TUCSON SUPPLEMENTAL RETIREMENT SYSTEM
BOARD OF TRUSTEES
Notice of Regular Meeting / Agenda

DATE: **Thursday, July 28, 2016**
TIME: **8:30 a.m.**
PLACE: **Finance Department Conference Room, 5th floor**
City Hall, 255 West Alameda
Tucson, Arizona 85701

A. **Consent Agenda**
1. Approval of June 30th, 2016 TSRS Board Meeting Minutes
2. Retirement ratifications for July 2016
3. June 2016 TSRS Budget Vs Actual Expenses
4. TSRS Portfolio Composition, Transactions and Performance Review

B. **Plan Administrator's Report**
1. Report on Office Operations and Key Facts & Figures for the Past Month
2. TSRS Operation Highlight – Defined Contribution Plans

C. **Administrative Discussions**
1. Education Plan for Staff and Trustees
2. Implementation of an Intern Program
3. Retreat Topics Update

D. **Articles for Board Member Education / Discussion**
1. J.P. Morgan – Asset Class Implications Post Brexit
2. Callan Associates Inc. – Thoughts and Summary on Brexit
3. Wall Street Journal – Brexit Adds to Pension Funds' Pain

E. **Call to Audience**

F. **Future Agenda Items**
1. Duties and Selection of Advisory Board
2. TSRS Board Annual Evaluation of Staff and Consultants
3. Formal Evaluation of Active Managers – 1.5% over benchmark over a given period
4. RFQ for Actuarial Services
5. Action Plan for Black Swan Events
6. Would It Be Better to Index the Whole Fund
7. BlackRock – Annual Manager Review
8. Champlain Investment Partners – Annual Manager Review

G. **Adjournment**

Please Note: Legal Action may be taken on any agenda item

***Pursuant to ARS 38-431.03(A)(3) and (4): the board may hold an executive session for the purposes of obtaining legal advice from an attorney or attorneys for the Board or to consider its position and instruct its attorney(s) in pending or contemplated litigation. The board may also hold an executive session pursuant to A.R.S. 38-431.03(A)(2) for purposes of discussion or consideration of records, information or testimony exempt by law from public inspection.

TUCSON SUPPLEMENTAL RETIREMENT SYSTEM
BOARD OF TRUSTEES
MEETING MINUTES

DATE:	**Thursday, June 30, 2016**
TIME:	**8:30 a.m.**
PLACE:	**Finance Department Conference Room, 5th floor** **City Hall, 255 West Alameda** **Tucson, Arizona 85701**

Members Present:	Michael Coffey, Acting Chairman Kevin Larson, City Appointee Rebecca Hill, HR Director Jorge Hernández, Elected Representative Karen Tenace, Deputy Director of Finance
Staff Present:	Neil Galassi, Pension Administrator Bob Szelewski, Pension Lead Analyst Dmitriy Adamia, Administrative Assistant
Guests Present:	Catherine Langford (via telephone) Stephen J. Arnoldi, City of Tucson Employee
Absent/Excused:	Robert Fleming, Chairman John O'Hare, Elected Retiree Representative

Michael Coffey called the meeting to order at 8:35 AM.

A. **Consent Agenda**
1. Approval of May 26th, 2016 TSRS Board Meeting Minutes
2. Retirement ratifications for June 2016
3. May 2016 TSRS Budget Vs Actual Expenses

Chairman Coffey asked for a vote on the approval of the Consent Agenda. A motion to approve the Consent Agenda was made by Kevin Larson, 2nd by Jorge Hernandez and passed by a vote of 4-0 (Chairman Coffey did not vote, Robert Fleming and John O'Hare absent/excused).

B. **Disability Applications** *
1. Stephen J. Arnoldi

Kevin Larson stated the approval from the Social Security Administration was an important factor in the disability application.

Chairman Coffey stated the approval from Social Security Administration is not the deciding factor but it is an important factor the TSRS Board considers.

Rebecca Hill stated Mr. Arnoldi has submitted paperwork for long-term disability.

A motion to approve the disability retirement application of Stephen J. Arnoldi was made by Kevin Larson, 2nd by Rebecca Hill and passed by a vote of 4-0 (Chairman Coffey did not vote, Robert Fleming and John O'Hare absent/excused).

C. **Investment Activity Report**

1. TSRS Portfolio Composition, Transactions and Performance Review as of May 31st, 2016

Neil Galassi asked if the Board had questions about the reports presented.

Chairman Coffey asked if this reporting format is the new standard.

Mr. Galassi answered in the affirmative.

Mr. Galassi stated the executive summary was prepared before the Brexit and he focused on a few factors regarding the Brexit.

Mr. Galassi stated the United Kingdom voted to leave the Euro Zone. This topic was touched upon by Callan in the last Board meeting as a potential event. As the Market anticipated the vote to leave would fail, the market rallied the day before and the portfolio saw a 50 basis point increase equating to about a $4.5M during the week leading up to the vote. Two days following the vote the portfolio declined approximately 1.7% from the balance as of the beginning of the week. Since Monday of this week the portfolio has gained back about 90 basis points. The initial losses were related to short term market reaction and correction from the previous rally. During discussions with Callan, they do not believe this is a Black Swan event, they would classify this as simply an event, as losses were not catastrophic and the market began to seemingly change trajectory from the events of the morning later in the day. Overall the largest one day market losses were around 3% - 3.5%

Chairman Coffey asked in terms of asset allocation he is interested in the effect on the Boards International Equity investments.

Mr. Galassi stated staff has received communication from all three of the Boards International Equity managers. All three managers have indicated they are focused on the best interests of their clients and are actively monitoring the negotiations. If the Euro Zone exit is done in an accommodative manner it may encourage other States to consider leaving. If the negotiations are punitive other States may look at it as a teachable moment and be more inclined to stay in the Euro Zone. Our recent increased exposure to international equity did not make a significant difference in the losses as the majority of domestic companies we have been invested in have international operations, therefore domestic equities saw similar losses. Going forward there is uncertainty, it will take years of negotiations for the exit to be finalized.

Mr. Galassi stated from an actuarial prospective this is an event that caused a loss near fiscal year end, which is the measurement date for our actuarial valuations. It appears as of June 30, 2016 the Portfolio could potentially be down somewhere in the 3% to 4% range from the June 30, 2015 Market value of $735.6M. Although from a market basis prospective the returns may be near zero, the actuarial value of the assets may increase. This is due to the 5 year actuarial smoothing of investment gains/losses in order to lessen the impact of potential events like near fiscal year end like the Brexit, and have contribution rates remain more stable. As of June 30, 2015, the actuarial value was $706.8M which was approximately $28.8M different from the market value as of that date. With the 5 year smoothing only 1/5th of losses from this fiscal year would affect the portfolio on an actuarial basis. It appears the years representing the other 4/5th may potentially mitigate losses resulting from the Brexit in the 2016 valuation.

D. **Administrative Discussions**

1. Funding Policy Revision: Redline Version – Catherine E. Langford

Catherine Langford stated when the Board was working on the proposed code changes that we were putting together in connection with the IRS application last fall; the board reviewed and revised the funding policy in a fairly significant manner in connection with those proposed City Code changes. The Overall goals of that funding policy revision last year were to incorporate and lock in this concept of setting the City's contributions to the system at a floor of 27.5% and building in on a permanent basis our rounding policy. The goal for the Board at that time was to get the funding policy incorporated into the actual code language, so we could get rid of the distinction between the actuarially required contribution and the Board's recommended contribution. When the contributions were taken to Mayor and Council for approval along with code changes, we were able to accomplish some of the needed code changes but we were not able to accomplish having the funding policy changes written into City Code. The Mayor and Council retained our current structure, where we have a baseline required contribution which is based on the actuarial calculation, and that is what the city has required under the code to appropriate and pay over into the system. She suggested making the funding policy consistent with the code changes that were actually approved by Mayor and Council last year. What the Board has done in this draft is remove the provisions that anticipated code changes, and anticipated that we would be able to replace in the code the actuarially required contributions with the board recommended contributions. We have taken that language out of the funding policy that reflected code changes that were not made, but left in there the Board's goal to encourage and recommend additional funding until the system is fully funded.

Chairman Coffey asked are administrative expenses factored in the ARC.

Ms. Langford answered administrative expenses are not factored into the ARC. Historically administrative expenses have reduced our investment gain. That was discovered that last year and it was decided that we should add the administrative expenses as a separate item in the calculation of the required actual contribution recommendation. The intent is to recommend to the City that they pay the administrative expense cost for the year, and the contributions be rounded under the rounding policy upon adoption of the contribution rate for any particular fiscal year. In the past administrative expenses were not accounted for as a separate line item in the Annual Actuarial Evaluation; they were simply just an offset to investment gains. Administrative expenses are typically in the neighborhood of $700,000 a year, they are part of the administrative budget, and that number is separately communicated to the actuary. This funding policy change last year with regards to administrative expenses was our effort to make that more transparent and to provide a more accurate reflection of the true investment results.

Karen Tenace stated the funding policy is a complicated read from a layperson's perspective. This policy will be published on our website, potentially plan members could be reading it, the public, and ward offices. Laced throughout this entire policy are terms like the ARC, ADC, calculated rate, and charged rate. The Board should consider not only tightening it up and reflecting what is actually occurred, but also tightening up the terminology. Additionally looking at other funding policies it is very clear and conspicuous in their policies the purpose is to fully fund the plan, to minimizing volatility for the employer and the employee, and to mitigate risk of intergenerational equity issue. Under our purpose we defined what the core elements of the ADC are. She believes this could be cleaned up to be an easier read.

Rebecca Hill stated most of the information is defined in the body of the document and there are visible attempts to be concise and to condense the document. It is a complex issue and most people probably are not going to understand it.

Kevin Larson asked do we tend to get a fair amount of questions on the funding policy and where is this policy posted.

Ms. Hill answered the Board has staff that can address those questions when they surface.

Mr. Larson stated he believes the funding policy is a legal document, which is why the Board has attorneys draft it to cover the legal bases. He believes it certainly could be better written in terms of being reader friendly. He asked do our employees or the public ever look at this to any extent and do we get follow-up questions.

Ms. Tenace stated this policy does get attached to Mayor-Council communications because we refer to it. We have the IAPC subcommittee looking at it and we will be answering questions regarding the funding policy when that committee meets. On occasion it does get reviewed and if we are starting from a confusing read versus something potentially clearer, we are starting off on better footing in terms of explaining something that is already complex.

Chairman Coffey stated he agrees it is a complex legal document and it may need to be complex to cover all of the legal bases. In parallel to this the Board could add documentation generated for our members that is easier to read but not necessarily change legal policy documents.

Chairman Coffey and Ms. Hill stated maybe a page that states “How to Understand the Funding Policy”.

Ms. Langford stated the Board put the funding policy document together 4 or 5 years ago because we needed to fill the gaps. We had code provisions that were very basic, we had the actuary evaluation report, and we did not have in writing a policy that captured the assumptions that were being used and the methodology. The Funding Policy evolved from a very technical standpoint, she thinks that if the Board were comfortable with the substance of the policy, she would recommend that the Board adopt the Funding Policy document draft presented here. She would then bring back another draft of it that is intended to be a more plain English version, and she thinks it can be accomplished in this document. Even if we had a more readable purpose section and introduction we can ease people into the technical nature of what we are covering here. She would like to have the basic principles adopted before we close out our current fiscal year, so that this funding policy which gets wrapped into the evaluation is accurate. The one that we adopted last year simply does not correspond to the code any longer.

Ms. Tenace stated she is onboard with this idea and in the following days she will come up with a few suggestions on how to make the Funding Policy a little bit more readable.

Mr. Larson stated he would support approving the Funding Policy. Additionally he would prefer a summary page that is focused on what is really important to the reader. He does not believe it is worth the time to try and go through these five pages and make it reader friendly because it is a lot of detail.

Ms. Langford stated we could start the funding policy with an Executive Summary page and leave the funding policy technical.

Chairman Coffey asked for a vote on the approval of the Funding Policy Revision. A motion to approve the Funding Policy Revision was made by Kevin Larson, 2nd by Rebecca Hill and passed by a vote of 4-0 (Chairman Coffey did not vote, Robert Fleming and John O’Hare absent/excused).

2. Valeant Pharmaceuticals Litigation – Catherine E. Langford

Catherine Langford stated Valeant is an international pharmaceutical corporation that is under investigation and the subject of several lawsuits for major stock losses. The company has lost more than $80B in market capitalization since inception of the investigation. Market losses were generated by what are alleged to be fraudulent pricing practices on certain drugs manufactured by Valeant. There is a large investor shareholder class action lawsuit that is pending in district court in New Jersey. The law firm that is doing the security monitoring for the Board, Robbins, Gellar, Rudman, & Dowd (RGRD) has identified a loss that the system suffered relating to Valeant securities purchased in March of 2015. The loss is estimated at half a million dollars for the system. The class action lawsuit has been pending and it deals with securities that were purchased over a two year period of time. The reason the Board was contacted about it by RGRD is the fact that the securities the system purchased in March of 2015 were part of a separate offering in which RGRD was not able to identify any other investor in their database who purchased shares directly in that March 2015 offering. As a result, they did not have another plaintiff available to represent the class of investors that bought shares in that March 2015 offering. Therefore, they approached the city and the system about becoming a named plaintiff with respect to that March 2015 offering in the current class action lawsuit. The lead plaintiff for the class action lawsuit is TIAA-Cref, they have the largest overall losses but they did not buy any securities in that particular March 15 offering. Staff and legal counsel had a series of conversations with the attorneys who are working on the class action lawsuit, and the City Attorney took the matter to Mayor and Council. Mayor and Council agreed and approved the named plaintiff position for the City. Given provisions in the City's Charter, the suit is written to have the City, on behalf of the system, be the named plaintiff. Although the system's losses are approximately $500,000, the losses for that entire class of investors from the March 2015 offering is about a billion dollars. It is significant because by bringing the System's claim into the suit as a named plaintiff, the attorneys are able to bring in a number of other parties as defendants for example, underwriters and insurance companies. The updated consolidated complaint was filed with the court last June 24, 2016, and that is the first time that the city or the system's name has appeared in any of the proceedings. RGRD is the main attorney on the case and we are going to be working with them on both the Volkswagen litigation and the Valeant litigation. The System is positioned differently in the Volkswagen litigation as the System is a class member, and is not expected to have anything to do in terms of work or participation in the active litigation. In the Valeant litigation it is different because the system, or rather the city on behalf of the system, is serving as a named plaintiff and it is likely that we will have to produce some discovery. However, we have been assured that will be minimal because discovery will be related to did you buy the securities and when and through which investment manager. The attorneys have already compiled all of that information; the securities were purchased through T. Rowe Price and RGRD is already working with T. Rowe Price. The other possibility is that the City or the System may have to make someone available for a deposition in the litigation with regard to the subject of the System's purchase of those shares. It is going to be done on a contingency basis so that the attorney's fees and all of the cost of the class action will be recovered only from any judgment or settlement that the attorneys achieve. This would all be subject to court approval. The litigation has a potential upside of recovering the losses to the System.

Kevin Larson stated he does not believe there is much of a downside to this litigation.

3. Disability Audit Results

Neil Galassi stated consistent with Tucson City Code Section 22-39(f), TSRS must complete a disability audit review of those members that have not reached the normal retirement age or 80 service credits. There are 151 retirees or beneficiary survivors receiving a disability type benefit, of the 151, there were 44 audits sent out in May of 2016 with a certified, return receipt requested. Responses had been received from 40 of the retirees audited. After attempts to locate the most recent information within the means of TSRS staff we were unable to locate 4 individuals. After consultation with legal counsel, Individuals who have failed to respond and/or have failed to ensure TSRS records contain their most recent information can be deemed to not be in compliance with TCC 22-39(f). We recommended discontinuing the benefits to the four non-compliant individuals as an attempt to garner their attention. This action is provided for in the Tucson Code. The audit responses required completion of a simple affidavit indicating whether the retiree had earned any income. The audited individuals were not new or recent retirees. If the Board approves the recommendation the action would affect with the July pension check of the non-compliant individuals. This action has been taken in the past for isolated cases and the reason for the audits was if the individual receiving disability benefits has another source of income, adjustments may be required on their pension checks. This action has been successful in the past.

Rebecca Hill asked if the pension check was discontinued, and the retiree contacts the pension office with the required affidavit than would their pension check be reinstated.

Mr. Galassi answered in the affirmative, once staff had an opportunity to evaluate the information provided in the affidavit.

Kevin Larson asked if the retiree does not contact the pension office for six months, would the retiree receive back pay for the six months.

Mr. Galassi answered in the affirmative. The retiree would be paid retroactively.

Chairman Coffey asked how the 44 retirees were selected out of the 151 in total.

Mr. Galassi stated the retirees that have not reached normal retirement age or attained the 80 service credits.

Chairman Coffey clarified that only 44 out of the 151 have not reached normal retirement age or 80 service credits.

Mr. Galassi answered in the affirmative, and all 44 were audited.

Chairman Coffey asked to clarify if the retiree's income needed to be verified.

Mr. Galassi answered per the City code if the retirees earned income exceeded 50% of their average final compensation than their benefit would need to be evaluated for adjustment.

Chairman Coffey asked in the audit communication sent to the 44 disability retirees, did staff inform the retirees that failure to comply would result in a termination of their benefits.

Mr. Galassi answered in the affirmative.

Catherine Langford stated the reason the income verification requirements may not be familiar to some of the Board members is because they only apply to employees that qualify for disability retirement prior to July of 2009. This is a requirement that is being carried over from an older version of the City code.

Mr. Larson asked what sort of documentation are the retirees required to provide.

Mr. Galassi answered the retirees are required to provide proof of income such as a W2 form and/or a tax return. Retirees also provided 1099R forms to show no earned income.

Chairman Coffey asked for a vote on the approval of discontinuing the benefits to the non-compliant individuals. A motion to approve discontinuing the benefits to the non-compliant individuals was made by Kevin Larson, 2nd by Karen Tenace and passed by a vote of 4-0 (Chairman Coffey did not vote, Robert Fleming and John O'Hare absent/excused).

Mr. Larson asked how does staff determine if a retiree has passed away.

Mr. Galassi stated staff uses a system called "Small World", it is how staff accesses the Social Security database. Bob Szelewski checks the database on a daily basis and we do rely on being contacted by the beneficiaries. Staff has been actively working with Small World, the ASRS, and other jurisdictions to improve the process even though we are at the very early stages of that process.

Bob Szelewski stated typically the population is really minimal. We have two groups of people, the ones that had left a survivor benefit, in that case we usually hear from them rapidly. It is the second group, the single life pensions that typically would be the ones that might go outside of a 30 day or 60 day window and then we have a process in place to recapture funds if there have been overpayments.

E. **Articles for Board Member Education / Discussion**

1. PIMCO – The Global Outlook: Stable But Not Secure

Neil Galassi stated the Global Outlook article was written and printed before the Brexit. PIMCO's outlook may have changed after the Brexit. The article discussed PIMCO's views of global economy, mainly in regards to China and the future of the global market. Mr. Galassi will be providing the Board members more educational articles in the future.

F. **Call to Audience –** None heard**.**

G. **Future Agenda Items**

1. Education Plan for New Staff and Trustees
2. Duties and Selection of Advisory Board
3. Hiring an Intern to Free Staff for Education
4. TSRS Board Annual Evaluation of Staff and Consultants
5. Formal Evaluation of Active Managers – 1.5% over benchmark over a given period
6. RFQ for Actuarial Services
7. Action Plan for Black Swan Events
8. Would It Be Better to Index the Whole Fund

Mr. Galassi stated Robert Fleming and staff will work together to prioritize and schedule future agenda items. He also indicated he will meet with Board members individually to gather their opinions about possible future agenda items.

H. **Adjournment** - 9:20 AM.

Chairman Coffey asked for a vote on the approval of the Adjournment. A motion to approve the Adjournment was made by Kevin Larson, 2nd by Rebecca Hill and passed by a vote of 4-0 (Chairman Coffey did not vote, Robert Fleming and John O'Hare absent/excused).

Approved:

Robert Fleming Chairman of the Board	Date	Neil S. Galassi Pension Administrator	Date

Service & Disability Retirements, End of Service Entrants for TSRS Board of Trustees Ratification

06/10/16 - 07/09/16 - July 2016

Name of Applicant	Department	Type	Effective Date	Date of Birth	Age	Credited Service	Present Value	Member's Accumulated Contributions	AFC	Option	Pension
Nancy F Anderson	City Attorney	Normal Retirement	7/6/2016	9/23/1958	57.79	22.2382	258,815.16	73,968.17	3,693.21	J&S 75	1,741.54
Stephen J Arnoldi	Human Resources	Disability Retirement	6/30/2016	5/21/1955	61.11	13.8980	139,768.13	37,038.83	3,463.17	J&S 100	938.52
James B Burns Jr	Water Utility	Normal Retirement	6/11/2016	7/21/1959	56.89	24.8687	313,938.42	95,340.18	4,092.40	Single Life	2,289.89
Susan G Delmar	Water Utility	Deferred Retirement	7/8/2016	7/8/1954	62.00	12.6616	174,626.52	105,464.48	4,631.06	J&S 75	1,213.02
Carlos Hernandez	Water Utility	Normal Retirement	6/11/2016	11/18/1954	61.56	18.6814	202,530.01	59,082.67	3,798.35	J&S 100	1,388.81
Andres A Jacobo	Transportation	Normal Retirement	7/6/2016	8/13/1946	69.90	30.8796	302,254.85	136,107.73	4,092.40	J&S 50	2,555.98
Hermelinda Jacobs	Mayor and Council	Normal Retirement	6/11/2016	4/22/1954	62.14	17.2577	266,549.22	75,493.50	5,186.27	J&S 50	1,862.32
Chris J Leverenz	Environmental Services	Normal Retirement	7/9/2016	6/4/1960	56.10	26.9185	782,049.24	245,403.24	9,296.27	J&S 100	5,142.97
Kim T Mckay	Transportation	Deferred Retirement	6/24/2016	6/24/1954	62.00	7.4948	129,367.34	52,689.08	5,795.91	Single Life	977.39
Virginia A Monyak	City Manager	Normal Retirement	6/11/2016	9/9/1961	54.76	25.334	408,308.34	152,793.88	4,941.36	J&S 100	2,603.40
Timothy C Murphy	City Manager	Normal Retirement	6/11/2016	1/23/1962	54.38	25.7515	534,984.43	187,672.40	6,487.87	J&S 100	3,453.17
Daniel L Norrgard	Water Utility	Normal Retirement	7/9/2016	3/15/1961	55.32	25.0305	295,770.14	95,106.58	3,734.17	J&S 75	1,959.54
Andrea D Palmer	Water Utility	Normal Retirement	6/11/2016	3/1/1958	58.28	33.4047	552,024.07	180,115.40	5,244.00	Single Life	3,941.43
David G Philips	Finance	Normal Retirement	7/2/2016	8/30/1954	61.84	26.0388	256,668.42	90,691.30	3,453.57	J&S 75	1,892.54
Angela M Quiroz	Information Technology	Normal Retirement	7/2/2016	11/13/1949	66.64	44.1735	1,002,717.61	414,439.07	8,333.13	Single Life	8,282.35
Glenn L Schuler	Police	Normal Retirement	6/11/2016	6/14/1955	60.99	40.2734	757,205.23	232,819.64	6,474.61	J&S 100	5,166.40
James V Stoyanoff	City Manager	Normal Retirement	6/11/2016	6/3/1957	59.02	21.0561	298,169.01	112,496.59	4,723.33	J&S 100	1,967.35
Maximilliano M Torres	Transportation	Normal Retirement	6/11/2016	7/26/1954	61.88	27.8213	501,162.74	176,448.17	6,311.28	Single Life	3,950.73
William C Townsend	Transportation	Normal Retirement	7/9/2016	7/15/1959	56.98	23.9325	350,198.00	107,673.24	4,743.65	J&S 100	2,266.39
Gail M Wentzel	Planning and Development Services	Normal Retirement	6/11/2016	11/10/1952	63.59	12.4035	147,789.41	35,279.29	4,135.74	Single Life	1,154.19
									102,631.75		54,747.93
				Averages	60.16		383,744.81	133,306.17	5,131.59		2,737.40

Comparison of Monthly Pension Payments - Beginning of FY 2016 to Current Monthly Pension Payments

	Plan Year beginning 07/01/2015 (*from GRS annual valuation)	Monthly	Annual	June 2016 Pension Payroll		Annualized	Annual change since July 1, 2015	% change
Service Pensions	2,305	5,007,097.17	60,085,166	2,437	5,331,706	63,980,468.28	3,895,302	6.48%
Disability Pensions	160	174,259	2,091,109	151	168,899	2,026,788.60	(64,320)	-3.08%
Survivor Pensions	344	298,979	3,587,750	342	336,084	4,033,013.52	445,264	12.41%
	2,809	5,480,335	65,764,025	2,930	5,836,689	70,040,270	4,276,245	6.50%
				19	**$ 58,756**			
				(net) change from previous month				

S:\treasdiv\tsrs\retirement\facts&figures\F&F 15-16.xls	prior month	2,911	$	5,777,933.08

Report ID : FIN-COT-BA-0001
Run Date : 07/19/2016
Run Time : 12:58 PM

City of Tucson
Budget vs Actual Expenses
Through: June, 2016
For Fiscal Year 2016

Parameter Page

Parameters and Prompts

Fiscal Year	2016
Accounting Period	12
Fund	072
Department	*
Unit	*
Object Code	*

Report Description

The Expenses vs. Actual Report shows expenditures and encumbrances for the selected accounting period and for the selected fiscal year compared against the current expense budget and the unobligated budget balance. The report is sectioned by Department, Fund and Unit and summarized by Object.

Report ID : FIN-COT-BA-0001
Run Date : 07/19/2016
Run Time : 12:58 PM

City of Tucson
Budget vs Actual Expenses
Through: June, 2016
For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9001 - Normal Retiree Benefit

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
105 - PAYROLL PENSION	0.00	5,321,558.92	5,321,558.92	0.00	61,959,725.70	61,959,725.70	63,300,000	1,340,274.30	2.12 %
Total for 100 - PAYROLL CHGS	**0.00**	**5,321,558.92**	**5,321,558.92**	**0.00**	**61,959,725.70**	**61,959,725.70**	**63,300,000**	**1,340,274.30**	**2.12 %**
Total for Unit 9001 - Normal Retiree Benefit	**0.00**	**5,321,558.92**	**5,321,558.92**	**0.00**	**61,959,725.70**	**61,959,725.70**	**63,300,000**	**1,340,274.30**	**2.12 %**

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City of Tucson
Budget vs Actual Expenses
Through: June, 2016
For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9003 - Normal Retiree Beneficiary Benefit

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
105 - PAYROLL PENSION	0.00	305,665.94	305,665.94	0.00	3,550,464.90	3,550,464.90	3,100,000	(450,464.90)	-14.53 %
Total for 100 - PAYROLL CHGS	**0.00**	**305,665.94**	**305,665.94**	**0.00**	**3,550,464.90**	**3,550,464.90**	**3,100,000**	**(450,464.90)**	**-14.53 %**
Total for Unit 9003 - Normal Retiree Beneficiary Benefi	**0.00**	**305,665.94**	**305,665.94**	**0.00**	**3,550,464.90**	**3,550,464.90**	**3,100,000**	**(450,464.90)**	**-14.53 %**

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City of Tucson
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Through: June, 2016
For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9020 - Disability Retiree Benefit

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
105 - PAYROLL PENSION	0.00	168,899.05	168,899.05	0.00	2,033,977.78	2,033,977.78	1,975,000	(58,977.78)	-2.99 %
Total for 100 - PAYROLL CHGS	**0.00**	**168,899.05**	**168,899.05**	**0.00**	**2,033,977.78**	**2,033,977.78**	**1,975,000**	**(58,977.78)**	**-2.99 %**
Total for Unit 9020 - Disability Retiree Benefit	**0.00**	**168,899.05**	**168,899.05**	**0.00**	**2,033,977.78**	**2,033,977.78**	**1,975,000**	**(58,977.78)**	**-2.99 %**

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City of Tucson
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For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9021 - Pension Fund Administration

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
101 - SALARIES & WAGES FOR PERMANENT EMPLOYEES	0.00	17,620.80	17,620.80	0.00	211,013.60	211,013.60	211,940	926.40	0.44 %
102 - EXTRA TIME	0.00	0.00	0.00	0.00	93.28	93.28	0	(93.28)	0.00%
103 - OVERTIME WAGES	0.00	0.00	0.00	0.00	195.02	195.02	0	(195.02)	0.00%
105 - PAYROLL PENSION	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00%
108 - DOWNTOWN ALLOWANCE & DISCOUNTED TRANSIT PASSES	0.00	92.32	92.32	0.00	1,028.72	1,028.72	1,160	131.28	11.32 %
113 - TSRS PENSION CONTRIBUTION	0.00	4,845.72	4,845.72	0.00	58,338.93	58,338.93	58,280	(58.93)	-0.10 %
114 - FICA (SOCIAL SECURITY)	0.00	1,345.61	1,345.61	0.00	18,757.94	18,757.94	15,410	(3,347.94)	-21.73 %
115 - WORKERS COMPENSATION INSURANCE	0.00	316.93	316.93	0.00	3,139.65	3,139.65	5,930	2,790.35	47.05 %
116 - GROUP PLAN INSURANCE	0.00	1,409.68	1,409.68	0.00	22,431.40	22,431.40	30,920	8,488.60	27.45 %
117 - STATE UNEMPLOYMENT	0.00	23.12	23.12	0.00	238.01	238.01	300	61.99	20.66 %
171 - SICK LEAVE PAID AT RETIREMENT	0.00	0.00	0.00	0.00	17,099.87	17,099.87	0	(17,099.87)	0.00%
185 - RETIREMENT INCENTIVE	0.00	0.00	0.00	0.00	19,011.20	19,011.20	0	(19,011.20)	0.00%
196 - INTERDEPARTMENTAL LABOR	0.00	9,016.66	9,016.66	0.00	204,199.92	204,199.92	220,800	16,600.08	7.52 %
Total for 100 - PAYROLL CHGS	**0.00**	**34,670.84**	**34,670.84**	**0.00**	**555,547.54**	**555,547.54**	**544,740**	**(10,807.54)**	**-1.98 %**
202 - TRAVEL	0.00	0.00	0.00	0.00	2,614.68	2,614.68	4,000	1,385.32	34.63 %
204 - TRAINING	0.00	0.00	0.00	0.00	440.00	440.00	14,000	13,560.00	96.86 %
205 - PARKING & SHUTTLE SERVICE	0.00	0.00	0.00	0.00	127.00	127.00	200	73.00	36.50 %
212 - CONSULTANTS AND SURVEYS	0.00	0.00	0.00	0.00	41,930.00	41,930.00	65,000	23,070.00	35.49 %

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Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9021 - Pension Fund Administration

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
213 - LEGAL	0.00	14,460.90	14,460.90	0.00	34,402.90	34,402.90	50,000	15,597.10	31.19 %
215 - AUDITING AND BANK SERVICES	0.00	0.00	0.00	0.00	23,845.00	23,845.00	25,000	1,155.00	4.62 %
219 - MISCELLANEOUS PROFESSIONAL SERVICES	0.00	211,736.36	211,736.36	0.00	2,883,145.11	2,883,145.11	4,034,500	1,151,354.89	28.54 %
221 - INSUR-PUBLIC LIABILITY	0.00	232.01	232.01	0.00	21,034.58	21,034.58	29,160	8,125.42	27.86 %
228 - HAZARDOUS WASTE INSURANCE	0.00	41.42	41.42	0.00	438.72	438.72	560	121.28	21.66 %
232 - R&M MACHINERY & EQUIPMENT	0.00	0.00	0.00	0.00	0.00	0.00	1,200	1,200.00	100.00 %
245 - TELEPHONE	0.00	0.00	0.00	0.00	1,680.00	1,680.00	1,200	(480.00)	-40.00 %
252 - RENTS EQUIPMENT	0.00	0.00	0.00	0.00	719.23	719.23	0	(719.23)	0.00%
260 - COMPUTER SOFTWARE MAINTENANCE AGREEMENTS	0.00	0.00	0.00	0.00	0.00	0.00	41,000	41,000.00	100.00 %
263 - PUBLIC RELATIONS	0.00	0.00	0.00	0.00	2,043.09	2,043.09	2,560	516.91	20.19 %
266 - ADVERTISING	0.00	0.00	0.00	0.00	411.50	411.50	0	(411.50)	0.00%
284 - MEMBERSHIPS AND SUBSCRIPTIONS	0.00	0.00	0.00	0.00	810.00	810.00	1,500	690.00	46.00 %
286 - MISC OUTSIDE SERVICES	0.00	0.00	0.00	0.00	61.92	61.92	0	(61.92)	0.00%
Total for 200 - PROF CHARGES	**0.00**	**226,470.69**	**226,470.69**	**0.00**	**3,013,703.73**	**3,013,703.73**	**4,269,880**	**1,256,176.27**	**29.42 %**
311 - OFFICE SUPPLIES	0.00	125.06	125.06	0.00	1,970.09	1,970.09	7,500	5,529.91	73.73 %
312 - PRINTING,PHOTOGRAPHY,REPRODUCTION	0.00	262.68	262.68	0.00	8,641.22	8,641.22	7,500	(1,141.22)	-15.22 %
314 - POSTAGE	0.00	127.64	127.64	0.00	9,557.26	9,557.26	10,000	442.74	4.43 %
341 - BOOK, PERIODICALS AND RECORDS	0.00	0.00	0.00	0.00	0.00	0.00	250	250.00	100.00 %

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Through: June, 2016
For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9021 - Pension Fund Administration

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
345 - FURNISHINGS, EQUIPMENT AND TOOLS < $5,000	0.00	0.00	0.00	0.00	0.00	0.00	1,000	1,000.00	100.00 %
346 - COMPUTER EQUIPMENT < $5,000	0.00	0.00	0.00	0.00	0.00	0.00	1,000	1,000.00	100.00 %
392 - GENERAL SERVICES WORK ORDER SUPPLIES	0.00	0.00	0.00	0.00	478.80	478.80	0	(478.80)	0.00%
Total for 300 - SUPPLIES	**0.00**	**515.38**	**515.38**	**0.00**	**20,647.37**	**20,647.37**	**27,250**	**6,602.63**	**24.23 %**
Total for Unit 9021 - Pension Fund Administration	**0.00**	**261,656.91**	**261,656.91**	**0.00**	**3,589,898.64**	**3,589,898.64**	**4,841,870**	**1,251,971.36**	**25.86 %**

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For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM

Fund 072 - TUCSON SUPP RETIREMENT SYSTEM

Unit 9022 - Disability Retiree Beneficiary Benefit

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
105 - PAYROLL PENSION	0.00	30,418.52	30,418.52	0.00	366,327.60	366,327.60	350,000	(16,327.60)	-4.67 %
Total for 100 - PAYROLL CHGS	**0.00**	**30,418.52**	**30,418.52**	**0.00**	**366,327.60**	**366,327.60**	**350,000**	**(16,327.60)**	**-4.67 %**
Total for Unit 9022 - Disability Retiree Beneficiary Ben	**0.00**	**30,418.52**	**30,418.52**	**0.00**	**366,327.60**	**366,327.60**	**350,000**	**(16,327.60)**	**-4.67 %**

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For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9023 - ACTIVE MEMBER REFUNDS-CONTRBS

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
105 - PAYROLL PENSION	0.00	0.00	0.00	0.00	0.00	0.00	0	(0.00)	0.00%
114 - FICA (SOCIAL SECURITY)	0.00	2.44	2.44	0.00	2.44	2.44	0	(2.44)	0.00%
186 - TSRS REFUNDS	0.00	236,518.70	236,518.70	0.00	2,447,334.08	2,447,334.08	2,400,000	(47,334.08)	-1.97 %
Total for 100 - PAYROLL CHGS	**0.00**	**236,521.14**	**236,521.14**	**0.00**	**2,447,336.52**	**2,447,336.52**	**2,400,000**	**(47,336.52)**	**-1.97 %**
Total for Unit 9023 - ACTIVE MEMBER REFUNDS-CON	**0.00**	**236,521.14**	**236,521.14**	**0.00**	**2,447,336.52**	**2,447,336.52**	**2,400,000**	**(47,336.52)**	**-1.97 %**

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For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM

Fund 072 - TUCSON SUPP RETIREMENT SYSTEM

Unit 9025 - INTEREST ON REFUNDS

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
186 - TSRS REFUNDS	0.00	6,306.60	6,306.60	0.00	34,810.78	34,810.78	50,000	15,189.22	30.38 %
Total for 100 - PAYROLL CHGS	**0.00**	**6,306.60**	**6,306.60**	**0.00**	**34,810.78**	**34,810.78**	**50,000**	**15,189.22**	**30.38 %**
Total for Unit 9025 - INTEREST ON REFUNDS	**0.00**	**6,306.60**	**6,306.60**	**0.00**	**34,810.78**	**34,810.78**	**50,000**	**15,189.22**	**30.38 %**

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City of Tucson
Budget vs Actual Expenses
Through: June, 2016
For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9026 - DWE SYSTEM BENEFIT PAYMENT

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
186 - TSRS REFUNDS	0.00	0.00	0.00	0.00	61,918.40	61,918.40	200,000	138,081.60	69.04 %
Total for 100 - PAYROLL CHGS	**0.00**	**0.00**	**0.00**	**0.00**	**61,918.40**	**61,918.40**	**200,000**	**138,081.60**	**69.04 %**
Total for Unit 9026 - DWE SYSTEM BENEFIT PAYMEN'	**0.00**	**0.00**	**0.00**	**0.00**	**61,918.40**	**61,918.40**	**200,000**	**138,081.60**	**69.04 %**

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City of Tucson
Budget vs Actual Expenses
Through: June, 2016
For Fiscal Year 2016

Department 900 - TUCSON SUPPL RETIREMENT SYSTEM
Fund 072 - TUCSON SUPP RETIREMENT SYSTEM
Unit 9027 - CREDITABLE SERVICE TRANS(ASRS)

Object	Current Period Encumbrance	Current Period Expenditure	Current Total Obligations	YTD Encumbrance	YTD Expenditure	YTD Total Obligations	Current Budgeted Amount	Unobligated Budget Balance	Percent
186 - TSRS REFUNDS	0.00	0.00	0.00	0.00	(8,811.37)	(8,811.37)	0	8,811.37	0.00%
Total for 100 - PAYROLL CHGS	**0.00**	**0.00**	**0.00**	**0.00**	**(8,811.37)**	**(8,811.37)**	**0**	**8,811.37**	**0.00%**
Total for Unit 9027 - CREDITABLE SERVICE TRANS(A:	**0.00**	**0.00**	**0.00**	**0.00**	**(8,811.37)**	**(8,811.37)**	**0**	**8,811.37**	**0.00%**
Total for Fund 072 - TUCSON SUPP RETIREMENT SYS	**0.00**	**6,331,027.08**	**6,331,027.08**	**0.00**	**74,035,648.95**	**74,035,648.95**	**76,216,870**	**2,181,221.05**	**2.86 %**
Total for Department 900 - TUCSON SUPPL RETIREME	**0.00**	**6,331,027.08**	**6,331,027.08**	**0.00**	**74,035,648.95**	**74,035,648.95**	**76,216,870**	**2,181,221.05**	**2.86 %**
Grand Totals	**0.00**	**6,331,027.08**	**6,331,027.08**	**0.00**	**74,035,648.95**	**74,035,648.95**	**76,216,870**	**2,181,221.05**	**2.86 %**

TSRS Portfolio Performance Review

DATE: July 21, 2016

TO: The Board of Trustees
Tucson Supplemental Retirement System

FROM: Neil S. Galassi, CPA
Pension Administrator

SUBJECT: **June 2016 Summary Performance Report**

SUMMARY:

This report presents the Tucson Supplemental Retirement System's investment portfolio as of June 30, 2016. Attached to this summary is the Callan prepared Investment Measurement Service Monthly Review Report which serves as the basis for this summary.

As of June 30, 2016, the Total Fund balance of $722.7 million remained unchanged from the previous month ended May 31, 2016. There were withdrawals totaling $1.5 million from the Total Fund to support pension payments during the recent month, and $29.0 million was withdrawn during fiscal year 2016.

For the month of June, the Total Fund performance was a positive .20% which was slightly below the custom benchmark return of positive 0.22% by 2 basis points. Total Fund performance was primarily impacted by negative returns during the month in all equity classes amounting to approximately a negative 0.72%, while the Fixed Income, Real Estate, and Infrastructure investment allocations saw modest returns during the month of 1.85%, 0.44%, and 0.97% respectively; the S&P 500 Index returned 0.26% during the month.

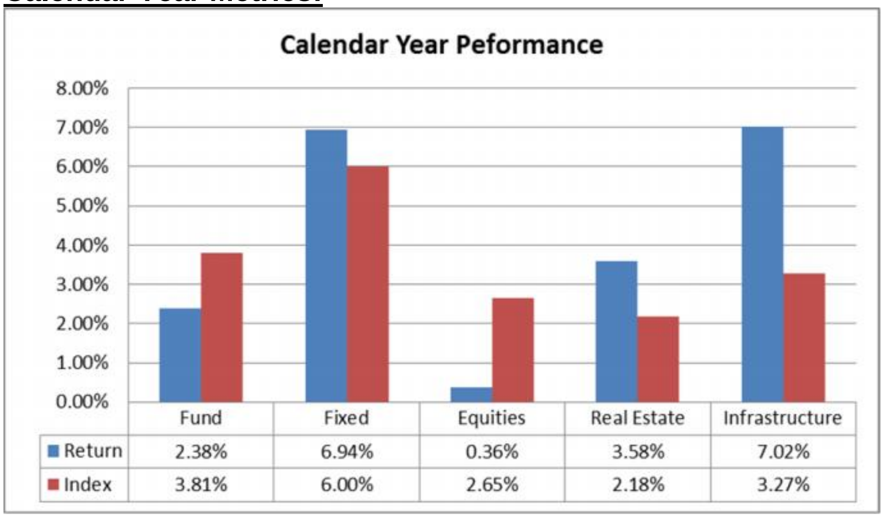
For the last twelve months the Total Fund performance was a positive 2.15% which was ahead of the custom benchmark return of 1.82% by 33 basis points. The Total Fund performance was impacted by negative but improving returns in the International Equity Markets of negative 9.40%, which were slightly better than the previous month's 12 month return of negative 12.18%. Domestic equity market returns outperformed the benchmark by 64 basis points for the same 12 month period with Small/Mid Cap Domestic Equity outperforming the benchmark by 3.84%. The Fund continues to experience 12 month positive returns on Fixed Income of 6.39% and returns on the Real Estate and Infrastructure were 10.40% and 10.25% respectively.

In regards to equity funds over the past 12 month period, the Small/Mid Cap Equity funds for Champlain Mid Cap and Pyramis Small Cap performed well above their benchmark by 4.08% and 2.32% respectively while the Large Cap Equity fund managers were relatively consistent with their benchmark except for T-Rowe Price which underperformed relative to the benchmark by 5.66%. The international equity fund managed by Causeway trailed the benchmark by 1.42% while the Aberdeen international equity fund outperformed the benchmark by 2.64%. For fixed income funds, the PIMCO Fixed Income Fund underperformed relative to benchmark by 0.74%, while the BlackRock U.S. Debt Fund was consistent with the benchmark at 6.09%. For Real Estate fund managers, both the JPM Strategic Property Fund and JPM Income and Growth Fund trailed the benchmark by 0.78% and 3.24% respectively. The Macquarie European Infrastructure Fund was 2.17% above the benchmark, and the Steel River Infrastructure fund also outperformed the benchmark by 8.55%.

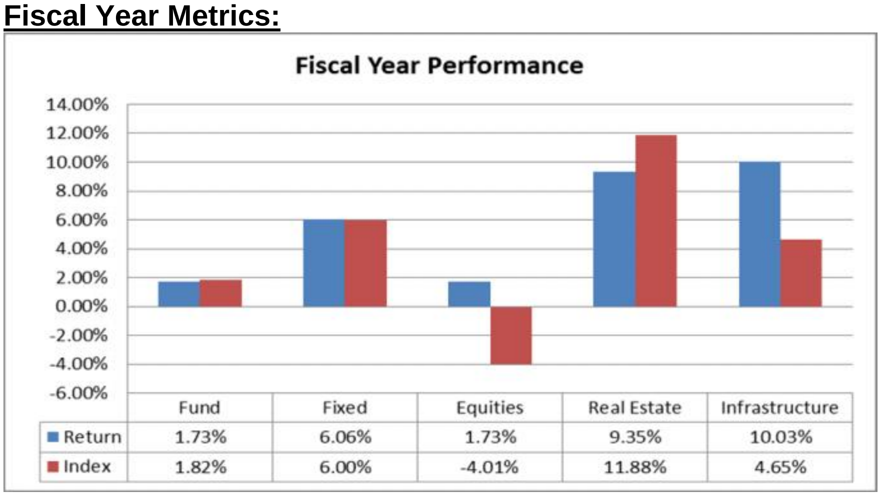
The Total Fund total as of today, July 21, 2016 was $733.2 million. This represents an increase of $10.5 million (1.40%), over the balance as of June 30, 2016. The increase was primarily a result of an increase of 2.80% in domestic equity asset balances and an increase of 0.84% in the fixed income asset balances since prior month end.

Summary graphs are as follows:

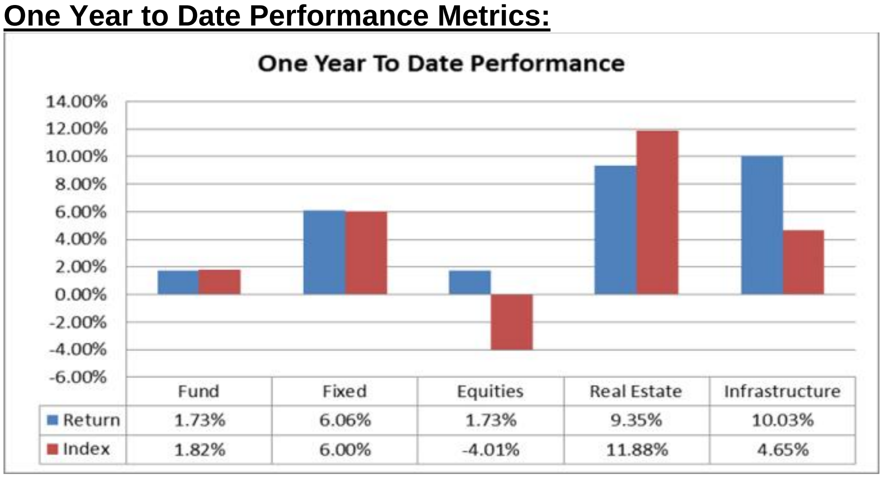
<u>Calendar Year Metrics:</u>



<u>Fiscal Year Metrics:</u>



<u>One Year to Date Performance Metrics:</u>



Callan

June 30, 2016

Tucson Supplemental Retirement System

Investment Measurement Service Monthly Review

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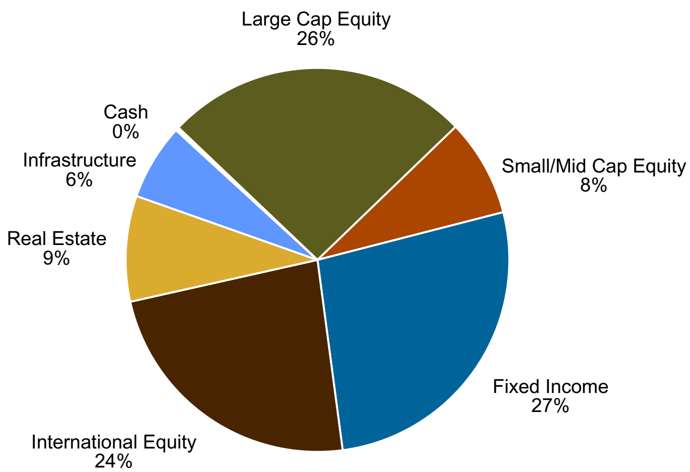
June 30, 2016

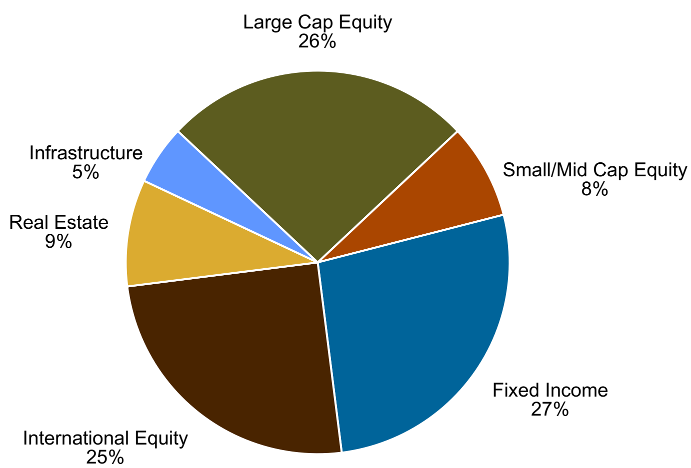
Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of June 30, 2016. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



Asset Class	$000s Actual	Percent Actual	Percent Target	Percent Difference	$000s Difference
Large Cap Equity	185,793	25.7%	26.0%	(0.3%)	(2,105)
Small/Mid Cap Equity	59,016	8.2%	8.0%	0.2%	1,201
Fixed Income	194,351	26.9%	27.0%	(0.1%)	(774)
International Equity	170,767	23.6%	25.0%	(1.4%)	(9,904)
Real Estate	64,188	8.9%	9.0%	(0.1%)	(853)
Infrastructure	46,512	6.4%	5.0%	1.4%	10,378
Cash	2,056	0.3%	0.0%	0.3%	2,056
Total	722,684	100.0%	100.0%		

*Current Month Target Performance is calculated using monthly rebalancing.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2016, with the distribution as of May 31, 2016. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	June 30, 2016				May 31, 2016	
	Market Value	Percent	Net New Inv.	Inv. Return	Market Value	Percent
Domestic Equity	**$244,809,003**	**33.87%**	**$(1,502,304)**	**$(1,097,269)**	**$247,408,577**	**34.23%**
Large Cap Equity	**$185,793,344**	**25.71%**	**$(1,505,295)**	**$(803,497)**	**$188,102,136**	**26.03%**
Transition Account (1)	10,600	0.00%	0	1,799	8,801	0.00%
Alliance S&P Index	55,522,224	7.68%	(1,499,608)	128,572	56,893,260	7.87%
PIMCO StocksPLUS	29,161,572	4.04%	0	75,803	29,085,770	4.02%
BlackRock Russell 1000 Value	51,094,305	7.07%	(6,921)	432,452	50,668,774	7.01%
T. Rowe Price Large Cap Growth	50,004,643	6.92%	1,234	(1,442,123)	51,445,531	7.12%
Small/Mid Cap Equity	**$59,015,659**	**8.17%**	**$2,991**	**$(293,772)**	**$59,306,440**	**8.21%**
Champlain Mid Cap	29,642,483	4.10%	860	152,131	29,489,493	4.08%
Pyramis Small Cap	29,373,176	4.06%	2,132	(445,903)	29,816,947	4.13%
International Equity	**$170,767,277**	**23.63%**	**$(114,536)**	**$(1,587,957)**	**$172,469,771**	**23.87%**
Causeway International Opps (2)	68,070,332	9.42%	2,753	(2,926,637)	70,994,216	9.82%
Aberdeen EAFE Plus	70,125,135	9.70%	(117,289)	1,879,290	68,363,133	9.46%
American Century Non-US SC (1)	32,571,810	4.51%	0	(540,611)	33,112,421	4.58%
Fixed Income	**$194,350,648**	**26.89%**	**$(8,199)**	**$3,530,910**	**$190,827,937**	**26.41%**
BlackRock U.S. Debt Fund	71,998,579	9.96%	(8,694)	1,254,164	70,753,108	9.79%
PIMCO Fixed Income	122,352,070	16.93%	495	2,276,746	120,074,829	16.62%
Real Estate	**$64,188,363**	**8.88%**	**$0**	**$278,552**	**$63,909,811**	**8.84%**
JPM Strategic Property Fund	46,510,048	6.44%	0	278,552	46,231,496	6.40%
JPM Income and Growth Fund	17,678,315	2.45%	0	0	17,678,315	2.45%
Infrastructure	**$46,512,323**	**6.44%**	**$117,075**	**$444,641**	**$45,950,606**	**6.36%**
Macquarie European	21,673,650	3.00%	0	444,641	21,229,008	2.94%
SteelRiver Infrastructure	24,838,673	3.44%	117,075	()	24,721,598	3.42%
Total Cash	**$2,056,478**	**0.28%**	**$(62,823)**	**$440**	**$2,118,861**	**0.29%**
Cash	2,056,478	0.28%	(62,823)	440	2,118,861	0.29%
Total Fund	**$722,684,093**	**100.0%**	**$(1,570,786)**	**$1,569,317**	**$722,685,562**	**100.0%**

(1) The Domestic Equity transition account was implemented for the May 2016 plan rebalancing. As part of the rebalancing, the American Century Non-US Small Cap strategy was funded on May 27, 2016.

(2) Client transitioned from Causeway International Value to International Opportunities in May 2016.

Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended June 30, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended June 30, 2016

	Last Month	Quarter to Date	Last 12 Months	Last 36 Months	Last 60 Months
Gross of Fees					
Domestic Equity	**(0.45%)**	**2.88%**	**1.24%**	**11.81%**	**12.16%**
Total Domestic Equity Target (1)	0.19%	2.70%	2.29%	11.02%	11.55%
Large Cap Equity	**(0.43%)**	**2.37%**	**1.60%**	**11.72%**	**12.05%**
S&P 500 Index	0.26%	2.46%	3.99%	11.66%	12.10%
Alliance S&P Index	0.21%	2.37%	3.97%	11.62%	12.07%
S&P 500 Index	0.26%	2.46%	3.99%	11.66%	12.10%
PIMCO StocksPLUS	0.26%	2.94%	2.68%	12.12%	13.18%
S&P 500 Index	0.26%	2.46%	3.99%	11.66%	12.10%
BlackRock Russell 1000 Value	0.85%	4.35%	2.75%	9.92%	11.40%
Russell 1000 Value Index	0.86%	4.58%	2.86%	9.87%	11.35%
T. Rowe Price Large Cap Growth	(2.80%)	0.13%	(2.64%)	13.25%	12.96%
Russell 1000 Growth Index	(0.39%)	0.61%	3.02%	13.07%	12.35%
Small/Mid Cap Equity	**(0.50%)**	**4.77%**	**0.17%**	**12.15%**	**12.39%**
Russell 2500 Index	(0.04%)	3.57%	(3.67%)	8.61%	9.48%
Champlain Mid Cap	0.52%	6.26%	4.64%	13.35%	12.52%
Russell MidCap Index	0.46%	3.18%	0.56%	10.80%	10.90%
Pyramis Small Cap	(1.50%)	3.20%	(4.41%)	10.78%	12.12%
Russell 2000 Index	(0.06%)	3.79%	(6.73%)	7.09%	8.35%
International Equity	**(0.92%)**	**1.83%**	**(9.40%)**	**1.15%**	**0.73%**
Total International Equity Target (2)	(1.73%)	(0.70%)	(10.30%)	1.15%	0.09%
Causeway International Opps (5)	(4.12%)	(0.62%)	(11.66%)	2.20%	3.04%
MSCI ACWI ex US	(1.53%)	(0.64%)	(10.24%)	1.16%	0.10%
Aberdeen EAFE Plus	2.75%	3.73%	(7.60%)	(0.63%)	0.96%
MSCI ACWI x US (Net)	(1.53%)	(0.64%)	(10.24%)	1.16%	0.10%
American Century Non-US SC (3)	(1.63%)	-	-	-	-
MSCI ACWI ex US Small Cap	(2.93%)	(0.87%)	(5.46%)	4.93%	2.28%
Fixed Income	**1.85%**	**3.76%**	**6.39%**	**4.89%**	**4.95%**
Barclays Aggregate Index	1.80%	2.21%	6.00%	4.06%	3.76%
BlackRock U.S. Debt Fund	1.77%	2.26%	6.13%	4.19%	3.90%
Barclays Aggregate Index	1.80%	2.21%	6.00%	4.06%	3.76%
PIMCO Fixed Income	1.90%	4.70%	6.55%	5.33%	5.74%
Custom Index (4)	2.09%	3.56%	7.29%	5.47%	5.28%

(1) The Total Domestic Equity target is currently composed of 76% S&P 500 and 24% Russell 2500 Index.

(2) The Total International Equity Target reflects the MSCI ACWI ex-US (Net Div) through May 2016 and the MSCI ACWI ex-US IMI (Net Div) thereafter.

(3) The American Century Non-US Small Cap strategy was funded May 2016.

(4) The PIMCO custom index is composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Previously the index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

(5) Client transitioned from Causeway International Value to International Opportunities in May 2016.

Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended June 30, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended June 30, 2016

	Last Month	Quarter to Date	Last 12 Months	Last 36 Months	Last 60 Months
Gross of Fees					
Real Estate	**0.44%**	**1.46%**	**10.40%**	**12.52%**	**13.03%**
NFI-ODCE Value Weight Gr*	0.72%	2.18%	11.88%	13.02%	12.73%
JPM Strategic Property Fund	0.60%	2.02%	11.10%	12.84%	12.92%
JPM Income and Growth Fund	0.00%	0.01%	8.64%	12.12%	15.88%
NFI-ODCE Value Weight Gr*	0.72%	2.18%	11.88%	13.02%	12.73%
Infrastructure	**0.97%**	**1.10%**	**10.25%**	**7.64%**	**6.36%**
CPI + 4%	0.68%	2.28%	4.65%	4.77%	5.13%
Macquarie European Infrastructure Fund	2.09%	2.38%	6.82%	3.43%	4.73%
SteelRiver Infrastructure North Amer.**	0.00%	0.00%	13.20%	12.43%	8.31%
CPI + 4%	0.68%	2.28%	4.65%	4.77%	5.13%
Total Fund	**0.22%**	**2.66%**	**2.15%**	**8.54%**	**8.50%**
Total Fund Target	0.22%	1.46%	1.82%	7.51%	7.64%

* Current Month Target = 27.0% Barclays Aggregate Index, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

*The NFI-ODCE Value Weight benchmark current quarter return is preliminary.

**SteelRiver Infrastructure's performance reflects prior month's market value adjusted for flows.

Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended June 30, 2016. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended June 30, 2016

Net of Fees	Last Month	Quarter to Date	Last 12 Months	Last 36 Months	Last 60 Months
Domestic Equity	**(0.45%)**	**2.78%**	**0.94%**	**11.49%**	**11.79%**
Total Domestic Equity Target (1)	0.19%	2.70%	2.29%	11.02%	11.55%
Large Cap Equity	**(0.44%)**	**2.33%**	**1.44%**	**11.56%**	**11.86%**
S&P 500 Index	0.26%	2.46%	3.99%	11.66%	12.10%
Alliance S&P Index	0.21%	2.36%	3.93%	11.58%	12.02%
S&P 500 Index	0.26%	2.46%	3.99%	11.66%	12.10%
PIMCO StocksPLUS	0.26%	2.94%	2.68%	12.12%	13.00%
S&P 500 Index	0.26%	2.46%	3.99%	11.66%	12.10%
BlackRock Russell 1000 Value	0.84%	4.33%	2.71%	9.88%	11.38%
Russell 1000 Value Index	0.86%	4.58%	2.86%	9.87%	11.35%
T. Rowe Price Large Cap Growth	(2.80%)	0.01%	(3.13%)	12.74%	12.43%
Russell 1000 Growth Index	(0.39%)	0.61%	3.02%	13.07%	12.35%
Small/Mid Cap Equity	**(0.50%)**	**4.49%**	**(0.61%)**	**11.27%**	**11.51%**
Russell 2500 Index	(0.04%)	3.57%	(3.67%)	8.61%	9.48%
Champlain Mid Cap	0.52%	6.05%	3.76%	12.40%	11.57%
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Russell 2000 Index	(0.06%)	3.79%	(6.73%)	7.09%	8.35%
International Equity	**(0.99%)**	**1.66%**	**(10.04%)**	**0.44%**	**0.00%**
Total International Equity Target (2)	(1.73%)	(0.70%)	(10.30%)	1.15%	0.09%
Causeway International Opps (5)	(4.12%)	(0.78%)	(12.24%)	1.54%	2.37%
MSCI ACWI ex US	(1.53%)	(0.64%)	(10.24%)	1.16%	0.10%
Aberdeen EAFE Plus	2.58%	3.56%	(8.32%)	(1.42%)	0.16%
MSCI ACWI x US (Net)	(1.53%)	(0.64%)	(10.24%)	1.16%	0.10%
American Century Non-US SC (3)	(1.63%)	-	-	-	-
MSCI ACWI ex US Small Cap	(2.93%)	(0.87%)	(5.46%)	4.93%	2.28%
Fixed Income	**1.85%**	**3.68%**	**6.06%**	**4.56%**	**4.62%**
Barclays Aggregate Index	1.80%	2.21%	6.00%	4.06%	3.76%
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(3) The American Century Non-US Small Cap strategy was funded May 2016.

(4) The PIMCO custom index is currently composed of 25% Barclays Mortgage, 25% Barclays Credit, 25% Barclays High Yield, and 25% JP Morgan EMBI Global. Prior to 2/1/2012, the custom index was composed of 70% Barclays Mortgage, 15% Barclays Credit, and 15% Barclays High Yield.

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JPM Strategic Property Fund	0.60%	1.77%	10.02%	11.75%	11.82%
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Infrastructure	**0.97%**	**1.10%**	**10.03%**	**6.86%**	**5.09%**
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SteelRiver Infrastructure North Amer.**	0.00%	0.00%	12.76%	11.30%	6.75%
CPI + 4%	0.68%	2.28%	4.65%	4.77%	5.13%
Total Fund	**0.20%**	**2.55%**	**1.73%**	**8.07%**	**7.98%**
Total Fund Target	0.22%	1.46%	1.82%	7.51%	7.64%

* Current Month Target = 27.0% Barclays Aggregate Index, 26.0% S&P 500 Index, 25.0% MSCI ACWI ex US IMI, 9.0% NFI-ODCE Value Weight Gr, 8.0% Russell 2500 Index and 5.0% CPI-W+4.0%.

*The NFI-ODCE Value Weight benchmark current quarter return is preliminary.

**SteelRiver Infrastructure's performance reflects prior month's market value adjusted for flows.

ICMA RC
DEFERRED COMPENSATION PLANS

457B Plan # 301512	ROTH IRA Plan # 705608	401a Plan # 106302	401a (ER) - Plan #107425
> Open to all Employees	> Open to all Employees	> Open to all Employees	> Available *only* to APPOINTED Employees by the Mayor/Council or City Manager based on a Contract for Employment.
> Voluntary Tax deferred savings through payroll deduction.	> Voluntary AFTER TAX SAVINGS through payroll deduction.	> Voluntary Tax deferred savings through payroll deduction.	
> IRS Contribution Limits	> IRS Contribution Limits	> Available only during 90 days of hire / appointment. % based voluntary election of pay period contributions and % for final cash payout of Vacation Leave. NO CHANGES ALLOWED IN % ONCE EMPLOYEE ELECTION HAS BEEN ACCEPTED / PROCESSED.	
< Age 50 = $ 18,000.00 > Age 50 = $ 24,000.00 3 Year Catch Up = $ 36,000.00	$5,000.00 > Age 50 = $ 6000.00	> IRS Contribution Limits $53,000.00	
Payroll Deduction Code: ICMA *	Payroll Deduction Code: ROTH *	Payroll Deduction Code: 401AE *	Payroll Deduction Code: 401ER *

Note: Refer to individual Plan Documents for further information.
Contact IMCA Representative for Enrollment information.

* TSRS office enters payroll code for all plan contributions / deductions

Education of TSRS Staff and Trustees Framework:

Purpose: The TSRS Board of Trustees and the City of Tucson are both committed to hiring and retaining a competent and qualified staff to oversee the operation and administration of the TSRS. In addition, the TSRS Board of Trustees must have the ability to effectuate the administration, management, and operation of the system as dictated in City code *Sec. 22-44 Board of Trustees*. To that end, onboarding of new Board members and continuing professional education is a crucial element to ensure both staff and Board members obtain and utilize the most current and relevant information to facilitate their roles with the TSRS on an ongoing basis. The following is designed to provide the framework for Trustee and Staff continuing Education:

Board Members:

1. Onboarding: A newly elected board member is provided a new board member packet by the Pension Administrator. The Packet includes hard copies of the following items:
    a. The meeting schedule for the fiscal year
    b. A copy of City Code Chapter 22 covering Pensions & Retirement
    c. Copies of the most recent monthly investment reports of the Trust
    d. A copy of the most recent version of the Board of Trustees Funding Policy
    e. A copy of the TSRS Investment Policy
    f. Copy of the most recent Board of Trustees Governance Policies
    g. A sheet containing kay staff contacts

    The Pension Administrator shall be available to address any initial questions and provide guidance to the newly elected board member regarding the information available in the packet.

2. Continuing Education: It has been the philosophy of the TSRS that Board Members are individually responsible for ensuring they retain the necessary knowledge and competence to perform their duties as dictated in the City code. To that end a training budget is established on an annual basis to be utilized by both the Trustees and Staff to obtain current and relevant training. The Pension administrator will actively seek out external training avenues, and make all efforts to notify board members in a timely manner to allow board members to plan for potential attendance. In addition, the Government Finance Officers Association provides a variety of handbooks and guides that may prove useful on their website (http://www.gfoa.org/series/elected-officials-guides). The Pension Administrator will facilitate provision of and/or purchasing of Board Member guides or handbooks as requested.

    In addition the following items to facilitate training and education are provided to the board:
    a. Each Monthly Board Packet contains materials designed to keep board members up to date on contemporary pension issues.
    b. Annual retreats and board meetings are in part designed to provide baseline education on issues thru the use of staff and consultants.
    c. The External Legal Counsel for TSRS provides fiduciary training to the board on an annual basis.

TSRS Staff

1. It is the philosophy of the Board that TSRS staff is given access to the necessary training and resources to perform their day to day duties from the inception of their employment. The Pension Administrator is responsible for ensuring TSRS staff continually possesses the necessary and most recent information and training to facilitate appropriate job performance. The Pension Administrator with devise an education strategy that is most relevant to each position. The strategy will involve inter-office cross training, utilization of internal subject matter experts, and external continuing professional education as approved by the Pension Administrator. The Pension Administrator will actively seek any and all training opportunities for staff on an ongoing basis.

Staff Recommendation

Staff does not believe a formal action from the TSRS Board is required on this item. If the Board is comfortable with the above framework staff would like to move forward with these parameters for Staff and Board education. It is assumed this is a living document that will be added to and/or updated as necessary.

Public Funds Summit 2017

Fairmont Scottsdale Princess, Scottsdale, AZ
January 9, 2017 - January 11, 2017

180

days left

Register Now

Tell a Friend Add to Calendar

Conference Details

Hotel Information

This year's event will draw focus to the topic of reform in the pension state and how funding policy and goals will change to address those concerns. Funding concerns and declining returns have led many pension plans to seek a balance between risk and reward in order to meet pension obligations. Furthermore, the role of investment and its returns are essential to the concern of meeting obligations to pension members - how investment managers, across various strategies, can aid public pension plans in ensuring a safe future for its members will be key in the conversations at the event. The exchange of ideas both in

Opal Group

sponsors and their fiduciaries.

Although attendance is not limited to those in the public sector, the conference takes aim at topics that are of particular relevance to public pension funds. By focusing on an atmosphere of education rather than sales or marketing, the Public Funds Summit provides a unique environment in which members of the public sector can exchange ideas and learn from other delegates, money managers, and consultants.

This year we will kick off the event with a 2-hour open debate on pension reform. Join us for the conversation on the current state of pension reform along with any possible solutions that make systems solvent, and ensure the best retirement services for public sector workers.

Keynote Speakers

Highlights

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Presented by

Who Should Attend

Industry Representation

- Pension Rep – Trustee, Administrators, Commissioners, Staff
- Consultants
- Attorneys
- Taft Hartley Reps – Trustee, Administrators, Commissioners, Staff
- Accountants
- Hedge Funds
- Fund of Funds
- Real Estate Managers

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- Private Equity
- Insurance Companies
- Benefit Companies
- Public Service Administrative Providers

HIRING AN INTERN FOR THE TSRS OFFICE DISCUSSION

Purpose: An agenda item has been proposed by the Board to discuss the potential for hiring an intern for the TSRS office. This communication serves to educate the board on the benefits and Cons of starting an intern program for the TSRS office.

Benefits: There are many benefits to having an intern program some of the most pertinent to TSRS are listed below:

- Increase ability to find future employees: Intern programs are a good recruiting tool and can provide a pipeline of potential future employees. Statistics say typically 60% to 70% of interns are offered full time positions and over 80% accept. In addition, students typically will share their experiences with others if positive. The program would give the office the ability to identify future talent for the System and experience how they would "fit" in the environment.
- Potential to increase office productivity: Setting up an internship program will allow the office to take advantage of short-term support. The extra sets of hands can help Staff be more productive, prevent them from becoming overburdened by side projects, as well as free them up to accomplish more creative tasks or those where higher-level, strategic thinking or expertise is required. In addition, intern labor is typically lower cost than hired staff.

Cons: Many benefits were described above, some cons to be cognizant of are:

- Compensation considerations: The city offers both paid and unpaid internships. Unpaid internships are available to students enrolled in a college program that would allow the internship to qualify for credit. In an environment of limited resources an unpaid internship would be most ideal; however the offer of no pay and the college credit restriction may make recruitment difficult. If the internship is paid we must strive to derive a benefit that is greater than the cost. In addition, the intern must not work more than 20 hours per week to remain compliant with Affordable Healthcare Act Rules.
- Operational Considerations: Staff would have to expend the time and effort to onboard the intern and be available to provide adequate attention and guidance.

Staff Recommendation: At this time Staff is not bringing forward a formal internship program to the board for recommendation. While Staff feels the benefits of an internship program would outweigh the cons, the TSRS office is currently not in a position to be adequately conducive to onboarding an intern and providing a beneficial experience. This is due to the current state of the office with all staff still onboarding and learning their roles and duties given recent noted turnover. Staff recommends revisiting the implementation of an intern program at a time when the office is better positioned to do so.

Considering Brexit

Strategists and portfolio managers weigh the economic and investment implications

July 2016

THE UK'S JUNE 23 REFERENDUM TO LEAVE THE EUROPEAN UNION CERTAINLY STARTLED MARKETS and sparked a sharp decline in global risk assets, but it did not set off a systemic shock. Yet even as markets absorbed the short-term impact, investors confronted a wide range of questions about the longer-range economic, geopolitical and investment impact of the Brexit vote.

At the end of June, we assembled a panel of strategists and portfolio managers to address some of the questions that are top of mind for global investors.

How might the Brexit shock impact growth in the UK? Will it derail the global recovery?

STEPHANIE FLANDERS, *Chief Market Strategist for UK and EMEA*

The Brexit vote has produced a large shock, but a local one. Our best estimate is that it will take at least a percentage point off the UK's growth rate over the next year. The annualized pace of growth in GDP would fall from 1.6% to about 0.6% in the second half of 2016, with a similar growth rate in 2017. In the eurozone, Brexit might shave 0.4% off GDP over that period, possibly strengthening the case for the European Central Bank (ECB) to expand its quantitative easing in the autumn. Bank of England Governor Mark Carney has already signaled that "some monetary easing will likely be required over the summer."

The UK and eurozone account for 22.2% of global GDP, but we do not believe that the Brexit shock poses an immediate threat to the global recovery (**EXHIBIT 1**, next page).

Overall, what is the outlook for UK equities?

STEPHEN MACKLOW-SMITH, *Portfolio Manager, European Equity Group*

Stocks and sectors that are sensitive to UK growth, many of them mid cap names, will likely underperform. On the other hand, internationally exposed stocks and sectors could find support in a weaker sterling, which should boost export earnings. Even a small rise in inflation domestically as a result of higher import prices could help corporate earnings overall if companies can reclaim some modest pricing power. In recent years, extremely low levels of inflation have made it difficult for many firms to raise prices.

The services sector has been a key strength of the UK economy. If Britain loses uninhibited access to the European single market, we may very well see its trade surplus in services—including financial services—eroded over the next four or five years.

AUTHORS

John Bilton
Head of Global Multi-Asset Strategy, Multi-Asset Solutions

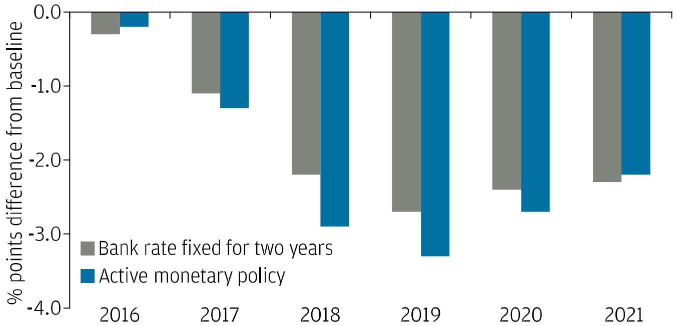
Stephanie Flanders
Chief Market Strategist for UK and EMEA

Nicholas Gartside
International CIO of Global Fixed Income, Currency & Commodities Group

Stephen Macklow-Smith
Portfolio Manager, European Equity Group

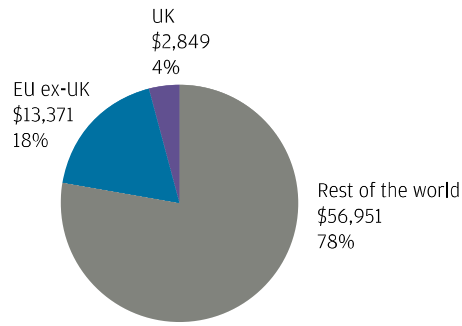
GDP will be lower—but will it be enough to derail the global economy?

EXHIBIT 1A: INDICATIVE OUTLOOK OF IMPACT ON GDP IN UK



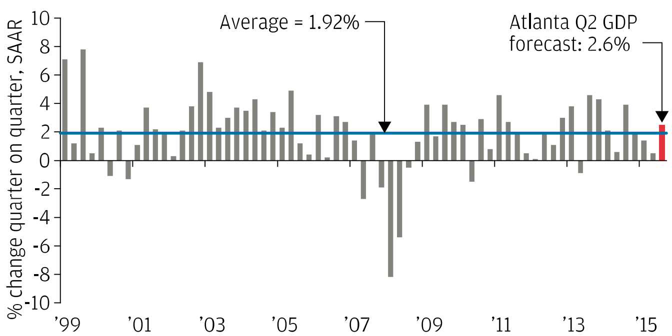
Source: National Institute of Economic and Social Research (NIESR), J.P. Morgan Asset Management; data as of June 28, 2016.

EXHIBIT 1B: BREAKDOWN OF WORLD GDP (USD, BILLIONS)



Source: National Institute of Economic and Social Research (NIESR), J.P. Morgan Asset Management; data as of June 28, 2016.

EXHIBIT 1C: U.S. REAL GDP



Source: Atlanta Fed, FactSet, J.P. Morgan Asset Management; data as of June 28, 2016.

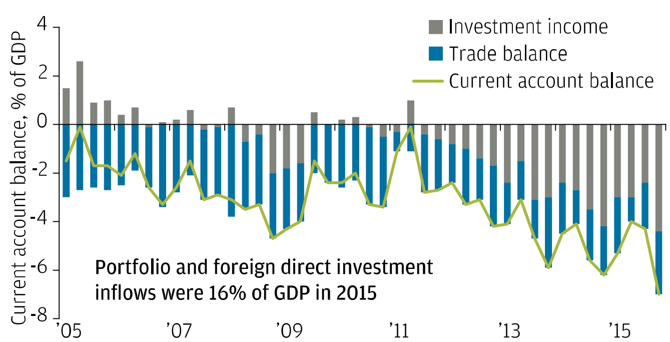
How will UK and European banks weather the Brexit storm?

STEPHEN MACKLOW-SMITH, *Portfolio Manager, European Equity Group*

Bank capital levels are substantially higher than they were in 2007-08, and UK and European banks are much better equipped to weather volatility. We'd note here that sterling could well fall further (after suffering its biggest one-day drop in 30 years), but banks look fairly well positioned to handle the impact (**EXHIBIT 2**).

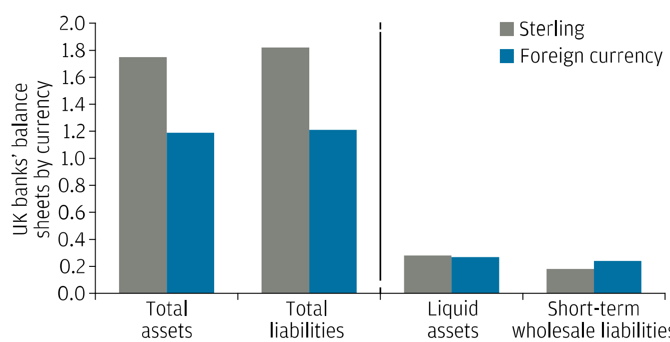
The UK needs foreign lending to plug its current account gap, and the pound could fall further, but banks look fairly well protected

EXHIBIT 2A: CURRENT ACCOUNT BALANCE, % OF GDP



Source: National Institute of Economic and Social Research, J.P. Morgan Asset Management; data as of June 28, 2016.

EXHIBIT 2B: UK BANK BALANCE SHEETS BY CURRENCY



Source: National Institute of Economic and Social Research, J.P. Morgan Asset Management; data as of June 28, 2016.

European high yield offers attractive default-adjusted spreads

EXHIBIT 3A: EUROPEAN HIGH YIELD UPGRADES, DOWNGRADES, 1990–2016

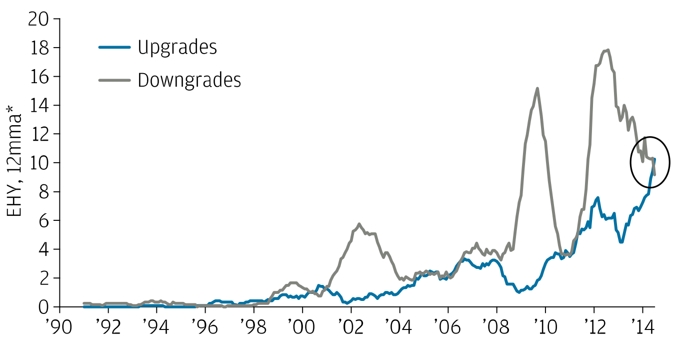
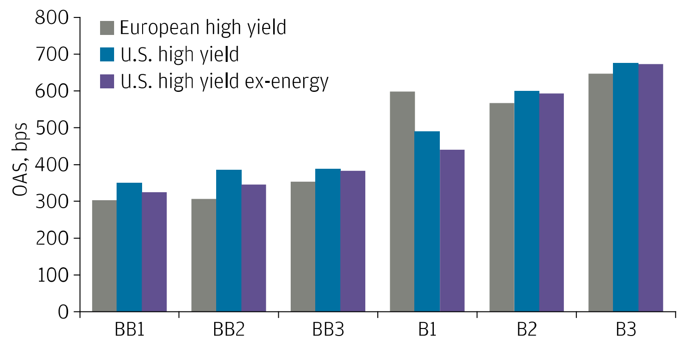


EXHIBIT 3B: U.S. AND EUROPEAN HIGH YIELD OPTION-ADJUSTED SPREAD



Source: BofA Merrill Lynch indices (HP4N, H4UN, H4XC), Barclays Research, Moody's, J.P. Morgan. Spreads as of May 31, 2016; upgrades as of September 2015.
OAS: option-adjusted spread.

*EHY: Europe high yield; MMA: monthly moving average.

Where can investors find opportunity in fixed income markets?

NICHOLAS GARTSIDE, *International CIO of Global Fixed Income, Currency & Commodities Group*

We aim high in our fixed income portfolios—we look for higher quality, higher yield and higher duration. In the wake of Brexit, nearly one-quarter of the global economy experienced a growth shock. This will probably persuade central banks to once again take action. If the Bank of England doesn't move in July, it will in August, we believe. By the end of the year, the ECB should ease aggressively again, and the Federal Reserve (Fed) is probably done hiking for this market cycle.

All that easing will underwrite credit risk, which is one reason we like European high yield. Europe is behind the U.S. in its credit cycle. Corporate fundamentals look reasonably robust, reflected in the fact that high yield upgrades have recently surpassed downgrades (**EXHIBIT 3**). As we assess the sector, we think European high yield offers attractive default-adjusted spreads.

The Brexit vote occurred amid sluggish global growth and expectations of muted asset returns. How can investors position multi-asset portfolios in such an environment?

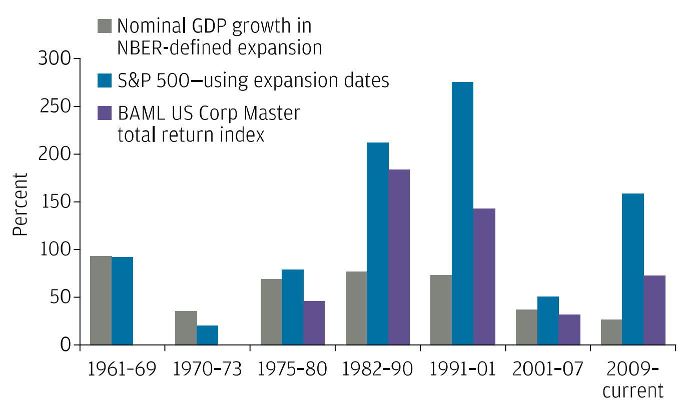
JOHN BILTON, *Head of Global Multi-Asset Strategy, Multi-Asset Solutions*

In this recovery, gains in asset markets have run far ahead of gains in the real economy. U.S. equity returns, for example, have outpaced economic growth by eight times in the current expansion vs. a historical average of about three times (**EXHIBIT 4**). This is causing some concern that valuations are dangerously extended. We disagree. But this gap does point us toward higher quality, more immunized assets.

Brexit did not fundamentally change our core asset allocation views. We maintain an up-in-quality bias, prefer U.S. assets, choose credit over equity (again with a quality bias), expect U.S. equities to outperform other global equities, and favor duration as a portfolio hedge. Even in a low return world, events such as Brexit can shine a light on relative value opportunities.

The U.S. market may be extended, but it remains the best of the pack

EXHIBIT 4: GDP GROWTH, S&P 500 AND CORPORATE BOND RETURNS DURING EXPANSION PERIODS OF THE LAST 50 YEARS



Source: Bloomberg, Datastream, J.P. Morgan Asset Management; data as of June 15, 2016.

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Market Update

Date: June 29, 2016

Subject: Brexit

Summary

Recent financial news has been dominated by the historic “Brexit” vote on June 23rd and the resulting market volatility. The decision by voters in the United Kingdom (UK) to leave the European Union (EU) was largely unexpected, with most pollsters and bookmakers anticipating a narrow victory for the “Remain” advocates. After leading the case for Remain, Prime Minister David Cameron announced his resignation.

Background

The EU is an economic and political union of 28 countries. The organization was created in the wake of WWII in an effort to promote economic cooperation with the belief that economic interdependency made conflict less likely. While members of the EU remain independent, they agree to free trade within the union and provide for open movement of people regardless of citizenship. Of the 28 countries, 19 share the Euro as a common currency; these countries are known as the Eurozone. While part of the EU, the UK is not part of the Eurozone and maintains the British Pound as its currency.

Uncertainties

The referendum is just the first step along an uncertain path. The process for leaving the EU is filled with questions as the action is unprecedented. The referendum itself is not binding; the UK will have to invoke Article 50 of the Lisbon Treaty, which outlines the process for a member state to leave the EU. This will likely not happen until a new Prime Minister is selected, which is expected by October. Triggering Article 50 sets in motion a two-year timeframe for negotiations. Treaties and trade agreements are very complex and require a great deal of attention. In all likelihood, we are in the initial stages of a very long and arduous process.

Market Response

Immediately following the unexpected vote to leave the EU, global equity markets declined significantly, the British pound and the euro lost strength versus the dollar and the yen while investors fled to government bonds and gold. However, this dramatic activity was short lived as some areas of the market reversed course and rebounded on Tuesday and Wednesday. The table on the following page details the market’s response.

	June 24th	June 27th	June 28th	June 29th	4-Day Return
FTSE 100* (UK)	-3.1%	-2.5%	2.6%	3.6%	0.3%
DAX* (Germany)	-6.8%	-3.0%	1.9%	1.7%	-6.3%
Nikkei 225* (Japan)	-7.9%	2.4%	0.1%	1.6%	-4.1%
S&P 500*	-3.6%	-1.8%	1.8%	1.7%	-2.0%
euro vs dollar^	-2.7%	-0.8%	0.4%	0.5%	-2.6%
euro vs yen^	-6.4%	-1.1%	1.2%	0.6%	-5.8%
pound vs dollar^	-8.9%	-3.4%	0.9%	0.6%	-10.7%
Gold (GLD)	4.9%	0.5%	-1.1%	0.4%	4.8%
10-year U.S. Treasury yield	1.57%	1.46%	1.46%	1.50%	NA

*Changes in value calculated from market close to market close

^Changes in value calculated from rates given at 5pm EDT

Observations

The Brexit vote has created heightened market volatility in the short-term, but longer-term effects remain unclear. There is a great deal of speculation about momentum for further referendums, other EU member exits, and implications for participating members and associated economies. While the immediate reaction of the financial markets has been perceived as quite negative, we do not believe that a wholesale change in the asset allocation or investment strategy is warranted. We continue to recommend a long-term strategic, diversified approach that accounts for periods of short term volatility, which are inherent in the markets. Past periods of instability have taught us that sticking to the strategic plan and rebalancing as needed, consistent with prevailing investment policy statements, is the best course of action. We will remain vigilant in monitoring the markets and interacting with your managers on your behalf. Should you have any questions or need additional information, please contact us.

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http://www.wsj.com/articles/brexit-adds-to-pension-funds-pain-1468194460

MARKETS

Brexit Adds to Pension Funds' Pain

Drop in interest rates that followed British vote to hurt 2016 returns

Colorado Treasurer Walker Stapleton says pension funds' interest-rate problem is 'snowballing.' *PHOTO: GETTY IMAGES*

By **TIMOTHY W. MARTIN**, **VIPAL MONGA** and **HEATHER GILLERS**
July 10, 2016 7:47 p.m. ET

The retirement savings of tens of millions of people have come under new threat since the surprise U.K. vote to leave the European Union, thanks to a plunge in global interest rates.

A post-Brexit scramble for safer bonds pulled yields lower and upended global markets just as many public pension funds wrapped up their fiscal year on June 30, eating into any annual gains and widening already-large deficits. Many public pensions that were already having a bad year are expected this month to report their worst annual performances since the last financial crisis in 2008-09.

"We could see some pretty ugly 2016 financial statements," said Matt Fabian, a partner at research firm Municipal Market Analytics.

A sustained period of rock-bottom rates in the U.S. and negative rates overseas is contorting financial plans for investors and consumers globally, from insurers that rely on bond income to retirees who have to live with lower returns on their certificates of deposit.

RELATED

- Frankfurt, Berlin Woo U.K. Firms (http://www.wsj.com/articles/frankfurt-berlin-up-efforts-to-attract-london-bankers-post-brexit-1468145222)

For officials who manage retirements of public and private-sector workers, Brexit exacerbated problems that have been roiling pensions around the world for years. The low-rate environment has pulled down returns, inflated funding gaps, encouraged larger investment risks and prompted plan officials to scale back future investment assumptions.

Now "this problem is snowballing," said Colorado Treasurer Walker Stapleton.

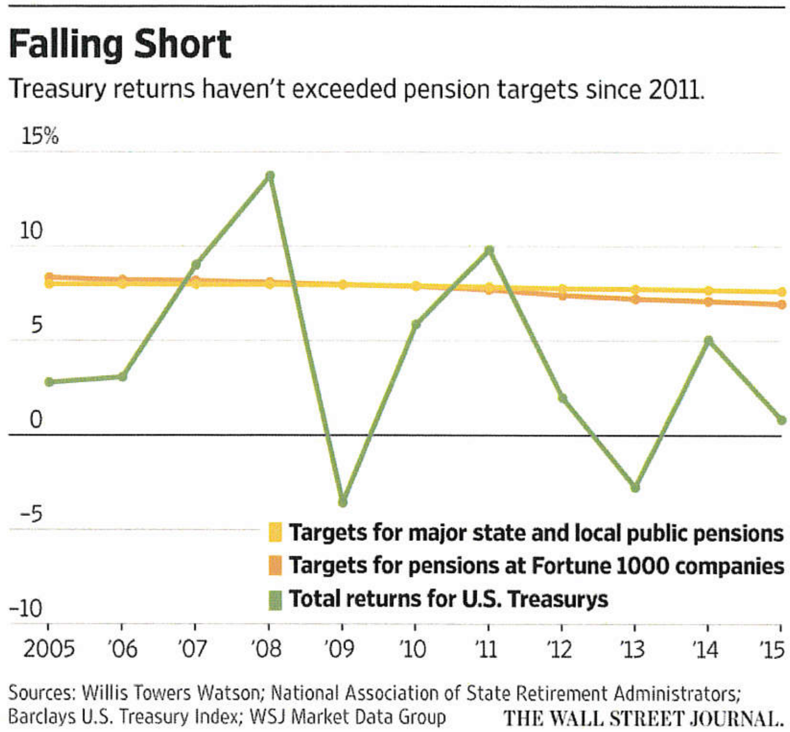
Pensions determine their assets and liabilities through formulas that depend heavily on the fluctuation of interest rates. When those rates fall, investment returns suffer and obligations to future retirees become larger.

While lower rates do boost the value of existing bonds, the negatives outweigh the positives for many funds. Pensions lose money when bonds with bigger payouts purchased years ago mature and are replaced with lower-yielding securities.

The consequences of any losses are real: Large companies must compensate for weak returns and mounting obligations by pumping money into their plans, thereby devoting less to capital expenditures, acquisitions and research.

At public plans, underperformance often means taxpayers or workers are asked to pay significantly more to account for liabilities that are expected to rise as lifespans increase and more Americans retire.

"Brexit should be a wake-up call for pension plans because it means interest rates are going to stay low or go lower and it makes it even less likely [the plans] are going to achieve the 7.5% rate of return that most of them are assuming," said



former San Jose, Calif., Mayor Chuck Reed.

New York City reduced its return target to 7% in 2013, but that assumption is likely still unrealistic, said Lawrence Golub, a financier and member of the New York State Financial Control Board, which monitors the city's finances. The assets returned 3.5% in fiscal 2015.

"The 7% is too high for planning purposes," he said. "It's not conservative."

A spokeswoman for the New York City Comptroller's Office said that the city calculates its returns over several years, which tempers the impact of any one bad year.

The Colorado Public Employees' Retirement Association last lowered its estimate to 7.5% from 8% three years ago, but Mr. Stapleton said the number needs to go lower. The state treasurer said the impact of Britain's vote to leave the EU only increased that conviction because it made clear the extent to which pension funds are at the mercy of international forces.

"You can't control global events," said Mr. Stapleton, who is a member of PERA's board. "Clearly there's a lot of uncertainty in the marketplace."

A spokeswoman for PERA said 7.5% is "a long-term objective," not an annual target and that reforms enacted in 2010 have lowered the fund's liabilities by $15 billion.

Ted Eliopoulos, the investment chief for the nation's largest public pension fund, the California Public Employees' Retirement System, told his board 10 days before Brexit that performance for the fiscal year ending June 30 was "likely to be flat, which is a nice way of saying zero." The system's consultant also dropped predictions of returns over the next decade to 6.4% annually, compared with a 2013 prediction of 7.1%.

The next three to five years will "test us," Mr. Eliopoulos said on June 13.

Corporate pension plans are also bracing for lower returns and higher deficits even though low rates affect them differently. Corporate pension funds use high-quality bonds to calculate their liabilities; if rates rise, those liabilities can fall. The sustained period of low rates has kept those pension obligations unexpectedly high.

Most corporate plans complete their funding calculations at the end of the calendar year, which gives them about six months to recover from the first half's turmoil.

However, there are early signs that upheaval during the first half of the year made things worse. The combined pension deficit for S&P 1500 companies ballooned to $568 billion at the end of June, meaning the value of their assets wasn't enough to cover future benefits for workers, according to Matt McDaniel, U.S. head of the defined-benefits risk consulting business at Mercer. That is a $164 billion increase in the deficit from the end of 2015.

Some companies are expected to pump more money into the plans to close the funding gap, and some have already borrowed money in the bond market at low rates to do so.

But there is no guarantee that approach will solve the long-term funding problem. Companies with large pension funds such as Verizon Communications Inc., Raytheon Co. and Lockheed Martin Corp. have been funneling billions into their pension plans in past years, with little to show for it.

Verizon, for example, has contributed $7.7 billion into its plans since 2008. In that time, its pension deficit has more than doubled to $5.9 billion from $2.6 billion. Although Verizon doesn't officially measure its obligations until the end of the year, in its financial disclosures, the telecom firm notes that every 0.50 point drop in the rate it uses to measure its liabilities will increase its pension obligations by $1.3 billion.

The typical rate used by companies fell 0.77 point in June from the end of last year, according to Mercer, meaning Verizon could see an increase of roughly $2 billion in its pension obligations if things remain as they were at the end of June.

A spokesman for Verizon said that the company has strong cash flows and has taken several steps over the past few years to reduce its pension risk. Lockheed Martin and Raytheon declined to comment.

Companies are "running in place," said Michael Moran, a pension strategist at Goldman Sachs Asset Management. "If the companies hadn't put that money in, it would have been even worse."
