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EXECUTIVE DIRECTOR REPORT
July 16, 2015

Activities	Updates
Summer Newsletter – Teachers' Edition	During the week of June 22nd, DCRB published a newsletter especially for DCPS teachers that reflected information provided to attendees of the Teachers' Retirement Workshop held at DCRB in March. This special *Teachers' Edition* (copy attached) focused on the provisions of the Teachers' Retirement Plan and the retirement process, as well as topics that generated the most interest during the Workshop: Medicare eligibility, Social Security's Windfall Elimination Provision, and COLAs. A video of the Workshop has been posted to DCRB's website under Retirement. Toward the end of the year, we are planning to publish a special edition for police officers and firefighters. A copy of the spring DCRB Report is also attached for the record.
DCRB Joins Visit by the Korean National Police Agency	On May 28, 2015, DCRB joined MPD and the Police/Fire Retirement and Relief Board in providing information about the District of Columbia Police Officers and Firefighters' Retirement Plan, and the processes surrounding the administration of the Plan, to a delegation of twelve members of the Korean National Police Agency. DCRB received a formal thank you from officials of the Korean embassy for participating in the event.
OPM Security Breach	Following OPM's recent announcement of the security breach affecting federal personnel data, DCRB contacted OPM to determine if any of the compromised data involved members of the District's Police/Fire or Teachers' Plans. OPM was not able to give us any definitive information at this time. We will contact OPM again later this summer.
ICMA Becomes Administrator of the DC 401(a) and 457(b) Plans	On June 23, 2015, DCHR announced the selection of ICMA as the new administrator for the District's 401(a) Retirement Plan and 457(b) Deferred Compensation Plan, replacing the former administrator, VOYA (previously known as ING). Since ICMA is also the administrator for the DCRB Supplemental Retirement Plan, DCRB will explore the possibility of cost savings that might be gained by joining the District's agreement with ICMA for the other two plans.
TOP Program FOIA Requests	On July 9, 2015, Freedom of Information Act (FOIA) requests were sent to both U.S. Treasury's Director of FOIA and Transparency, and the Disclosure Office of Treasury's Bureau of the Fiscal Service, asking for copies of all requests for exemptions under the Federal TOP program, copies of the Secretary's written responses granting or denying such requests, and a waiver of all fees associated with DCRB's request for this information.
O'Rourke v. DCRB	*Joseph G. O'Rourke v. DCRB*, Case No. 14-CV-1106: Oral argument was held on June 11, 2015 at 9:30, at the DC Court of Appeals, 430 E Street, NW, 2nd Floor, Room 1. Mr. O'Rourke was a lateral law enforcement officer hire who did not purchase any of his prior law enforcement service and retired with 8

	years of active MPD service. He claims he is entitled to longevity pay in his retirement benefit without having to purchase the prior service. Groom Law Group represented DCRB in this matter. No decision is available as yet.
Board Portal Project	The purpose of the Board Portal Project is to transition from hard copy (paper) Board materials to mostly digital documents. The Board approved an award to Diligent Board Member Services (Diligent) to host and distribute DCRB's meeting information through their portal application. Now that DCRB's contract with Diligent is final, training for Trustees and staff has been scheduled, and those who have been trained may begin using the application at next week's Board meeting.
Staffing	**New Hires** **Jason Todd,** who joined DCRB's Information Technology Department on July 6, 2015 as an IT Business Intelligence Analyst, will participate on the Data Management and Pension Information Management System projects. Previously, Jason worked with DCRB through the Office of the Chief Technology Officer on the Data Reclamation project, conducting and drafting a detailed Gap Analysis report that was used to identify deficiencies in the District's PeopleSoft system. The following interns have also joined DCRB for the summer: **Brea Grisham**, **RaeShawn White**, and **Alexander Williams von Fabricius** (Benefits); **John Siegmond** (Investments); and **Alexandria Veasley** (Legal). **Promotions** Effective July 6, 2015, **Anthony Shelborne** assumed the role of Chief Financial Officer (CFO) for DCRB, and is now a member of DCRB's Executive Leadership Team (ELT), reporting directly to me. Anthony joined DCRB as its Controller in March 2014, and has made significant contributions to the agency in his relatively brief time here. Following Tom Anderson's retirement as CFO earlier this year, Anthony stepped in and has gradually assumed full leadership responsibilities within our Finance Department. Effective June 28, 2015, **Jacqueline Thomas**, was promoted to Manager of the Benefits Department's Quality, Compliance and Projects Unit. Jacqueline, who joined DCRB in February 2014, formerly served as a Quality, Compliance and Project Analyst. **Patrick Sahm**, who joined DCRB as an Investment Analyst in October 2010, was promoted to Senior Investment Strategist, effective May 4, 2015. Please join me in congratulating Anthony, Jacqueline and Patrick on their promotions, and welcoming Jason, Brea, RaeShawn, Alexander, John, and Alexandria to DCRB. **Existing vacancies** include: Member Services Manager, Member Services Representative, and two Quality, Compliance and Project Analysts (Benefits); Sr. Financial Management and Budget Analyst (Finance); Portfolio Manager (IT), and Business Analyst (Operations).

Recent Retirement-Related Articles and Other Materials (attached)	*"Pensions Drop Annual Targets After Financial Crisis,"* Timothy W. Martin, The Wall Street Journal, May 22, 2015. *"Public Pension Plan Investment Return Assumptions,"* NASRA Issue Brief, May 2015. *"States Tackle America's Retirement-Savings Shortfall,"* Anne Tergesen, The Wall Street Journal, May 28, 2015.

A Publication of the District of Columbia Retirement Board for Active and Retired Police Officers, Firefighters and Teachers

DCRB Report
Teachers' Edition

SUMMER 2015

Inside

The District of Columbia Retirement Board's mission is to prudently invest the assets of the Police Officers, Firefighters, and Teachers of the District of Columbia, while providing those employees with total retirement services.

CHAIRMAN'S CORNER

From the Chairman of the Board

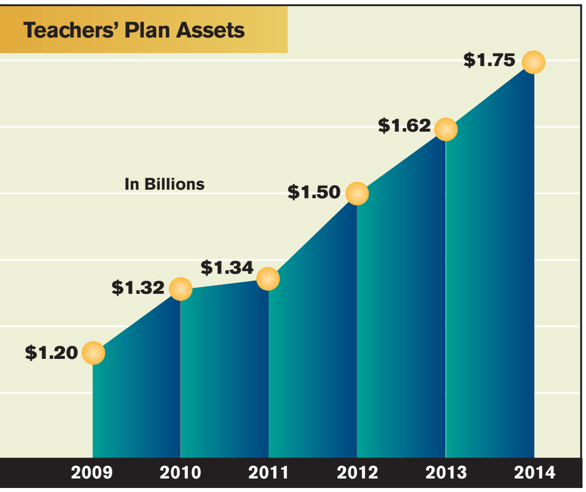
Joseph M. Bress

On March 30 and 31, the DC Retirement Board ("DCRB") and DC Public Schools ("DCPS") joined forces to present the 2015 Teachers' Retirement Workshop. The Workshop was held after school hours and, for the first time, the Workshop was hosted by DCRB.

During the first day, the agenda included presentations by Diana Varela of the Social Security Administration's Public Affairs Department; Jana Woods-Jefferson, DCPS' Director of Benefits and Compensation; and Johnetta Bond, DCRB's Chief Benefits Officer. The subjects covered were Social Security benefits, Medicare, the District of Columbia Teachers' Retirement Plan (the "Plan"), post-retirement health and life insurance benefits, and the steps in the retirement process. On the second day, Aprenea McCutchen of the Variable Annuity Life Insurance Company ("VALIC") discussed the features of 403(b) plans, and the representatives of several of DCPS' 403(b) plan providers were available to meet with attendees and answer their questions.

The Workshop planners held the Workshop at DCRB's offices because of our ability to record the presentations. Teachers who were not able to attend the Workshop can view a video of it on DCRB's web site at www.dcrb.dc.gov under Retirement or on DCPS' web site at www.dcps.dc.gov under Human Resources, then Retirement.

DCRB is pleased to have hosted this important event and we look forward to working with DCPS to continue to bring such valuable information to Plan members. The articles in this special newsletter provide highlights of the information that was presented and responses to questions that were asked.



Cost-of-Living Adjustments

Cost-of-living adjustments ("COLAs") for Social Security benefits are paid on January 1 of each year, and reflect the inflation rate for the 12-month period ending the prior September 30th (the end of the federal fiscal year). The increase, if any, is based on the change in the Consumer Price Index for Urban Wage Earners and Clerical Workers (the "CPI-W"). The COLA applicable to benefits under the District of Columbia Teachers' Retirement Plan, on the other hand, is paid on April 1 of each year, and reflects the movement in the CPI-W (1967 base) during the prior calendar year. Because these COLAs are calculated over different time frames, they are usually not the same percentage.

District of Columbia Teachers' Retirement Plan

The District of Columbia Teachers' Retirement Plan (the "Plan") defines "teacher" as a DCPS employee in a salary class position ET 1 – 15 under the DCPS system. This includes not only teachers, but others, such as, librarians, principals, assistant principals, and certain charter school teachers who previously worked for DCPS.

Eligibility to Retire

To be eligible to retire under the Plan's **Voluntary Retirement** option, a member must be:

- Age 55 and have at least 30 years of service, or
- Age 60 and have at least 20 years of service, or
- Age 62 and have at least 5 years of service.

Further, at least five (5) years of the required service must be with DCPS.

In addition, a **Disability Retirement** requires at least five (5) years of DCPS service upon becoming disabled, and a **Deferred Retirement** requires that a member, who separated from DCPS before becoming eligible to retire, be at least age 62 and have at least five (5) years of DCPS service.

Involuntary Retirement requires that a member have at least 25 years of service (five (5) of which must be with DCPS), or be at least age 50, and have at least 20 years of service (five (5) of which must be with DCPS), and the termination must be for reasons other than gross misconduct or delinquency.

Post-Retirement Health Care Coverage

To be eligible to continue District health care coverage after retirement, the member must have:

- At least ten (10) years of creditable District employment,
- Which includes at least five (5) continuous years of coverage under a District health plan immediately preceding retirement.

To continue to be covered after a retiree's death, the retiree's spouse or registered domestic partner, must be currently covered under a District health plan and be eligible to receive a survivor annuity.

Time Frame and Steps in the Retirement Process

At least six (6) months prior to retirement, a teacher considering retirement should request an estimated benefit from DCPS' Human Resources Department ("DCPS-HR"). If a purchase of service is being contemplated, that process should begin at this time, as well, by contacting DCRB. Any purchase of service must be completed prior to retirement.

Teachers who are planning to retire are also encouraged to request a copy of their Individual Retirement Record (previously called a Form 2806) from the District's Office of Pay and Retirement Services. They should also review the documents in their personnel file to assure that all service and salary information is there and that it is correct. These materials should be reviewed at least three months prior to the selected retirement date.

The retiring teacher should also request a Retirement Application form from DCPS-HR at least 90 days prior to the anticipated retirement date, and make an appointment with a DCPS retirement specialist to discuss the information and process.

Jana Woods-Jefferson, DCPS' Director of Benefits and Compensation.

Johnetta Bond, DCRB's Chief Benefits Officer.

Social Security Rules

Teachers who are members of the District of Columbia Teachers' Retirement Plan do not pay Social Security taxes and, therefore, are not eligible for Social Security benefits based on DCPS service. However, many of the teachers who attended the Teachers' Retirement Workshop were interested in knowing more about Social Security, and asked many questions on that subject during the presentation. Below is a sampling of the information they requested.

Eligibility

To be eligible for Social Security benefits, a person must pay a minimum in Social Security taxes for at least 40 quarters (10 years) during their working career. One quarter is earned for each three-month period in which the person earns at least $1,220 (as of 2015), and the quarters earned need not be consecutive. A person can also qualify by being an eligible survivor (e.g., widow, widower, minor child or former spouse) of an eligible family member who has died.

When Benefits are Payable and in What Percentages

For workers born between 1943 and 1954, full Social Security benefits are payable at 66 years of age.The full benefit time frame increases incrementally up to age 67, based on the person's year of birth (see chart). If the person elects to receive the benefit early, there is a reduction in the full benefit, and if he/she elects to take it later, there is an increase. For example, if a full benefit is paid at age 66, receiving the benefit at the earliest date (age 62), would result in the benefit being reduced by 25%. If the person elects to wait until the latest date (age 70), the benefit would be increased by 32%. So, a benefit of $1,000 per month would be reduced to $750 at age 62 and it would increase to $1,320 at age 70.

Year of Birth	Full Retirement Age
1943 - 1954	66
1955	66 and 2 months
1956	66 and 4 months
1957	66 and 6 months
1958	66 and 8 months
1959	66 and 10 months
1960 or later	67

Those who are eligible for Social Security, can estimate their benefit using the calculator on the Social Security website at www.socialsecurity.gov.

In Memoriam

Name	Date of Death
Alford, Joyce D.	Apr/24/2014
Browning, Joyce L	Jul/06/2014
Barrow, Priscilla H	Jan/16/2014
Bowers, Shellie F	Nov/20/2014
Gordon, Murielene	Dec/15/2014
Green, Lillie M.	Oct/20/2014
Hamner Jr., John	Mar/10/2014
Harper-Carter, Geraldine F	Jul/21/2014
Hawkins, Rebecca R	Dec/31/2014
Hughes, Blondine	Aug/13/2014
Ilori, Laura	Feb/07/2014
Jagnanan, Jagdat	Jun/23/2014
Jordan-Okudzeto, Mary H	Nov/05/2014
Lyons, Carolyn S	May/29/2014
Melby, Zachary E	Oct/21/2014
Nokes, Felicia J	Nov/04/2014
Ramsey, Dorothy L	Sep/13/2014
Rice, Lynn K	Dec/03/2014
Robinson, Esther Y	Aug/17/2014
Savoy, Norbet A	Jul/14/2014
Shek, Amehed M	May/30/2014
Smith, Viola F	Apr/13/2014
Sparrow, John	May/01/2014
Taylor, Cheryl Y	Apr/14/2014
Tyler, Joneal R.	Dec/08/2014
Weaver, Virginia D	Aug/23/2014
Witcher, Annie A.	May/04/2014

Medicare Enrollment

DCPS teachers pay Medicare taxes and, therefore, are eligible for Medicare benefits. You are first eligible for Medicare at age 65, but you may defer enrolling, if you work beyond that age. In either case, there are specific time frames to keep in mind. For instance, if you plan to retire at age 65, you may enroll in Medicare during the seven-month period beginning three months before your 65th birthday, the month of your birthday, and the three months following that birthday. If you retire and you do not enroll during that seven-month period, your premiums for Medicare Parts B (doctors and other medical services) and D (prescriptions) will be increased. Since no premium is required for Medicare Part A (hospital services), you should enroll in this coverage even if you continue to work after age 65.

Note: You should be aware that the District's health care coverage assumes that you (or your covered spouse or registered domestic partner) sign up for Medicare as soon as you are eligible to do so (age 65). So, if you retire at age 62, for example, your District health care coverage will automatically become the secondary payor (20%) of your medical bills when you reach age 65. If you do not sign up for Medicare at age 65, then your only coverage will be your secondary District coverage.

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Inside this DCRB Report

District of Columbia Teachers' Retirement Plan

Windfall Elimination Provision

Social Security's Windfall Elimination Provision ("WEP") applies to individuals who earned a pension from a job (usually a public-service job) that is **not covered by Social Security**, and also worked in a Social Security-covered job for at least 10 years (40 quarters). In such situations, the person's Social Security benefit is offset due to the existence of a pension benefit under a plan where no Social Security taxes were paid.

Congress created the WEP in 1983 so that Social Security could distinguish between actual low-wage workers and workers who earn substantial pensions from primary jobs in non-covered employment, but whose low wages or short work records make them appear to be low-wage workers. Essentially, Congress did not want the second group to unfairly benefit from Social Security's progressive formula that pays benefits that are a greater portion of a low-wage earner's income than a high-wage earner's income. The WEP was intended to prevent people from "double dipping."

In essence, a regular Social Security benefit is calculated in three segments, where the first portion of covered earnings is multiplied by 90%, the second by 32%, and the third by 15%. Under the WEP, the first segment is reduced to 40% for retirees who worked in Social Security-covered employment for fewer than 20 years. There is a sliding scale for those who worked in Social Security-covered employment between 20 and 30 years, and the WEP is eliminated at 30 years or more. The maximum amount of the reduction is equal to 50% of the non-covered pension.

USEFUL CONTACTS

D.C. Public Schools Human Resources Office
(202) 442-4090
dcps.hranswers@dc.gov

DCRB Member Services
(202) 343-3272
Toll free: (866) 456-3272
dcrb.benefits@dc.gov

Social Security Administration
(800) 772-1213
http://www.ssa.gov

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Editor

A Publication of the District of Columbia Retirement Board for Active and Retired Police Officers, Firefighters and Teachers

DCRBReport

SPRING 2015

Inside

The District of Columbia Retirement Board's mission is to prudently invest the assets of the Police Officers, Firefighters, and Teachers of the District of Columbia, while providing those employees with total retirement services.

CHAIRMAN'S CORNER

From the Chairman of the Board

Joseph M. Bress

At the Board's meeting on March 19, 2015, I was honored to be reelected as Chairman for this next year. At that meeting, the Trustees also elected the following officers: Joseph Clark, Secretary; Lyle Blanchard, Treasurer; Thomas Tippett, Parliamentarian; and Gary Hankins, Sergeant-at-Arms. Since the Board did not have a meeting in April, I will appoint Chairs of the Board's Standing Committees in May. The current Committee Chairs are: Edward Smith, Benefits Committee; Joseph Clark, Fiduciary Committee; Barbara Davis Blum, Investment Committee; Darrick Ross, Operations Committee; Lyle Blanchard, Legislative Committee; and Gary Hankins, Audit Committee.

New Standing Committee

Trustee Gary Hankins was appointed last year to Chair our newly established Audit Committee. The key responsibilities of this Committee are to provide independent review and oversight of DCRB's financial reporting processes and internal controls.

Health of the Plans

As in the past, our spring Newsletter serves as your Summary Annual Report for the prior Plan Year (ending September 30, 2014). As such, the *Investment Update* on page 2 and the *Statement of Net Assets* on page 3 provide you with information on the status and health of the Trust Fund that supports the Plans, and illustrate Fund changes that have taken place over Fiscal Year 2014. The investment performance over the past year was 8.4%, and the Fund's average annual return since its inception in 1982 is 9.1%. We are also pleased to advise you that the Plans are well funded. As of October 1, 2014, the Plans' funded status was an aggregate 101.4%.

Technology Update

A few years ago, DCRB engaged a consulting firm to assess our benefits administration systems for the purpose of upgrading our operations to better serve you. As a result of that assessment, we scanned member records and improved our telephone system. This past year, we completed a review and reclamation of historical salary, service and contribution data that we receive from the District's human resources and payroll offices and that existed primarily in paper form. This data is now being reviewed to assure its accuracy. Once that review is completed later this year, the data will be readily available for our use in calculating benefits. The goals are to provide new retirees and survivors with their initial pension pay-

Continued on page 4

Plan Membership*

Category	Police	Firefighters	Teachers	Total
Active	3,902	1,649	4,499	10,050
Service Retirement	3,318	1,085	5,423	9,826
Disability Retirement	1,044	379	331	1,754
Survivors	1,355	562	435	2,352
Total	**9,619**	**3,675**	**10,688**	**23,982**

**as of October 1, 2014.*

Fiscal Year 2014 Investment Update

Performance Update

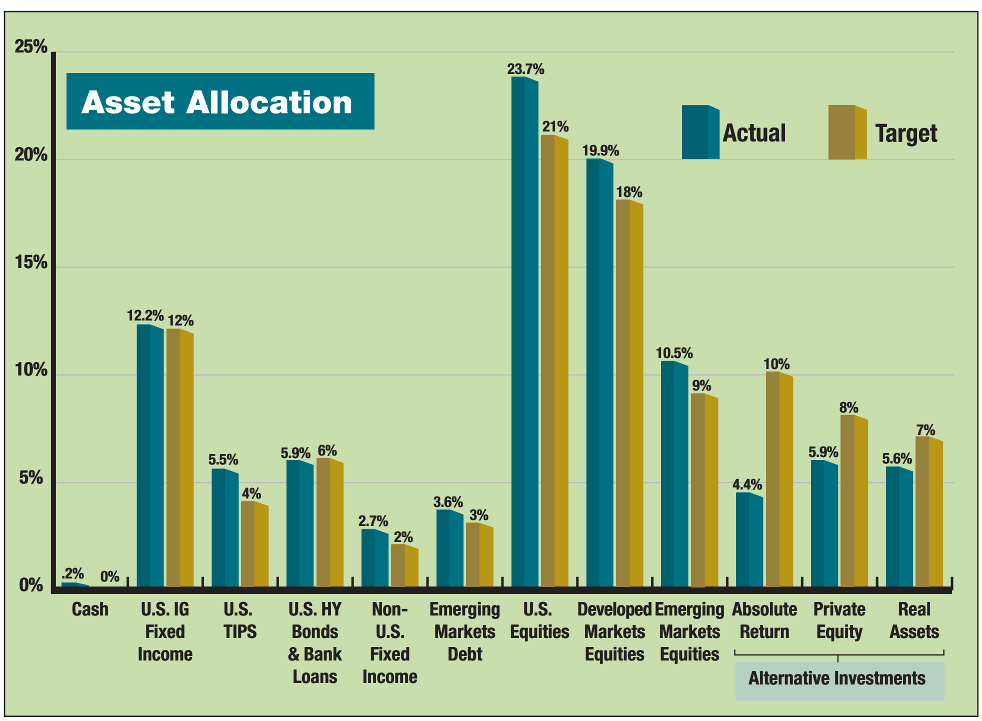
The assets of the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Fire Fighters' Retirement Fund (collectively referred to as the "Fund") are commingled for investment purposes. As of September 30, 2014, the Fund's total assets were $6.3 billion, an increase of approximately $540 million compared to September 30, 2013. The Fund generated an annual gross return for the fiscal year of 8.4%, outperforming by 1.9% the actuarial return target of 6.5% (the long-term rate of return needed to fully fund the Plans). Positive performance by investments in U.S. stocks, private equity, and infrastructure were the primary drivers of the 1.9% outperformance.

Global Market Review

US and international ("global") equity markets were positive during the fiscal year ending September 30, 2014. The Russell 3000 Index (an index that measures the performance of the 3,000 largest U.S. companies by market capitalization), increased 17.8%. The MSCI World ex U.S. Index, which measures the performance of stocks in developed markets around the world, indicated an increase of 4.9%, and the MSCI Emerging Markets Index, a barometer of the performance of the stocks in the emerging markets, reflected an increase of 4.3%. U.S. fixed income markets rose by 3.1%, as measured by the Barclays Capital U.S. Universal Index, driven by a slight decline in U.S. interest rates.

Asset Allocation

The Board made no changes to the Fund's strategic asset allocation during fiscal year 2014 and, as of September 30, 2014, the Fund's asset classes were within their respective target ranges with the exception of the Absolute Return program, which was moderately below the targeted range minimum. The targeted and actual allocations as of September 30, 2014, are shown in the chart below.



Other Investment Updates

During fiscal year 2014, the Board continued to work with its general investment consultant, Meketa Investment Group, to: review the investment performance of the Fund, the asset class, and each investment manager; implement an allocation to bank loans, a category within fixed income; and select a new international developed markets equity manager. The Board also worked closely with Cliffwater, its alternative investments consultant, to commit additional capital to private equity and private real assets funds.

The Environmental, Social, and Governance (ESG) policy adopted by the Board in November 2013, was implemented and incorporated into the investment decision-making process. The Board thought it important to put into writing its commitment to considering the environmental, social, and governance impacts of its investments, as well as best practices in these areas, as part of its framework to make the most prudent investments on behalf of beneficiaries. The Board will continue to work with its investment consultants to identify investment managers who exhibit best practices in these areas.

During fiscal year 2015, the Board will fund the previously-approved mandates for international developed markets equities and U.S. bank loans. Additionally, the Board plans to review the services provided by its custodian bank and investment consultants. The Board may also consider changes to the current asset allocation and investment manager structure, if warranted by the market environment or manager-specific events.

Statement of Net Assets

For Fiscal Year 2014, the Board once again received a clean opinion from its external auditor. The following schedules compare the FY 2014 financial statements with those of FY 2013.

Statement of Net Assets for the Fiscal Years ending September 30, 2014, and September 30, 2013 ($000s)

	2014			2013		
	Teachers' Retiremt Fund	POLFF Retiremt Fund	Total	Teachers' Retiremt Fund	POLFF Retiremt Fund	Total
Assets						
Cash and short-term investments	$7,236	$20,164	$27,400	$26,826	$69,232	$96,058
Receivables & Prepaid expenses	43,458	111,885	155,343	28,853	70,820	99,673
Investments at fair value	1,729,571	4,546,197	6,275,768	1,630,294	4,144,784	5,775,078
Collateral from securities lending	6,885	18,097	24,982	23,566	59,912	83,478
Capital assets	0	0	0	0	0	0
Total Assets	1,787,150	4,696,343	6,483,493	1,709,539	4,344,748	6,054,287
Liabilities						
Other payables	1,781	4,623	6,404	22,249	11,253	33,502
Investment commitments payable	32,426	85,237	117,663	41,162	104,649	145,811
Obligations under securities lending	6,982	18,354	25,336	23,753	60,389	84,142
Total Liabilities	41,189	108,214	149,403	87,164	176,291	263,455
Net Assets Held in Trust For Pension Benefits	$1,745,961	$4,588,129	$6,334,090	$1,622,375	$4,168,457	$5,790,832
ADDITIONS						
Employer contributions	$31,636	$110,766	$142,402	$6,407	$96,314	$102,721
Employee contributions	28,751	32,821	61,572	28,129	30,581	58,710
Net investment income/(loss)	132,086	338,894	470,980	168,117	423,581	591,698
Other income	522	1,342	1,864	796	2,047	2,843
Total additions	192,995	483,823	676,818	203,449	552,523	755,972
DEDUCTIONS						
Benefit payments	59,832	52,784	112,616	54,180	45,656	99,836
Retirement benefits payable to U.S. Treasury	0	0	0	21,503	9,391	30,894
Refunds	5,790	1,637	7,427	5,250	1,960	7,210
Administrative expenses	3,787	9,730	13,517	3,627	8,913	12,540
Total deductions	69,409	64,151	133,560	84,560	65,920	150,480
Change in net assets	123,586	419,672	543,258	118,889	486,603	605,492
Net Assets Held in Trust For Pension Benefits, Beginning of Fiscal Year	1,622,375	4,168,457	5,790,832	1,503,486	3,681,854	5,185,340
Net Assets Held in Trust For Pension Benefits, End of Fiscal Year	$1,745,961	$4,588,129	$6,334,090	$1,622,375	$4,168,457	$5,790,832

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Inside this DCRB Report

Fiscal Year 2014 Investment Summary and Financial Statements

2015 COLA Notices to Members

The D.C. Human Resources Office announced the following cost-of-living adjustments (COLAs) for retired police officers, firefighters, and teachers, and their survivors, for 2015.

- Police officers and firefighters:* 0.8%
- Teachers: 0.3%

These increases were effective March 2, 2015, and they were included in pension payments that were issued on April 1, 2015.

For more details about the 2015 COLAs, please visit DCRB's website at dcrb.dc.gov. The COLA Notifications are located under Newsroom, then click on Press Releases.

*Police and firefighter retirees who retired before February 15, 1980 (Tier 1) receive equalization payments based on pay increases granted to active members and, therefore, do not receive COLAs.

DCRB Hosts Teachers' Retirement Workshop

On March 30 - 31, DCRB and DC Public Schools (DCPS) joined forces to present the 2015 Teachers' Retirement Workshop, which was held at DCRB's office at 900 Seventh Street, NW. On the first day of the Workshop, teachers were provided with information on Social Security and Medicare, and with an overview of the District of Columbia Teachers' Retirement Plan. The presenters also fielded questions on post-retirement health care and life insurance coverage, and the steps in the retirement process. On the second day, DCPS' 403(b) plan providers presented attendees with information and materials on those plans.

Chairman's Corner

continued from page 1

ments much sooner, and to enable our ability to provide you with annual benefit statements.

While the review of the recovered data is in progress, our Information Technology Department will work on a Data Management Project, which contains applications that will assist us in assuring the integrity of pension-related data that is added to our pension database going forward. They are also gathering requirements and reviewing market research aimed toward transitioning pension calculation and record keeping from the U.S. Treasury Department to a system that will be owned and maintained by DCRB. Although the implementation of this system is still a few years away, we are excited that with the completion of each step of the project, we are that much closer to being able to provide you with more comprehensive benefits administration services.

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THE WALL STREET JOURNAL.

May 22, 2015, 2:17 PM ET

Pensions Drop Annual Targets After Financial Crisis

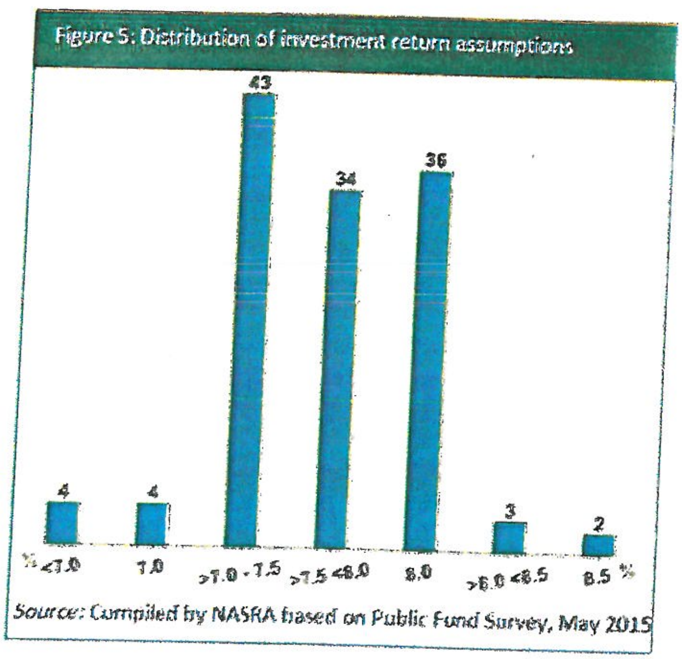
By Timothy W. Martin

More pensions are aiming lower with their annual returns.

Nearly two-thirds, or 79, of 126 public pension plans have lowered their return assumption in the years following the 2008 financial crisis, according to a recent report by the National Association of State Retirement Administrators.

The median return assumption among the 129 plans is 7.69%. That's below the pre-crisis rate of 8%, Nasra says. "It's worth noting that almost every change in the investing return assumption has been incremental," said Keith Brainard, research director at Nasra, a non-profit group representing retirement-system directors.

But, he added, "In a lot of cases, the plans have changed their assumption more than once" in recent years.



States and cities, with the guidance of actuaries, establish their own annual targets. A higher target means governments have to set aside less each year from their annual budgets. A lower target could mean a higher annual payment by cities and states.

Mr. Brainard said a major driver on pensions setting lower targets is low inflation.

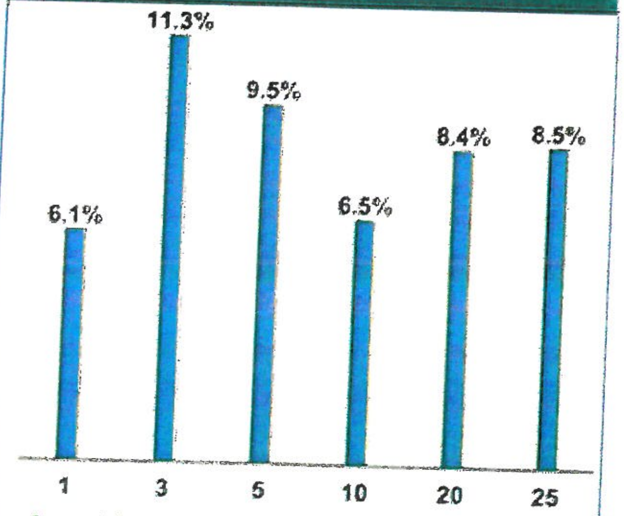
How these pension costs get calculated can be controversial when there are disagreements. In sizing up the city of Chicago's $20 billion in pension liabilities, Moody's Investors Service, a credit-ratings firm, uses its own estimates, which are more conservative, meaning the pension problems look worse. Moody's downgraded the city last week, stemming from bloated pension liabilities.

On Thursday, Moody's missed out on rating $800 million in general-obligation bonds expected to hit the market in coming weeks, as the WSJ reported Friday.

Four plans tie for the lowest target returns of 6.5%: two Washington D.C. pensions, representing the teachers, plus the fire and police, and the Indiana retirement systems for public employees and teachers.

The highest rate—of 8.5%–is shared by the Houston Firefighters and Connecticut Teachers, Nasra says.

Figure 1: Median public pension annualized investment returns for period ended 12/31/2014



Source: Callan Associates

NASRA Issue Brief:
Public Pension Plan Investment Return Assumptions

Updated May 2015

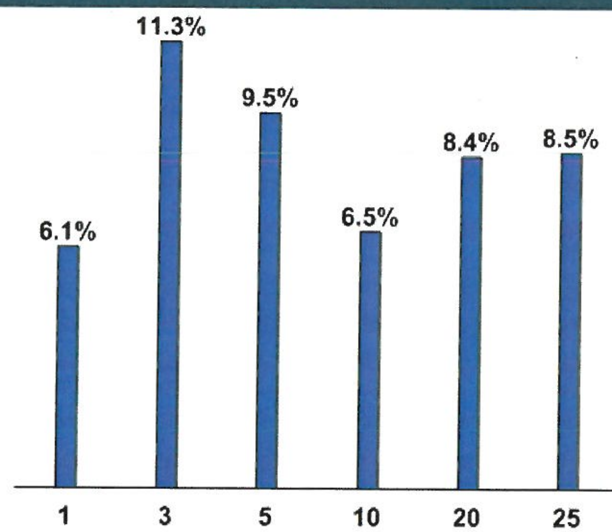
As of December 31, 2014, state and local government retirement systems held assets of $3.78 trillion.[1] These assets are held in trust and invested to pre-fund the cost of pension benefits. The investment return on these assets matters, as investment earnings account for a majority of public pension financing. A shortfall in long-term expected investment earnings must be made up by higher contributions or reduced benefits.

Funding a pension benefit requires the use of projections, known as actuarial assumptions, about future events. Actuarial assumptions fall into one of two broad categories: demographic and economic. Demographic assumptions are those pertaining to a pension plan's membership, such as changes in the number of working and retired plan participants; when participants will retire, and how long they'll live after they retire. Economic assumptions pertain to such factors as the rate of wage growth and the future expected investment return on the fund's assets.

As with other actuarial assumptions, projecting public pension fund investment returns requires a focus on the long-term. This brief discusses how investment return assumptions are established and evaluated, and compares these assumptions with public funds' actual investment experience.

Some critics of current public pension investment return assumption levels say that current low interest rates and volatile investment markets require public pension funds to take on excessive investment risk to achieve their assumption. Because investment earnings account for a majority of revenue for a typical public pension fund, the accuracy of the assumption has a major effect on the plan's finances and actuarial funding level.

Figure 1: Median public pension annualized investment returns for period ended 12/31/2014



Source: Callan Associates

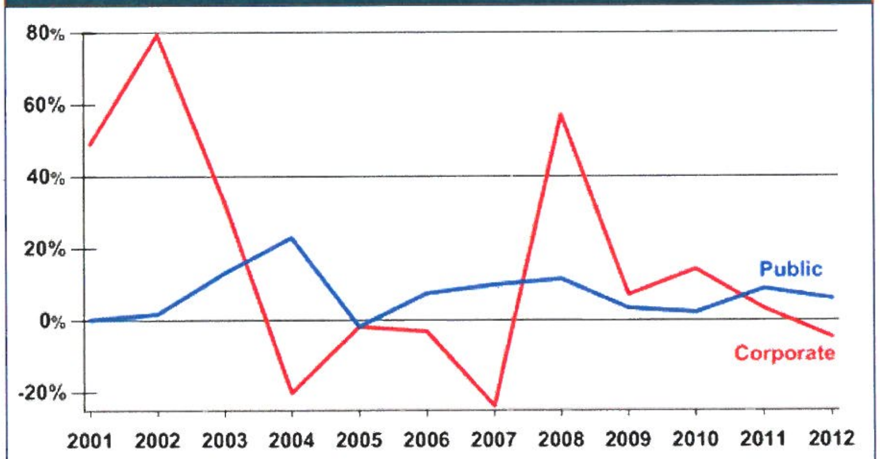
An investment return assumption that is set too low will overstate liabilities and costs, causing current taxpayers to be overcharged and future taxpayers to be undercharged. A rate set too high will understate liabilities, undercharging current taxpayers, at the expense of future taxpayers. An assumption that is significantly wrong in either direction will cause a misallocation of resources and unfairly distribute costs among generations of taxpayers.

Although public pension funds, like other investors, experienced sub-par returns in the wake of the 2008-09decline in global equity values, median public pension fund returns over longer periods meet or exceed the assumed rates used by most plans. As shown in Figure 1, the median annualized investment return for the 3-, 5-, 20- and 25-year periods ended December 31, 2014, exceeds the average assumption of 7.69 percent (see Figure 5), while the 10-year return is below this level.

[1] Federal Reserve, *Flow of Funds Accounts of the United States: Flows and Outstandings, Fourth Quarter 2014*, Table L.118

Public retirement systems typically follow guidelines set forth by the Actuarial Standards Board to set and review their actuarial assumptions, including the expected rate of investment return. Most systems review their actuarial assumptions regularly, pursuant to state or local statute or system policy. Actuarial Standards of Practice No. 27 (Selection of Economic Assumptions for Measuring Pension Obligations) (ASOP 27) prescribes the considerations actuaries should make in setting an investment return assumption. As described in ASOP 27, the process for establishing and reviewing the investment return assumption involves consideration of various financial, economic, and market factors, and is based on a very long-term view, typically 30 to 50 years. A primary objective for using a long-term approach in setting public pensions' return assumption is to promote stability and predictability of cost to ensure intergenerational equity among taxpayers.

Figure 2: Annual change in contributions from prior year, corporate vs. public pensions

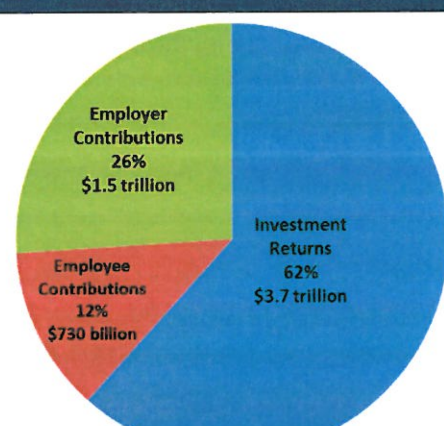


Source: Compiled by NASRA based on U.S. Department of Labor and U.S. Census Bureau data

Unlike public pension plans, corporate plans are required by federal regulations to make contributions on the basis of current interest rates. As Figure 2 shows, this method results in plan costs that are volatile and uncertain, often changing dramatically from one year to the next. This volatility is due in part to fluctuations in interest rates and has been identified as a leading factor in the decision among corporations to abandon their pension plans. By focusing on the long-term and relying on a stable investment return assumption, public plans experience less volatility of costs.

As shown in Figure 3, since 1984, public pension funds have accrued an estimated $5.9 trillion in revenue, of which $3.7 trillion, or 62 percent, is estimated to have come from investment earnings. Employer contributions account for $1.5 trillion, or 26 percent of the total, and employee contributions total $730 billion, or 12 percent.[2]

Figure 3: Public Pension Sources of Revenue, 1984-2013



Source: Compiled by NASRA based on U.S. Census Bureau data

Public retirement systems operate over long timeframes and manage assets for participants whose involvement with the plan can last more than half a century. Consider the case of a newly-hired public school teacher who is 25 years old. If this pension plan participant elects to make a career out of teaching school, he or she may work for 35 years, to age 60, and live another 25 years, to age 85. This teacher's pension plan will receive contributions for the first 35 years and then pay out benefits for another 25 years. During the entire 60-year period, the plan is investing assets on behalf of this participant. To emphasize the long-term nature of the investment return assumption, for a typical career employee, more than one-half of the investment income earned on assets accumulated to pay benefits is received *after* the employee retires.

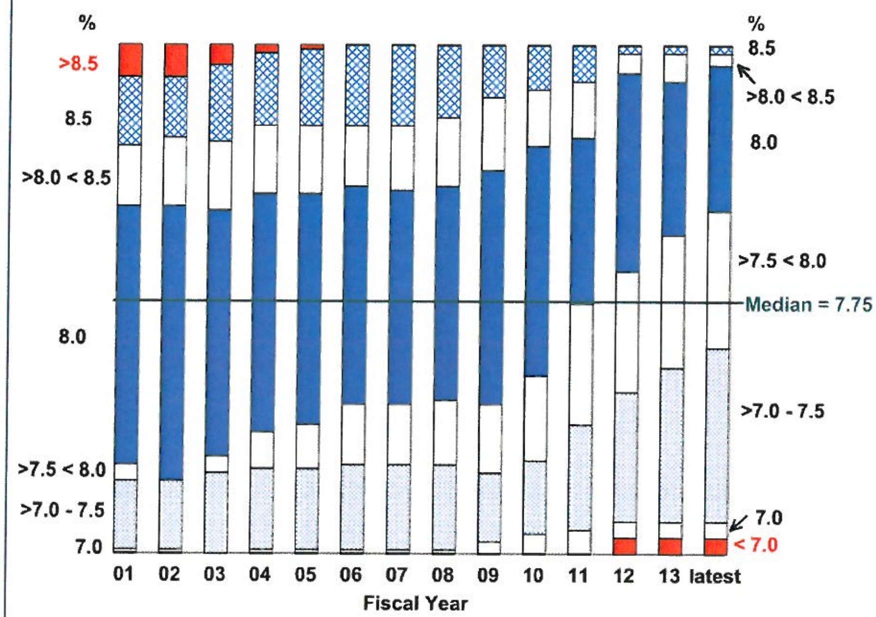
[2] US Census Bureau, Annual Survey of Public Pensions, State & Local Data

The investment return assumption is established through a process that considers factors such as economic and financial criteria; the plan's liabilities; and the plan's asset allocation, which reflects the plan's capital market assumptions, risk tolerance, and projected cash flows.

Standards for setting an investment return assumption, established and maintained by professional actuaries, recommend that actuaries consider a range of specified factors, including current and projected interest rates and rates of inflation; historic and projected returns for individual asset classes; and historic returns of the fund itself. The investment return assumption reflects a value within the projected range.

As shown in Figure 4, many public pension plans have reduced their return assumption in recent years. Among the 126 plans measured in the Public Fund Survey, more than one-half have reduced their investment return assumption since fiscal year 2008. The average return assumption is 7.69 percent. Appendix A details the assumptions in use or adopted by the 126 plans in the Public Fund Survey.

Figure 4: Change in distribution of public pension investment return assumptions, FY 01 through May 2015

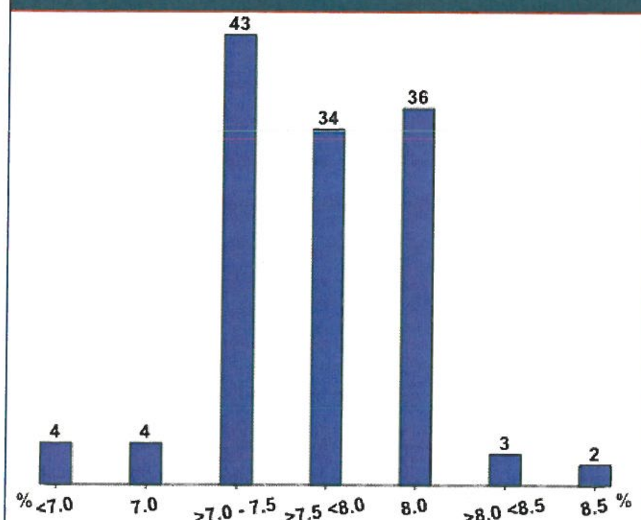


Source: Compiled by NASRA based on Public Fund Survey

Conclusion

Over the last 25 years, a period that has included three economic recessions and four years when median public pension fund investment returns were negative, public pension funds have exceeded their assumed rates of investment return. Changes in economic and financial conditions are causing many public plans to reconsider their investment return assumption. Such a consideration must include a range of financial and economic factors while remaining consistent with the long timeframe under which plans operate.

Figure 5: Distribution of investment return assumptions



Source: Compiled by NASRA based on Public Fund Survey, May 2015

See Also:

- Actuarial Standards of Practice No. 27, Actuarial Standards Board
- The Liability Side of the Equation Revisited, Missouri SERS, September 2006
- The Public Fund Survey is sponsored by the National Association of State Retirement Administrators (registration required).

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National Association of State Retirement Administrators

Appendix A: Investment Return Assumption by Plan

(Figures reflect the nominal assumption in use, or announced for use, as of May 2015)

Plan	Rate (%)
Alaska PERS	8.00
Alaska Teachers	8.00
Alabama ERS	8.00
Alabama Teachers	8.00
Arkansas PERS	7.75
Arkansas Teachers	8.00
Arizona Public Safety Personnel	7.85
Arizona SRS	8.00
Phoenix ERS	7.50
California PERF	7.50
California Teachers	7.50
Contra Costa County	7.25
LA County ERS	7.50
San Diego County	7.75
San Francisco City & County	7.50
Colorado Affiliated Local	7.50
Colorado Fire & Police Statewide	7.50
Colorado Municipal	7.50
Colorado School	7.50
Colorado State	7.50
Denver Employees	8.00
Denver Public Schools	7.50
Connecticut SERS	8.00
Connecticut Teachers	8.50
DC Police & Fire	6.50
DC Teachers	6.50
Delaware State Employees	7.20
Florida RS	7.65
Georgia ERS	7.50
Georgia Teachers	7.50
Hawaii ERS	7.75
Iowa PERS	7.50
Idaho PERS	7.00
Chicago Teachers	7.75
Illinois Municipal	7.50
Illinois SERS	7.25
Illinois Teachers	7.50
Illinois Universities	7.25
Indiana PERF	6.75
Indiana Teachers	6.75
Kansas PERS	8.00
Kentucky County	7.75
Kentucky ERS	7.75
Kentucky Teachers	7.50
Louisiana SERS	7.75
Louisiana Teachers	7.75
Massachusetts SERS	8.00
Massachusetts Teachers	8.00
Maryland PERS[1]	7.65
Maryland Teachers[1]	7.65
Maine Local	7.13
Maine State and Teacher	7.13
Michigan Municipal	8.00
Michigan Public Schools	8.00
Michigan SERS	8.00
Duluth Teachers	8.00
Minnesota PERF	8.00
Minnesota State Employees	8.00
Minnesota Teachers[2]	8.40
St. Paul Teachers	8.00
Missouri DOT and Highway Patrol	7.75
Missouri Local	7.25
Missouri PEERS	8.00
Missouri State Employees	8.00
Missouri Teachers	8.00
St. Louis School Employees	8.00
Mississippi PERS	8.00
Montana PERS	7.75
Montana Teachers	7.75
North Carolina Local Government	7.25
North Carolina Teachers and State Employees	7.25
North Dakota PERS	8.00
North Dakota Teachers	8.00
Nebraska Schools	8.00
New Hampshire Retirement System	7.75
New Jersey PERS	7.90
New Jersey Police & Fire	7.90
New Jersey Teachers	7.90
New Mexico PERF	7.75

New Mexico Teachers	7.75
Nevada Police Officer and Firefighter	8.00
Nevada Regular Employees	8.00
New York City ERS	7.00
New York City Teachers	8.00
New York State Teachers	8.00
NY State & Local ERS	7.50
NY State & Local Police & Fire	7.50
Ohio PERS	8.00
Ohio Police & Fire	8.25
Ohio School Employees	7.75
Ohio Teachers	7.75
Oklahoma PERS	7.50
Oklahoma Teachers	8.00
Oregon PERS	7.75
Pennsylvania School Employees	7.50
Pennsylvania State ERS	7.50
Rhode Island ERS	7.50
Rhode Island Municipal	7.50
South Carolina Police	7.50
South Carolina RS	7.50
South Dakota PERS[3]	7.25
TN Political Subdivisions	7.50
TN State and Teachers	7.50

City of Austin ERS	7.75
Houston Firefighters	8.50
Texas County & District	8.00
Texas ERS	8.00
Texas LECOS	8.00
Texas Municipal	7.00
Texas Teachers	8.00
Utah Noncontributory	7.50
Fairfax County Schools	7.50
Virginia Retirement System	7.00
Vermont State Employees[4]	8.10
Vermont Teachers[4]	7.90
Washington LEOFF Plan 1[5]	7.90
Washington LEOFF Plan 2	7.90
Washington PERS 1[5]	7.90
Washington PERS 2/3[5]	7.90
Washington School Employees Plan 2/3[5]	7.90
Washington Teachers Plan 1[5]	7.90
Washington Teachers Plan 2/3[5]	7.90
Wisconsin Retirement System	7.20
West Virginia PERS	7.50
West Virginia Teachers	7.50
Wyoming Public Employees	7.75

1. The Maryland State Retirement Agency Board of Trustees began, with the actuarial valuation dated June 30, 2013, a phased reduction in the assumption used for its PERS and Teachers plans from 7.75 percent, by .05% each year until reaching 7.55.

2. The Minnesota Legislature is responsible for setting the investment return assumption for plans in the state. Legislation approved in 2015 established a rate of 8.0 percent for all plans except the TRA, which is using a select and ultimate rate pending completion of an actuarial experience study. For more information on select-and-ultimate rates, please see Actuarial Standards of Practice No. 27: http://www.actuarialstandardsboard.org/pdf/asops/asop027_145.pdf.

3. The SDRS set the rate at 7.25% through FY 2017, after which the rate will rise to 7.50% unless the SDRS board takes action otherwise.

4. The Vermont retirement systems adopted select-and-ultimate rates in 2011; the rates shown reflect the single rates most closely associated with the funding results for the respective plans, based on their projected cash flows.

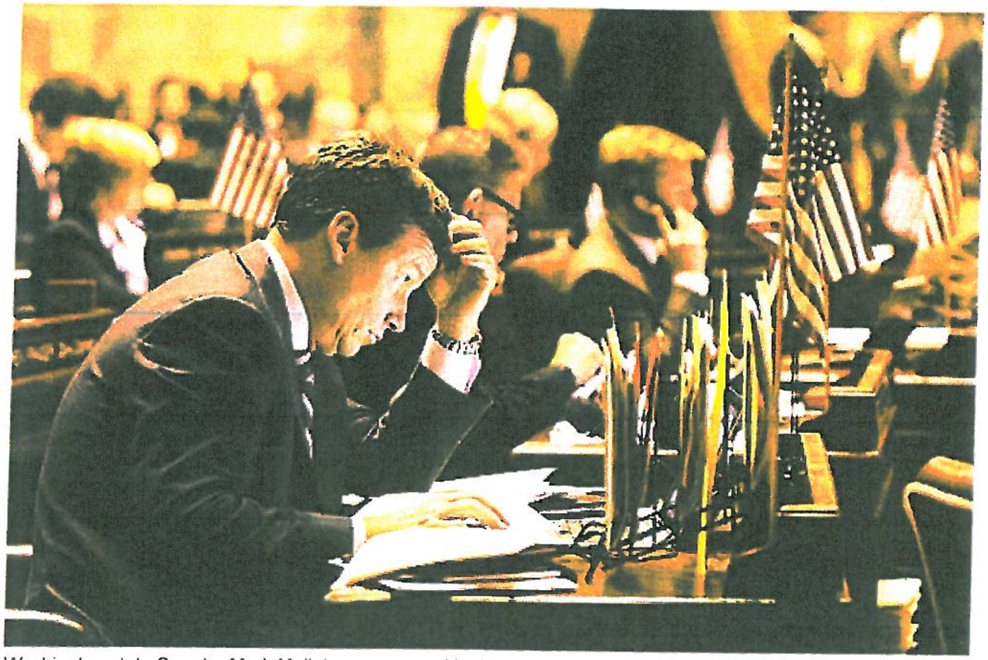
5. For all Washington State plans except LEOFF Plan 2, the assumed rate of return will be reduced to 7.8% on July 1, 2015, and to 7.7% on July 1, 2017.

THE WALL STREET JOURNAL.
WSJ.com

May 28, 2015, 6:00 AM ET

States Tackle America's Retirement-Savings Shortfall

ByAnne Tergesen



Washington state Senator Mark Mullet co-sponsored legislation authorizing a new retirement-savings program.

TED S. WARREN/ASSOCIATED PRESS

A growing number of state legislatures are trying to solve the nation's retirement savings crisis.

Last week, Washington state became the second state in the nation—after Illinois—to authorize its own state-run retirement savings program for a broad spectrum of companies. The goal: to get small businesses, many of which don't currently offer retirement savings plans, to deduct contributions from employees' paychecks and funnel them into individual retirement accounts, where money can grow tax-deferred until retirement.

Washington and Illinois are on the cutting edge of a trend. Currently, 25 states are either studying similar state-run retirement savings plans or are actively considering legislation that would establish one, says Sarah E. Mysiewicz Gill, a senior legislation representative at AARP, which supports the efforts through its Work & Save initiative. Such efforts are "really hitting critical mass," she says.

Massachusetts is in the early stages of implementing a 2012 law that creates a state-run 401(k) program for employees of nonprofits with 20 or fewer workers. Other states, including California, Minnesota, Connecticut and Oregon, are conducting feasibility studies that are likely to pave the way for similar programs aimed at all small businesses, says Ms. Gill, who expects Oregon and New Jersey to pass legislation to establish plans by year-end.

States are motivated to take action because "a lot of the burden is going to fall on state and local governments to provide public assistance" for retirees with insufficient savings, says David John, a senior strategic policy adviser at AARP Public Policy Institute in Washington.

Currently, more than half of working-age Americans have no retirement-plan coverage at work. For years, policy makers have been searching for ways to address the problem by enticing small businesses to offer their employees 401(k)-style retirement savings plans. The Center for Retirement Research at Boston College calculates that 53% of working-age households are at risk of being unable to maintain their pre-retirement standard of living after they stop working.

The state plans follow different models. For example, Washington state's plan will leave it up to employers with 100 or fewer employees to decide whether to offer retirement savings accounts to their employees.

In California, legislation that Governor Jerry Brown signed in 2012 authorized a feasibility study of a program to require private-sector companies with five or more employees that don't currently offer a retirement plan to automatically deduct contributions from employees' paychecks and funnel them into IRAs. The study is scheduled to be published by year-end, says Ms. Gill, who expects the state to authorize a plan in 2016.

Under the Washington plan, which is likely to be up and running by 2016 or 2017, the state's Commerce Department will appoint a private company to oversee a state marketplace, where financial-services companies can offer retirement plans, featuring all-in-one target-date mutual funds, which shift more from stocks to bonds as participants age. Some plans may also offer balanced funds, which typically consist of 60% stocks and 40% bonds, says the bill's co-sponsor, state Senator Mark Mullet, a Democrat from Issaquah, Wash.

To pass muster with Washington state, a retirement plan must charge no administrative fees and must cap the fees participants pay—including investment-management fees—at 1% of assets a year, he adds.

Aside from promoting the retirement plans to small businesses, the state will vet the offerings and may even offer financial incentives to small employers to sign up, says Mr. Mullet. Employers will have a choice of three plans: a Simple IRA, which can accept both employee and employer contributions; an IRA which will only accept employee contributions; and the federal myRA, which is a Roth IRA with just one investment option—a Treasury bond with relatively modest returns. Individuals can contribute up to $5,500 a year to an IRA, although the limit rises to $6,500 for those age 50 or older.

Washington's program will need about $250,000 to $500,000 in state or private funding and will be open to state-based employers with 100 or fewer employees—almost 80% of which don't currently offer retirement plans, says Mr. Mullet.

–This article also appeared on MarketWatch Retirement.

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TO: BOARD OF TRUSTEES

FROM: EDWARD SMITH, CHAIRMAN

DATE: **JULY 16, 2015**

SUBJECT: BENEFITS COMMITTEE REPORT

The Benefits Committee met on July 1, 2015. The following report reflects Benefits Department activities and projects that occurred in May and June.

Disability Income Review Updates

As noted in the May Report, DCRB staff requested the verification of 2014 income from 166 annuitants receiving disability retirement payments under the District of Columbia Police Officers and Firefighters' Retirement Plan (the "Plan"). As of the May 15, 2015 deadline, all but 9 annuitants had responded. After that date, Benefits staff made additional attempts to contact the nine non-compliant members (phone calls, certified mail, emails, etc.), but received no responses. Consequently, non-compliance letters were sent to all nine annuitants indicating an anticipated annuity suspension date of August 3, 2015. Additionally, letters were sent to 151 disability annuitants, notifying them that there would be no change in their disability benefits. The 2014 income review process resulted in the reinstatement of pension payments to 3 annuitants whose income fell below the income level limitations, and the continuation of payment suspensions to 3 disability payees whose earnings were above the income limits set forth by the Plan.

Annuitant Verification Updates

As a standard practice nationwide, public retirement systems conduct periodic verifications to ensure benefit payments are properly disbursed to annuitants in accordance with governing rules. To fulfill this responsibility, DCRB periodically sends verification letters to a random sampling of annuitants, requesting that they acknowledge receipt of their monthly benefit payments, verify their address, and update other information, as appropriate. Accordingly, on May 19, 2015, DCRB sent letters to 282 annuitants of various age levels above age 60. As of June 16, DCRB received 120 responses (42%). On that same date, DCRB sent certified mail to the remaining annuitants in anticipation of the June 30, 2015 filing deadline. Failure to respond to a verification request may result in suspension of a benefit payment until verification has been received.

Benefits Department Monthly Statistics

Processing volume increased during the month of May, with over 101 new retirement claims, 79 of which were completed and moved to payment status. In addition, the Member Services Unit received 1,515 telephone calls and 114 walk-in customers. Also during the month of May, the Department prepared, scanned, and validated more than 2,599 documents into FileNet. More information related to the operational performance of the Benefits Department for the month of May is provided in the attached monthly payroll statistical report.

iCore Phone System Changes

In an effort to continue improving customer service responses to callers, the Call Center's TV monitor, which tracks incoming calls, calls awaiting response, and other activities, is being relocated to a place that is more visible to all Member Services staff. The Benefits Department will continue to monitor the iCore phone system to assess the need for additional improvements.

Federal Max 80/Lookback COLA Errors Update (As of June 30, 2015)

Of the 568 affected federal annuitants, 558 had the right to request reconsideration of the benefit change (the remaining 10 had their benefit previously adjusted and were informed of the decision to waive past overpayments). Due process rights have expired for 387 annuitants who did not submit a request for reconsideration within the 60-day timeframe. The U.S. Treasury's Office of D.C, Pensions ("ODCP") provided the following table, which shows the due process status for benefit changes through June 30, 2015:

	Request for Reconsideration	Appeal of Reconsideration Decision
Total Number Received	**171**	**4**
Number of Decisions Issued	**108**	**0**
Breakdown of Decisions Issued:		
• **Denied**	**107**	**0**
• **Granted**	**0**	**0**
• **Mixed** [a]	**1**	**0**

[a] Decision denied part of the request or appeal and granted part of the request or appeal.

ODCP has received 40 Congressional inquiries and one FOIA request related to the Project. A total of $11,341.13 has been collected as of June 30, 2015.

Treasury Offset Program (TOP)

ODCP has indicated that it is moving forward with steps to implement TOP, the federal debt collection process that intercepts federal and state payments of payees who owe delinquent debts to federal and state agencies, in late 2015. DCRB Benefits and Legal staff participated in a June 9th meeting held by U.S. Treasury to discuss modifying the STAR system to accommodate the application of TOP requirements to Police/Fire and Teachers' Plan annuitants. ODCP has requested the Commissioner of the Department of the Treasury's Bureau of Fiscal Services for a reduction in the program's 25% maximum collection requirements to 15%, the same percentage used for Social Security payments. ODCP has not yet received a response to this request.

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TO: BOARD OF TRUSTEES

FROM: LYLE BLANCHARD, CHAIRMAN

DATE: JULY 16, 2015

SUBJECT: LEGISLATIVE COMMITTEE REPORT

The following report reflects activities of interest since the May Board Meeting.

COUNCIL OF THE DISTRICT OF COLUMBIA

B21-0157, "Fiscal Year 2016 Budget Request Act of 2015"

This proposal would approve appropriation of $136,115,000 from local funds for the Police Officers and Firefighters' Retirement System; $44,469,000 from local funds for the Teachers' Retirement System; and $32,302,000 from the Teachers' and Police Officers and Firefighters' Retirement Funds for the District of Columbia Retirement Board.

Status: The bill was transmitted to the Mayor on June 22, 2015. On July 2, 2015, the bill was enacted with Act number A21-99 and signed by the Mayor.

The New York Times | http://nyti.ms/1fp5xMW

Bad Math and a Coming Public Pension Crisis

By MARY WILLIAMS WALSH JULY 8, 2015

When Jim Palermo was serving as a trustee of the village of La Grange, Ill., he noticed something peculiar about the local police officers and firefighters. They were not going to live as long as might be expected, at least according to pension tables.

After Mr. Palermo dug into the numbers, he found that the actuary — the person who advises pension plan trustees about how much money to set aside — was using a mortality table from 1971 that showed La Grange's roughly 100 police officers and firefighters were expected to die, on average, before reaching 75, compared with 79 under a more recent table.

The four years are significant beyond any interest in macabre statistics. When actuaries calculate the numbers for a pension plan, mortality rates are a powerful hidden factor. If an actuary predicts the workers will live to an old age, it means they will be drawing their pensions for more years. That, in turn, means the employer should set aside more money up front, to keep from running out later.

Assuming shorter life spans reduces annual contributions and frees up money for other things, like bigger current paychecks. And if the plan bases pensions on pay, as those in most American cities do, shortening the workers' life spans on paper could lead to both fatter paychecks now and bigger pensions in the future. In La Grange's case, those four years meant tens or hundreds of thousands of dollars to each retiree.

But if more workers are retiring and not dying on schedule, it can be a recipe for financial disaster.

The recommendations made by pension actuaries, like which mortality table to use, are largely hidden from public view, but each decision ripples across decades and can have an outsize effect. More and more actuaries are now worried that their profession will be blamed for its role in steering states and cities into what is looking like a trillion-dollar quagmire.

On Thursday, a panel of senior actuaries will consider whether to update, or elaborate on, the existing actuarial standards for public pensions. The dueling mortality tables will be among the evidence, and Mr. Palermo is among the parties who have submitted written testimony.

It is only the second time in recent memory that the Actuarial Standards Board has held a public hearing, an indication of the gravity of the nation's pension woes. State and local governments have promised several trillion dollars' worth of benefits to retirees — the exact amount is in dispute. Now, with large numbers of public workers retiring, the money set aside is turning out to be at least a trillion dollars short.

Retirees are counting on the money promised to them. Taxpayers are in no mood to bail out troubled pension funds. Some are looking for scapegoats.

"Actuaries make a juicy target," said Mary Pat Campbell, an actuary who responded to the board's call for comments.

She expressed concern that elected officials were using actuaries to lend respectability to "questionable behavior" like funding pensions with borrowed money, picking risky investments and "enacting benefit improvements based on lowballed costs."

Other commentators have focused on the opacity of actuaries' calculations and reports to the boards of trustees that govern public pension plans.

Trustees need clear and honest projections and do not receive them, a former pension trustee from Kentucky, Christopher Tobe, wrote.

He recalled seeing an assumption for future investment returns jump to 7.75 percent from 4.5 percent, with no explanation. The change lowered the state's pension obligations by more than a billion dollars, which in turn meant smaller contributions.

Another commentator, Mark Glennon, **told the board** that actuaries were churning out reports that no one but other actuaries could understand, providing cover for elected officials who were letting problems spin out of control.

"Chicago represents the most glaring example," wrote Mr. Glennon, the founder of an online news service, **WirePoints**, which covers the fiscal morass in Illinois. "An actuary could have looked only briefly at some of its pension reports from years ago and seen the calamity to come. Reporters, political leadership and most pension trustees could not. Those who could understand were able to remain silent."

In La Grange, Mr. Palermo, who was elected in 2007, thought the pension funds were being shortchanged. More and more police officers and firefighters were retiring, and they were not dying according to the mortality table used by the actuary. Between them, the two pension funds had less than half the money they should. If this continued, he said, the money would eventually run short, and people would get hurt.

And not just in La Grange. The actuary, Timothy W. Sharpe, had the biggest market share of police and fire pension business in Illinois.

"I think it's a moral hazard," Mr. Palermo said.

Mr. Palermo, who works in financial services, determined Mr. Sharpe was using a table from 1971, which tracked a group of people born from 1914 to 1918, who retired from 1964 to 1968. It is seldom used these days. A table from 2000 is considered more accurate, and in 2014 the Society of Actuaries issued an even newer one.

Mr. Palermo researched mortality rates in the American work force and found no evidence that police and firefighters die younger than other public workers. Finally, he sent a confidential complaint to the Actuarial Board for Counseling and

Discipline, which deals with actuaries who stray from the profession's standards of practice.

A few months later, his complaint was written up in a village manager's report and distributed at a public meeting. Mr. Palermo had accused Mr. Sharpe of making statements that were "frequently erroneous and incomplete," it said. He had accused Mr. Sharpe of misleading the village board and persuading it to incorporate the wrong mortality assumptions into the local tax levy.

The news media pounced.

The village manager's report strongly suggested that Mr. Palermo was a troublemaker with few allies in the local government. It said he had acted on his own and that most of the village board was on Mr. Sharpe's side.

It also said that Mr. Sharpe had refused to supply any numbers until the complaint was resolved, so the village had no numbers on which to base the coming year's tax levy. It was about to miss a state deadline.

Mr. Sharpe sent a letter to The Doings, La Grange's newspaper, saying that he had the unanimous support of the police and fire trustees. "I will not be intimidated," he wrote.

In a phone interview, Mr. Sharpe said that he had been instructed to use the 1971 mortality table by the Illinois Insurance Department. Even though it was old, he said, he considered it more realistic because it projected death rates out to age 110. The table from 2000 uses a different population sample and projects death rates out to age 120.

If La Grange projected life spans the way Mr. Palermo wanted, he added, it would "be collecting taxes to pay for pensions to people assumed to live to age 120," a needless expense.

Mr. Sharpe said those additional 10 years were particularly troubling.

"In Illinois, our pensions start very early, at age 50 for police and fire," he said. "There's a 3 percent compounded cost-of-living increase that goes on for life. So the pensions at the later ages of life — I'm talking about after 100, for instance — get very, very large. The person who gets a $50,000 pension at age 50 would get a $250,000 pension by age 100."

He provided data on public workers' death rates from the Illinois Insurance Department, which showed that no one in the state ever lived that long. That is why he said the more recent mortality table could lead to needless tax increases.

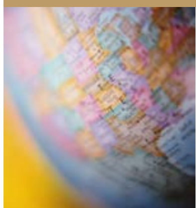
In a separate interview, Mr. Palermo said he could not discuss his complaint, which has been resolved, but said that by focusing on the oldest years of the mortality tables, Mr. Sharpe was diverting attention from the much more relevant middle years, where the probability of death was much greater in the 1971 table. For 50-year-olds, for example, the risk of death was seen as more than double in 1971 than what is expected in the later table.

Neither man disclosed how the complaint was resolved. But their battle appears to have no clear-cut victor. Mr. Sharpe, who now uses the newer mortality table, no longer consults for La Grange's police and fire pension trustees. Mr. Palermo did not seek re-election and stepped down in May.

As for the pension system, Mr. Sharpe's successor changed the mortality projections, and La Grange's required minimum pension contribution increased by 20 percent. More increases are coming, but the city has tax caps and cannot catch up quickly without cutting other services.

Mr. Palermo fears it's too late. "It's probably beyond repair," he said. "We're at the point where we're just managing the decline."

A version of this article appears in print on July 9, 2015, on page B1 of the New York edition with the headline: Bad Math and a Coming Public Pension Crisis .



CENTER *for* RETIREMENT RESEARCH *at* BOSTON COLLEGE

STATE AND LOCAL PENSION PLANS

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THE FUNDING OF STATE AND LOCAL PENSIONS: 2014-2018

*By Alicia H. Munnell and Jean-Pierre Aubry**

INTRODUCTION

The year 2014 was always going to be a pivotal one for the funded status of public pension plans because, under the old GASB 25 accounting standards, the disastrous stock market performance of 2009 rotates out of the smoothing calculations for the majority of plans that use a five-year averaging period. But 2014 also became pivotal because it was the first year that plan sponsors reported under GASB's new accounting standards for their financial disclosures. The new GASB 67 standards involve two major changes. First, assets are reported at market value rather than actuarially smoothed. Second, in cases when assets are projected to fall short of future benefits, liabilities are valued using a "blended" discount rate.

Although GASB standards apply to financial reporting only, when GASB 25 was in effect, most plans also used the same standards for funding purposes. Under GASB 67, however, plans are now using separate standards for reporting and funding. For reporting in their financial documents, all plans in our sample that have released 2014 data adopted the market valuation of assets as required by GASB 67, but only seven plans determined it necessary to use a significantly lower blended discount rate. For funding purposes (i.e. in plans' actuarial valuations), they maintained the traditional approach used under GASB 25 of using smoothed assets and expected long-run returns for discounting. This *brief* focuses on the data used in plans' actuarial valuations because they provide the basis for historical comparisons and for funding decisions.

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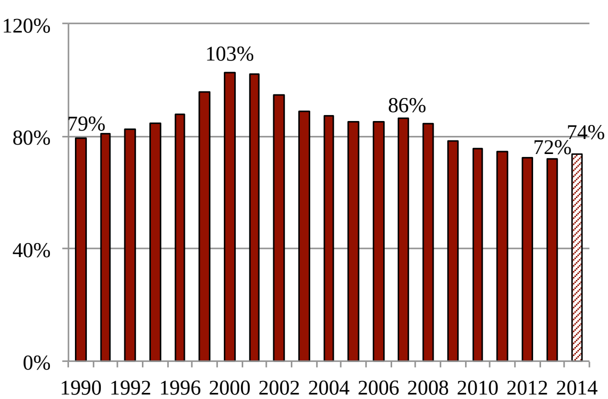
The discussion is organized as follows. The first section reports that the ratio of assets to liabilities for the 150 plans in the *Public Plans Database* increased from 72 percent in 2013 to 74 percent in 2014. The second section shows that the required contribution increased from 17.8 percent to 18.6 percent of payrolls, while the percentage of required contributions paid increased from 82 percent to 88 percent. The third section revalues liabilities and recalculates funded ratios using the riskless rate, as advocated by most economists for *reporting* – as opposed to funding – purposes. The fourth section projects funded ratios for our sample plans for 2015-18 under two economic scenarios. The fifth section briefly describes the information reported in the financial statements under the new GASB standards. The final section concludes that, if plans achieve their assumed returns, the public pension landscape should continue to improve over the next few years.

Funded Status in 2014

In fiscal year (FY) 2014, the estimated aggregate ratio of assets to liabilities for our sample of 150 state and local pension plans was 74 percent under GASB's old standards (see Figure 1).[1] (The ratio for each individual plan appears in the Appendix).

Figure 1. State and Local Pension Funded Ratios under GASB 25 Standards, FY 1990-2014

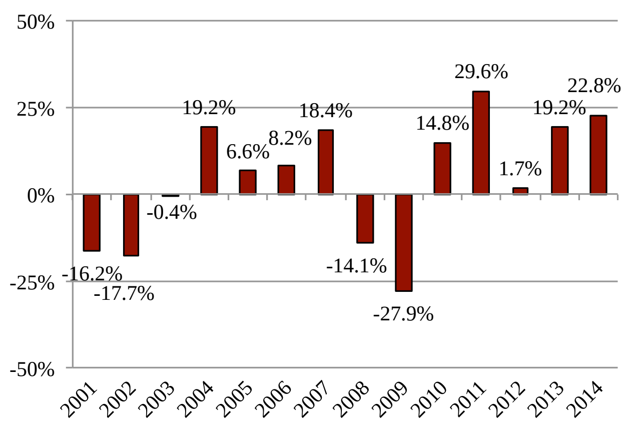


Note: 2014 involves projections for about one third of plans.
Sources: 2014 actuarial valuations; *Public Plans Database* (PPD) (2001-2014); and Zorn (1990-2000).

Because only about two thirds of our sample of 150 plans had reported their funded levels by early June 2015, the 2014 aggregate figure involves some projections. As in previous years, for those plans without 2014 valuations, assets are projected on a plan-by-plan basis using the detailed process described in the valuations.[2] This process resulted in a complete set of plan funded ratios for FY 2014. In the aggregate, the actuarial value of assets amounted to $3.2 trillion and liabilities amounted to $4.3 trillion, producing the funded ratio of 74 percent.

The funded ratio rose because asset values increased faster than liabilities. Not only was 2014 a strong year for the stock market, but the terrible 2009 performance of the market was rotated out of the smoothing calculations (see Figure 2). These two changes boosted smoothed asset values by 7 percent. Since liabilities grew by only 4.5 percent in 2014, below their historical rate of 5.6 percent, funding rose.

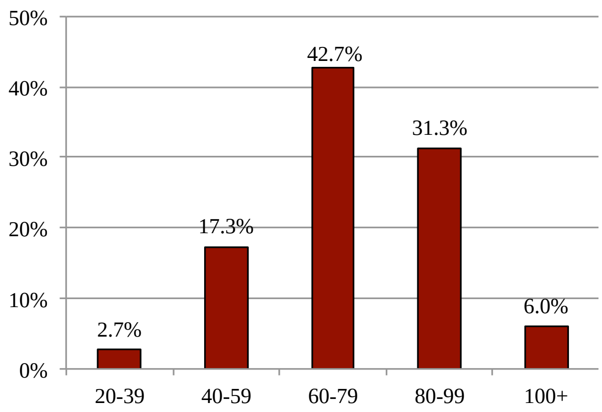
Figure 2. Percent Change in Wilshire 5000 Index, FY 2001-2014



Source: Wilshire Associates (2015).

In 2014, as in earlier years, funded levels among plans varied substantially. Figure 3 on the next page shows the distribution of funding for the sample of 150 plans. Although many of the poorly funded plans are relatively small, several large plans, such as those in Illinois (SERS, Teachers, and Universities) and Connecticut (SERS), had funded levels below 50 percent.

Figure 3. Distribution of Funded Ratios for Public Plans, FY 2014



Sources: 2014 actuarial valuations; and authors' calculations from the PPD (2014).

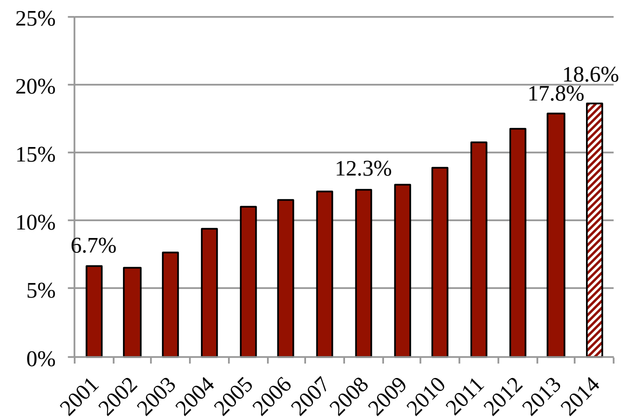
The ADEC (Formerly the ARC)

The new GASB standards replaced the Annual Required Contribution (ARC) with the Actuarially Determined Employer Contribution (ADEC). Unlike with assets and liabilities, plans do not seem to be maintaining two sets of required-contribution numbers – one for the actuarial valuation and one for the financial statements – but rather have shifted to using the ADEC for both purposes.

While both the ARC and ADEC are meant to capture the employer's "required contribution" to keep the plan on a steady path toward full funding, the two concepts differ slightly. First, while GASB 25 limited the range of allowable assumptions and methods that could be used to calculate the ARC, GASB 67 places no limitation on the calculation of the ADEC. Second, for the few plans that use a statutory contribution rate, GASB allows for the ADEC to reflect the statutory contribution rather than an actuarially calculated contribution. While conceptually these differences could cause a discontinuity between the ARC and ADEC, in practice they do not appear to be consequential. For the plans in our database, the ARC and ADEC are nearly identical; most plans have continued to use the same methods and assumptions they became accustomed to under the old GASB standards, and the few plans with a statutory rate have continued to report an actuarially determined contribution rather than the statutory rate. Thus, it is possible to extend our prior ARC series using the ADEC for 2014 forward.

Both the ARC and the ADEC equal the normal cost – the present value of the benefits accrued in a given year – plus a payment to amortize the unfunded liability, generally over 20-30 years. These measures have increased because the financial crisis led to higher unfunded liabilities and thereby a higher amortization component of the calculation. In 2014, the ADEC was 18.6 percent of payroll, up sharply from 2013 (see Figure 4).

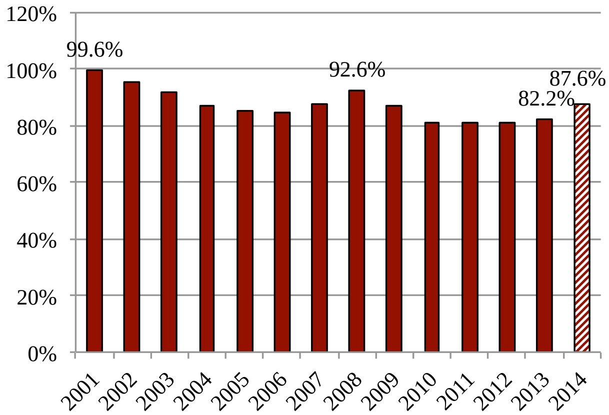
Figure 4. Required Contribution as a Percentage of Payroll, FY 2001-2014



Notes: The measure for 2001-2013 is the ARC; the measure for 2014 is the ADEC. The 2014 value involves projections for about one third of plans.
Sources: 2014 actuarial valuations; and PPD (2001-2014).

The increase in required contributions over the past several years began just as the recession eroded state and local government revenues. As a result, states and localities cut back on their pension contributions. As revenues have started to recover, sponsors are paying an increasing share of their required contribution, rising to 88 percent in 2014 (see Figure 5 on the next page). Hopefully, this trend will continue as the economy improves, mirroring the pattern of decline and recovery evident in the wake of the bursting of the dot.com bubble at the turn of the century.

Figure 5. Percentage of Required Contribution Paid, FY 2001-2014

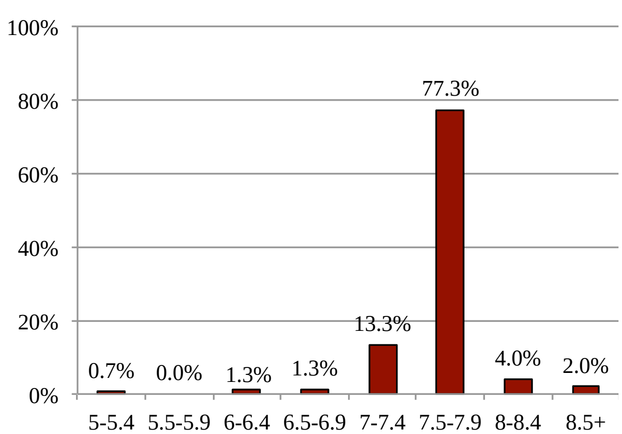


Notes: The measure for 2001-2013 is the ARC; the measure for 2014 is the ADEC. The 2014 value is authors' estimate.
Sources: 2014 actuarial valuations; and PPD (2001-2014).

Liabilities Valued at Riskless Rate

The funded ratios presented above reflect assets reported on an actuarially smoothed basis and a discount rate equal to the long-run expected rate of return, which has moved from around 8.0 percent to 7.6 percent in 2014 (see Figure 6). These ratios have been challenged by financial economists who argue that – *for reporting purposes* – future streams of payment should be discounted at a rate that reflects their risk.[3]

Figure 6. Distribution of Discount Rates for Public Plans under GASB 25, FY 2014



Sources: 2014 actuarial valuations; and PPD (2001-2014).

Table 1 shows the value of total liabilities and unfunded liabilities for our sample of 150 plans under different interest rates. As noted, in 2014 – calculated under a typical discount rate of 7.6 percent – the aggregate liability was $4.3 trillion and, given assets of $3.2 trillion, the unfunded liability was $1.1 trillion. A discount rate of 5 percent – a close approximation to the riskless rate – raises public sector liabilities to $6.3 trillion and the unfunded liability to $3.1 trillion.[4] In the end, required contributions to fund future benefits will depend on actual investment returns, not the discount rate used to calculate liabilities.

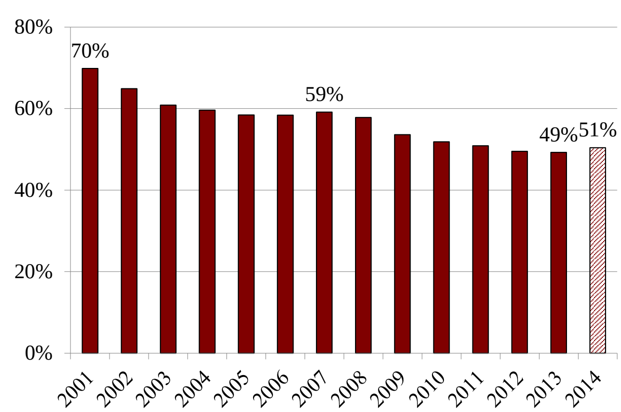
Table 1. Aggregate State and Local Pension Liabilities under Alternative Discount Rates, 2014, Trillions of Dollars

Measure	Discount rate				
	7.6%	7%	6%	5%	4%
Total liability	$4.3	$4.9	$5.5	$6.3	$7.1
Assets	3.2	3.2	3.2	3.2	3.2
Unfunded liability	1.1	1.7	2.3	3.1	3.9

Source: Various 2014 actuarial valuations; and authors' calculations from the *Public Plans Database* (2014).

Recalculating the liabilities for each plan at 5 percent in 2014 produces a funded ratio of 51 percent: $3.2 trillion in actuarial assets compared to $6.3 trillion in liabilities. The 2014 ratio of 7.6-percent liability to 5-percent liability was applied retroactively to derive funded ratios for earlier years (see Figure 7).

Figure 7. State and Local Funded Ratios with Liabilities Discounted by Riskless Rate, FY 2001-2014



Note: Authors' estimates.
Sources: 2014 actuarial valuations; and PPD (2001-2014).

Looking Beyond 2014

Future funded levels depend on three factors: cash flows (contributions and benefits), the growth in liabilities, and the performance of the stock market. Both contributions and benefits rise slowly over time, so their average growth for the period 2015-2018 is assumed to equal their average growth over 2001-14.[5] Growth in liabilities, which will likely be restrained by the long-term benefit cutbacks enacted in recent years, is assumed to hold steady at the 2014 level of 4.5 percent.[6]

Public pensions currently hold more than half of their assets in equities and about 70 percent in risky assets. While most plans assume portfolio returns of 7.6 percent nominal (implying nominal stock returns are at least 9.6 percent), many investment firms – such as Bridgewater, Goldman Sachs, and GMO – project nominal returns for a balanced portfolio of between 4 and 5 percent.[7] To address uncertainty about the future performance of plan assets, projections are made under two scenarios. The baseline is designed to yield an overall return on portfolios close to that assumed by most plans. The alternative scenario assumes portfolio returns are 3 percent below plans' assumed return – 4.6 percent nominal.

The projected funded ratios are shown in Table 2. After 2014, if plans achieve their assumed return, funded ratios keep climbing, as asset growth continues to exceed assumed liability growth. If, instead, returns are at the lower rates predicted by the investment firms, funding grows for the next year and then levels off.

Table 2. Projected Funded Ratios for FY 2015-18 under Two Scenarios for Asset Returns

Year	Baseline	Alternative
2014 (actual)	73.7%	73.7%
2015	77.5	77.4
2016	78.6	77.8
2017	79.7	77.9
2018	80.5	77.3

Source: Authors' projections.

GASB 67

The new GASB 67 standards involve two major changes relating to the valuation of assets and liabilities used to measure reported funded ratios. First, assets are reported at market value rather than actuarially smoothed. Second, projected benefit payments are discounted by a combined rate that reflects the expected return for the portion of liabilities that is projected to be covered by plan assets and the return on high-grade municipal bonds for the portion that is to be covered by other resources.[8] It was always unclear the extent to which discount rates would really change for reporting purposes, and in fact only seven plans in our sample reduced their rates by more than 50 basis points (see Table 3).

Table 3. Plans Adopting a Significantly Lower GASB 67 Blended Rate, 2014

Plan	Rate		Funded status	
	Actuarial	GASB 67	Actuarial	GASB 67
Duluth Teachers	8.0%	5.4%	56.9%	46.8%
Kentucky Teachers	7.5	5.2	53.6	45.6
New Jersey PERS	7.9	5.4	60.9	42.7
New Jersey Police & Fire	7.9	6.3	72.6	58.9
New Jersey Teachers	7.9	4.7	54.0	33.6
Texas ERS	8.0	6.1	77.2	63.4
Texas LECOS	8.0	5.7	73.2	56.4

Note: A number of other plans, such as IL SERS and IL SURS, have reduced their rate by less than 50 basis points.
Sources: 2014 actuarial valuations; and PPD (2014).

Even though market assets were greater than actuarially smoothed assets for some of these plans in FY 2014, lowering the discount rate reduced the funded status for all the plans. Until more is understood about the adoption of GASB 67, our updates will continue to focus on assets and liabilities reported in the actuarial valuations.

Conclusion

The year 2014 was a year of big change. A strong stock market and the elimination of 2009 from the smoothing process led to a sharp increase in actuarial assets and to the first improvement in the funded status of public sector plans since the financial crisis. What happens from here on out depends very much on the performance of the stock market. In 2018, assuming plans achieve their expected return, they should be 81 percent funded. If returns are lower, as predicted by many investment firms, funding will stabilize at about 77 percent.

2014 was also the first year that GASB's new provisions took effect for financial reporting. Under these provisions, funded ratios were based on market values, and seven plans – those with assets projected to be insufficient to cover future benefits – adopted a significantly lower blended rate to calculate liabilities. As a result, the overall ratio of assets to liabilities for these plans was lower under the new standards.

For understanding the long-term trends in plan funding, however, we believe that it makes more sense to continue to focus on the numbers calculated for funding purposes.

Endnotes

1 The sample represents about 90 percent of the assets in state-administered plans and 30 percent of those in plans administered at the local level.

2 For plans without published 2014 actuarial valuations, we estimated the percent change in actuarial assets between 2013 and 2014, calculated according to the plan's own methodology, and applied that change to its published 2013 GASB level of actuarial assets. Liabilities are projected based on the average rate of growth for plans already reporting. The initial estimates of assets and liabilities were then sent to the plan administrators, and any suggested alterations were incorporated.

3 The analysis of choice under uncertainty in economics and finance identifies the discount rate for riskless payoffs with the riskless rate of interest. See Gollier (2001) and Luenberger (1997). This correspondence underlies much of the current theory and practice for the pricing of risky assets and the setting of risk premiums. See Sharpe, Alexander, and Bailey (2003); Bodie, Merton, and Cheeton (2008); and Benninga (2008).

4 Just what constitutes the riskless rate is a subject of debate. See Munnell et al. (2010) for the rationale for our choice of 5 percent.

5 The focus here is on contributions, where growth remains fairly steady, rather than on the percentage of required contributions paid, which is more variable.

6 See Munnell et al. (2013). From 2001-2013, liabilities have grown an average of 5.6 percent annually. In 2013, liabilities grew by 4.1 percent in aggregate. For the 90 or so plans that did report in 2014, liabilities grew by 5.0 percent. For the remaining plans, we assume a 4-percent growth rate, resulting in aggregate liability growth of 4.5 percent for 2014.

7 GMO (2015); Goldman Sachs (2014).

8 In addition, the entry age normal/level percentage of payroll would be the sole allocation method used for reporting purposes (roughly three quarters of plans already use this method).

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APPENDIX

Appendix: Ratio of Assets to Liabilities for State/Local Plans 2001, 2004, 2007-2013, and 2014 Estimates[a]

Plan name	2001	2004	2007	2008	2009	2010	2011	2012	2013	2014	
Alabama ERS	100.2	89.7	79.0	75.7	72.2	68.2	65.8	65.7	65.7	69.5	*
Alabama Teachers	101.4	89.6	79.5	77.6	74.7	71.1	67.5	66.5	66.2	70.1	*
Alameda County Employee's Retirement Association	105.8	82.1	89.2	83.9	81.2	77.5	76.6	73.9	75.9	79.2	*
Alaska PERS	100.9	70.2	77.8	78.8	63.0	62.4	61.9	57.1	54.5	57.1	*
Alaska Teachers	95.0	62.8	68.2	70.2	57.0	54.3	54.0	49.9	48.1	50.2	*
Arizona Public Safety Personnel	126.9	92.4	66.4	68.8	70.0	67.7	63.7	60.2	58.7	49.2	
Arizona SRS	115.1	92.5	83.3	82.1	79.0	76.4	75.5	75.3	75.4	76.3	
Arizona State Corrections Officers	140.0	104.8	84.6	90.3	86.4	83.8	76.6	70.7	66.9	57.3	
Arkansas PERS	105.6	88.7	89.1	89.7	78.0	74.1	70.7	68.9	74.3	77.8	
Arkansas Teachers	95.4	83.8	85.3	84.9	75.7	73.8	71.8	71.2	73.3	77.3	
Boston Retirement Board[b]	70.3	63.3	67.6	59.3	60.2	63.1	61.4	61.9	59.5	60.9	*
California PERF	111.9	87.3	87.2	86.9	83.3	83.4	82.6	83.1	75.2	75.8	*
California Teachers	98.0	82.5	88.8	87.3	78.2	71.5	69.3	67.2	66.9	68.5	
Chicago Municipal Employees	93.3	72.0	69.1	64.2	58.1	50.8	45.2	37.6	37.0	40.9	
Chicago Police	70.5	55.9	51.5	48.3	44.5	40.4	36.2	31.3	29.7	29.2	*
Chicago Teachers	100.0	85.8	80.1	79.4	73.3	66.9	59.7	53.9	49.5	51.5	
City of Austin ERS	96.4	80.8	78.3	65.9	71.8	69.6	65.8	63.9	70.4	70.9	
Colorado Municipal	104.3	77.2	81.2	76.4	76.2	73.0	69.3	74.5	73.1	77.2	*
Colorado School	98.2	70.1	75.5	70.1	69.2	64.8	60.2	62.1	60.3	63.6	*
Colorado State	98.2	70.1	73.3	67.9	67.0	62.8	57.7	59.2	57.5	60.6	*
Connecticut Municipal	109.3	102.9	103.7	103.3	88.9	88.4	88.3	85.0	87.5	92.3	*
Connecticut SERS	63.1	54.5	53.6	51.9	–	44.4	47.9	42.3	41.2	41.5	
Connecticut Teachers	–	65.3	–	70.0	–	61.4	–	55.2	–	59.0	
Contra Costa County	87.6	82.0	89.9	88.4	83.8	80.3	78.5	70.6	76.4	79.7	*
Cook County Employees	88.9	70.9	77.3	72.6	63.2	60.7	57.5	53.5	56.6	57.5	*
Dallas Police and Fire	84.5	80.8	89.4	78.4	81.9	79.5	74.0	78.1	75.6	74.2	*
DC Police & Fire	–	–	101.0	99.8	100.7	108.0	108.6	110.1	110.1	107.3	
DC Teachers	–	–	111.6	108.2	110.8	118.3	101.9	94.4	90.1	88.6	
Delaware State Employees	112.4	103.0	103.7	103.1	98.8	96.0	94.0	91.5	91.1	92.3	
Denver Employees	99.5	99.1	98.2	91.8	88.4	85.0	81.6	76.4	76.4	75.5	**
Denver Schools	96.5	88.2	87.7	84.3	88.3	88.9	81.5	84.0	81.2	85.7	*
Duluth Teachers	107.6	91.8	86.8	82.1	76.5	81.7	73.2	63.4	54.0	56.9	
Fairfax County Schools	103.0	–	86.4	88.0	76.9	75.6	76.4	75.6	75.4	77.1	*
Florida RS	117.9	112.1	105.6	105.3	87.9	88.0	86.9	86.4	85.4	86.6	
Georgia ERS	101.7	97.6	93.0	89.4	85.7	80.1	76.0	73.1	71.4	72.8	**
Georgia Teachers	103.9	100.9	94.7	91.9	89.9	85.7	84.0	82.3	81.1	81.9	
Hawaii ERS	90.6	71.7	67.5	68.8	64.6	61.4	59.4	59.2	60.0	61.4	
Houston Firefighters	112.9	88.2	91.1	95.6	95.4	93.4	90.6	87.0	86.6	90.4	*
Idaho PERS	97.2	91.7	105.5	93.3	73.3	78.9	90.2	84.7	85.3	93.9	
Illinois Municipal	106.4	94.3	96.1	84.3	83.2	83.3	83.0	84.3	87.6	92.4	*
Illinois SERS	65.8	54.2	54.2	46.1	43.5	37.4	35.5	34.7	34.2	33.7	

Plan name	2001	2004	2007	2008	2009	2010	2011	2012	2013	2014
Illinois Teachers[c]	59.5	61.9	63.8	56.0	52.1	48.4	46.5	42.1	40.6	40.6
Illinois Universities	72.1	66.0	68.4	58.5	54.3	46.4	44.3	42.1	41.5	42.3
Indiana PERF	105.0	100.1	98.2	97.5	93.1	85.2	80.5	76.6	80.2	82.4
Indiana Teachers[d]	43.0	44.8	45.1	48.2	41.9	44.3	43.8	42.7	45.7	48.1
Iowa Municipal Fire and Police	–	84.2	87.2	89.7	85.6	81.1	78.2	73.7	73.9	77.8
Iowa PERS	97.2	88.6	90.2	89.1	81.2	81.4	79.9	79.9	81.0	82.7
Kansas PERS	88.3	75.2	69.4	70.8	58.8	63.7	62.2	59.2	59.9	63.6 *
Kentucky County	141.0	101.0	80.1	77.1	70.6	65.5	62.9	60.0	59.5	61.9
Kentucky ERS	125.8	85.8	58.4	54.2	46.7	40.3	35.6	29.7	25.8	23.9
Kentucky Teachers	90.8	80.9	71.9	68.2	63.6	61.0	57.4	54.5	51.9	53.6
Kern County Employees Retirement Association	103.3	93.6	75.7	72.3	66.1	62.7	60.8	60.5	61.1	60.8
LA County ERS	100.0	82.8	93.8	94.5	88.9	83.3	80.6	76.1	75.0	79.5
Los Angeles City Employees' Retirement System	108.1	82.5	81.7	84.4	79.5	75.9	72.4	69.0	68.7	67.4
Los Angeles Fire and Police	118.9	103.0	99.2	99.1	96.2	91.6	86.3	83.7	83.1	86.6
Los Angeles Water and Power	109.9	97.3	91.9	95.1	90.0	81.5	80.3	78.1	78.8	80.9
Louisiana Municipal Police	101.1	72.9	89.1	86.9	65.2	59.9	58.1	59.8	64.2	68.1
Louisiana Schools	103.0	75.8	80.0	76.6	65.5	61.0	59.9	61.6	62.1	66.9
Louisiana SERS	74.2	59.6	67.2	67.6	60.8	57.7	57.6	55.9	60.2	59.3
Louisiana State Parochial Employees	–	93.5	96.9	96.0	96.9	97.2	97.6	86.8	92.5	99.1 *
Louisiana Teachers	78.4	63.1	71.3	70.2	59.1	54.4	55.1	55.4	56.4	57.4
Maine Local	108.2	112.1	113.6	112.7	102.5	96.3	93.5	88.8	88.4	91.2
Maine State and Teacher	73.1	68.5	74.1	74.1	67.7	66.0	77.6	77.0	77.7	81.4
Maryland PERS	102.2	91.2	79.5	77.2	63.9	62.8	62.8	62.5	63.3	65.9
Maryland Teachers	95.3	92.8	81.1	79.6	66.1	65.4	66.3	65.8	67.1	70.7
Massachusetts SRS	91.8	83.9	85.1	89.4	71.6	76.5	81.0	73.8	69.1	70.3
Massachusetts Teachers	79.2	69.6	71.0	73.9	58.2	63.0	66.3	60.7	55.7	56.3
Michigan Municipal	84.3	76.7	77.3	75.1	75.5	74.5	72.6	71.4	71.7	71.4 *
Michigan Public Schools	96.5	83.7	88.7	83.6	78.9	71.1	64.7	61.3	59.6	59.9
Michigan SERS	107.6	84.5	86.2	82.8	78.0	72.6	65.5	60.3	60.3	61.6
Milwaukee City ERS	137.2	116.7	131.2	99.1	112.8	104.4	96.0	90.8	94.8	100.8 *
Minneapolis ERF	93.3	92.1	85.9	77.0	56.7	65.6	73.5	69.1	74.4	82.0
Minnesota GERF	87.0	76.7	73.3	73.6	70.0	76.4	75.2	73.5	72.8	73.5
Minnesota Police and Fire Retirement Fund	120.5	101.2	91.7	88.4	83.2	87.0	82.9	78.3	81.2	80.0
Minnesota State Employees	112.1	100.1	92.5	90.2	85.9	87.3	86.3	82.7	82.0	83.0
Minnesota Teachers	105.8	100.0	87.5	82.0	77.4	78.5	77.3	73.0	71.6	74.1
Mississippi PERS	87.5	74.9	73.7	72.9	67.3	64.2	62.2	58.0	57.7	61.0
Missouri DOT and Highway Patrol	66.1	53.4	58.2	59.1	47.3	42.2	43.3	46.3	46.2	49.2
Missouri Local	104.0	95.9	96.1	97.5	80.0	81.0	81.6	83.5	86.5	91.7
Missouri PEERS	103.1	82.7	83.2	82.5	80.7	79.1	85.3	82.5	81.6	85.1
Missouri State Employees	97.0	84.6	86.8	85.9	83.0	80.4	79.2	73.2	72.7	75.1
Missouri Teachers	99.4	82.0	83.5	83.4	79.9	77.7	85.5	81.5	80.1	82.8

Plan name	2001	2004	2007	2008	2009	2010	2011	2012	2013	2014	
Montana PERS	–	86.7	91.0	90.2	83.5	74.2	70.2	67.4	80.2	74.4	
Montana Teachers	–	77.4	80.4	80.7	67.4	65.4	61.5	59.2	66.8	65.4	
Nebraska Schools	87.2	87.2	90.5	90.6	86.6	82.4	80.4	76.6	77.1	82.7	
Nevada Police Officer and Firefighter	78.9	71.7	71.1	70.8	68.9	67.8	68.4	70.1	71.1	74.9	*
Nevada Regular Employees	85.5	80.5	78.8	77.7	73.4	71.2	70.6	71.2	68.9	71.2	*
New Hampshire Retirement System[e]	85.0	71.1	67.0	67.8	58.3	58.5	57.4	56.1	56.7	60.7	
New Jersey PERS	117.1	91.3	76.0	73.1	64.9	69.5	66.8	63.6	62.1	60.9	
New Jersey Police & Fire	100.8	84.0	77.6	74.3	70.8	77.1	75.0	74.3	73.1	72.6	
New Jersey Teachers	108.0	85.6	74.7	70.8	63.8	67.1	62.8	59.5	57.1	54.0	
New Mexico Educational	91.9	75.4	70.5	71.5	67.5	65.7	63.0	60.7	60.1	63.1	
New Mexico PERA	105.4	93.1	92.8	93.3	84.2	78.5	70.5	65.3	72.9	75.8	
New York City ERS	117.4	94.5	79.0	79.7	78.6	64.2	65.0	66.3	68.4	70.6	*
New York City Fire	84.7	63.9	55.1	56.4	56.8	48.2	50.3	52.3	54.3	56.6	*
New York City Police	104.5	80.1	68.9	70.8	71.3	60.1	61.1	63.7	66.8	70.5	*
New York City Teachers	98.0	81.1	69.6	65.2	64.1	58.9	58.2	57.6	57.7	60.3	*
New York State Teachers	125.0	99.2	104.2	106.6	103.2	100.3	96.7	89.8	87.5	89.6	*
North Carolina Local Government[f]	99.3	99.3	99.5	99.5	99.6	99.5	99.6	99.8	99.8	99.8	
North Carolina Teachers and State Employees[f]	112.8	108.1	106.1	104.7	99.3	95.9	95.4	94.0	94.2	94.8	
North Dakota PERS	110.6	94.0	93.3	92.6	85.1	73.4	70.5	65.1	62.0	64.5	
North Dakota Teachers	96.4	80.3	79.2	81.9	77.7	69.8	66.3	60.9	58.8	61.8	
NY State & Local ERS	120.1	100.5	105.8	107.3	101.0	93.9	90.2	87.2	88.5	94.2	*
NY State & Local Police & Fire	132.6	104.1	106.5	108.0	103.8	96.7	91.9	87.9	89.5	95.1	*
Ohio PERS	102.6	87.6	96.3	75.3	75.3	79.1	77.4	80.9	82.4	83.8	*
Ohio Police & Fire	92.7	80.9	81.7	65.1	72.8	69.4	63.1	64.2	66.7	66.2	*
Ohio School Employees	95.0	78.1	80.8	82.0	68.4	72.6	65.2	62.8	65.3	68.1	
Ohio Teachers	91.2	74.8	82.2	79.1	60.0	59.1	58.8	56.0	66.3	69.3	
Oklahoma PERS	82.6	76.1	72.6	73.0	66.8	66.0	80.7	80.2	81.6	88.6	
Oklahoma Police Pension and Retirement System	91.4	81.1	79.9	82.2	76.2	74.9	93.0	90.2	89.3	94.6	
Oklahoma Teachers	51.4	47.3	52.6	50.5	49.8	47.9	56.7	54.8	57.2	63.2	
Orange County ERS	94.7	70.9	74.1	71.3	68.8	69.8	67.0	62.5	66.0	69.2	*
Oregon PERS	97.6	97.0	110.5	112.2	80.2	85.8	86.9	82.0	90.7	95.9	
Pennsylvania Municipal Retirement System	–	105.6	105.9	106.1	103.8	102.4	103.8	99.1	98.4	99.3	*
Pennsylvania School Employees	114.4	91.2	85.8	86.0	79.2	75.1	69.1	66.3	63.8	62.0	
Pennsylvania State ERS	116.3	96.1	97.1	89.0	84.4	75.2	65.3	58.8	59.2	61.3	*
Philadelphia Municipal Retirement System	77.5	59.8	53.9	55.0	45.0	45.4	47.3	45.8	47.4	45.8	
Phoenix ERS	102.5	84.2	83.9	79.1	75.3	69.3	66.6	62.2	64.2	58.7	
Rhode Island ERS	77.6	59.4	56.2	61.5	58.5	48.4	58.8	57.8	57.3	58.7	
Rhode Island Municipal	118.1	93.2	90.3	92.8	88.3	73.6	84.3	82.5	82.1	84.1	
Sacramento County ERS	107.7	93.3	93.4	93.2	86.0	87.7	87.0	83.3	82.8	85.2	
San Diego City ERS	89.9	65.8	78.8	78.1	66.5	67.1	68.5	68.6	70.4	74.2	
San Diego County	106.8	81.1	89.7	94.4	91.5	84.3	81.5	78.7	79.0	80.9	

Plan name	2001	2004	2007	2008	2009	2010	2011	2012	2013	2014	
San Francisco City & County	129.0	103.8	110.2	103.8	97.0	91.1	87.7	82.6	80.6	85.3	
South Carolina Police[g]	94.6	87.7	84.7	77.9	76.3	74.5	72.8	71.1	69.2	69.5	**
South Carolina RS[g]	87.4	80.3	69.7	69.3	67.8	65.5	67.4	64.7	62.5	62.7	**
South Dakota RS	96.4	97.7	97.1	97.2	91.8	96.3	96.4	92.6	100.0	100.0	
St. Louis School Employees[h]	80.5	86.3	87.6	87.6	88.4	88.6	84.9	84.3	84.4	84.8	**
St. Paul Teachers	81.9	71.8	73.0	75.1	72.2	68.0	70.0	62.0	60.4	61.8	
Texas County & District	89.3	91.0	94.3	88.6	89.8	89.4	88.8	88.2	89.4	95.3	*
Texas ERS	104.9	97.3	95.6	92.6	89.8	85.4	84.5	82.6	79.6	77.2	
Texas LECOS	131.6	109.3	98.0	92.0	89.7	86.3	86.4	82.0	73.3	73.2	
Texas Municipal	85.0	82.8	73.7	74.4	75.8	82.9	85.1	87.2	84.1	85.8	
Texas Teachers	102.5	91.8	89.2	90.5	83.1	82.9	82.7	81.9	80.8	80.2	
TN Political Subdivisions	90.4	–	89.5	–	86.3	–	89.1	–	95.0	94.5	*
TN State and Teachers	99.6	–	96.2	–	90.6	–	92.1	–	93.3	92.9	*
University of California	147.7	117.9	104.8	103.0	94.8	86.7	82.5	78.7	75.9	80.0	
Utah Noncontributory	102.8	92.3	95.1	86.5	85.7	83.8	80.1	77.4	82.0	83.0	*
Utah Public Safety	100.8	88.3	90.7	81.6	80.6	77.1	75.4	73.0	79.3	80.4	*
Vermont State Employees	93.0	97.6	100.8	94.1	78.9	81.2	79.6	77.7	76.7	77.9	
Vermont Teachers	89.0	90.2	84.9	80.9	65.4	66.5	63.8	61.6	60.5	59.9	
Virginia Retirement System[i]	107.3	90.3	82.3	84.0	80.2	72.4	69.9	65.8	65.9	69.6	
Washington LEOFF Plan 2	154.4	116.9	128.8	133.5	127.9	119.0	118.7	119.0	114.6	117.4	*
Washington PERS 2/3	179.1	134.4	119.9	118.7	116.3	112.7	111.6	111.3	102.3	103.0	*
Washington School Employees Plan 2/3	197.0	136.9	126.1	120.8	115.7	112.5	110.2	109.9	101.9	102.8	*
Washington Teachers Plan 2/3	197.4	152.6	130.4	125.4	118.2	115.5	113.4	114.1	104.9	107.2	*
West Virginia PERS	84.4	80.0	97.0	84.2	79.7	74.6	78.4	77.6	79.7	83.1	
West Virginia Teachers	21.0	22.2	51.3	50.0	41.3	46.5	53.7	53.0	57.9	66.2	
Wisconsin Retirement System	96.5	99.4	99.6	99.7	99.8	99.8	99.9	99.9	99.9	104.7	*
Wyoming Public Employees	103.2	96.0	94.0	78.6	87.5	84.6	81.9	78.6	77.6	81.0	*

Note: Municipal agency plans such as Michigan Municipal and Illinois Municipal do not have a single funded ratio, as they are made up of individual retirement systems that each maintain their own liabilities and funded ratio. For these types of plans, the funded ratios reported above represent an aggregate of assets and liabilities of the individual systems.
* Numbers are authors' estimates. ** Received from plan administrator.
[a] Funded ratios may vary across plans because of the discount rate used to value liabilities. While the median discount rate is 7.75 percent, the rates range from 8.5 percent for Connecticut Teachers and 8.25 percent for Ohio Police and Fire, to 7.0 percent in Virginia, 6.75 percent for Indiana, and 5.5 percent in Pennsylvania Municipal.
[b] If you include the Commonwealth's share of the Boston Retirement System's actuarial liability, the plan was 59.5 percent funded in fiscal year 2014 (without the Commonwealth's share the plan was 70.2 percent funded).
[c] Through 2008, Illinois TRS funded ratio was based on the market value of assets. Beginning in 2009, the funded ratio was calculated using five-year smoothed actuarial assets.
[d] The reported funded ratios of the Indiana TRF are made up of two separately funded accounts: the pre-1996 account and the 1996 account. The pre-1996 account is for employees hired prior to 1996 and is funded under a pay-go schedule. The 1996 account is for employees hired afterwards and is pre-funded. The funded ratio for the pre-funded account is currently 96.1 percent. As expected, the pay-go account has a much lower funded ratio of 32.8 percent.
[e] Prior to 2007, the New Hampshire Retirement System used the Open Group Aggregate to calculate its funded ratio. Beginning in 2007, the entry age normal (EAN) was used.
[f] For North Carolina Local Government and North Carolina Teachers and State Employees, data are as of December 31st of the previous year. For example, the funded ratio reported for 2014 is the funded ratio as of December 31, 2013.
[g] The 2011 funded ratios for South Carolina Police and RS are calculated based on the plan design features and actuarial methods in place prior to the passing of Act 278.
[h] For St. Louis School Employees, data are as of the Jan. 1 actuarial valuation of the following calendar year. For example, the funded ratio reported for 2014 is the funded ratio as of Jan. 1, 2015.
[i] The funded ratios presented represent the "VRS" plan only for the state employees, teachers and political subdivisions. They do not reflect the information in the other plans – SPORS, JRS and VaLORS.

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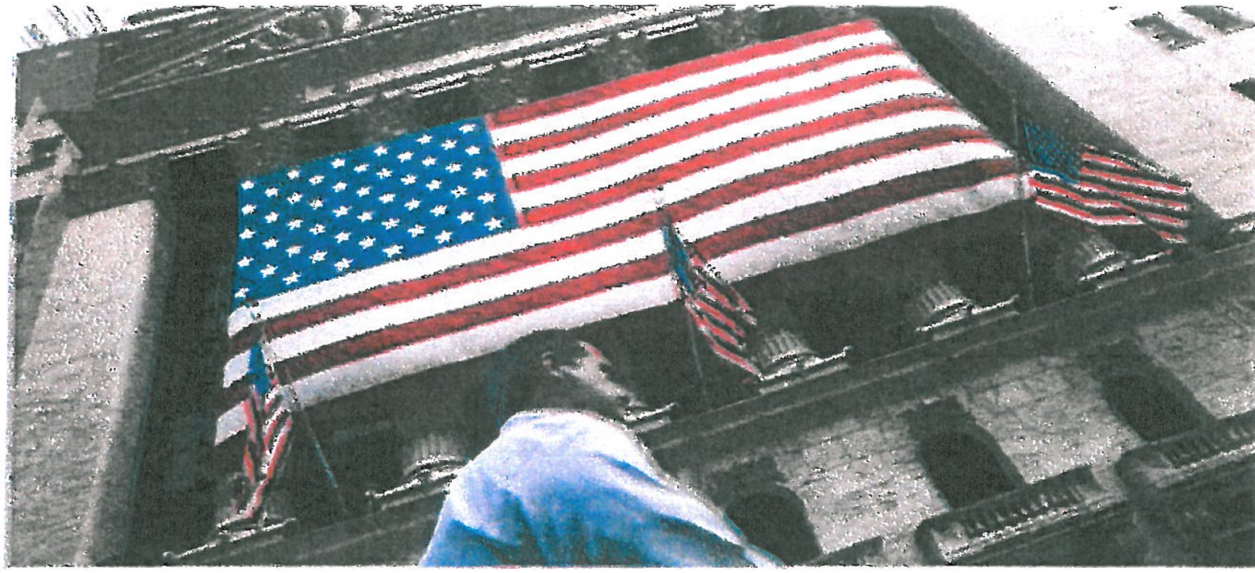
The Next Financial Crisis?

By Robert Samuelson - June 29, 2015



WASHINGTON -- A central economic question of our time is whether the policies undertaken to recover from the last financial crisis are laying the groundwork for the next. We now have two reports from reputable groups suggesting just that.

The first comes from the Bank for International Settlements (BIS), which was created in 1930 to handle reparations payments from World War I -- reparations that were soon canceled. The BIS is now a major source of economic research and statistics. Recently, it has acted as the loyal opposition to the easy-money policies adopted in the United States, Europe, Japan and elsewhere. Its just-released annual report continues its dissent.

The BIS critique goes like this. Low interest rates have sustained the recovery, but the support is fragile. The economy relies too much on debt, which cannot build forever, and artificially high asset prices (stocks, homes, bonds) may someday tumble from unrealistic levels. A new crisis could be severe because governments have already deployed their standard anti-recession tools: cheap credit and big deficits.

The BIS' most intriguing point is that a new recession or financial crisis might originate with "emerging-market" countries: China, Brazil, India, Turkey and the like. Although there has been debt repayment in the United States, the opposite has happened in some emerging-market countries, says the BIS. Private firms have assumed dollar loans worth $3 trillion, even though their "debt-servicing capacity has deteriorated." Will defaults follow?

Overvalued stocks pose another threat. China is a case in point. Its Shanghai stock index advanced an eye-popping 125 percent from mid-2014 to late May 2015 -- a leap widely attributed to speculation (and now being partially reversed). Emerging-market countries constitute about half the world economy, up from a third in the late 1990s, so any setbacks could spread to advanced countries. Weaker exports would be one channel; losses to internationally diversified investors would be another.

The second warning comes from the Organization for Economic Cooperation and Development (OECD), a group of 34 mostly wealthy nations. In a new study, it cautions that "low interest rates threaten [the] solvency of pension funds and insurers." The problem is that today's unanticipated low interest rates may not be high enough to pay the benefits promised to retirees.

Not all pensions or life insurance policies are vulnerable. The main threats involve "defined-benefit" pensions and life insurance annuities. Still, these are huge. In 2013, U.S. insurance companies had $3.3 trillion in reserves to back annuities, according to the American Council of Life Insurers. Defined-benefit pensions had $2.7 trillion of reserves in 2013, reports Pensions & Investments magazine.

By pledging to pay fixed amounts, defined-benefit plans and annuities offer security. Unfortunately, the guarantees were given when interest rates were higher and hardly anyone imagined them going as low as they have -- and staying low. Some plans and insurers might miss their guarantees. Worse, says the OECD, some might try to boost returns by shifting to riskier investments. Bad bets could lead to insolvency. Similar dangers afflict pensions and annuities in other advanced countries.

Most financial crises are surprises. If they had been anticipated, chances are they could have been prevented. The fact that these dangers are now being discussed suggests that, though they may pose problems, they won't trigger a panic akin to the Lehman Brothers collapse in 2008. (The same logic, incidentally, applies to a possible Greek debt default. It's been so long discussed and analyzed that the side effects outside Greece are likely to be limited.)

"Interest rates have never been so low for so long," says the BIS report. "Yet exceptional as this situation may be, many expect it to continue. There is something deeply troubling when the unthinkable threatens to become routine."

The trouble with this analysis is not that it's wrong but that it begs the practical question: What's the alternative to low interest rates? It's hard to argue (and the BIS doesn't) that the weak global recovery would have been stronger if interest rates had been higher.

But it's also true that persistently low rates may become destabilizing. Global capital is mobile. Investors with hundreds of billions of dollars scour the world to find slight differences in returns. These massive inflows and outflows of funds can spawn booms and busts. If the Federal Reserve raises interest rates, will spillover effects hurt other economies?

"There is great uncertainty about how the economy works," the BIS says. This is more than a throwaway line. Ignorance subverts confidence, and doubt hampers a vigorous recovery.