professionals retained by the Board are listed on page viii of this report.

### **Acknowledgments**

This report is intended to provide information as a means for making management decisions, complying with statutory provisions, and demonstrating responsible stewardship for assets of the System. The preparation of this report reflects the combined efforts of all TSRS staff, the City of Tucson Finance Department, and others that have worked diligently to assure the successful operation of TSRS. Special words of appreciation are due to: David Roels, Principal Accountant, Allan Bentkowski, CPA, Finance Manager, Michael Jesse, Lead Analyst and Melissa Waychoff, Administrative Assistant. The direction and support extended by the Board of Trustees is also greatly appreciated.

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Tucson Supplemental Retirement System for its comprehensive annual financial report for the fiscal year ended June 30, 2012. This was the 17<sup>th</sup> consecutive year that the Tucson Supplemental Retirement System 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 generally accepted accounting principles and applicable legal requirements.

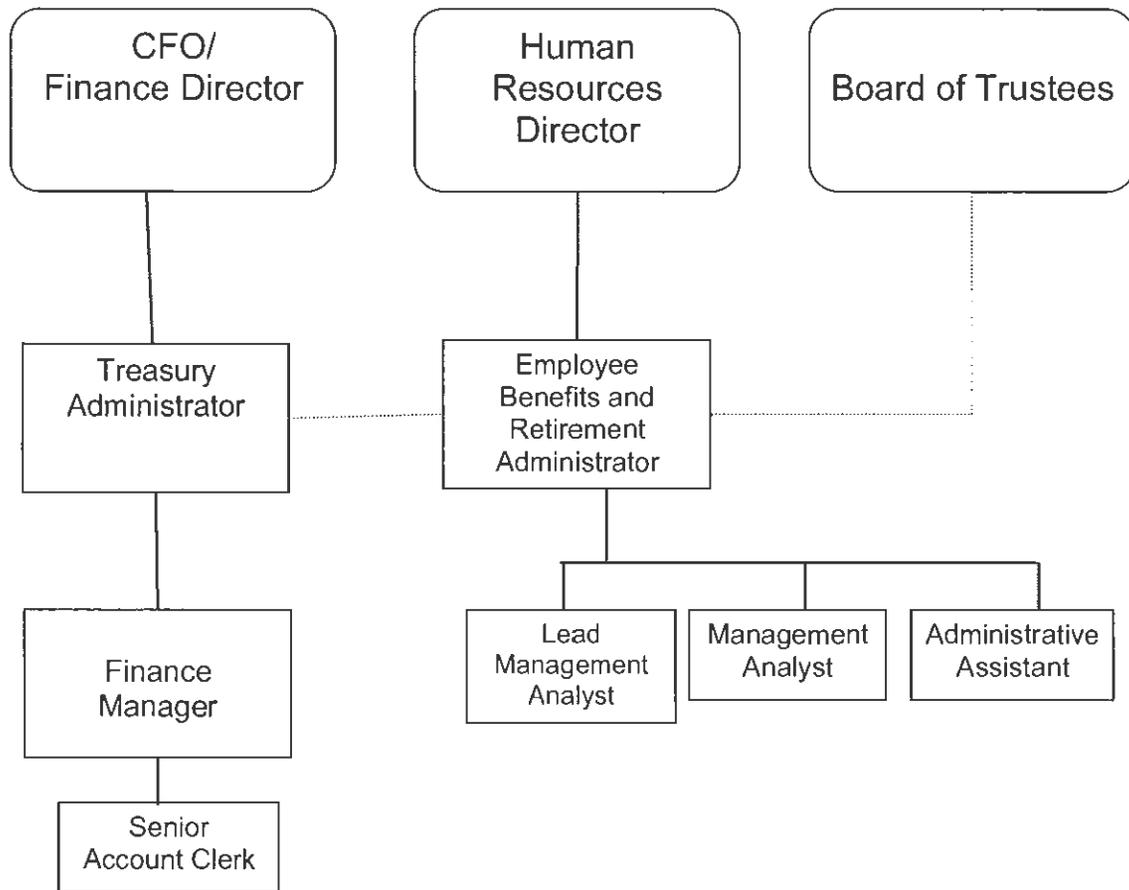
A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael A. Hermanson". The signature is fluid and cursive, with a large initial "M" and "H".

Michael A. Hermanson, CPA  
Employee Benefits and Plan Administrator

### Organization Chart



## Administrative Organization

### BOARD OF TRUSTEES

Robert Fleming  
Chairman

Kevin Larson  
City Manager's Appointee

Kelly Gottschalk  
CFO/Finance Director

Lani Simmons  
Human Resources Director

Walter "Brandy" Kadous  
Employee Representative

Karen Tenace  
Employee Representative

John O'Hare  
Retiree Representative

### TREASURY DIVISION STAFF

Silvia Navarro  
Treasury Administrator

Allan Bentkowski, CPA  
Finance Manager

Deborah Gagnier-Campbell  
Sr. Account Clerk

### RETIREMENT DIVISION STAFF

Michael A. Hermanson, CPA  
Employee Benefits & Retirement  
Administrator

Michael Jesse  
Lead Finance Analyst

Melissa Waychoff  
Administrative Assistant

### ACCOUNTING

David Roels  
Principal Accountant

### LEGAL

David Deibel  
Principal Assistant City Attorney

Cassie Langford  
Yoder & Langford, P.C.  
Phoenix, AZ

### ACTUARY

Gabriel, Roeder, Smith & Company  
Denver, CO

### AUDITOR

CliftonLarsonAllen LLP  
Tucson, AZ

### INVESTMENT MANAGERS

Aberdeen Asset Management  
Philadelphia, PA

Alliance Capital Management Corporation  
New York, NY

BlackRock Institutional Trust Company, N.A.  
San Francisco, CA

Causeway Capital Management  
Los Angeles, CA

Pyramis Global Advisors  
Smithfield, RI

JP Morgan Asset Management  
San Francisco, CA

LaSalle Investment Management  
Chicago, IL

Pacific Investment Management Company  
Newport Beach, CA

Champlain Investment Partners  
Burlington, VT

Macquarie Capital (USA), Inc.  
New York, NY

SteelRiver Infrastructure  
New York, NY

T. Rowe Price Associates  
Baltimore, MD

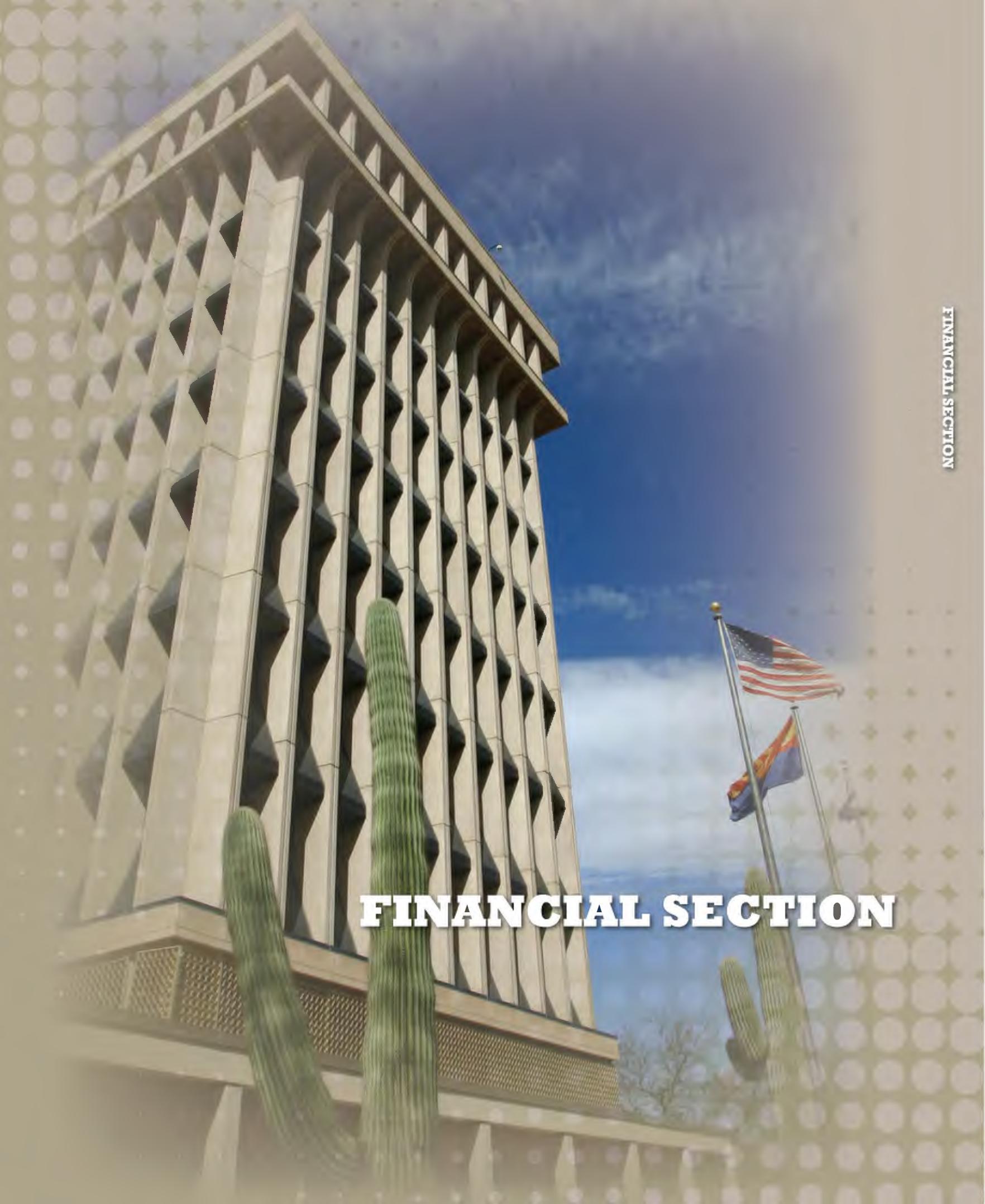
### INVESTMENT CONSULTANT

Hewitt EnnisKnupp  
Lincolnshire, IL

### CUSTODIAN BANK

BNY Mellon  
New York, NY





# FINANCIAL SECTION





CliftonLarsonAllen LLP  
www.CLAconnect.com

## INDEPENDENT AUDITORS' REPORT

The Board of Trustees  
Tucson Supplemental Retirement System  
Tucson, Arizona

### **Report on the Financial Statements**

We have audited the accompanying statement of plan net position of Tucson Supplemental Retirement System (the System), as of June 30, 2013 and the related statement of changes in plan net position for the year then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

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

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

### **Auditors' Responsibility**

Our responsibility is to express opinions 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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

### **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Tucson Supplemental Retirement System as of June 30, 2013, and the changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Board of Trustees  
Tucson Supplemental Retirement System

### **Other Matters**

#### *Required Supplementary Information*

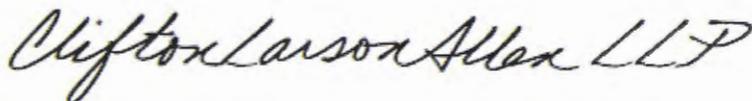
Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3-7 and the required supplementary information on pages 24-25 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### *Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Tucson Supplemental Retirement System's basic financial statements. The supporting schedules of administrative expenses and investment services expense are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supporting schedules of administrative expenses and investment services expense are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supporting schedules of administrative expenses and investment services expense are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory section, the investment section, the actuarial section, and the statistical section have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.



December 23, 2013

## **MANAGEMENT'S DISCUSSION AND ANALYSIS**

We are pleased to provide this overview and analysis of the financial activities of the Tucson Supplemental Retirement System (TSRS) for the plan year ended June 30, 2013. We encourage readers to consider the information presented here in conjunction with additional information that we have furnished in our Letter of Transmittal, which begins on page ii of this report.

### *Financial Highlights*

- The net position of TSRS as of the close of the plan year ended June 30, 2013 was \$641,046,190 (net position held in Trust for Pension Benefits). The net position is available to meet TSRS's ongoing obligations to plan participants and their beneficiaries.
- TSRS's increase in total net position held in trust for pension benefits was \$60,662,849, or 10.45%, primarily as a result of increases in the fair value of the System's assets.
- TSRS's funding objective is to establish and receive contributions, which will remain approximately level from year to year and thereby minimize inter-generational cost transfers. As of June 30, 2013, the date of our last actuarial valuation, the funded ratio for TSRS was 63.3% on an actuarial basis, 67.6% using the market value basis.
- Revenues (Additions to Plan Net Position) for the year were \$126,174,802, which includes member and employer contributions plus transfers from other systems and contributions from other sources totaling \$44,737,878, investment earnings income and securities lending income of \$11,537,172 and a net gain in fair value of investments of \$73,705,613 reduced by investment expenses of \$3,805,861.
- Expenses (Deductions from Plan Net Position) increased from \$64,491,237 in the prior year to \$65,511,953 or approximately 1.6%. The net increase in deductions resulted from an increase in pension benefits paid of \$498,072, an increase in refunds and transfers of \$383,996 and increased administrative expenses of \$138,649; bringing the total increase in expenses to \$1,020,717.

### *Overview of the Financial Statements*

The following discussion and analysis are intended to serve as an introduction to TSRS's financial statements, which are comprised of these components:

1. Statement of Plan Net Position
2. Statement of Changes in Plan Net Position
3. Notes to the Financial Statements

Please note, however, that this report also contains other supplementary information in addition to the basic financial statements themselves, including details of the system's investments, actuarial analysis, and various statistical information found in sections under those names.

*The Statement of Plan Net Position* is a snapshot of account balances at year-end. It indicates the assets available for future payments to retirees and any current liabilities that are owed at this time.

*The Statement of Changes in Plan Net Position*, on the other hand, provides a view of current year additions to and deductions from the plan.

Both statements comply with applicable Governmental Accounting Standards Board (GASB) Statements. These pronouncements require certain disclosures and require state and local governments to report using the full accrual method of accounting. TSRS complies with all material requirements of these pronouncements.

The Statement of Plan Net Position and the Statement of Changes in Plan Net Position report information about TSRS's activities. These statements include all assets, deferred outflows, liabilities and deferred inflows, using the full accrual basis of accounting, which is similar to the accounting used by most private-sector companies. All of the current year's revenues and expenses were taken into account regardless of when cash is received or paid. All investment gains and losses are shown at trade date, not settlement date. In addition, both realized and unrealized gains and losses are shown on investments, and all capital assets (fixed assets) are depreciated over their useful lives.

These two statements report TSRS's net position held in trust for pension benefits (net position) – the difference between assets and liabilities – is one way to measure the system's financial position. Over time, increases and decreases in TSRS's net position is one indicator of whether its financial condition is improving or deteriorating. (See TSRS's financial statements on pages 8 and 9 of this report).

*Notes to the Financial Statements* provide additional information that is essential to a full understanding of the data provided in the financial statements. (See Notes to Financial Statements on pages 10-23 of this report).

*Other information* - in addition to the financial statements and accompanying notes, this report presents certain required supplementary information concerning TSRS's progress in funding its obligations to provide pension benefits to members (See Required Supplementary Information on page 24 and 25 of this report).

The schedules of administrative expenses, investment manager fees and other investment expenses, and payments to consultants are presented immediately following the required supplementary information on pensions. (See Supporting Schedules on page 26 of this report.)

### Financial Analysis

As previously noted, net position may serve over time as a useful indication of TSRS's financial position (see table on page 5). The total assets of TSRS exceeded its liabilities at the close of the plan year ended June 30, 2013 with \$641,046,190 in net position held in trust for payment of ongoing obligations to plan participants and their beneficiaries.

Net Position of the Plan

<b>Assets</b>	<b>6/30/13</b>	<b>6/30/12</b>	<b>% change</b>
Cash, Cash Equivalents and Receivables	8,335,168	14,026,483	-40.6%
Investments	637,607,058	591,555,915	7.8%
Securities Lending Cash Collateral	23,753,680	15,567,962	52.6%
Capital Assets, Net	12,678	37,794	-66.5%
<b>Total Assets</b>	<b>\$ 669,708,584</b>	<b>\$ 621,188,154</b>	<b>7.8%</b>
<b>Liabilities</b>			
Accounts Payable and Other Payables	334,479	640,506	-47.8%
Due to Securities Lending Borrowers	23,753,680	15,567,962	52.6%
Due to Brokers	4,574,235	24,596,345	-81.4%
<b>Total Liabilities</b>	<b>\$ 28,662,394</b>	<b>\$ 40,804,813</b>	<b>-29.8%</b>
<b>Total Net Position</b>	<b>\$ 641,046,190</b>	<b>\$ 580,383,341</b>	<b>10.5%</b>

At June 30, 2013, Plan Net Position held in the Trust of \$641,046,190 was available for payment of pension benefits, as shown in the Statement of Plan Position on page 8. This amount represents an increase of 10.5% from June 30, 2012. The increase was attributable primarily to exceptional investment performance experienced in the financial markets during this plan year.

Additions to Plan Net Position

	<b>6/30/13</b>	<b>6/30/12</b>	<b>% change</b>
Employer Contributions	34,523,315	27,429,666	25.9%
Employee Contributions	9,200,262	7,685,264	19.7%
Purchase of Service Credit	1,014,301	1,280,263	-20.8%
Transfers and contributions - other sources	0	254,404	-100.0%
Net gain (loss) in Fair Value of Investments	73,705,613	566,661	12907.0%
Investment and securities lending income (net)	7,731,311	7,946,508	-2.7%
<b>Total Additions</b>	<b>\$ 126,174,802</b>	<b>\$ 45,162,766</b>	<b>179.4%</b>

Employer contributions increased by \$7,093,649; or 25.9%, and employee contributions increased by \$1,514,998, or 19.7%. A total of \$1,014,301 was received from employees purchasing service credits; which was \$265,962 less than the prior fiscal year by 20.8%. There were no transfers from other systems during this fiscal year; a decrease from the prior year of \$254,404, or 100%. Net gain in Fair Value of Investments increased by \$73,138,952, or 12,907%; and income from investment and securities lending decreased for the current year by \$215,197 or -2.7%, caused primarily by higher investment expenses on investments throughout the fiscal year.

Deductions from Plan Net Position

The principal purpose for which the System was created was to provide supplemental retirement annuities, survivor benefits, and total and permanent disability benefits to qualified members and their beneficiaries. The costs of such programs include recurring benefit payments as required by the plan design, refunds of contributions to terminated

employee's, the cost of administering the System and expenses incurred in the investment of the System's assets.

Total deductions for fiscal year 2013 were \$65,511,954 representing an increase of 1.6% from fiscal year 2012 expenses. The largest contributors to the increase in deductions for this year were attributed to new retirements following the final end of service program exits at December 31, 2011; which increased the amount of retirement benefit payments paid by \$3,445,526, for a 5.9% increase. The increased retirement benefits were offset by the absence of transfers to other systems; a change of \$2,928,607 related to a July 1, 2011 revision to an Arizona state law that previously allowed full reciprocity for member account transfers, effectively eliminating all transfers out during fiscal 2013.

#### Deductions from Plan Net Position

	06/30/13	06/30/12	% change
Retirement Benefits	62,191,480	61,693,408	0.8%
Refund of Contributions	2,631,221	2,247,225	17.1%
Administrative Expenses	689,252	550,604	25.2%
<b>Total Deductions</b>	<b>\$ 65,511,953</b>	<b>\$ 64,491,237</b>	<b>1.6%</b>
<b>Net Increase/(Decrease) in Plan Position</b>	<b>\$ 60,662,849</b>	<b>\$ (19,328,471)</b>	<b>413.9%</b>

#### Reserves

The system places an amount into a separate Reserve for Employee Contributions for all amounts contributed by members. Deductions are made from this account when the member retires, transfers balances to other retirement systems, or when a member terminates employment and requests a refund. As of the plan year ended June 30, 2013, the balance in this reserve account increased by \$16,101,992 to \$138,342,388.

Upon retirement, the system places an amount in Reserves for Retirement Benefits equivalent to the present value of the actuarial benefit selected by the member. When the present value is determined, amounts are added to this reserve from amounts in the Reserve for Employee Contributions and from the Unreserved Net Position balance to fully fund the expected liability. As a result of the change in market value of the system assets, the reserve increased for the plan year ended June 30, 2013 by \$124,630,424 to \$609,558,963.

The impact of gains or losses recognized during the plan year ended June 30, 2013 affects the amount remaining in the Unreserved Net Position. Employer funding is added to the Unreserved Net Position balance. At retirement, amounts needed to fully fund retirement benefits are transferred from the Unreserved Net Position to the Reserves for Retirement Benefits. As a result of the change in market values of the system's assets, the Unreserved Net Position increased by \$80,069,567 to a negative ending balance of \$106,855,161.

TSRS's Fiduciary Responsibilities

TSRS's Board of Trustees and management staff are fiduciaries of the pension trust fund. Under the City of Tucson Code the assets can only be used for the exclusive benefit of plan participants and their beneficiaries.

Requests for Information

This financial report is designed to provide the Retirement Board of Trustees, our membership, taxpayers, investment managers and other interested parties with a general overview of TSRS's finances and to account for the money it receives. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Tucson Supplemental Retirement System  
Attention: TSRS Plan Administrator  
City Hall, 5<sup>th</sup> floor – Finance Administration Office  
255 West Alameda Street  
Tucson, Arizona 85701  
(520) 791-4598

**Tucson Supplemental Retirement System**  
**Statement of Plan Net Position**  
**June 30, 2013**

**Assets**

Cash Deposits/Pooled Investments	\$	1,316,498
Receivables:		
Accounts Receivable		
Employer Contributions (Note 3)		1,314,431
Employee Contributions (Note 3)		366,823
Due From Brokers		4,068,711
Interest and Dividends		1,268,705
Total Receivables		<u>7,018,670</u>
Investments, at Fair Value (Notes 4, 5, and 6):		
Short Term Investments		13,080,955
U.S. Treasuries, Agencies & Other Governmental Bonds		71,125,198
Corporate Bonds & Other Fixed Income Instruments		41,827,473
U.S. Equity & Comingled Equity Funds		308,993,186
International Bonds & Other Fixed Income Instruments		28,681,485
International Equity & Comingled Equity Funds		85,706,293
Real Estate & Comingled Real Estate Funds		48,776,932
Infrastructure Investment Funds		39,415,536
Total Investments, at Fair Value		<u>637,607,058</u>
Securities Lending Collateral at Fair Value		23,753,680
Capital Assets, Net of Accumulated Depreciation		12,678
Total Assets		<u>669,708,584</u>
<b>Liabilities</b>		
Accounts Payable		327,621
Accrued Wages Payable		6,858
Due to Brokers		4,574,235
Obligations under Securities Lending (Note 5)		23,753,680
Total Liabilities		<u>28,662,394</u>
<b>Net Position Held in Trust for Pension Benefits</b>	<b>\$</b>	<b><u>641,046,190</u></b>

**See Accompanying Notes to Financial Statements**

**Tucson Supplemental Retirement System  
Statement of Changes in Plan Net Position  
Year Ended June 30, 2013**

**Additions**

## Contributions (Note 3):

City	\$ 34,523,315
Employee	9,200,262
Purchase of Service	1,014,301
Total Contributions	<u>44,737,878</u>

## Income from Investment Activity

Net Gain (Loss) in Fair Value of Investments	73,705,613
Interest	4,174,559
Dividends	7,158,084
Miscellaneous Income	98,400
	<u>85,136,656</u>
Investment Expenses	(3,805,861)

Net Income from Investment Activity 81,330,795

## Income from Securities Lending Activity

Gross Income	184,733
Management Fees	(78,604)
Net Income from Securities Lending Activity	<u>106,129</u>

Net Investment Income 81,436,924

Total Additions 126,174,802

**Deductions**

Benefits	62,191,480
Refunds	2,631,221
Administrative Expenses	689,252
Total Deductions	<u>65,511,953</u>

**Net Increase (Decrease) in Plan Net Position** \$ 60,662,849

**Net Position Held in Trust for Pension Benefits (Note 7)**

July 1, 2012	580,383,341
June 30, 2013	<u>\$ 641,046,190</u>

**See Accompanying Notes to Financial Statements**

**Tucson Supplemental Retirement System  
Notes to Financial Statements  
Year Ended June 30, 2013**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND DISCUSSION OF PLAN NET POSITION**

**A. Reporting Entity** - Due to the extent of the System's financial and operational relationship with the City of Tucson, the System is considered a component unit of the City's financial reporting entity and is included in its Comprehensive Annual Financial Report as a pension trust fund.

**B. Basis of Accounting** - The System's financial statements are prepared using the accrual basis of accounting using the economic resources measurement focus. Employee and employer contributions are recognized when due, pursuant to formal commitments. Benefits and refunds are recognized when due and payable in accordance with the plan provisions.

**C. Investments** - Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. The fair value of real estate investments is based on independent appraisals. Investments that do not have an established market are reported at estimated fair value, which is determined by the System custodian in consultation with the System's investment managers.

The cost of common stock sold is determined on the average cost method. Realized and unrealized gains or losses are reflected in revenues.

At the end of the current fiscal year, there were no individual investments, other than those issued or guaranteed by the United States government that represented 5 percent or more of System net assets.

**D. Deposits** - In accordance with the City Charter and state statutes, the System is authorized to deposit money in certificates of deposit and interest-bearing accounts provided that deposits in excess of the insured amount are collateralized. State statutes require collateral pledged for deposits to be held in the System's name by a bank other than the pledging bank or by the pledging bank's trust department.

**E. Capital Assets** - Capital assets of the System currently include moveable equipment items and the capitalized cost of pension administration software, stated at historical cost net of accumulated depreciation. The straight-line method of depreciation for capitalized equipment and software is used over an estimated useful life of 6 years. The capitalization threshold is \$5,000.

**F. Benefit Changes** - The TSRS Board of Trustees shall determine, pursuant to its formal policy and in its discretion whether the System shall fund an annual supplemental post-retirement benefit payment to retired members and beneficiaries.

**G. Administrative Costs** - All costs of administering the plan are financed by the employer and member contributions made, based upon recommended contribution rates in effect for the year, applied on active member covered payroll.

**H. Adoption of GASB Statement 63** – The System adopted Governmental Accounting Standards Board (GASB) Statement No. 63, “Financial Reporting of Deferred Outflows of Resources, Deferred Inflow of Resources, and Net Position” during the fiscal year. The adoption of GASB No. 63 had no effect on the amounts reported in the financial statements of the System in the current fiscal year.

**I. Tax Status of the Plan** – The System applied for an IRS determination letter in November 2008, and received a favorable determination (qualified status) from the IRS July 19, 2012.

## 2. DESCRIPTION OF THE PLAN

**A. Authorization, Purpose, and Administration of the System** - The Tucson Supplemental Retirement System (the “System” or “TSRS”) is a single-employer defined benefit plan for City of Tucson (“City”) employees. It was established in the City Charter to provide its members with a supplement to the retirement and disability benefits of the social security system. The System is governed by a seven member Board of Trustees: a chairman who is appointed by the Mayor and Council, the City’s directors of human resources and of finance, two members elected by the membership of the System, a retired member elected by the System’s retirees, and one member appointed by the City Manager. Benefit provisions and changes in benefits or funding are recommended by the Board of Trustees and must be approved by Mayor and Council.

**B. Plan Membership** - The System covers substantially all City of Tucson, Arizona, employees, except for appointed officials and staff who may elect not to join, and commissioned police and fire personnel and elected officials, who are covered under other plans. Employees participate in the System immediately upon beginning employment with the City. Employee membership data as of June 30, 2013 is as follows:

<b>Active plan participants:</b>	
<b>Vested</b>	2,096
<b>Non-vested</b>	654
<b>Total Active plan participants</b>	2,750
<b>Current Retirees and beneficiaries</b>	2,719
<b>Terminated Vested participants</b>	256

### C. Plan Benefits

#### 1. Retirement Benefits

- Tier I benefit plan: Any employee hired prior to July 1, 2011, who has attained the earlier of age 62, or a combination of the employee’s age and years of creditable service equaling the sum of 80, is entitled to receive monthly retirement benefits calculated at 2.25% of average final monthly compensation multiplied by the number of years of creditable service. Employees hired after July 1, 2009 receive the same

benefit, but are required to have a minimum of five years accrued service. Average final monthly compensation is defined as the highest compensation of 36 consecutive months during the 120 months immediately preceding retirement. Accrued unused sick leave and vacation leave at the final salary is included in the member's service period and is substituted for an equal number of hours at the beginning of the 36 month period for determining the average final salary calculation.

- Tier II benefit plan: Any employee hired after June 30, 2011, who has attained the minimum retirement age of age 60, and who also has a combination of employee age and years of service equaling the sum of 85, is entitled to receive monthly retirement benefits calculated at 2.00% of average final monthly compensation multiplied by the number of years of creditable service. Average final monthly compensation is defined as the highest compensation of 60 consecutive months during the 120 months immediately preceding retirement. Accrued unused sick leave and vacation leave at the final salary is not included for member service credits or as a substitution for an equal number of hours at the beginning of the 60 month period final average salary calculation.

An employee who retires after attaining age 55 with 20 or more years of creditable service under Tier I; or after attaining age 60 with 20 or more years of credited service under Tier II, is entitled to early retirement benefits reduced to the actuarial equivalent of the amount to which the employee would have been entitled upon attaining normal retirement.

An employee is always fully vested in his/her individual contributions. Upon termination of employment for reasons other than retirement, employees having five or more years of creditable service (terminated vested participants) may leave their contributions in the System as a deferred retirement, and begin drawing a retirement allowance when they reach either their normal or early retirement eligibility date.

2. Disability Benefits - Employees with ten or more years of creditable service, who are not yet eligible to retire and who have a total and permanent disability may apply for disability retirement.

3. Death Benefits - The beneficiary of an employee who pre-selected a retirement option and died while eligible to retire, shall receive a benefit based upon the selected option if the member has made such an election by June 30, 2009.

The spousal beneficiary of an employee who died while eligible to receive benefits but who had not pre-selected a benefit option by June 30, 2009, may choose to receive a benefit equal to a 100% joint and survivor annuity based on the member's years of credited service and average final monthly compensation at the time of the member's death, or may elect to receive a lump sum payment of twice the members account balance plus interest, measured on the date of death.

The named beneficiary of an employee who is other than the spouse of the employee who died while eligible to receive benefits but who had not pre-selected a benefit option by June 30, 2009, may choose to receive a benefit equal to a 15 year term certain benefit to the named beneficiary, or the beneficiary may elect to receive a lump sum payment of twice the members account balance plus interest, measured on the date of death.

Multiple designated beneficiaries of an employee who died while eligible to receive benefits but who had not pre-selected a benefit option by June 30, 2009, receive a lump sum payment of twice the members account balance plus interest, measured on the date of death.

The beneficiary of an employee who was not eligible for any retirement benefits, but had more than five years of creditable service, may receive a lump sum payment of twice the member account balance plus interest, measured on the date of death.

### 3. CONTRIBUTIONS AND RESERVES

#### A. Funding Requirements

1. *Employee Contributions* - Employee contributions are 5% of active member covered payroll for employees hired prior to July 1, 2006. Employees hired after June 30, 2006 are paying an amount equal to 40% of the actuarially required contribution rate determined annually by the system Actuary. For the fiscal year ended June 30, 2013, the employee contribution rate was 13.97%. All member contributions are made by payroll deductions applied to regular pay, based on the approved contribution rates established by the system Actuary, applied as a percent of payroll.

Effective July 1, 2013, the funding policy changed for employees hired after June 30, 2006; requiring a contribution rate that is equal to a range of between 50% and 100% of the normal cost of the members benefit Tier. For Tier I members (hired between July 1, 2006 and June 30, 2011), the contribution rate is 6.715%. For Tier II members (hired after July 1, 2011), the contribution rate is 5.06%. A reserve is established for contributions and earnings allocations, less amounts transferred to the reserve for retirement benefits which includes retirement and disability and amounts reserved for terminated employees. If an employee leaves covered employment before attaining five years service credit, the accumulated contributions plus interest are refunded to the employee or his designated beneficiary. There are no long-term contracts for employee contributions to the plan, and all contributions are made on a bi-weekly basis.

2. *Employer Contributions* – Employer contributions are based on the annual required contribution rate determined by the Actuary, and are equal to the difference between the recommended total contribution rate and the employee rates, based on a level percentage of payroll method. The contribution rate is determined by the actuary at a level necessary to finance employee participation in the System and to fund the costs of administering the System. The annual rate determined by the Actuary is recommended to the Board of Trustees and considered for approval and adoption. There are no long-term contracts for employer contributions to the plan, and all contributions are made on a bi-weekly basis.

#### B. Net Position

Two general types of net position reserves are maintained within the System. The Reserve for Employee Contributions contains the employee contributions for all contributing members of the System, plus allocated interest earnings. At the time an

employee retires or defers retirement, the actuarial value of the individual's retirement benefits is transferred to the Reserve for Retirement Benefits, which is decreased by payments to retirees and increased by interest earnings. The reserves are fully funded.

Earnings of the System are allocated semi-annually (at June 30 and December 31) to the reserves which comprise net position. At the year ended June 30, 2013, allocations were based on rates of return of 6.00% per annum. Any unallocated earnings remain in unreserved net position.

The net position at June 30, 2013, consisted of the following components:

Reserved for employee contributions	\$	138,342,388
Reserved for retirement benefits		609,558,963
Unreserved net position (deficit)		<u>-106,855,161</u>
Net Position	\$	<u>641,046,190</u>

#### 4. INVESTMENTS

The System is governed by a Board of Trustees. The Board of Trustees is required by City Code in making investment decisions, to exercise the judgment and care under the circumstances then prevailing which persons of ordinary prudence, discretion and intelligence exercise in management of their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income there from, as well as the probable safety of the capital. Investments of the System are held separately from those of other City funds by investment custodians. Quoted market prices have been used to value investments as of June 30, 2013.

For those investments that do not have established market exchanges, the fair value is estimated as objectively as possible by third party appraisals. Real Estate and Infrastructure investment managers utilize third party appraisals to determine fair market value of assets under investment. Infrastructure investments pertain to forms of "real" property used for general public purposes that typically involve partnerships between governmental and private entities. Examples of infrastructure investments are toll roads, bridges, pipelines, airports, shipping ports, etc. The System currently participates in two pooled infrastructure funds as well as three real estate funds.

The System's investments at June 30, 2013 are listed below. These investments are either held by the System or its agent in the System's name and are either insured, registered or collateralized. A portion of these investments is subject to credit risk (including custodial credit risk and concentrations of credit risk), interest rate risk and/or foreign currency risk. The Government Accounting Standards Board (GASB) Statement 40 requires the System to disclose such risks which are all discussed in the sections that follow.

All System investments are reflected in the following schedule with the exception of amounts held in the City's investment pool account and certain deposits of \$115,360. The City maintains an investment pool account for City funds. Bi-weekly contributions for the Tucson Supplemental Retirement System are held in the City's investment pool account and are used to pay recurring expenditures. The \$1,304,492 cash balance in

the investment pool account, as well as, current deposits to the City's investment pool account are invested in money market funds consisting of U.S. Treasuries and Agencies and separately held issues of federal agency and U.S. corporate bonds with ratings no lower than A2 as reported by Moody's.

<u>Investments</u>	<u>Fair Value</u>
U.S. Issues not on Securities Loan:	
U.S. Treasuries, Agencies & Other Governmental Bonds	\$ 62,798,307
Corporate Bonds & Other Fixed Income Instruments	36,702,385
US Equity & Comingled Equity Funds	300,360,416
Non-U.S. Issues not on Securities Loan:	
International Bonds & Other Fixed Income Instruments	28,225,870
International Equity & Comingled Equity Funds	85,134,686
Subtotal	<u>513,221,664</u>
Investments Held by Broker-Dealers Under Securities Loans with Cash Collateral:	
U.S. Treasuries, Agencies & Other Governmental Bonds	8,326,891
Corporate Bonds & Other Fixed Income Instruments	5,125,088
U.S. Equity	8,632,770
International Bonds & Other Fixed Income Instruments	455,615
International Equity	571,607
Subtotal	<u>23,111,971</u>
Securities Lending Short-Term Collateral Investment Pool	23,753,680
Money Market Funds/Short-Term Investments	12,965,595
Real Estate & Comingled Real Estate Funds	48,776,932
Infrastructure Investment Funds	39,415,536
Subtotal	<u>124,911,743</u>
Total Deposits and Investments	<u>\$ 661,245,378</u>

**Credit Risk** – As defined by GASB Statement 40, credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Associated with credit risk is concentration of credit risk and custodial credit risk. Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of investment or collateral securities that are in the possession of an outside party.

The System presently maintains two externally managed fixed income (bond) accounts which are exposed to some form of credit risk. The assets in the first account are actively managed while the assets in the second account are invested in a commingled bond index fund (passively managed).

The TSRS Board has given the actively managed account manager discretion to invest in a broad array of public and private asset classes, instruments and investment vehicles in order to meet or exceed the agreed upon investment return custom benchmark. However, the following specific investment policy guidelines pertain to this manager:

- The maximum position in a single issuer (excluding obligations of U.S. Government and its Agencies) should not exceed 5% of the portfolio's assets at current market value
- The portfolio should maintain an average quality of at least "BB+"
- Money market instruments must be rated in one of the two highest categories by a nationally recognized rating agency
- The minimum rating of individual issues should be CCC (based on market value) as rated by Moody's, Standard & Poor's or Fitch
- Should an issue be downgraded below the minimum, the manager will determine the appropriate action to be taken

The passive fund is expected to replicate, as close as possible, the characteristics, quality and performance of its underlying index, the BC Aggregate Bond Index.

The System currently does not have a policy regarding custodial credit risk for deposits or investments as defined in the Credit Risk section above. As of June 30, 2013 the System was exposed to custodial credit risk for deposits in the amount of \$4,269 and custodial credit risk for investments of \$265,000.

**Credit Risk** – (continued from previous page)

The System had the following credit risk structure as of June 30, 2013:

**Credit Risk Structure**

<u>Investment Type</u>	<u>Holdings</u>	<u>Average Credit Rating (1)</u>	<u>Fair Value</u>	<u>Percent of Grand Total</u>
Cash and Cash Equivalents:				
Cash & Short Term Investment Funds	3	A1	\$ 12,965,595	
Sub Total	3		12,965,595	8.39%
U.S. Treasury Notes & Bonds:				
	4	Aaa	9,517,763	6.16%
U.S. Agency & Other Governmental Obligations:				
Municipal Bonds	6	Baa2	3,887,102	
BlackRock U.S. Debt Fund	1	Aa2	57,720,333	
Sub Total	7		61,607,435	39.85%
Corporate & Other Fixed Income Instruments:				
Collateralized Mortgage Obligations (CMO)	5	Baa3	949,693	
Fixed Income Swaps & Options	27	Aa2	(111,410) (2)	
Banking & Finance	10	Ba2	4,924,624	
Health Care	2	Ba1	1,181,853	
Oil, Gas & Chemicals	4	Ba3	1,454,573	
Food, Beverage & Tobacco	2	Baa2	1,076,110	
Transportation	3	Baa2	1,091,487	
Utilities	5	Ba2	747,657	
Other Corporate Issues	20	Ba2	8,527,977	
PIMCO Private Mortgage Sector Fund	1	Aa1	21,984,909	
Sub Total	79		41,827,473	27.06%
International Bonds & Other Fixed Income Investments				
	109	Baa2	28,681,485	18.54%
Grand Total	202		\$ 154,599,751	100%

## Footnotes

(1) Per Moody's Investors Service, Inc. (Moody's)

(2) A negative value in any of the instruments noted above is the result of netting long and short positions against each other. This strategy is utilized as a means to mitigate interest rate risk from holding long positions in mortgages and / or corporate bonds.

**Interest Rate Risk** – As defined by the Government Accounting Standards Board (GASB) in Statement 40, interest rate risk is the risk that changes in interest rates will adversely affect the fair value of investments. For fixed income securities, there is an inverse relationship between the change in interest rates and their fair value. For example, in a rising interest rate environment the value of fixed income securities will tend to fall by varying degrees depending on the length of their maturities. In general, the value of fixed income securities with a longer duration will tend to decrease more than shorter duration securities in a rising interest rate environment.

The System's investment policy regarding interest rate risk for the actively managed fixed income account, is to limit duration to within 30% of the custom benchmark which is defined as 25% BC Mortgage Index, 25% BC Credit Index, 25% BC High Yield Index and 25% JPM EMBI Global Index. The passive fund should match, as close as possible, the maturity structure and duration of the BC Aggregate Bond Index.

The System had the following maturity structure as of June 30, 2013:

### Maturity Structure

Investment Type	Investment Maturities (in Years)				Fair Value
	Less Than 1	1 - 5	6 - 10	More Than 10	
Cash & Short Term Investment Fund	\$ 12,965,595	\$ -	\$ -	\$ -	12,965,595
U.S. Treasury Issues	-	-	7,211,512	2,306,251	9,517,763
U.S. Agency & Other Governmental Obligations	-	-	-	3,887,102	3,887,102
BlackRock U.S. Debt Fund	-	-	57,720,333	-	57,720,333
Corporate & Other Fixed Income Instruments	553,834	32,659,090	5,950,081	2,664,468	41,827,473
International Bonds & Other Fixed Income Investments	377,102	10,376,066	14,905,638	3,022,679	28,681,485
<b>Total</b>	<b>\$ 13,896,531</b>	<b>\$ 43,035,156</b>	<b>\$ 85,787,564</b>	<b>\$ 11,880,500</b>	<b>\$ 154,599,751</b>
<b>Effective Duration:</b>	<b>Active Account</b> 5.4 years	<b>Passive Account</b> 5.1 years			

Note: The information indicated has been presented using the specific identification method

**Foreign Currency Risk** – As defined by the Governmental Accounting Standards Board (GASB) in Statement 40, foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit.

The TSRS Board has given the System's international equity managers discretion to invest in a broad array of common and preferred stocks, convertibles and warrants of companies headquartered outside of the United States in order to meet or exceed their agreed upon investment return benchmarks. However, the following specific investment policy guidelines pertain to these managers:

- Investments in any single country market should not exceed more than 4 times the weight of the country in the benchmark index or 50% of portfolio assets, whichever is lower
- If a country has a greater than 50% weight in the index, the maximum exposure to that country in the portfolio may be as high as its weight in the index
- No more than 35% of each manager's portfolio should be invested in "emerging markets" (i.e., markets that are not included in the Morgan Stanley Capital International Europe, Australia and Far East Index)
- Managers are permitted to enter into hedging strategies, including cross-currency hedges, using forward currency exchange contracts and currency options
- Derivatives should not be used for the purpose of speculation or for leveraging the portfolio

**Foreign Currency Risk** (continued from previous page)

The TSRS fund had the following foreign currency risk exposure as of June 30, 2013:

**Foreign Currency Risk Exposure**

Currency Type	Cash & Cash Equivalents (1)	Fixed Income (1)	Equity	Real Estate	Infra- structure	Foreign Exchange Contracts (2)	Fair Value	Percent of Total
Australian Dollar	\$ 91,930	\$ 203,888	\$ -	\$ -	\$ -	\$ (348,540)	\$ (52,722)	-0.008%
Brazil Real	-	-	-	-	-	522,594	522,594	0.082%
Canadian Dollar	480	-	769,221	-	-	-	769,701	0.121%
Euro Currency Unit	75,846	3,267,650	16,765,910	-	22,267,969	(3,461,999)	38,915,376	6.109%
Hong Kong Dollar	-	-	2,506,118	-	-	-	2,506,118	0.393%
Japanese Yen	22,882	-	7,122,797	-	-	88,030	7,233,709	1.136%
Mexican New Peso	20,985	(131,411)	-	-	-	747,354	636,928	0.100%
Norwegian Krone	-	-	-	-	-	45,786	45,786	0.007%
Polish Zloty	-	-	-	-	-	88,622	88,622	0.014%
British Pound Sterling	(77,172)	2,248,994	11,199,855	-	-	(1,396,403)	11,975,274	1.880%
Russian Rubel	-	-	-	-	-	(2,686)	(2,686)	0.000%
S. African Comm Rand	73,347	-	-	-	-	(61,305)	12,042	0.002%
Singapore Dollar	-	-	1,069,597	-	-	-	1,069,597	0.168%
South Korean Won	-	-	930,873	-	-	-	930,873	0.146%
Swedish Krona	-	-	527,239	-	-	-	527,239	0.083%
Swiss Franc	-	-	5,328,112	-	-	-	5,328,112	0.836%
Foreign Curr. Subtotals	208,298	5,589,121	46,219,722	-	22,267,969	(3,778,547)	70,506,563	11.068%
U.S. Dollar	12,757,297	136,045,035	348,479,756	48,776,932	17,147,567	3,307,443	566,514,030	88.932%
<b>TOTALS</b>	<b>\$ 12,965,595</b>	<b>\$ 141,634,156</b>	<b>\$ 394,699,478</b>	<b>\$ 48,776,932</b>	<b>\$ 39,415,536</b>	<b>\$ (471,104)</b>	<b>\$ 637,020,593</b>	<b>100%</b>
	2.04%	22.23%	61.96%	7.66%	6.19%	-0.08%	100%	

**Footnotes:**

(1) A negative value in the instruments noted above is the result of netting long and short positions against each other. This strategy is utilized as a means to mitigate interest rate risk obtained from holding long positions in mortgages and/or corporate bonds.

(2) A negative currency position is obtained by accepting an obligation to deliver the designated currency to a counterparty at a specified date in the future. This position is favorable for portfolio returns if the currency depreciates in value versus the U.S. dollar over the period of the contract.

## 5. SECURITIES LENDING

The Board of Trustees for the Tucson Supplemental Retirement System permits the custodian bank, BNY Mellon, to lend securities to broker-dealers and other entities. Each loan is executed with a simultaneous agreement to return the collateral for the same securities in the future. The custodian bank lends U.S. securities for collateral initially valued at 102% of the fair value of the securities plus any accrued interest. Non-U.S. securities are loaned for collateral initially valued at 105% of the fair value of the securities plus any accrued interest. Collateral is marked-to-market daily. As of June 30, 2013, the carrying amount and fair value of securities on loan was \$23,111,971. If the fair value of the pledged collateral falls below the specified levels, additional collateral is required to be pledged by the close of the next business day.

In the event of a borrower's default, the custodian bank is obligated to indemnify the lender if, and to the extent that, the fair value of the collateral is insufficient to replace the loaned securities. BNY Mellon's responsibilities include performing appropriate borrower and collateral investment credit analysis, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations covering securities lending.

Although the average term of the security loans is one week, each loan can be terminated at will by either the lender or the borrower. Cash collateral is invested in a short-term investment pool, which on average had a weighted maturity of 30 days. The relationship between the maturities of the investment pool and the security loans are affected by the maturities of the loans made by other entities that use the agent's pool.

The lender cannot pledge or sell collateral securities received until, and unless, a borrower defaults. There were no significant violations of legal or contractual provisions and no borrower or lending agent default losses known to the securities lending agent. As of June 30, 2013, the lenders had no credit risk exposure to borrowers because the fair value of collateral held exceeded the fair value of securities loaned.

## 6. DERIVATIVES

The Tucson Supplemental Retirement System permits the limited use of derivatives by its international equity and external fixed income managers. Examples of derivative instruments permitted, but not limited to, are forward foreign currency exchange contracts, financial futures, options, swaps and swaptions. All derivative instruments utilized are considered "Investment Derivative Instruments" as defined in GASB 53 "Accounting and Financial Reporting for Derivative Instruments." The statement addresses the recognition, measurement, and disclosure regarding derivative instruments entered into by the System.

The following table is a summary of the various derivative instruments utilized by the System's external fixed income manager as of June 30, 2013. Changes in Fair Value is included as part of the overall Increase (Decrease) in Fair Value of Investments in the Statement of Changes in Plan Net Position. Fair Value is included as part of investments listed under Corporate Bonds & Other Fixed Income Instruments in the Statement of Plan Net Position.

<u>Investment Derivative Instrument</u>	<u>Notional Amount (1)</u>	<u>Changes in Fair Value</u>	<u>Fair Value</u>	<u>Principal Risk</u>
OTC Swaptions	(23,500,000)	\$ (12,924)	\$ (119,153)	Interest Rate
Currency Forwards (Net)	15,620,518	\$ (221,516)	\$ (3,777,310)	Foreign Currency
Credit Default Swaps	14,720,000	\$ 101,656	\$ (219,773)	Credit
Interest Rate Swaps	26,900,000	\$ (51,188)	\$ (48,178)	Interest Rate

Footnotes:

(1) The Notional amount is the number of currency units (stated in U.S. and/or foreign currencies), shares or other units specified in the derivative instrument. It is a stated amount on which payments depend.

Whenever possible, the investment manager will base the valuation of derivatives on market information; however, where market quotes are not readily available, an independent third party pricing vendor will be utilized. Exchange traded derivatives are an example of derivatives where market quotes are available, whereas over-the counter (OTC) derivatives are not traded over standardized markets.

In addition to the principal risks noted above, Forward Foreign Currencies, Credit Default Swaps and Interest Rate Swaps are also subject to counterparty risk. In general, counterparty risk is the risk of loss of an amount expected to be delivered under an agreement in the event of the default or bankruptcy of the counterparty. Generally, counterparty risk is controlled through dealing with a number of different counterparties reasonably deemed to be creditworthy by the investment manager and using agreements with counterparties that permit netting of obligations. Counterparty risk with swaps is limited by execution under standardized International Swap and Derivatives Association Agreements. These contracts allow for the mutual exchange of collateral should an overall unsecured market value exceed a certain threshold (e.g., \$250,000).

Credit, interest rate and foreign currency risks are addressed in previous sections of Note 4. These risks, applicable to other fixed income and foreign investments, are not substantially different from principal risks associated with derivative instruments.

## 7. FUNDED STATUS AND FUNDING PROGRESS

As of June 30, 2013, the most recent actuarial valuation date, the plan was 63.3% funded on an actuarial value basis, 67.6% using the market value. The actuarial accrued liability for benefits was \$948.6 million and the actuarial value of assets was \$600.3 million, resulting in an unfunded actuarial accrued liability (UAAL) of \$348.2 million. The covered payroll (annual payroll of active employees covered by the plan) was \$125.9 million, and the ratio of UAAL to the covered payroll was 276.7 percent.

The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information about

whether the actuarial value of the plan assets are increasing or decreasing over time relative to the actuarial accrued liability for benefits.

## **8. ACTUARIAL METHODS AND ASSUMPTIONS**

In the June 30, 2013 actuarial valuation, the level-percent contribution requirements and actuarial present values are calculated using the entry age actuarial cost method. The actuarial assumptions included (a) 7.75 percent investment rate of return (net of administrative expenses); (b) projected salary increases at 3.50% compounded annually; and (c) additional projected salary increases of 0.00% to 4.00% attributable to seniority / merit. The assumptions do not include postretirement benefit increases, because there is no guarantee or requirement that future increases will be granted. The projection of benefits for financial accounting purposes also does not explicitly incorporate the potential effects of legal or contractual funding limitations, since they do not apply. The actuarial value of assets was determined using techniques that spread the effects of short term volatility in the market value of assets over a five-year smoothing period, which was first adopted for the plan year ended June 30, 2009. The Unfunded Actuarial Accrued Liability is being amortized as a level percentage of payroll on an open period of 20 years; the new amortization period was first adopted for the plan year ended June 30, 2013. The assumptions are selected based upon the recommendation of the plan's actuary and adopted by the Board of Trustees.

## Required Supplementary Information

## Schedule of Funding Progress

Actuarial Valuation Date June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (b)-(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	Unfunded AAL as a Percentage of Active Member Covered Payroll ((b-a)/c)
1996	266,740	300,607	33,867	88.7	105,230	32.2
1997	304,684	327,378	22,694	93.1	110,189	20.6
1998	353,056	348,966	(4,090)	101.2	113,729	-
1999	402,875	400,224	(2,651)	100.7	126,817	-
2000	453,954	437,750	(16,204)	103.7	134,088	-
2001	470,672	495,359	24,687	95.0	145,059	17.0
2002	463,102	553,947	90,845	83.6	153,580	59.2
2003	458,857	601,173	142,316	76.3	143,164	99.4
2004	494,987	645,351	150,364	76.7	149,782	100.4
2005	538,789	693,871	155,082	77.6	162,149	95.6
2006	588,228	735,793	147,565	79.9	155,855	94.7
2007	634,763	763,539	128,776	83.1	159,250	80.9
2008	650,227	822,205	171,978	79.1	153,982	111.7
2009	665,298	859,485	194,187	77.4	149,925	129.5
2010	641,819	904,480	262,661	71.0	141,459	185.7
2011	642,665	928,609	303,944	67.3	121,631	249.9
2012	597,107	940,939	343,832	63.5	125,003	275.1
2013	600,330	948,562	348,232	63.3	125,858	276.7

\$ Amounts are in thousands.

**Required Supplementary Information  
Schedule of Employer Contributions**

<b>Fiscal Year Beginning July 1,</b>	<b>Actuarial Valuation Date June 30</b>	<b>Annual Required Contribution</b>	<b>Percent Contributed</b>
1998	1997	\$ 9,475,558	100.0
1999	1998	9,707,235	100.0
2000	1999	10,123,248	100.0
2001	2000	9,088,970	100.0
2002	2001	12,765,619	100.0
2003	2002	18,457,476	100.0
2004	2003	21,657,270	100.0
2005	2004	23,643,630	100.0
2006	2005	25,958,330	100.0
2007	2006	25,232,745	100.0
2008	2007	24,358,460	100.0
2009	2008	27,601,156	100.0
2010	2009	28,756,890	100.0
2011	2010	34,824,621	100.0
2012	2011	34,523,315	100.0
2013	2012	33,863,319	100.0
2014	2013	35,714,929 <sup>1</sup>	100.0 <sup>1</sup>

<sup>1</sup>Projected amount: Actual required contribution dollar amount will be based on the computed contribution rate and the actual pensionable payroll for the period.

**Notes to Required Supplementary Information  
Summary of Actuarial Methods and Assumptions**

Valuation Date	June 30, 2013
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level percent-of-payroll, open
Amortization Period	20 years
Asset Valuation Method	Smoothed market
Actuarial Assumptions:	
Investment Rate of Return*	7.75%
Projected Salary Increases*	3.50-7.50%
Payroll Growth Rate	3.50%
*Includes Inflation	3.50%

**Supporting Schedules**  
**June 30, 2013**  
**Schedule of Administrative Expenses**

**Personal Services**

Staff Salaries	\$ 197,183
Fringe Benefits	89,682
Total Personal Services	<u>286,865</u>

**Professional Services**

Accounting	156,000
Actuary	49,938
Physician Services	7,541
Legal	31,493
Total Professional Services	<u>244,972</u>

**Other Administrative Expenses**

Computer Software Maint. & Hosting	41,300
Depreciation	25,115
File Conversion expense	10,076
Insurance	42,200
Other	7,311
Postage	8,324
Printing and Supplies	5,762
Professional Development	8,243
Temporary Staff	9,084
Total Miscellaneous	<u>157,415</u>

<b>Total Administrative Expenses</b>	<b><u>\$ 689,252</u></b>
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**Schedule of Investment Services Expense**

Trust & Custody	\$ 286,558
Investment Consultant	156,997
Investment Management	3,362,306
<b>Total Investment Expenses</b>	<b><u>\$ 3,805,861</u></b>





INVESTMENT SECTION

# INVESTMENT SECTION



# Callan

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December 4, 2013

The Board of Trustees  
Tucson Supplemental Retirement System  
255 W. Alameda Street  
Tucson, AZ 85701

Dear Board Members,

This letter reviews the general economic environment, capital markets and investment performance of the Tucson Supplemental Retirement System for the fiscal year ended June 30, 2013.

#### **Economic Overview as of June 30, 2013**

The first quarter of fiscal year 2013 commenced with the breaking of the LIBOR fixing scandal and culminated with the Federal Reserve announcing open-ended bond purchases, nicknamed "QE3" or "QE-Infinity". Soon attention was turned to the looming "fiscal cliff", tax increases coupled with a reduction in government spending. While the "cliff" was averted at the last minute, no long-term solutions to the U.S. debt problem were found. The beginning of calendar year 2013 brought news of more turmoil abroad, particularly in the Eurozone. The mid-February announcement that banks in Cyprus were insolvent and would need a bailout set off investor concerns around the world. The situation, however, was well contained within a couple of months and equity markets continued their upward march. In late May the Federal Reserve announced that a "tapering" of bond purchases (quantitative easing) might begin as soon as July. The taper comment sent equity markets tumbling from their all-time highs and bond yields rose to levels not seen in more than a year.

There were some encouraging signs of economic growth during the fiscal year. After starting at 8.2%, unemployment steadily declined throughout the fiscal year, ending at 7.6%. The recent downward trend in the labor force participation rate seems to have bottomed out as well. Although many feared high inflation due to quantitative easing, it remained very benign throughout the year, never topping 2.2%.

The domestic economy grew a modest 1.4% in fiscal year 2013 while Europe suffered through a mild recession, which appears to be ending. The developed world's major central banks all continued their respective quantitative easing programs in efforts to spur their economies to more substantial growth. So far, the Bank of Japan may have been the most successful as Japan's GDP growth for the first two quarters of 2013 was 3.8% and 2.6%. China is in the midst of a long-term decline in GDP growth. Even though the days of double-digit growth may be behind China growth this year is still expected to be a very robust 7.5%.

#### **Domestic Equity Overview**

The fiscal year ended June 30, 2013 brought strong returns across the broad domestic equity market. The Russell 3000 Index, a broad market indicator for the U.S. stock market, finished the fiscal year with a return of 21.46%. While all quarters were positive, the bulk of return came in the third fiscal quarter (+11.07%). Small cap stocks performed better than large cap stocks during the fiscal year. The Russell 2000, a gauge of small cap stock performance, outperformed its large cap peer (the Russell 1000 Index), 24.21% to 21.24%. Value stocks held up better than growth stocks during fiscal year 2013. The Russell 3000 Value Index advanced 25.28% versus a gain of 17.56% for the Russell 3000 Growth Index.

# Callan

Tucson Supplemental Retirement System  
December 4, 2013 2

## International Equity Overview

Developed International equity markets, as represented by the MSCI EAFE Index, rose in fiscal year 2013. The index gained 18.62%, significantly better than the 13.83% loss in the 2012 fiscal year. Growth and value stocks produced nearly identical returns. For the trailing twelve-months ended June 30, 2013, the MSCI EAFE Growth Index gained 18.67% while the MSCI EAFE Value Index was rose 18.56%. Emerging market returns trailed developed market returns in fiscal year 2013 as the MSCI Emerging Markets Index gained only 3.23%. In sum, fiscal 2013 was a good year for the developed world's stock markets.

## Domestic Fixed-Income Overview

The U.S. bond market, as measured by the Barclays Capital Aggregate Bond Index, had a -0.69% return for the four calendar quarters ended June 30, 2013. With fears of a recession fading and Federal Reserve's intention to "taper" quantitative easing, investors fled the bond markets into higher returning equity markets. Treasury yields rose across the curve. When compared to fiscal year 2012, yield spreads for non-government bonds tightened during fiscal year 2013. The Barclays Capital Government Index fell 1.51% over the fiscal year. This return was substantially above the 8.18% loss of the Barclays Capital Government Long Index. The Barclays Capital Credit Index rose 0.84% for the last year as company balance sheets continued to improve. High yield investors saw strong returns; the Barclays Capital High Yield Index returned 9.49% for the year ended June 30, 2013.

## Real Estate Overview

The NCREIF Property Index, a measure of the private real estate market, rose 10.72% during the 2013 fiscal year. The index was positive in each of the four quarters, extending its positive streak to fourteen (14) straight quarters. Capitalization rates are essentially with the previous fiscal year and returns are positive across sectors. The FTSE NAREIT Equity Index, a measure of the public securities real estate market, gained 9.42% during the 2013 fiscal year.

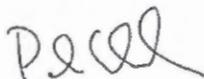
## Infrastructure

As of mid-2013 there were 142 private infrastructure funds raising capital worldwide, 71 of which have held a first close. This number is comparable to the 144 in the market during this time last year. However, a total of \$15.4 billion in institutional investor capital was secured by private infrastructure fund managers in the first half of 2013, which represents an 88% increase over the \$8.2 billion raised during the same period in 2012. As such, momentum in the current fundraising market is clearly stronger than at the same point in 2012. However, fund managers still face plenty of competition as they are still marketing to a small and highly selective investor pool given the relatively small allocations which most investors make to infrastructure. At the deal level, energy related investments represent the largest portion of trades and Europe remains the dominate region for deal flow.

## Total Fund Review

The Tucson Supplemental Retirement System returned 14.8% for the fiscal year, exceeding its benchmark return of 12.8%. All active managers outperformed their respective benchmarks except Champlain (mid cap domestic equity), Aberdeen EAFE Plus (international equity), LaSalle Income and Growth Fund (real estate) and SteelRiver (infrastructure).

Cordially,



Paul Erlendson  
Senior Vice President



Gordon Weightman, CFA  
Vice President

## Outline of Investment Policies

The asset allocation policy includes a 61% allocation to equity securities: 36% to large U.S. stocks; split among S&P 500 index, enhanced index, large capitalization growth and value accounts; 10% to mid-cap and small-cap U.S. stock accounts; and 15% to foreign stock accounts. There is also an allocation of 26% to fixed income, 8% to equity real estate and 5% to infrastructure.

The Board has set an asset allocation target range on each asset class, sub-class, and manager. The Board of Trustees has adopted a policy of rebalancing the portfolio when the actual allocation falls above or below the target range.

Over the long term, asset allocation policy will be the primary determinant of the returns generated by the TSRS pension fund and the associated volatility of returns. In particular, the level of equity exposure is the key element within the TSRS pension investment policies.

In developing asset allocation policies for its pension plan, the Board examined asset and liability projections to evaluate possible results over the next ten years. These projections examined the risk/return tradeoffs of alternative asset classes, as well as alternative levels of equity exposure. Through incorporating the results of these projections with its risk posture, as well as considering typical practices and practical investment issues, the Board has developed the following asset mix guidelines:

	Percent of Total Pension Fund		
	Minimum	Target	Maximum
<b>Equities:</b>			
Large Capitalization	31%	36%	41%
Small/Mid Capitalization	6%	10%	14%
International	13%	15%	17%
<b>Total Equities</b>	<b>56%</b>	<b>61%</b>	<b>66%</b>
<b>Fixed Income</b>	<b>21%</b>	<b>26%</b>	<b>31%</b>
<b>Real Estate</b>	<b>6%</b>	<b>8%</b>	<b>10%</b>
<b>Infrastructure</b>	<b>3%</b>	<b>5%</b>	<b>7%</b>

Separate target ranges are also set for each investment manager within an asset class and are monitored in conjunction with the overall asset allocation. TSRS monitors its asset mix and rebalances its portfolio mix at any time that a primary asset class (i.e., equities, fixed-income, and real estate), secondary asset class (i.e., domestic equities, international equities), portfolio style, or manager reaches the minimum or maximum allocation specified. Staff is authorized to direct rebalancing and report to the Board.

## Investment Objectives

### Total Pension Fund Performance Objectives:<sup>1</sup>

The TSRS Pension Fund's return will be, in part, a function of the capital market environment in which the plan's investment managers operate. Therefore, regardless of whether or not the market environment permits the achievement of substantial real returns, the TSRS expects any active investment managers that it retains to produce results that are above average relative to other actively-managed funds and relative to passive alternatives. Investment managers should cover the fees paid and provide a return increment that justifies the risk assumed in active management.

On a rolling three-year basis, the annualized total return of the portfolio should exceed the annualized total return of the following custom index:

- Standard & Poor's 500 Stock Index (36% weight)
- Russell 2500 Stock Index (10% weight)
- MSCI All Country World, ex-U.S. Stock Index (15% weight)
- Barclays Capital Aggregate Bond Index (23% weight)
- Barclays Capital High Yield Bond Index (3% weight)
- NCREIF ODCE Real Estate Index (8% weight)
- CPI + 4% (5% weight)

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<sup>1</sup> The investment objectives defined herein assume that performance comparisons will be based on a before-fee analysis, unless otherwise indicated.

**Individual Managers Performance Objectives**

On a rolling three-year basis, the annualized total return earned by an actively managed portfolio should place the account in a competitive ranking (i.e., top 40%) relative to a peer group of managers. In addition, the managers should outperform the following market index benchmarks:

*T. Rowe Price (Large Cap Growth Equity)*

- Exceed the annualized total return of the Russell 1000 Growth Index

*BlackRock Value (Russell 1000 Value Index)*

- Match the annualized total return of the Russell 1000 Value Index

*Alliance Capital (S&P 500 Index)*

- Match the annualized total return of the S&P 500 Index

*PIMCO StocksPlus (Enhanced Index)*

- Exceed the annualized total return of the S&P 500 Index

*Champlain Investment Partners (Mid Cap Core Equity)*

- Exceed the annualized total return of the Russell Mid Cap Index

*Pyramis Global Advisors (Small Cap Equity)*

- Exceed the annualized total return of the Russell 2000 Stock Index

*Aberdeen Asset Management (International Core Equity)*

- Exceed the annualized total return of the MSCI AC World ex-U.S. Index

*Causeway Capital Management (International Value Equity)*

- Exceed the annualized total return of the MSCI EAFE Index

*PIMCO (Custom Fixed Income)*

- Exceed the annualized total return of a customized fixed income benchmark composed of 25% BC Mortgage, 25% BC Credit, 25% BC High Yield and 25% JP Morgan EMBI index

*BlackRock U.S. Debt Index Fund (U.S. Investment Grade Fixed Income)*

- Match the annualized total return of the BC Aggregate Bond Index

*JP Morgan Strategic Property Fund (Core Real Estate)*

- Exceed the annualized total return of the NCREIF ODCE Real Estate Index

*LaSalle Income & Growth Fund IV (Value Added Real Estate)*

- Exceed the annualized total return of the NCREIF ODCE Real Estate Index

*JP Morgan Income & Growth Fund (Value Added Real Estate)*

- Exceed the annualized total return of the NCREIF ODCE Real Estate Index

*Macquarie European Infrastructure Fund 3 (European Infrastructure)*

- Exceed the annualized total return of the CPI + 4%

*SteelRiver Infrastructure Fund North America (North America Infrastructure)*

- Exceed the annualized total return of the CPI + 4%

**Investment Results by Year**  
**Last Ten Fiscal Years Ended June 30, 2013**

<u>Year Ended</u>	<u>Annual Return</u>	<u>3-Year Annualized Return</u>	<u>5-Year Annualized Return</u>	<u>10-Year Annualized Return</u>
6/30/13	14.8%	13.2%	5.0%	7.4%
6/30/12	2.4%	12.1%	1.2%	6.2%
6/30/11	23.2%	2.8%	4.0%	5.1%
6/30/10	11.6%	-5.6%	1.8%	2.1%
6/30/09	-21.0%	-4.1%	1.3%	2.0%
6/30/08	-4.6%	7.3%	9.8%	5.5%
6/30/07	17.2%	12.3%	11.5%	7.8%
6/30/06	10.7%	12.5%	6.2%	7.8%
6/30/05	9.3%	10.0%	2.4%	8.4%
6/30/04	17.8%	3.8%	2.6%	9.3%

**Schedule of Investment Results  
For Period Ended June 30, 2013**

	<u>One Year</u>	<u>Annualized Returns (1)</u>	
		<u>Three Years</u>	<u>Five Years</u>
<b>TOTAL PORTFOLIO</b>			
TSRS	14.84%	13.15%	5.04%
Custom Benchmark (2)	12.81%	12.51%	5.33%
<b>EQUITY FUNDS</b>			
Alliance S&P 500 Index	20.51%	18.34%	7.08%
S & P 500 Index	20.60%	18.45%	7.01%
PIMCO StocksPlus S & P 500 Index	24.51%	21.49%	10.42%
	20.60%	18.45%	7.01%
BlackRock Russell 1000 Value Index	25.36%	18.59%	6.85%
Russell 1000 Value Index	25.32%	18.51%	6.67%
T. Rowe Price Large Cap Growth (Inception date: 2/12)	20.41%	19.60%	9.49%
Russell 1000 Growth Index	17.07%	18.68%	7.47%
Champlain Investment Partners (Inception date 7/10)	22.88%	19.06%	10.39%
Russell Mid Cap Index	25.41%	19.53%	8.28%
Pyramis Small Cap Russell 2000 Index	29.74%	23.73%	12.29%
	24.21%	18.67%	8.77%
Causeway International Value Equity	22.07%	13.88%	3.49%
MSCI EAFE Index	18.62%	10.04%	-0.63%
Aberdeen EAFE Plus Equity (Inception date: 4/12)	11.69%	12.09%	3.34%
MSCI All Country World ex-U.S. Index	13.83%	7.99%	-0.80%
<b>FIXED INCOME FUNDS</b>			
BlackRock U.S. Debt Fund (Inception date: 1/12)	-0.48%	3.65%	5.32%
Barclays Aggregate Bond Index	-0.69%	3.51%	5.19%
PIMCO Custom Fixed Income Custom Index (3)	3.27%	6.12%	7.38%
	2.03%	5.15%	6.78%
<b>REAL ESTATE FUNDS</b>			
JPM Strategic Property Fund	14.08%	14.96%	1.06%
NCREIF ODCE Index	12.17%	14.96%	-0.15%
LaSalle Income & Growth Fund IV	5.20%	1.29%	-9.45%
NCREIF ODCE Index	12.17%	14.96%	-0.15%
JPM Income and Growth Fund	25.49%	25.62%	-2.81%
NCREIF ODCE Index	12.17%	14.96%	-0.15%

Notes: All data provided by independent investment consultant, Callan Associates, Inc.

(1) Geometrically compounded, time-weighted rates of return (all returns reported gross of fees)

(2) Custom Benchmark = 36% S&P 500 Index + 10% Russell 2500 + 15% MSCI ACWI ex-U.S.+ 23%, Barclays Capital Aggregate + 3% Barclays Capital High Yield + 8% NCREIF ODCE + 5% CPI+4%

(3) Custom Index = 25% Barclays Capital Mortgage + 25% Barclays Capital Credit + 25% Barclays Capital High Yield + 25% JP Morgan EMBI Global

**Schedule of Investment Results**  
**For Period Ended June 30, 2013 (Continued)**

	<u>One Year</u>	<u>Annualized Returns (1)</u>	
		<u>Three Years</u>	<u>Five Years</u>
<b>INFRASTRUCTURE FUNDS</b>			
Macquarie European Infrastructure Fund 3 CPI + 4%	13.28% 5.76%	12.29% 6.46%	(4)
SteelRiver Infrastructure Fund North America CPI + 4%	-7.19% 5.76%	3.78% 6.46%	(4)

Notes: All data provided by independent investment consultant, Callan Associates, Inc.

(1) Geometrically compounded, time-weighted rates of return (all returns are reported gross of fees)

(4) Data unavailable, funding commenced in last quarter of 2008

**Asset Summary**  
**By Manager and Type of Investment (in thousands)**  
**June 30, 2013**

Manager	Style	Large U.S. Stocks	Small/Mid U.S. Stocks	Foreign Stocks	Fixed Income	Real Estate	Infra-structure	Short Term	Totals
Alliance Capital	S & P 500 Index	\$ 72,730	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 472	\$ 73,202
T. Rowe Price	Large Cap Growth	65,746	-	-	-	-	-	325	66,071
BlackRock Russell Value	Large Cap Value Index	67,626	-	-	-	-	-	-	67,626
PIMCO StocksPlus	Enhanced Index	34,918	-	-	-	-	-	-	34,918
Champlain Investments	Mid-Cap Core	-	33,176	-	-	-	-	639	33,815
Pyramis Global Advisors	Small-Cap Core	-	34,069	-	-	-	-	313	34,382
Causeway Capital	Foreign Stocks-Value	-	-	46,948	-	-	-	1,394	48,342
Aberdeen Asset Mgmt	Foreign Stocks-Core	-	-	39,487	-	-	-	-	39,487
BlackRock U.S. Debt	U.S. Gov/Credit Bonds	-	-	-	57,720	-	-	-	57,720
PIMCO Custom Fixed Income	U.S. & Foreign Bonds	-	-	-	93,146	-	-	-	93,146
JPM Strategic Property Fund	Core Real Estate	-	-	-	-	33,326	-	-	33,326
LaSalle Income & Growth Fund	Value Added Real Estate	-	-	-	-	2,429	-	-	2,429
JPM Income & Growth Fund	Value Added Real Estate	-	-	-	-	13,022	-	-	13,022
Macquarie (MEIF3)	European Infrastructure	-	-	-	-	-	22,268	-	22,268
SteelRiver IFNA	North American Infrastructure	-	-	-	-	-	17,148	-	17,148
Liquidity Fund	Cash & Cash Equivalents	-	-	-	-	-	-	1,363	1,363
<b>TOTALS</b>		<b>\$ 241,020</b>	<b>\$ 67,245</b>	<b>\$ 86,435</b>	<b>\$ 150,866</b>	<b>\$ 48,777</b>	<b>\$ 39,416</b>	<b>\$ 4,506</b>	<b>\$ 638,265</b>

**Notes:**

(1) The Asset Summary does not include the City pooled investment account. (2) Assets are reflected on a trade date basis. (3) Short-term investments have been adjusted for the net impact of unsettled transactions in order to report on a trade date basis. (4) Each asset class includes receivables and payables.

## Manager and Asset Diversification (in thousands)

June 30, 2013

<u>Manager</u>	<u>Actual</u>		<u>Target</u>	
	<u>Amount</u>	<u>Percentage</u>	<u>Amount</u>	<u>Percentage</u>
Alliance Capital	\$ 73,202	11.5%	\$ 70,209	11.0%
T. Rowe Price	66,071	10.3%	63,827	10.0%
BlackRock Russell Value	67,626	10.6%	63,827	10.0%
PIMCO StocksPlus	34,918	5.5%	31,913	5.0%
<b>Large U.S. Stocks</b>	<b>241,817</b>	<b>37.9%</b>	<b>229,776</b>	<b>36.0%</b>
Champlain Investment Partners	33,815	5.3%	31,913	5.0%
Pyramis Global Advisors	34,382	5.4%	31,913	5.0%
<b>Small/Mid-Cap U.S. Stocks</b>	<b>68,197</b>	<b>10.7%</b>	<b>63,826</b>	<b>10.0%</b>
Causeway Capital	48,342	7.6%	47,870	7.5%
Aberdeen Asset Management	39,487	6.2%	47,870	7.5%
<b>Foreign (International) Stocks</b>	<b>87,829</b>	<b>13.8%</b>	<b>95,740</b>	<b>15.0%</b>
<b>Total Equities</b>	<b>397,843</b>	<b>62.4%</b>	<b>389,342</b>	<b>61.0%</b>
BlackRock U.S. Debt	57,720	9.0%	63,826	10.0%
PIMCO Custom Fixed Income	93,146	14.6%	102,122	16.0%
<b>Fixed Income (Bonds)</b>	<b>150,866</b>	<b>23.6%</b>	<b>165,948</b>	<b>26.0%</b>
JPM Strategic Property Fund	33,326	5.2%	31,913	5.0%
LaSalle Income & Growth Fund	2,429	0.4%	9,574	1.5%
JPM Income & Growth Fund	13,022	2.0%	9,574	1.5%
<b>Real Estate</b>	<b>48,777</b>	<b>7.6%</b>	<b>51,061</b>	<b>8.0%</b>
Macquarie (MEIF3)	22,268	3.5%	15,957	2.5%
SteelRiver IFNA	17,148	2.7%	15,957	2.5%
<b>Infrastructure</b>	<b>39,416</b>	<b>6.2%</b>	<b>31,914</b>	<b>5.0%</b>
Liquidity Fund	1,363	0.2%	-	0.0%
<b>Total</b>	<b>\$ 638,265</b>	<b>100%</b>	<b>\$ 638,265</b>	<b>100%</b>

**Asset Allocation by Asset Class  
Last Five Fiscal Years**

<u>Asset Class</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
U.S. Stocks	48%	46%	46%	46%	44%
Foreign (International) Stocks	14%	13%	15%	13%	13%
<b>Total Equities</b>	<u>62%</u>	<u>59%</u>	<u>61%</u>	<u>59%</u>	<u>57%</u>
Fixed Income (Bonds)	24%	26%	26%	29%	29%
Real Estate	8%	8%	6%	6%	8%
Infrastructure	6%	7%	6%	5%	5%
Cash	0%	0%	1%	1%	1%
	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>

**Ten Largest Bond Holdings**  
**(By Market Value)**  
**June 30, 2013**  
(dollars in thousands)

<u>Par Value</u>	<u>Bond</u>	<u>Coupon Rate</u>	<u>Due</u>	<u>Rating</u> <u>(1)</u>	<u>Market Value</u>
\$ 7,700	U.S. TREASURY NOTE	1.750%	05/15/23	Aaa	\$ 7,212
1,300	GAZPROM OAO VIA GAZ CAPITAL SA	9.250%	04/23/19	Baa1	1,567
1,400	FORD MOTOR CREDIT CO LLC	3.984%	06/15/16	Baa3	1,467
1,000	LLOYDS BANK PLC 144A	Variable	12/29/49	Ba1	1,332
1,300	U.S. TREASURY BOND	3.000%	05/15/42	Aaa	1,185
1,000	CHICAGO IL TRANSIT AUTHORITY SALES	6.899%	12/01/40	Aa3	1,161
1,000	RBSCF TRUST 2010 RR4 CMLA 144A	Variable	12/16/49	Aaa	1,108
1,100	INTESA SANPAOLO SPA 144A	6.500%	02/24/21	Baa2	1,108
1,000	HCA INC	6.500%	02/15/20	Ba3	1,082
1,000	INTERNATIONAL LEASE FINAN 144A	6.750%	09/01/16	Ba2	1,080

(1) Per Moody's Investors Service, Inc.

**Ten Largest Stock Holdings**  
**(By Market Value)**  
**June 30, 2013**  
(dollars in thousands)

<u>Shares</u>	<u>Stock</u>	<u>Market Value</u>
5,668	GOOGLE, INC	\$ 4,990
12,760	AMAZON.COM, INC	3,543
55,500	GILEAD SCIENCES, INC.	2,845
6,010	APPLE, INC.	2,383
21,184	BOEING	2,170
2,561	PRICELINE.COM INC	2,117
32,600	DANAHER CORP	2,064
22,756	EXXON MOBIL CORP	2,056
27,810	CROWN CASTLE INTERNATIONAL CORP	2,013
24,479	PROCTER & GAMBLE	1,885

A complete list of portfolio holdings is available by contacting the City of Tucson, Treasury Division, 255 W. Alameda, 5-west, Tucson, AZ 85701-1303

## Schedule of Fees June 30, 2013

	<u>Assets Under Management</u>	<u>Fees</u>
<b>Investment Manager Fees</b>		
<i>Fixed Income Managers</i>		
BlackRock U.S. Debt	\$ 57,720,333	\$ 31,846
PIMCO (Custom Fixed Income)	93,145,886	469,969
Total Fixed Income	\$ 150,866,219	\$ 501,815
<i>Equity Managers</i>		
Alliance Capital Management	\$ 73,202,385	\$ 26,954
BlackRock Russell Value Index	67,626,446	25,213
T. Rowe Price	66,070,870	301,343
Causeway Capital Management	48,341,947	307,811
Pyramis Global Advisors	34,382,269	241,216
Aberdeen Asset Management	39,486,571	315,740
PIMCO StocksPlus	34,918,072	385,024
Champlain Investment Partners	33,814,633	268,111
Total Equity	\$ 397,843,193	\$ 1,871,412
Liquidity Account	1,363,471	-
<i>Real Estate Managers</i>		
JPM Strategic Property Fund	\$ 33,326,031	\$ 325,499
JPM Income & Growth Fund	13,022,023	153,138
LaSalle Income & Growth Fund IV	2,428,878	36,333
Total Real Estate	\$ 48,776,932	\$ 514,970
<i>Infrastructure Managers</i>		
Macquarie (MEIF3)	\$ 22,267,969	\$ 208,930
SteelRiver IFNA	17,147,567	265,179
Total Infrastructure	\$ 39,415,536	\$ 474,109
Total Assets (Trade date basis)	\$ 638,265,351	
Total Investment Management Fees		\$ 3,362,306
<b>Other Investment Service Fees</b>		
<i>Custodian Fees</i>		
BNY Mellon		\$ 286,558
<i>Security Lending - Bank &amp; Administration Fees</i>		
BNY Mellon		78,604
<i>Consulting and Performance Management</i>		
Hewitt EnnisKnupp		156,997
Total Other Investment Service Fees		\$ 522,159

### Schedule of Commissions June 30, 2013

Broker Description	Shares	Commissions	Commissions Per Share
J.P. MORGAN CLEARING CORP, NEW YORK	454,381	\$ 12,009	\$ 0.0264
MERRILL LYNCH PIERCE FENNER SMITH INC NY	380,795	9,386	0.0247
CREDIT SUISSE, NEW YORK (CSUS)	576,602	8,812	0.0153
MORGAN STANLEY & CO INC, NY	497,462	8,131	0.0164
GOLDMAN SACHS & CO, NY	284,785	5,595	0.0196
STIFEL NICOLAUS	172,880	5,327	0.0308
JEFFERIES & CO INC, NEW YORK	187,117	5,288	0.0283
BNY CONVERGEX, NEW YORK	205,860	4,786	0.0233
ITG INC, NEW YORK	259,517	4,702	0.0181
RBC CAPITAL MARKETS LLC, NEW YORK	236,491	4,666	0.0197
RAYMOND JAMES & ASSOC INC, ST PETERSBURG	125,510	3,974	0.0317
PERSHING LLC, JERSEY CITY	132,760	3,875	0.0292
GOLDMAN SACHS EXECUTION & CLEARING, NY	168,273	3,810	0.0226
DEUTSCHE BK SECS INC, NY (NWSCUS33)	121,253	3,577	0.0295
KNIGHT CLEARING SERVICES LLC, JERSEY CIT	137,650	3,439	0.0250
BAIRD, ROBERT W & CO INC, MILWAUKEE	108,710	3,385	0.0311
MERRILL LYNCH INTL LONDON EQUITIES	214,849	3,296	0.0153
BARCLAYS CAPITAL INC./LE, NEW JERSEY	134,750	3,124	0.0232
CITIGROUP GBL MKTS INC, NEW YORK	110,267	2,983	0.0271
BARCLAYS CAPITAL, LONDON (BARCGB33)	141,816	2,717	0.0192
INVESTMENT TECHNOLOGY GROUP, NEW YORK	122,400	2,432	0.0199
UBS SECURITIES LLC, STAMFORD	123,380	2,345	0.0190
JANNEY MONTGOMERY SCOTT, PHILADELPHIA	76,260	2,283	0.0299
UBS EQUITIES, LONDON	185,001	1,911	0.0103
LIQUIDNET INC, BROOKLYN	74,600	1,865	0.0250
CANTOR FITZGERALD & CO INC, NEW YORK	56,920	1,573	0.0276
CITIGROUP GLOBAL MARKETS U.K., LONDON	374,874	1,560	0.0042
UBS WARBURG ASIA LTD, HONG KONG	163,900	1,446	0.0088
WILLIAM BLAIR & CO, CHICAGO	38,390	1,417	0.0369
SG SEC (LONDON) LTD, LONDON	53,536	1,393	0.0260
BROADCOURT CAP CORP/SUB OF MLPF&S,NY	34,200	1,368	0.0400
BERNSTEIN SANFORD C & CO, NEW YORK	44,520	1,353	0.0304
CREDIT AGRICOLE CHEUVREUX, COURBEVOIE	30,561	1,223	0.0400
J P MORGAN SECS LTD, LONDON	185,253	1,168	0.0063
CITIGROUP GLOBAL MARKETS LTD, LONDON	128,589	1,151	0.0090
VARIOUS BROKERS - LESS THAN \$1,000	1,078,614	23,224	0.0215
<b>TOTALS</b>	<b>7,422,726</b>	<b>\$ 150,590</b>	
<b>AVERAGE COMMISSION RATE</b>			<b>\$ 0.0203</b>





# **ACTUARIAL SECTION**

ACTUARIAL SECTION



Gabriel Roeder Smith & Company  
Consultants & Actuaries

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November 4, 2013

The Board of Trustees  
Tucson Supplemental Retirement System  
City Hall – 255 W. Alameda Street  
Tucson, AZ 85726-7210

**Subject: Certification of July 1, 2013 Actuarial Valuation**

Dear Members of the Board:

At the request of the Board, this letter certifies that the actuarial valuation report describes the current actuarial condition of the Tucson Supplemental Retirement System and determines the calculated employee and employer contribution rates. In addition, the valuation report provides information required by TSRS in connection with Governmental Accounting Standards Board Statement No 25 (GASB 25), and it provides various summaries of data. Valuations are prepared annually as of July 1. This letter was prepared at the request of the Board and is intended for use for the annual Comprehensive Annual Financial Report.

**Funding objective and funding policy**

The funding objective of the Retirement System is to establish and receive contributions which, expressed as percents of active member payroll, will remain approximately level from generation to generation of Tucson citizens. Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to provide for normal cost plus level percent of payroll financing of unfunded actuarial accrued liability (UAAL). The unfunded liability was amortized as a level percent of payroll over 20 years to develop the annual amortization payment amount. The annual required contribution is the sum of the amortization payment and the normal cost for the year. The City contribution is the annual required contribution net of employee contributions (5.00% of pay for those hired before July 1, 2006, 50% of normal cost for their given tier of benefits for those hired on or after July 1, 2006). This funding policy was implemented for the fiscal year beginning July 1, 2013.

**Progress toward realization of financing objectives**

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches at least 100%.

The funded ratio decreased from 63.5% to 63.3%. This decrease was primarily due to the recognition of the final 20% of the extraordinary investment loss that occurred in the year ending June 30, 2009. Absent unfavorable actuarial experience, we expect the funded ratio to gradually increase in future years.

Contributions are sufficient to meet the funding policy stated above.

The Board of Trustees  
November 4, 2013 Page 2

**Assumptions and methods**

The actuarial assumptions and methods used to perform this valuation remain unchanged from the prior valuation, with the exception of the amortization period to amortize the unfunded liability (which was increased from 15 to 20 years). An experience study is performed every five years and the Actuary makes recommendations regarding the assumptions and methods and the Board has the authority to accept or reject the recommendation. The last experience study was performed in 2008 and an experience study is scheduled for late 2013.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and calculated contribution rates.

The actuarial assumptions and methods meet the parameters set forth in Statement No. 25 of the Governmental Accounting Standards Board and meet Actuarial Standards of Practice. In our opinion, the assumptions are reasonably related to past experience and represent our best estimate of future conditions affecting the System.

**Data**

The valuation was based upon information, furnished by your retirement system administrator, concerning Retirement System benefits, financial transactions, individual members, terminated members, retired members, and beneficiaries. Data was checked for completeness and reasonableness but was not otherwise audited.

**Preparation of Schedules**

We prepared all of the schedules in the actuarial section with the exception of retirants and beneficiaries added to and removed from rolls. In the Financial Section, GRS prepared the Schedule of Funding Progress, the Schedule of Employer Contributions, and the Summary of Actuarial Methods and Assumptions.

**Certification**

All of our work conforms with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries and consultants. Both are Enrolled Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries. Both consultants below are experienced in performing valuations for large public retirement systems.

Sincerely,

**Gabriel, Roeder, Smith & Company**



Leslie L. Thompson, FSA, FCA, EA, MAAA  
Senior Consultant

## Actuarial Cost Method

**Normal cost contributions** were computed as follows:

The series of contributions, payable from date of employment, sufficient to accumulate at time of retirement was computed as the discounted value of each member's projected pension and potential survivor's pension, using the assumptions summarized on the following pages. Each contribution in the series is a constant percentage of the member's year by year projected compensation (entry-age normal actuarial cost method).

Effective July 1, 2013 the new funding policy requires a computation of normal cost separately for those members in Tier 1 and Tier 2. Actuarial accrued liability was computed and financed as follows:

(1) Retirants and beneficiaries. The discounted value of pensions likely to be paid to retired members and their potential survivors were computed using the investment return and mortality assumptions.

(2) Active members and former members. The actuarial accrued liability associated with service rendered prior to the valuation date, including experience gains and losses, was computed using the investment return, mortality and other assumptions outlined on the following pages. The computed amount was reduced by applicable valuation assets and the unfunded amount was amortized over 20 years as of June 30, 2013. An open amortization period of 20 years was adopted effective June 30, 2013.

**Actuarial accrued liability** was computed and financed as follows:

1. Retirants and beneficiaries. The discounted value of pensions likely to be paid to retired members and their potential survivors were computed using the investment return and mortality assumptions.
2. Active members and former members. The actuarial accrued liability associated with service rendered prior to the valuation date, including experience gains and losses, was computed using the investment return, mortality and other assumptions outlined on the following pages. The computed amount was reduced by applicable valuation assets and the unfunded amount was amortized over 20 years, using an open amortization method, adopted for years beginning July 1, 2012.

## Actuarial Assumptions

Level-percent contribution requirements and actuarial present values are calculated by using the entry-age actuarial cost method and assumptions concerning future experiences in the financial risk areas of a retirement plan. Actuarial gains and losses are amortized as a level percent-of-payroll over an open period of 20 years effective June 30, 2013. The assumptions are selected based upon the recommendation of the actuary.

The principal areas of risk which require assumptions about future experiences are:

- (i) long-term rates of investment return to be generated by the assets of the system,
- (ii) patterns of pay increases to members,
- (iii) rates of mortality among members, retirants and beneficiaries,
- (iv) rates of withdrawal of active members,
- (v) rates of disability among active members, and
- (vi) the age patterns of actual retirements

Through the valuation process, the monetary effect of each expected assumption against actual experience is projected for the lifetime of each covered member and potential beneficiary.

Actual experience of the system will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time, one or more of the assumptions are modified to reflect experience trends (but not random or temporary year to year fluctuations). The Board of Trustees adopts the assumptions based upon recommendations of the actuary. The demographic assumptions were last revised for the June 30, 2009 actuarial valuation following an actuarial investigation of experience of the Retirement System covering the period July 1, 2003 through June 30, 2008.

**Investment Return** 7.75% a year, compounded annually. This consists of a real rate of return of 4.25% a year plus a long-term rate of inflation of 3.50% a year.

This assumption is used to equate the value of payments due at different points in time. The approximate internal rate of investment return, for the purpose of comparison with the assumed rate is indicated below:

**For years ending June 30,**

	2013	2012	2011	2010	2009	3 Year Avg.	5 Year Avg.
Investment Return Rate <sup>1</sup>	4.1%	0.1%	-1.8%	-0.4%	6.2%	2.0%	2.3%
Real Rate of Investment Return	2.4%	-2.0%	-1.1%	-1.0%	7.5%	-0.3%	1.1%

<sup>1</sup> Based on actuarial value of assets, not market value

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other plans -- to do so will mislead.

**Pay Projections** These assumptions are used to project current pays to those which will determine average final compensation. The assumptions should consist of the same inflation component used for the investment return assumption plus an age graded component to reflect promotion and seniority increments.

<b>Less than Five Years of Service</b>				<b>Five or More Years of Service</b>			
Service	Inflation Component	Merit & Seniority	Total	Sample Ages	Inflation Component	Merit & Seniority	Total
0	3.50%	4.00%	7.50%	20	3.50%	2.00%	5.50%
1	3.50	3.50	7.00	25	3.50	2.00	5.50
2	3.50	3.00	6.50	30	3.50	2.00	5.50
3	3.50	2.50	6.00	35	3.50	2.00	5.50
4	3.50	2.00	5.50	40	3.50	1.50	5.00
				45	3.50	1.00	4.50
				50	3.50	0.75	4.25
				55	3.50	0.75	4.25
				60	3.50	0.75	4.25
				65	3.50	0.00	3.50

The pay increase assumptions will produce 3.50% annual increases in active member payroll (the base rate) given a constant active member group size. This is the same payroll growth assumption used to amortize unfunded actuarial accrued liability. In addition, an assumption is made that final average compensation will be increased by 2.2% to reflect unused sick leave for service retirements and vested terminations.

**Pre-Retirement Mortality Table** The 1994 Group Annuity Mortality Table with no set back and a multiplier of 80%. This assumption is used to measure the probabilities of members dying before retirement.

Sample Ages	Future Life Expectancy (years)		Deaths per 1,000 Lives	
	Men	Women	Men	Women
50	32.8	36.9	2.1	1.1
55	28.2	32.2	3.5	1.8
60	23.8	27.5	6.4	3.6
65	19.7	23.1	11.6	6.9
70	16.0	19.0	19.0	11.0
75	12.6	15.2	29.8	18.1
80	9.7	11.7	49.6	31.5
85	7.3	8.7	77.8	54.2

**Post-Retirement Mortality Table** The 1994 Group Annuity Mortality Table set forward one year for men and women with a multiplier of 80%. This assumption is used to measure the probabilities of each benefit payment being made after retirement. Disability mortality is set forward eight years.

Sample Ages	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)		Healthy Deaths per 1,000 Lives		Disabled Deaths per 1,000 Lives	
	Men	Women	Men	Women	Men	Women	Men	Women
50	\$139.27	\$144.83	31.9	36.0	2.3	1.3	6.3	3.4
55	131.85	138.89	27.3	31.2	4.0	2.1	11.5	6.7
60	122.61	131.17	23.0	26.6	7.2	4.1	19.9	11.8
65	111.82	121.82	18.9	22.3	13.0	7.8	31.2	18.3
70	99.79	110.72	15.3	18.2	20.8	12.0	50.2	31.7
75	86.30	97.33	12.0	14.4	32.7	20.3	82.5	54.9
80	72.12	82.48	9.2	11.1	54.9	35.2	127.0	93.8
85	58.65	67.14	6.9	8.2	84.6	60.3	198.4	155.9

**Rates of Retirement** Rates of retirement are used to measure the probabilities of an eligible member retiring during the next year. For those ages 62 and older, the Rule of 80 retirement rates only applies if the Rule of 80 is attained by age 62.

**Tier I Members**  
**Percentage of Those Eligible Retiring During Year**

Retirement Ages	Rule of 80	Age Based	Early
50	25%		
51	25		
52	25		
53	25		
54	25		
55	25		8%
56	25		8
57	25		8
58	25		8
59	25		8
60	25		
61	25		
62	25	33%	
63	25	19	
64	25	28	
65	25	30	
66	25	38	
67	25	47	
68	25	75	
69	25	90	
70	100	100	

Deferred vested members are assumed to retire at age 62.

**Tier 2 Members**  
**Percentage of Those Eligible Retiring During Year**

Retirement Ages	Rule of 80	Age Based	Early
60	30%		8%
61	30		8
62	30		8
63	30		8
64	30		8
65	30	33%	
66	30	41	
67	30	50	
68	30	75	
69	30	90	
70	100	100	

Deferred vested members are assumed to retire at age 65.

**Rates of Separation from Active Membership** This assumption measures the probabilities of a member terminating employment. The rates do not apply to members who are eligible to retire.

Sample Ages	Years of Creditable Service	Probability of Termination During Year
Any	0	15.00%
	1	10.00
	2	9.00
	3	7.50
	4	7.00
25	5 & Over	6.30
30		5.90
35		3.90
40		2.90
45		2.20
50		1.80
55		1.70
60		1.70

**Rates of Disability** This assumption measures the probabilities of a member becoming disabled. The rates do not apply to members who are eligible to retire.

Sample Ages	% of Active Members Becoming Disabled During Next Year
25	0.01%
30	0.02
35	0.03
40	0.05
45	0.07
50	0.11
55	0.19
60	0.28
65	0.25

Disabled life mortality is measured by the 1994 Group Annuity Mortality Table, as previously noted, with ages set forward 8 years. It is assumed that no valued disability retirement benefits will be offset for worker's compensation benefits or earned income received by the disabled retiree.

**Forfeiture of Vested Benefits** The assumption is that 55% of the actuarial present value of vested termination benefits will be forfeited by a withdrawal of accumulated contributions.

**Marital Status** 80% of men and women were assumed married at retirement.

**Spouse Status** Women were assumed to be 3 years younger than men.

**Assumed Age for Commencement for Deferred Benefits** Members electing to receive a deferred benefit are assumed to commence receipt at the earlier of age 62 and eligibility for rule of 80 Tier I and the earlier of age 65 and eligibility for the rule of 85 for Tier 2.

**Active Member Group Size** The number of active members was assumed to remain constant.

**Active Members as of June 30, 2013  
By Attained Age and Years of Service**

Attained Age	Years of Service to Valuation Date							Total No.	Total Valuation Payroll
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus		
< 20	1	-	-	-	-	-	-	1	\$ 33,946
20-24	35	-	-	-	-	-	-	35	1,054,102
25-29	95	30	-	-	-	-	-	125	3,874,437
30-34	111	80	18	-	-	-	-	209	7,408,440
35-39	106	91	65	9	-	-	-	271	10,321,563
40-44	73	116	98	90	9	1	-	387	16,906,968
45-49	67	98	73	106	63	15	-	422	20,124,166
50-54	74	96	82	86	93	58	1	490	23,862,384
55-59	52	86	103	103	88	51	19	502	25,556,444
60	7	14	6	14	8	9	4	62	3,218,496
61	11	11	14	14	6	8	3	67	3,426,232
62	10	6	6	13	7	7	3	52	2,860,603
63	1	5	4	7	4	4	3	28	1,489,840
64	3	6	5	5	6	2	4	31	1,674,631
65	3	5	3	3	5	2	4	25	1,559,316
66	1	7	1	-	4	1	-	14	839,488
67	1	1	1	1	1	1	-	6	309,234
68	2	-	1	1	1	-	1	6	424,077
69	-	2	1	1	-	-	-	4	205,962
70	1	-	1	2	1	-	-	5	276,286
71	-	1	1	-	-	-	-	2	124,530
72	-	-	-	-	-	-	-	-	-
73	-	-	-	-	-	-	-	-	-
74	-	-	-	-	1	-	-	1	33,488
75	-	-	-	-	-	-	-	-	-
76	-	-	1	-	-	1	-	2	154,960
77	-	-	-	-	-	-	-	-	-
78	-	-	2	-	-	-	-	2	67,974
79	-	-	-	1	-	-	-	1	50,336
<b>Totals</b>	<b>654</b>	<b>655</b>	<b>486</b>	<b>456</b>	<b>297</b>	<b>160</b>	<b>42</b>	<b>2,750</b>	<b>\$ 125,857,903</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 47.5 years  
 Service: 11.8 years  
 Annual Pay: \$45,767

**Active Members Included in Valuation  
Comparative Schedule - June 30, 2013**

Valuation Date	Active Members	Annual Payroll	Average			Vested Inactive Members
			Age	Service	Pay	
6/30/1989 <sup>1</sup>	3,250	81,386,395	41.8	8.6	25,042	40
6/30/1990	3,246	86,478,158	42.1	8.7	26,641	42
6/30/1991	3,195	86,829,527	42.4	9	27,177	38
6/30/1992	3,149	86,205,432	42.9	9.4	27,375	48
6/30/1993	3,224	92,867,286	43.3	9.8	28,805	45
6/30/1994	3,287	94,180,104	43.6	10.1	28,652	40
6/30/1995	3,284	99,847,171	43.9	10.2	30,404	45
6/30/1996	3,378	105,229,504	43.9	10.2	31,151	43
6/30/1997	3,430	110,188,751	44.3	10.9	32,125	52
6/30/1998	3,484	113,729,143	44.5	11	32,643	104
6/30/1999	3,550	126,816,830	44.8	10.7	35,723	119
6/30/2000	3,600	134,088,074	45.2	11	37,247	81
6/30/2001	3,669	145,058,897	45.4	11.1	39,536	107
6/30/2002	3,626	153,580,185	45.7	11.6	42,355	111
6/30/2003	3,364	143,164,205	45.5	11.2	42,558	125
6/30/2004	3,476	149,781,753	45.9	11.4	43,090	130
6/30/2005	3,609	162,149,200	46.2	11.4	44,929	148
6/30/2006	3,247	155,855,162	46.6	12.1	48,000	394 <sup>2</sup>
6/30/2007	3,326	159,249,822	46.2	11.4	47,880	223
6/30/2008	3,251	153,982,399	45.7	10.6	47,365	202
6/30/2009	3,175	149,924,649	46.3	11.2	47,220	205
6/30/2010	2,982	141,459,257	47.1	12.1	47,438	215
6/30/2011	2,628	121,631,362	47.1	11.9	46,283	208
6/30/2012	2,718	125,003,023	47.3	11.9	45,991	229
6/30/2013	2,750	125,857,903	47.5	11.8	45,767	256

<sup>1</sup> An amendment eliminated the one-year service requirement for participation in TSRS

<sup>2</sup> Includes 136 form Library employees requesting a transfer of service credits to ASRS

## Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

Fiscal Year	Added to Rolls		Removed from Rolls		Rolls End of Year		Average Annual Allowance	Percentage Increase in Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowance		
6/30/2005	68	\$3,498,948	42	\$485,633	1,793	\$ 32,027,305	17,862	
6/30/2006	101	\$2,335,032	53	\$656,383	1,878	\$ 35,091,468	18,686	4.61%
6/30/2007	213	\$6,055,096	36	\$403,347	2,018	\$ 39,883,032	19,764	5.77%
6/30/2008	313	\$10,001,857	24	\$395,246	2,307	\$ 49,489,643	21,452	8.54%
6/30/2009	112	\$2,005,399	54	\$683,947	2,365	\$ 50,810,927	21,485	0.15%
6/30/2010	141	\$3,089,275	56	\$784,935	2,450	\$ 53,115,267	21,680	0.91%
6/30/2011	332	\$9,880,306	73	\$1,284,997	2,709	\$ 61,710,576	22,780	5.07%
6/30/2012	64	\$1,084,848	69	\$1,057,560	2,704	\$ 61,737,864	22,832	0.23%
6/30/2013	96	\$2,027,292	81	\$1,216,923	2,719	\$ 62,548,233	23,004	0.75%

## Comparative Schedule of Annual Pension Benefits Paid

Actuarial Section

Year Ending June 30	No.	Annual Pensions	% Increase	No. of Active Per Retired	Pensions as % of Active Payroll	Average Pensions	Actuarial Present Value of Pensions	Expected Removals	
								No.	Pensions
1989*	780	5,344,719	17.6	4.2#	6.6	6,852	46,556,352	26.6	133,860
1990	832	6,488,714	21.4	3.9	7.5	7,799	57,430,128	28.5	150,864
1991*	918	8,111,103	25.0	3.5	9.3	8,836	72,419,436	29.8	172,608
1992	965	9,010,345	11.1	3.3	10.5	9,337	80,342,604	32.3	208,068
1993*	989	9,704,929	7.7	3.3	10.5	9,813	85,832,484	34.3	235,068
1994	1,035	10,612,612	9.4	3.2	11.3	10,254	95,449,308	35.8	263,340
1995*	1,065	11,429,402	7.7	3.1	11.4	10,732	102,511,728	35.8	270,600
1996	1,105	12,236,298	7.1	3.1	11.6	11,074	109,572,672	37.7	302,952
1997*	1,156	13,391,185	9.4	3.0	12.2	11,594	119,508,312	39.4	325,440
1998	1,208	14,479,476	8.1	2.9	12.7	11,986	129,345,816	42.4	370,344
1999*	1,260	15,721,865	8.6	2.8	12.4	12,478	139,805,832	44.2	402,504
2000*	1,301	16,966,042	7.9	2.8	12.7	13,041	150,527,136	46.2	445,464
2001*	1,355	18,505,247	9.1	2.7	12.8	13,657	161,740,968	47.1	484,776
2002*	1,442@	21,273,162	15.0	2.5	13.9	14,753	187,508,568	53.3	622,236
2003*	1,742~	29,767,500	39.9	1.9	20.8	17,088	275,193,384	58.2	742,908
2004*	1,753	30,491,864	2.4	2.0	20.4	17,394	286,698,084	55.7	717,888
2005*	1,793	32,027,305	5.0	2.0	19.8	17,862	298,395,396	58.3	781,152
2006*	1,878	35,091,468	9.6	1.7	22.5	18,686	326,828,088	61.1	857,760
2007*	2,018 <sup>§</sup>	39,883,032	13.7	1.6	25.0	19,764	371,497,680	66.3	977,328
2008	2,307	49,489,643	24.1	1.4	32.1	21,452	473,240,976	74.4	1,134,019
2009	2,365	50,810,927	2.7	1.3	33.9	21,485	494,923,021	63.8	994,553
2010	2,450	53,115,267	4.5	1.2	37.5	21,680	525,200,232	58.9	948,815
2011	2,709	61,710,576	16.2	1.0	50.7	22,780	618,779,524	63.5	1,059,171
2012	2,704	61,737,864	0.0	1.0	49.4	22,832	607,450,331	66.1	1,125,302
2013	2,719	62,548,233	1.3	1.0	49.7	23,004	609,558,963	69.0	1,200,744

\*Includes ad hoc cost-of-living increases.

#Reflects increase in the number of active members as a result of an amendment which eliminated the one year service requirement for participation in the Retirement System.

@Reflects increase in the number of retirees resulting from a temporary amendment that reduced requirements for retirement eligibility.

~Reflects increase in the number of retirees resulting from temporary amendments that reduced requirements for retirement eligibility and provided added retirement incentives during a limited period.

§Reflects increase in the number of retirees resulting from temporary amendments that provided added retirement incentives during a limited period.

Tucson Supplemental Retirement System

June 30, 2013

**Experience Gains (Losses)  
Comparative Schedule**

	Year Ended 6-30-13	Year Ended 6-30-12
(1) UAAL <sup>1</sup> at start of year	\$343,832,211	\$303,943,911
(2) + Normal Cost	15,625,430	15,279,908
(3) - Actual contributions	44,737,877	36,649,597
(4) + Interest accrual on (1), (2) and (3)	25,518,888	22,727,577
(5) Expected UAAL before changes	340,238,652	305,301,799
(6) Actual UAAL	348,232,387	343,832,211
(7) Experience gain (loss) (5) - (6)	(7,993,735)	(38,530,412)
(8) As % of beginning of year AAL <sup>2</sup>	(0.8%)	(4.1%)

<sup>1</sup> Unfunded actuarial accrued liability

<sup>2</sup> Actuarial accrued liability

## Solvency Test

Valuation Date	Aggregate Accrued Liabilities For			Valuation Assets	Portion of Accrued Liabilities Covered by Reported Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Active Member Contributions	Retirants and Beneficiaries	Active Member (Employer Financed Portion)				
6-30-93	\$55,146,786	\$85,832,484	\$98,492,344	\$197,281,861	100.0%	100.0%	57.2%
6-30-94	60,424,161	95,449,308	105,838,311	213,540,661	100.0	100.0	54.5
6-30-95	66,316,408	102,511,728	113,211,848	237,712,863	100.0	100.0	60.8
6-30-96	72,294,235	109,572,672	118,739,900	266,740,007	100.0	100.0	71.5
6-30-97	78,991,358	119,508,312	128,878,531	304,684,444	100.0	100.0	82.4
6-30-98	85,106,175	129,345,816	134,514,294	353,056,577	100.0	100.0	103.0
6-30-99	92,367,491	139,805,832	168,050,794	402,875,158	100.0	100.0	101.6
6-30-00	100,413,022	150,527,136	186,809,583	453,953,722	100.0	100.0	108.7
6-30-01	108,696,394	161,740,968	224,921,223	470,671,667	100.0	100.0	89.0
6-30-02	118,913,979	187,508,568	247,524,186	463,101,526	100.0	100.0	63.3
6-30-03	110,195,709	275,193,384	215,784,329	458,856,831	100.0	100.0	34.0
6-30-04	123,643,527	286,698,084	235,009,321	494,986,798	100.0	100.0	36.0
6-30-05	135,346,297	298,395,396	260,129,138	538,788,828	100.0	100.0	40.4
6-30-06	140,387,532	326,828,088	268,577,863	588,227,845	100.0	100.0	45.1
6-30-07	136,028,896	371,497,680	256,012,354	634,763,193	100.0	100.0	49.7
6-30-08	125,331,432	473,240,976	223,632,380	650,227,215	100.0	100.0	23.1
6-30-09	133,633,947	494,923,021	230,928,190	665,298,494	100.0	100.0	15.9
6-30-10	140,224,998	525,200,232	239,055,106	641,818,551	100.0	95.5	0.0
6-30-11	119,049,097	614,497,202	195,062,492	624,664,880	100.0	82.3	0.0
6-30-12	122,240,396	607,450,331	211,247,995	597,106,511	100.0	78.2	0.0
6-30-13	138,342,388	609,558,963	200,661,102	600,330,066	100.0	75.8	0.0

## Summary of Benefit Provisions Evaluated or Considered (June 30, 2013)

### **Normal Retirement (NO REDUCTION FACTOR)**

#### **Eligibility:**

**Tier 1** – Members hired before July 1, 2011. Age 62, or a combination of age and creditable service equal to 80 (for those hired on or after July 1, 2009, eligibility at age 62 requires a minimum of 5 years of accrued service).

**Tier 2** - Members hired on or after July 1, 2011. Age 65, with 5 years of service or a combination of age and creditable service equal to 85 and the attainment of age 60.

**Amount** - Creditable service times 2.25% of average final compensation for Tier 1 and 2.00% of average final compensation for Tier 2.

**Average Final Compensation** – The average monthly creditable compensation for the period of 36 consecutive months during which the member's creditable compensation was the highest during the 120 months immediately preceding the date of retirement for Tier 1 and 60 consecutive months immediately preceding the date of retirement for Tier 2. Effective July 1, 2000, accrued unused sick leave at the final salary may be substituted for an equal number of hours at the beginning of the 36 month period for Tier 1.

### **Early Retirement (REDUCTION FACTOR)**

**Eligibility** - Age 55 with 20 or more years of creditable service for Tier 1 and age 60 with 20 or more years of creditable service for Tier 2.

**Amount** - An amount computed as for normal retirement but reduced by 1/2 of 1% per month for each month (6% per year) retirement precedes normal retirement.

### **Deferred Retirement (VESTED TERMINATION)**

Eligibility - 5 or more years of accrued service. Deferred retirement benefits for terminated vested employee becomes automatic at age 62 (age 65 for Tier 2) or when a combination of age and creditable service equals 80 (85 with the attainment of age 60 for Tier 2), unless the member elects to withdraw the employee contribution account in lieu of a deferred retirement benefit. In addition to the eligibility listed above, the term-vested member may chose an Early Retirement (minimum age of 55 for Tier 1 and 60 for Tier 2 and minimum service of 20 yrs) subject to the same reduction – reduced by 1/2 of 1% per month for each month (6% per year) retirement precedes normal retirement eligibility.

**Amount** - An amount computed as for normal retirement.

### **Disability Retirement**

**Eligibility** – Eligibility requires 10 or more years of credited service and a disability that is total and permanent.

**Amount** - An amount computed as for normal retirement. Disability Retirement Benefits are offset, if the combination of all employer-provided benefits exceeds 100% of the members adjusted income base, then members pension benefit from TPRS is reduced so income does not exceed the 100% maximum allowed.

### **Pre-Retirement Survivor Benefits**

**Eligibility** - 5 or more years of accrued service.

**Amount** - Lump sum payment equal to twice the member's contributions, with interest. In lieu of the lump sum a surviving spouse may elect 50% of the deceased member's normal retirement amount accrued at the time of death.

**Eligibility** - 5 or more years of accrued service and not eligible to retire.

**Amount** - Lump sum payment equal to twice the member's contributions, with interest.

**Eligibility** - After attaining eligibility for retirement, in the event the member dies prior to submitting an application for retirement benefits:

**Amount** - If the member is married, a default provision allows the member's spouse to elect to receive either a lump sum payment of twice the member's contributions account, or receive a lifetime annuity benefit determined as if the member had elected a joint & last survivor benefit of 100% survivor annuity prior to death. If the member is not married and has named a single non-spousal beneficiary, the beneficiary may elect to receive either a lump sum payment of twice the member's contributions account, or receive a 15 year annuity benefit determined as if the member elected payment of a 15 year term certain annuity. If the member has named multiple designated beneficiaries, a lump sum refund of the member's account balance will be paid to the named beneficiaries.

### **Other Termination Benefits**

**Eligibility** - termination of employment without eligibility for any other benefit.

**Amount** - accumulated contributions and interest in members account at time of termination.

### **Employee Contributions**

Interest is credited to member accumulated contributions accounts as simple interest two times per year at an annual interest rate of 6%. For those hired prior to July 1, 2006, employee contributions are 5.00% of salary. For those hired on or after July 1, 2006, employee contributions are 40% of the total required contribution. For those hired after July 1, 2009, employee contributions will be a minimum of 40% and a maximum of 50% of the total required contribution.

Beginning July 1, 2013, for those hired after June 30, 2006 (Tier I and Tier II variable classes) employee contributions are 50% of the respective Normal Cost for each

class. The employee contributions for the Tier I and Tier II variable classes for FY13/14 are 6.715% and 5.06% respectively.

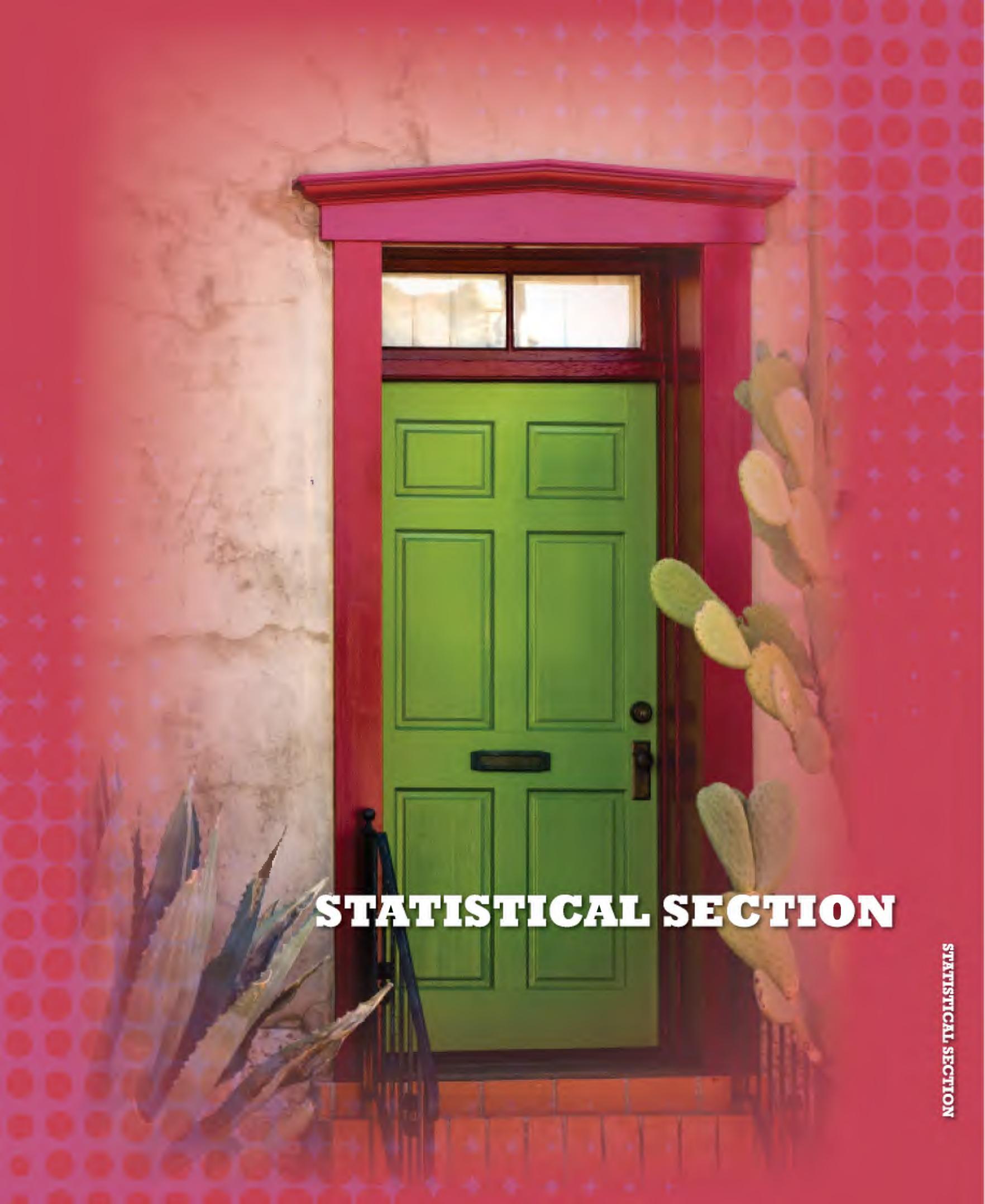
***City Contributions***

City Contributions are actuarially determined; which together with employee contributions and investment earnings will fund the obligations of the System in accordance with accepted actuarial principles.

***Post-Retirement Adjustments***

The TSRS Board has established formal policies to determine whether the system shall fund an annual supplemental post retirement benefit payment to retired members and beneficiaries.





**STATISTICAL SECTION**



## **Discussion of Statistical Section**

This section of the Tucson Supplemental Retirement System's comprehensive annual financial report (CAFR) provides detailed financial and non-financial information, often considered relevant to users. The statistical section presents certain information on a trend basis; that is, a summary of information that is provided for each year in a ten-year period. Other non-trend schedules present demographic and participation information for our active and retired membership. Each schedule is defined below with an explanation and an identification of the source of the data.

### **Statement of Changes in Plan Net Position**

This schedule provides the additions and deductions to the plan for the past ten years. The change in net position is provided to illustrate whether or not sufficient resources are available in the current fiscal year to cover plan benefits. This schedule is developed using the Statements of Changes in Plan Net Position for the past ten years.

### **Retired Members by Type of Benefit**

This schedule provides the number of retired members by type of benefit. The TSRS plan benefits include payments for normal retirement benefits, disability benefits, survivor benefits, and term certain benefits paid to members, beneficiaries and alternate payees. The schedule is developed using TSRS' database.

### **Average Monthly Benefit Payments to New Retirees**

This schedule provides the average monthly benefit payments made to new retirees, using six ranges of years of credited service by year. This information is provided to illustrate changes in benefit payments as the amount of service earned increases and indicates the number of employees retired during each of the last 10 years. This schedule is developed using TSRS' database.

### **Demographics of Retired and Active Members**

This schedule provides the age demographics of all retirees, survivors and beneficiaries of retired members for this year only. Similarly, age demographics for the systems active membership are indicated as well as the relative composition of membership categorized by Tier. This schedule is developed using TSRS' membership database.

### **Employee and Employer Contribution Rates**

This schedule provides the contribution rates paid by the Plan sponsor and by City employees during the past 10 years. This schedule is a historical summary of the actual rates paid.

### **Benefit and Refund Deductions from Net Position by Type**

This schedule provides the benefits paid to all service and disability retirees during each of the last 10 years. In addition, the lump sum payments to members elected to participate in the End of Service program since 2007 and refunds associated with member deaths, separation from service and transfers to other retirement systems are summarized. This schedule is developed using the Statements of Changes in Plan Net Position for the past ten years.

### **Retiree Benefit and Service Summary**

This schedule indicates average retiree benefits paid to retirees, based on the number of years retired, indicating eight age categories and the years of credited service served. This schedule is developed using TSRS' membership database.

**Tucson Supplemental Retirement System**  
**Statement of Changes in Plan Net Position - Last Ten Fiscal Years**

For the Fiscal Years Ending June 30,

	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
<b>Additions</b>					
City Contributions	\$ 34,523,315	\$ 27,429,666	\$ 23,432,916	\$ 23,260,609	\$ 21,279,535
Employee Contributions	9,200,262	7,685,264	7,562,294	8,041,748	8,156,115
Purchase of Service	1,014,301	1,280,263	3,772,923	1,556,832	1,565,164
Contributions from Other Sources	-	50,000	50,000	50,000	140,512
Transfers from Other Systems	-	204,404	700,009	1,652,656	1,589,190
<b>Total Contributions</b>	<u>\$ 44,737,878</u>	<u>\$ 36,649,597</u>	<u>\$ 35,518,142</u>	<u>\$ 34,561,845</u>	<u>\$ 32,730,516</u>
<b>Investment Income</b>					
Net Gain (Loss) in Fair Value of Investments	\$ 73,705,613	\$ 566,661	\$ 106,114,437	\$ 40,143,355	\$ (155,121,980)
Interest	4,174,559	6,319,874	6,361,246	7,441,435	11,087,144
Dividends	7,158,084	4,981,339	5,589,052	6,743,309	7,219,584
Real Estate Income	-	-	-	-	-
Securities Lending Income	184,733	157,562	124,158	91,625	359,394
Miscellaneous Income	98,400	16,833	45,681	3,640	120,820
<b>Net Income from Investment Activity</b>	<u>\$ 85,321,389</u>	<u>\$ 12,042,269</u>	<u>\$ 118,234,574</u>	<u>\$ 54,423,364</u>	<u>\$ (136,335,038)</u>
<b>Less Investment Expenses:</b>					
Securities Lending Fees	\$ 78,604	\$ 68,370	\$ 35,027	\$ 25,401	\$ 197,429
Investment Services	3,805,861	3,460,730	3,871,641	4,096,007	4,580,028
<b>Total Investment Expense</b>	<u>\$ 3,884,465</u>	<u>\$ 3,529,100</u>	<u>\$ 3,906,668</u>	<u>\$ 4,121,408</u>	<u>\$ 4,777,457</u>
<b>Net Investment Gain</b>	<u>\$ 81,436,924</u>	<u>\$ 8,513,169</u>	<u>\$ 114,327,906</u>	<u>\$ 50,301,956</u>	<u>\$ (141,112,495)</u>
<b>Total Additions</b>	<u>\$ 126,174,802</u>	<u>\$ 45,162,766</u>	<u>\$ 149,846,048</u>	<u>\$ 84,863,801</u>	<u>\$ (108,381,979)</u>
<b>Deductions</b>					
Benefits	\$ 62,191,480	\$ 61,693,408	\$ 58,247,882	\$ 51,700,541	\$ 51,996,508
Refunds	2,631,221	2,247,225	2,350,626	2,110,360	1,689,956
Transfers to Other Systems	-	-	2,928,607	898,085	2,655,061
Administrative Expenses	689,252	550,604	728,642	672,622	864,382
<b>Total Deductions</b>	<u>\$ 65,511,953</u>	<u>\$ 64,491,237</u>	<u>\$ 64,255,757</u>	<u>\$ 55,381,608</u>	<u>\$ 57,205,907</u>
<b>Net Change in Plan Net Position</b>	<u>\$ 60,662,849</u>	<u>\$ (19,328,471)</u>	<u>\$ 85,590,291</u>	<u>\$ 29,482,193</u>	<u>\$ (165,587,886)</u>

**Tucson Supplemental Retirement System**  
**Statement of Changes in Plan Net Position - Last Ten Fiscal Years**

For the Fiscal Years Ending June 30,

	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>
<b>Additions</b>					
City Contributions	\$ 23,902,286	\$ 22,670,418	\$ 24,319,911	\$ 21,423,488	\$ 15,966,754
Employee Contributions	8,591,124	8,120,057	8,197,437	7,638,608	6,563,651
Purchase of Service	5,186,289	1,008,980	1,157,572	1,972,509	2,307,962
Contributions from Other Sources	130,784	41,595	-	857,399	-
Transfers from Other Systems	2,012,917	3,794,093	620,601	-	294,722
<b>Total Contributions</b>	<u>\$ 39,823,400</u>	<u>\$ 35,635,143</u>	<u>\$ 34,295,521</u>	<u>\$ 31,892,004</u>	<u>\$ 25,133,089</u>
<b>Investment Income</b>					
Net Gain (Loss) in Fair Value of Investments	\$ (50,256,771)	\$ 85,493,111	\$ 48,195,450	\$ 33,977,326	\$ 67,110,061
Interest	10,815,803	7,649,621	4,144,414	3,692,702	4,051,824
Dividends	10,009,694	9,537,064	8,187,034	9,779,723	7,691,638
Real Estate Income	-	-	-	-	16,209
Securities Lending Income	1,881,706	2,594,083	1,683,061	879,477	417,044
Miscellaneous Income	152,848	6,038	53,855	43,387	24,744
<b>Net Income from Investment Activity</b>	<u>\$ (27,396,720)</u>	<u>\$ 105,279,917</u>	<u>\$ 62,263,814</u>	<u>\$ 48,372,615</u>	<u>\$ 79,311,520</u>
<b>Less Investment Expenses:</b>					
Securities Lending Fees	\$ 1,708,227	\$ 2,517,081	\$ 1,618,232	\$ 819,201	\$ 324,034
Investment Services	4,129,652	3,433,243	3,096,323	2,581,056	2,308,746
<b>Total Investment Expense</b>	<u>\$ 5,837,879</u>	<u>\$ 5,950,324</u>	<u>\$ 4,714,555</u>	<u>\$ 3,400,257</u>	<u>\$ 2,632,780</u>
<b>Net Investment Gain</b>	<u>\$ (33,234,599)</u>	<u>\$ 99,329,593</u>	<u>\$ 57,549,259</u>	<u>\$ 44,972,358</u>	<u>\$ 76,678,740</u>
<b>Total Additions</b>	<u>\$ 6,588,801</u>	<u>\$ 134,964,736</u>	<u>\$ 91,844,780</u>	<u>\$ 76,864,362</u>	<u>\$ 101,811,829</u>
<b>Deductions</b>					
Benefits	\$ 46,211,560	\$ 40,419,922	\$ 33,475,950	\$ 31,357,794	\$ 30,259,921
Refunds	1,265,235	1,573,276	1,219,263	1,229,267	1,249,453
Transfers to Other Systems	4,340,520	11,886,941	482,469	209,410	362,716
Administrative Expenses	519,346	485,469	433,350	389,303	380,407
<b>Total Deductions</b>	<u>\$ 52,336,661</u>	<u>\$ 54,365,608</u>	<u>\$ 35,611,032</u>	<u>\$ 33,185,774</u>	<u>\$ 32,252,497</u>
<b>Net Change in Plan Net Position</b>	<u>\$ (33,321,180)</u>	<u>\$ 221,514,188</u>	<u>\$ 152,793,083</u>	<u>\$ 123,943,207</u>	<u>\$ 174,003,941</u>

**Tucson Supplemental Retirement System**  
**Average Monthly Payments to New Retirees**  
**June 30, 2013**

Retirement Effective Dates For Fiscal Years Ending June 30	Years of Credited Service							
	<5	5-9	10-14	15-19	20-24	25-29	> 30	
2013								
Avg Monthly Benefit	\$ 507	\$ 578	\$ 1,275	\$ 1,669	\$ 2,060	\$ 2,956	\$ 3,876	
Avg Monthly Final Avg Comp.	\$ 5,609	\$ 3,077	\$ 4,497	\$ 4,121	\$ 4,041	\$ 4,680	\$ 5,124	
Number of Active/EOSP retirees	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
2012*								
Avg Monthly Benefit	\$ 237	\$ 563	\$ 923	\$ 1,829	\$ 1,428	\$ 2,401	\$ 2,745	
Avg Monthly Final Avg Comp.	\$ 2,728	\$ 3,355	\$ 3,240	\$ 4,787	\$ 2,767	\$ 3,869	\$ 3,745	
Number of Active/EOSP retirees	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
2011*								
Avg Monthly Benefit	\$ 519	\$ 560	\$ 964	\$ 1,913	\$ 2,303	\$ 2,998	\$ 3,780	
Avg Monthly Final Avg Comp.	\$ 2,865	\$ 3,350	\$ 3,352	\$ 4,774	\$ 4,509	\$ 4,899	\$ 5,044	
Number of Active/EOSP retirees	5	12	18	24	83	107	58	
2010*								
			1-9	10-14	15-19	20-24	25-29	>30
Avg Monthly Benefit			\$ 481	\$ 931	\$ 1,466	\$ 2,374	\$ 2,386	\$ 3,376
Avg Monthly Final Avg Comp.			\$ 3,229	\$ 2,976	\$ 3,841	\$ 5,148	\$ 4,251	\$ 4,871
Number of Active/EOSP retirees			23	16	13	35	23	13
2009*								
Avg Monthly Benefit		\$ 620	\$ 1,117	\$ 1,452	\$ 2,165	\$ 3,475	\$ 2,811	
Avg Monthly Final Avg Comp.		\$ 3,474	\$ 3,823	\$ 3,671	\$ 4,281	\$ 5,775	\$ 3,942	
Number of Active/EOSP retirees		14	13	12	23	15	9	
2008*								
Avg Monthly Benefit		\$ 645	\$ 1,076	\$ 1,502	\$ 2,258	\$ 3,133	\$ 3,944	
Avg Monthly Final Avg Comp.		\$ 4,302	\$ 4,542	\$ 3,869	\$ 5,094	\$ 5,310	\$ 6,222	
Number of Active/EOSP retirees		18	16	27	74	84	63	
2007								
Avg Monthly Benefit		\$ 648	\$ 725	\$ 1,360	\$ 2,010	\$ 2,999	\$ 3,730	
Avg Monthly Final Avg Comp.		\$ 3,947	\$ 2,922	\$ 3,687	\$ 4,258	\$ 5,086	\$ 5,589	
Number of Active Retirees		12	11	33	42	55	48	
2006								
Avg Monthly Benefit		\$ 610	\$ 802	\$ 1,304	\$ 1,974	\$ 3,141	\$ 4,001	
Avg Monthly Final Avg Comp.		\$ 4,046	\$ 2,803	\$ 3,245	\$ 4,006	\$ 4,970	\$ 5,561	
Number of Active Retirees		20	14	25	27	33	20	
2005								
Avg Monthly Benefit		\$ 563	\$ 912	\$ 1,095	\$ 1,803	\$ 3,291	\$ 3,615	
Avg Monthly Final Avg Comp.		\$ 3,518	\$ 3,722	\$ 3,017	\$ 3,884	\$ 5,623	\$ 4,883	
Number of Active Retirees		8	3	10	20	17	10	
2004								
Avg Monthly Benefit		\$339	\$895	\$1,245	\$1,547	\$2,508	\$2,876	
Avg Monthly Final Avg Comp.		\$2,519	\$3,398	\$3,500	\$3,483	\$4,292	\$4,323	
Number of Active Retirees		4	10	6	7	8	2	

\*includes EOSP Participants still employed and alt. payees receiving benefits

**Tucson Supplemental Retirement System  
Demographics of Retired and Active Members  
June 30, 2013**

**Retired Members**

Ages	Retirees			Survivors/Beneficiaries		
	Male	Female	Total	Male	Female	Total
Under 55	35	43	78	1	20	21
55 to 59	141	145	286	4	24	28
60 to 64	362	208	570	3	31	34
65 to 69	389	194	583	3	37	40
70 to 74	216	125	341	1	63	64
75 to 79	178	75	253	4	55	59
80 to 84	96	52	148	2	33	35
85 to 89	44	29	73	4	34	38
90 to 94	23	17	40	3	14	17
95 to 100	2	7	9	-	2	2
101 and over	-	-	-	-	-	-
<b>Total</b>	<b>1,486</b>	<b>895</b>	<b>2,381</b>	<b>25</b>	<b>313</b>	<b>338</b>

**Active Members**

Ages	Active Members			Percentage Distribution		
	Male	Female	Total	Male	Female	Total
Under 20	-	1	1	0.00%	0.04%	0.04%
20 to 29	82	78	160	2.98%	2.84%	5.82%
30 to 39	269	211	480	9.78%	7.67%	17.45%
40 to 49	434	375	809	15.78%	13.64%	29.42%
50 to 59	607	385	992	22.07%	14.00%	36.07%
60 to 69	216	79	295	7.85%	2.88%	10.73%
70 and over	10	3	13	0.36%	0.11%	0.47%
<b>Total</b>	<b>1,618</b>	<b>1,132</b>	<b>2,750</b>	<b>58.82%</b>	<b>41.18%</b>	<b>100.00%</b>

**Composition of Active TSRS Membership by Tier**

	<u>Membership</u>	<u>Payroll</u>	<u>% of Payroll</u>
Tier 1 - Fixed Contribution Rates	1,802	89,730,154	71.30%
Tier 1 - Variable Contribution Rates	456	18,390,154	14.61%
Tier 2 - Variable Contribution Rates	492	17,737,595	14.09%
	<u>2,750</u>	<u>125,857,903</u>	<u>100.00%</u>

**Tucson Supplemental Retirement System  
Employee and Employer Contribution Rates  
Last Ten Fiscal Years as of June 30, 2013**

Fiscal Year	Employee Rate (percentage)		Employer Rate (percentage)		Total Contribution (percentage)
	Fixed	Variable	Fixed	Variable	
02/03	5.0	n/a	8.41	n/a	13.41
03/04	5.0	n/a	11.17	n/a	16.17
04/05	5.0	n/a	14.06	n/a	19.06
05/06	5.0	n/a	14.83	n/a	19.83
06/07*	5.0	7.5	15.04	12.54	20.04
07/08*	5.0	8.084	15.21	12.126	20.21
08/09*	5.0	7.788	14.47	11.682	19.47
09/10*	5.0	8.852	17.13	13.278	22.13
10/11*	5.0	9.428	18.57	14.142	23.57
11/12*	5.0	11.62	24.05	17.43	29.05
12/13*	5.0	13.976	29.94	20.964	34.94

\*Employees hired on or after July 1, 2006 pay a variable rate, which changes annually, to 40% of the actuarially recommended contribution rate (ARC) for the system.

**Tucson Supplemental Retirement System  
Benefit and Refund Deductions from Net Position by Type  
Last Ten Fiscal Years**

	fiscal years ended June 30,									
	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
<b>Type of Benefit</b>										
Service Benefits:										
Retirees	\$ 56,406,478	\$ 48,475,837	\$ 51,377,474	\$ 45,580,606	\$ 40,123,580	\$ 39,940,472	\$ 31,993,340	\$ 28,946,679	\$ 27,440,364	\$ 26,533,141
EOSP lump sum <sup>(1)</sup>	-	7,656,801	1,517,252	997,448	6,805,342	1,495,136	4,069,547	-	-	-
Survivors <sup>(2)</sup>	3,397,302	3,166,737	2,951,507	2,757,941	2,700,791	2,499,152	2,236,330	2,229,540	1,860,300	1,646,238
Disability Benefits:										
Retirees	2,066,746	2,056,266	2,057,473	2,015,248	1,969,239	1,999,565	1,847,725	1,763,061	1,717,457	1,646,927
Survivors	320,954	337,767	344,176	349,299	397,556	277,235	272,980	536,670	339,672	433,615
<b>Total Benefits</b>	<b>\$ 62,191,480</b>	<b>\$ 61,693,408</b>	<b>\$ 58,247,882</b>	<b>\$ 51,700,541</b>	<b>\$ 51,996,508</b>	<b>\$ 46,211,560</b>	<b>\$ 40,419,922</b>	<b>\$ 33,475,950</b>	<b>\$ 31,357,794</b>	<b>\$ 30,259,921</b>
<b>Type of Refund</b>										
Death	\$ 316,495	\$ 310,994	\$ 305,536	\$ 250,047	\$ 299,778	\$ 96,935	\$ 70,309	\$ 147,588	\$ 86,361	\$ 223,073
Separation	2,281,823	1,936,231	2,045,089	1,860,312	1,390,177	1,168,300	1,502,967	1,219,264	1,225,670	1,242,340
Transfers	32,903	-	2,928,607	898,085	2,655,061	4,340,520	11,886,941	482,469	209,410	362,716
<b>Total Refunds</b>	<b>\$ 2,631,221</b>	<b>\$ 2,247,225</b>	<b>\$ 5,279,232</b>	<b>\$ 3,008,445</b>	<b>\$ 4,345,017</b>	<b>\$ 5,605,755</b>	<b>\$ 13,460,218</b>	<b>\$ 1,849,320</b>	<b>\$ 1,521,441</b>	<b>\$ 1,828,129</b>

<sup>(1)</sup> EOSP - An End of Service Program benefit option became available for the first time in FY2007, allowing retiring employees to accumulate up to one year's worth of benefit payments during their final year of employment

<sup>(2)</sup> Includes Death in service pension benefits

Tucson Supplemental Retirement System  
Retiree Benefit and Service Summary

# yrs Retired	Average Benefit (1)	Total Monthly Benefit pmts	# of Retirees (2)	Age at 6/30/13									Years of Credited Service		
				<55	55-59	60-64	65-69	70-74	75-79	80-84	=>85	<10	10-19	20>	
<5	2,183	1,379,727	632	70	164	229	149	15	5	0	0	81	134	417	
5-9	2,369	1,651,494	697	22	116	215	219	96	25	4	0	67	142	488	
10-14	1,925	1,256,825	653	6	28	145	218	168	80	3	5	38	155	460	
15-19	1,353	422,172	312	1	3	11	30	105	93	58	11	34	73	205	
20-24	1,401	357,180	255	0	2	3	5	19	85	94	47	21	62	172	
25-29	935	107,523	115	0	1	1	2	0	19	20	72	9	44	62	
30>	681	37,431	55	0	0	0	0	2	5	4	44	14	23	18	
		<u>5,212,352</u>	<u>2719</u>	<u>99</u>	<u>314</u>	<u>604</u>	<u>623</u>	<u>405</u>	<u>312</u>	<u>183</u>	<u>179</u>	<u>264</u>	<u>633</u>	<u>1822</u>	

Note (1)

Note (2)

Notes:

- (1) Average Benefit for all retirees is \$1,917 per month
- (2) # of Retirees includes alternate payees and survivors

**Tucson Supplemental Retirement System  
Retired Members by Type of Benefit  
As of June 30, 2013**

Amount of Monthly Benefit	Number of Retirees	Type of Retirement <sup>a</sup>				Option Selected <sup>b</sup>						
		1	2	3	4	1	2	3	4	5	6	7
\$ 1 - \$ 250	50	37	11	1	1	34	-	1	1	6	3	5
\$ 251 - \$ 500	175	97	40	18	20	110	2	1	5	22	6	29
\$ 501 - \$ 750	238	140	53	34	11	131	2	2	3	47	17	36
\$ 751 - \$ 1,000	236	145	52	33	6	124	-	1	-	52	19	40
\$ 1,001 - \$ 1,250	256	186	41	27	2	126	-	-	1	42	37	50
\$ 1,251 - \$ 1,500	224	181	28	13	2	97	1	1	1	43	33	48
\$ 1,501 - \$ 1,750	246	223	11	12	-	113	-	-	2	47	36	48
\$ 1,751 - \$ 2,000	250	230	9	11	-	105	-	3	1	51	39	51
\$ 2,001 - \$ 2,250	189	177	7	5	-	82	-	4	-	50	22	31
\$ 2,251 - \$ 2,500	179	172	1	6	-	76	-	-	1	48	20	34
\$ 2,501 - \$ 2,750	149	144	4	1	-	79	-	2	1	25	15	27
\$ 2,751 - \$ 3,000	107	106	-	1	-	65	-	-	-	11	15	16
\$ 3,001 - \$ 3,250	75	74	1	-	-	36	-	-	2	12	6	19
\$ 3,251 - \$ 3,500	47	46	1	-	-	26	-	-	-	7	8	6
\$ 3,501 - \$ 3,750	55	55	-	-	-	33	-	-	-	8	5	9
\$ 3,751 - \$ 4,000	38	37	1	-	-	24	-	-	1	2	2	9
\$ 4,001 - \$ 4,250	38	37	1	-	-	21	-	-	-	5	3	9
\$ 4,251 - \$ 4,500	30	30	-	-	-	17	-	-	-	5	6	2
\$ 4,501 - and over	137	136	1	-	-	69	-	1	2	25	16	24
	2,719	2,253	262	162	42	1,368	5	16	21	508	308	493

Notes:

<sup>a</sup>Type of retirement

- 1 - Normal retirement for age and service
- 2 - Beneficiary payment, normal retirement
- 3 - Disability retirement
- 4 - Beneficiary payment, disability retirement

<sup>b</sup>Option selected:

- 1 - Single life; beneficiary receives lump sum of member's unused contributions
- 2 - Beneficiary receives remainder of 5 yr term, if applicable
- 3 - Beneficiary receives remainder of 10 yr term, if applicable
- 4 - Beneficiary receives remainder of 15 yr term, if applicable
- 5 - Beneficiary receives 75% of member's reduced benefit



