NYSTRS' STRENGTH: A PICTURE IS WORTH A THOUSAND WORDS

Annual Delegates Meeting
November 6, 2016

Agenda

- *Why a Defined Benefit Plan?*
- *What Does the Blueprint of a Successful Plan Look Like?*
- *How Is NYSTRS Doing?*
- *Who Should Share the Story?*
- *Where Are the Tools to Help?*
- *When Should the Story Be Told?*

Why a Defined Benefit?

Still a Better Bang for the Buck: Update on the Economic Efficiencies of Pensions

"The study calculates that the economic efficiencies embedded in defined benefit (DB) pensions enable these retirement plans to deliver the same retirement income at a 48% lower cost than 401(k)-type defined contribution (DC) accounts."

2014 Report by the National Institute on Retirement Security

NATIONAL INSTITUTE ON
Retirement Security
Reliable Research. Sensible Solutions.

Why a Defined Benefit?

Three Cost Saving Drivers of Defined Benefit Plans

- *Pooled Longevity Risk - 10% cost savings – An individual investor must save more, in case (s)he lives beyond average life expectancy.*
- *Balanced Portfolio – 11% cost savings – An individual investor typically moves to lower risk, thus lower return, investments as (s)he ages. A DB plan is "ageless."*
- *Higher Investment Returns – 27% cost savings – An individual investor incurs higher management costs than those associated with a DB plan.*

2014 Report by the National Institute on Retirement Security

Why a Defined Benefit?

Investment Returns: Defined Benefit vs. Defined Contribution Plans

"The analysis compares returns by plan type from 1990-2012 using data from the US Department of Labor Form 5500.

During this period, DB plans outperformed 401(k)s by an average of 0.7% per year.

In addition, much of the money accumulated in 401(k)s is eventually rolled over into IRAs which, after fees, earn even lower returns."

2015 study conducted by the Center for Retirement Research at Boston College

Why a Defined Benefit?

The Role of Fees

- *In Defined Contribution (DC) plans, investment fees typically account for 80-90% of total expenses.*
- *DC plans invest through mutual funds, and those funds charge fees for buying and selling the stocks within the fund, as well as for the research involved that drives buy and sell decisions.*
- *These fees can sometimes exceed 1.5% ($1.50 per $100 invested) depending on the fund type. If the fund achieves a 6% return, the net return after fees might only be 4.5%!*


NYSTRS Modeling Excellence
8.7%
25-year avg. rate of return on investments
24¢ per $100 cost to manage plan
$108 billion net assets (6/30/16)
$53 billion growth of net assets (1996-2016)
84% Percent of income from investment returns (1996-2016)
$6.7 billion in benefits paid last year
NY STRS NY

Cents and Sensibility

Providing our members with a secure pension is a shared responsibility. Over the past 20 years, earnings on investments and member contributions produced the bulk of NYSTRS' income. Taxpayers contribute by way of employer contributions. The result of this shared commitment is a well-funded plan.

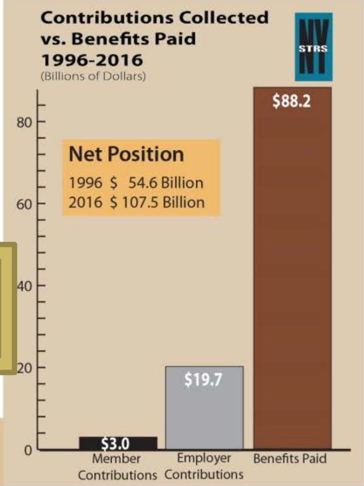
Why a NYSTRS Pension Pays

- $ 80% of benefits paid remain in New York State.
- $ Retiree spending creates a ripple effect through the economy.
- $ NYSTRS administers its defined

¢ NYSTRS investment fees average 24¢ per $100 managed.

is internally managed.

See our Pension Education Toolkit at NYSTRS.org



10.2016

Why a Defined Benefit?

The Answer Is Simple:

A defined benefit plan is the most cost effective, efficient vehicle available to provide retirement security to current and future retirees!

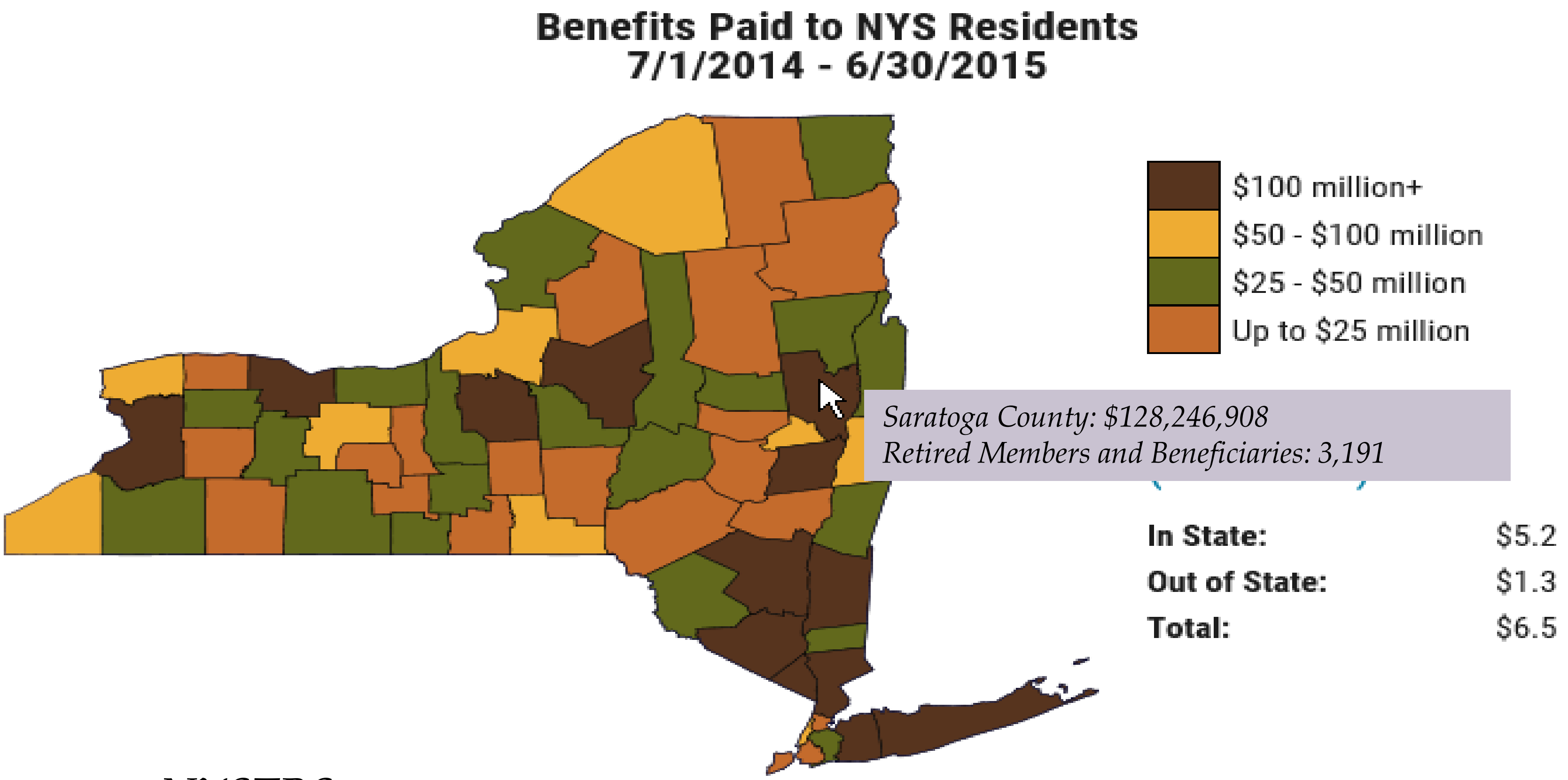
Why a Defined Benefit?

The Buck Stays Here

- *The System's annual benefit payroll for the fiscal year ending June 30, 2016 was approximately $6.7 billion.*

- *About 80% of this total, or approximately $5.4 billion, was paid to retirees and beneficiaries living in New York State, and contributes to economic activity throughout the state.*

Benefits Paid by County



NYSTRS.org

Hover over a county to see total payments and the number of benefit recipients.

Why a Defined Benefit?

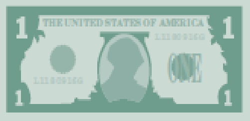
Pensionomics 2016

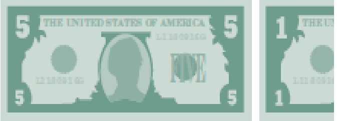
In NYS, 2014 expenditures stemming from state & local pensions supported…

- *215,867 jobs, which paid $12.5 billion in wages and salaries.*
- *$35.3 billion in total economic output.*
- *$8.1 billion in federal, state, and local tax revenues.*

NIRS: Pensionomics 2016: Measuring the Economic Impact of DB Pension Expenditures

Taxpayer Contribution Factor*



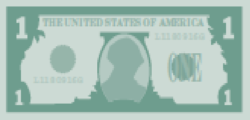


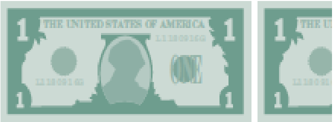
$1.00
contributed by taxpayers to New York pensions over 30 years

$5.29
total output

Each $1 in taxpayer contributions to New York's state and local pension plans supported $5.29 in total output in the state. This reflects the fact that taxpayer contributions are a minor source of financing for retirement benefits—investment earnings and employee contributions finance the lion's share.

Pension Benefit Multiplier





$1.00
pension benefits paid to retirees in New York

$1.29
total output

Each $1 in state and local pension benefits paid to New York residents ultimately supported $1.29 in total output in the state. This "multiplier" incorporates the direct, indirect, and induced impacts of retiree spending, as it ripples through the state economy.

NIRS: Pensionomics 2016: Measuring the Economic Impact of DB Pension Expenditures

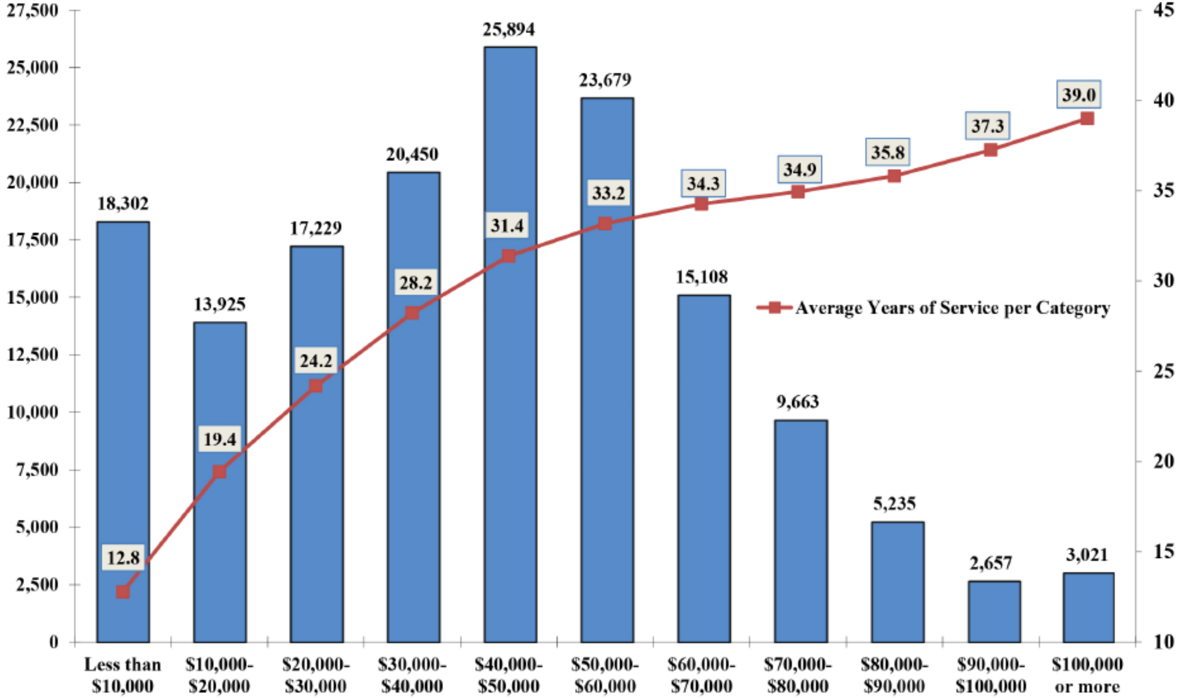
Why a Defined Benefit?

Pensionomics 2016

- *Retiree spending has a "ripple effect" throughout the economy.*
- *Pension income can be especially important during tough economic times. Retirees who depend on 401(K)-type plans might be reluctant to spend money during tough times, but retirees with pensions can count on a steady income available for spending.*

NIRS: Pensionomics 2016: Measuring the Economic Impact of DB Pension Expenditures

New York State Teachers' Retirement System
Distribution of the Annual Benefit* of All Retired Members
- as of June 30, 2016



*Maximum annual retirement benefit including supplementation and COLA.

- The average System retiree receives approx. $41,000 on an annual basis, a benefit earned through a career in teaching.
- Approximately 77% of System retirees receive less than $60,000 per year.
- Less than 2% of System retirees receive an annual benefit over $100,000.

What Does the Blueprint of a Successful Plan Look Like?

What Does the Blueprint of a Successful Plan Look Like?

NYSTRS - A Model Pension Fund

- *In 2011, the National Institute on Retirement Security (NIRS) issued a report titled, Lessons from Well-Funded Public Pensions: An Analysis of Six Plans that Weathered the Financial Storm.*

- *In the report, NYSTRS was one of six pension funds in the U.S. described as a role model for other systems.*

What Does the Blueprint of a Successful Plan Look Like?

The Six Most Important Features for Successful Funds

- *Full actuarial required annual employer contributions.*
- *Employee contributions that help share the cost of the plan.*
- *Benefit improvements that are properly funded upon adoption.*
- *Responsible cost-of-living adjustments.*
- *"Anti-spiking" measures that ensure the actuarial integrity of a pension benefit determination.*
- *Achievable long-term actuarial assumptions.*

Lessons from Well-Funded Public Pensions: An Analysis of Six Plans that Weathered the Financial Storm National Institute on Retirement Security, June 2011

What Does the Blueprint of a Successful Plan Look Like?

Receipt of Our Full Annual Required Contribution Was a Key Reason

"The most fundamental principle in ensuring a plan achieves a 100% funding ratio is ensuring that the plan sponsors pay the entire amount of the annual required contribution (ARC) each year, because anything short of a full ARC payment will have a negative impact on the plan's funding ratio in the long run."

Lessons from Well-Funded Public Pensions: An Analysis of Six Plans that Weathered the Financial Storm National Institute on Retirement Security, June 2011

How Is NYSTRS Doing?

Employer Contribution Rate (ECR)

- *Participating employers contribute a uniform percentage of member payroll.*

- *Rate determined annually by System's valuation of its assets and liabilities.*
  - *Assets = 5-year smoothed value of current System assets.*
  - *Liabilities = Present value of payments to retirees <u>and</u> accrual of reserves for future payments to current active teachers.*
  - *Difference = What employers owe (ECR).*

How Is NYSTRS Doing?

Current ECR

June 30, 2015 Actuarial Valuation

11.72% of pay

(Decrease of approx. **12%** *from prior ECR of 13.26%)*

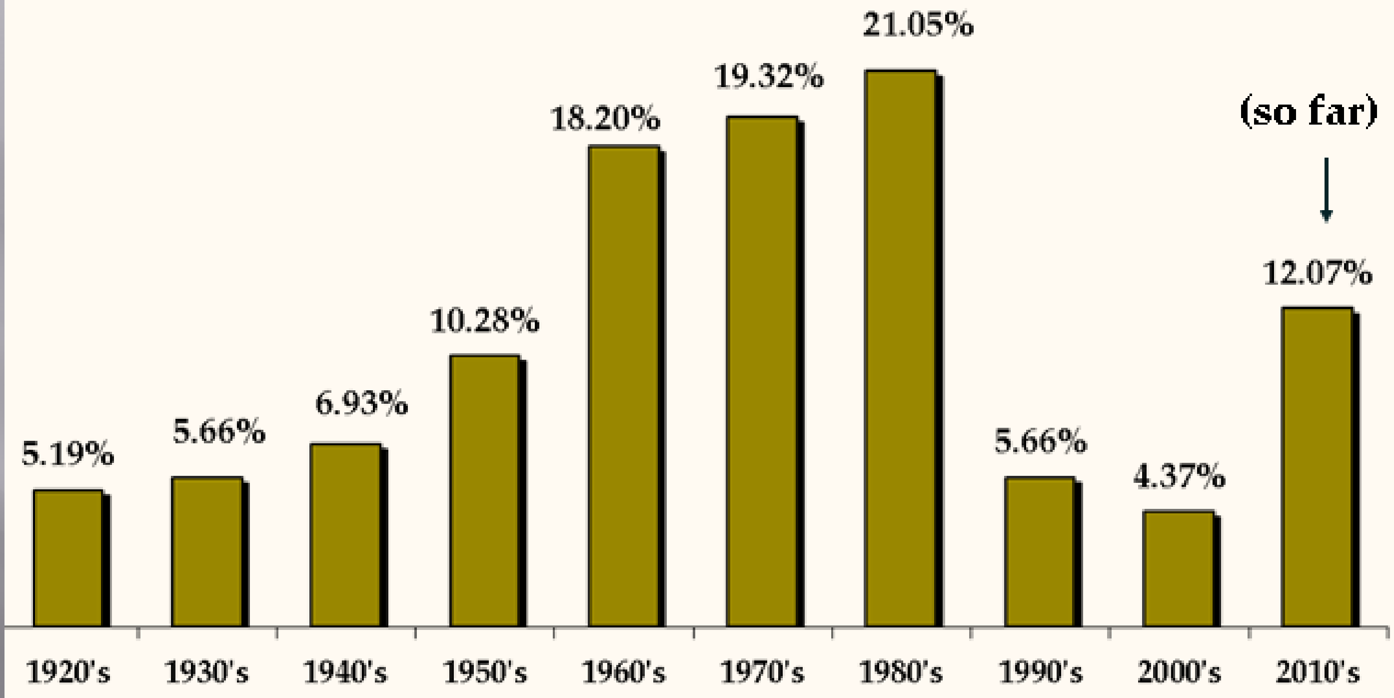
How Is NYSTRS Doing?

Estimated ECR

June 30, 2016 Actuarial Valuation

9.5% - 10.5% of pay

Average ECR's by Decade

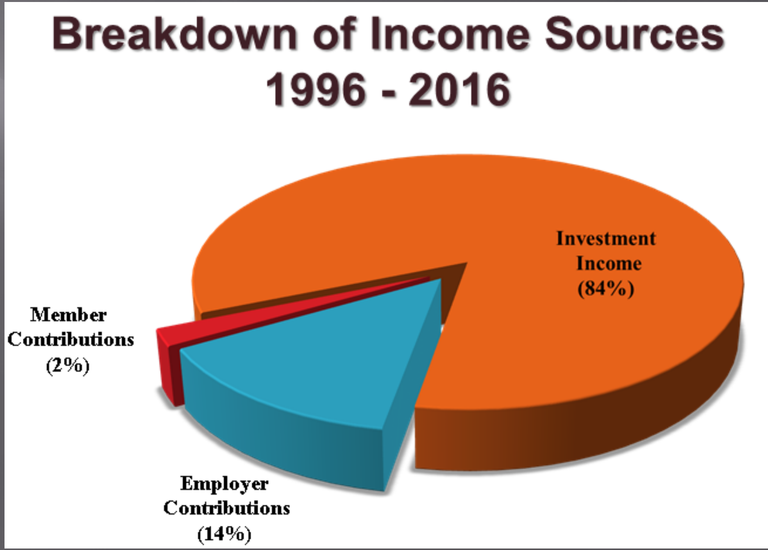


Average over all years: 10.96%

How Is NYSTRS Doing?

System funding comes from three sources:

- *Employer Contributions*
- *Member Contributions*
- *Investment Income*



How Is NYSTRS Doing?

Assumed Investment Return

- *In 2015, the NYSTRS Board adopted several new actuarial assumptions, one of which was a 7.5% long-term investment return down from the previous 8% assumption.*

- *NYSTRS has historically avoided "knee-jerk" reactions based on short-term economic trends.*

How Is NYSTRS Doing?

Rates of Return (6/30/2016)*	
1 Year	*2.3%*
3 Year	*8.4%*
5 Year	*8.3%*
10 Year	*6.2%*
20 Year	*7.6%*
25 Year	*8.7%*
30 Year	*8.9%*

** Net of fees*

Twenty Year Period 1996 - 2016

Member and Employer Contributions
$22.7 billion

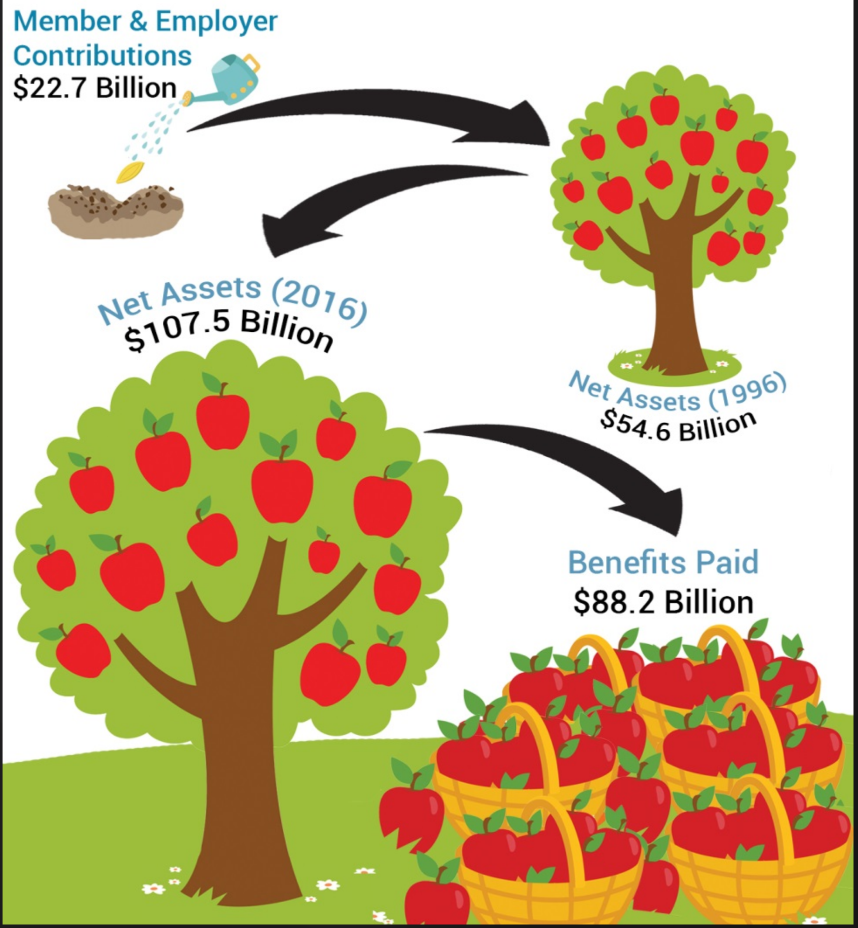
Investment Income
$118.4 billion

NY STRS

Benefit Payments Made
$88.2 billion

Approx. MV of assets – 1996: $54.6B
Approx. MV of assets – 2016: $107.5B

Contributions Collected vs. Benefits Paid 1996-2016

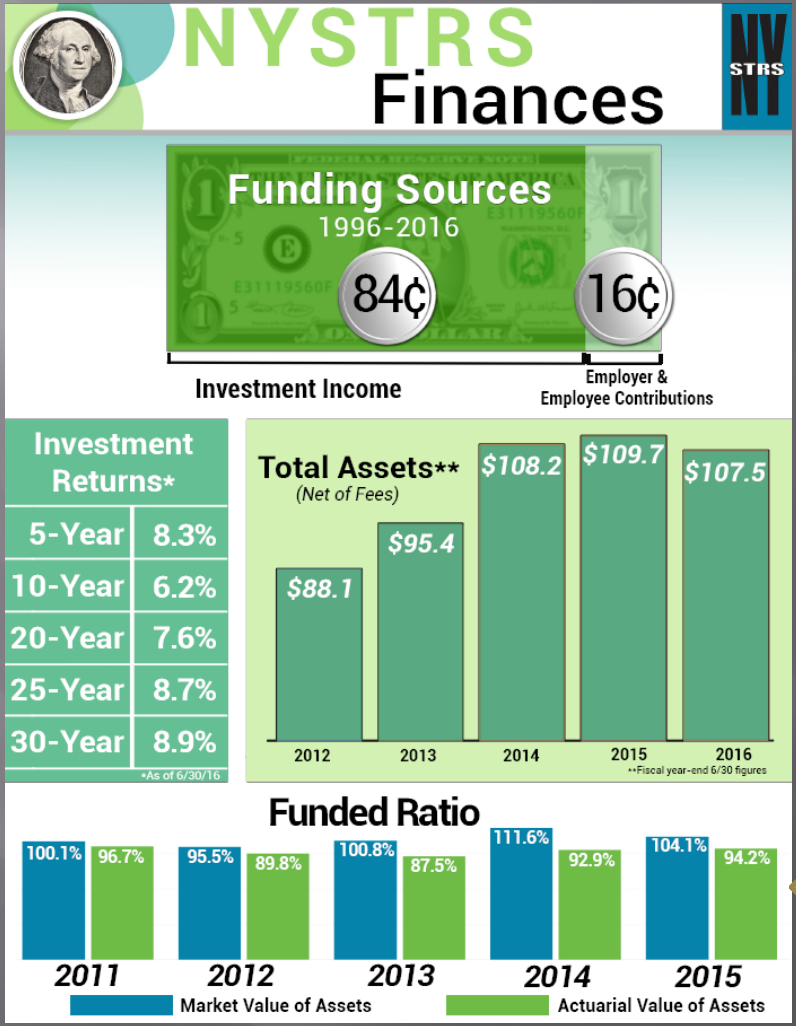


How Is NYSTRS Doing?

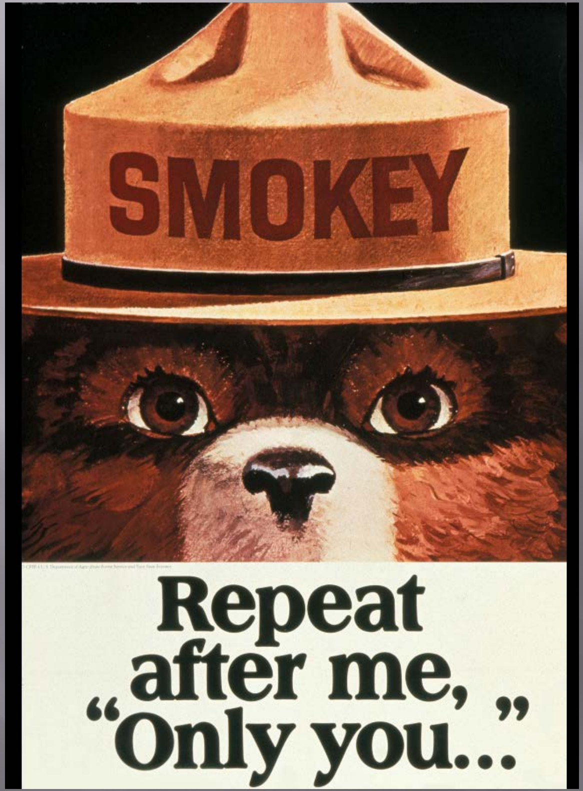
NYSTRS Funded Ratios

- *Actuarial Value of Assets – The average (or smoothed) investment return over a period of time. NYSTRS uses a 5-year smoothing calculation.*

- *Market Value of Assets – The current price for which you could sell assets on the open market.*

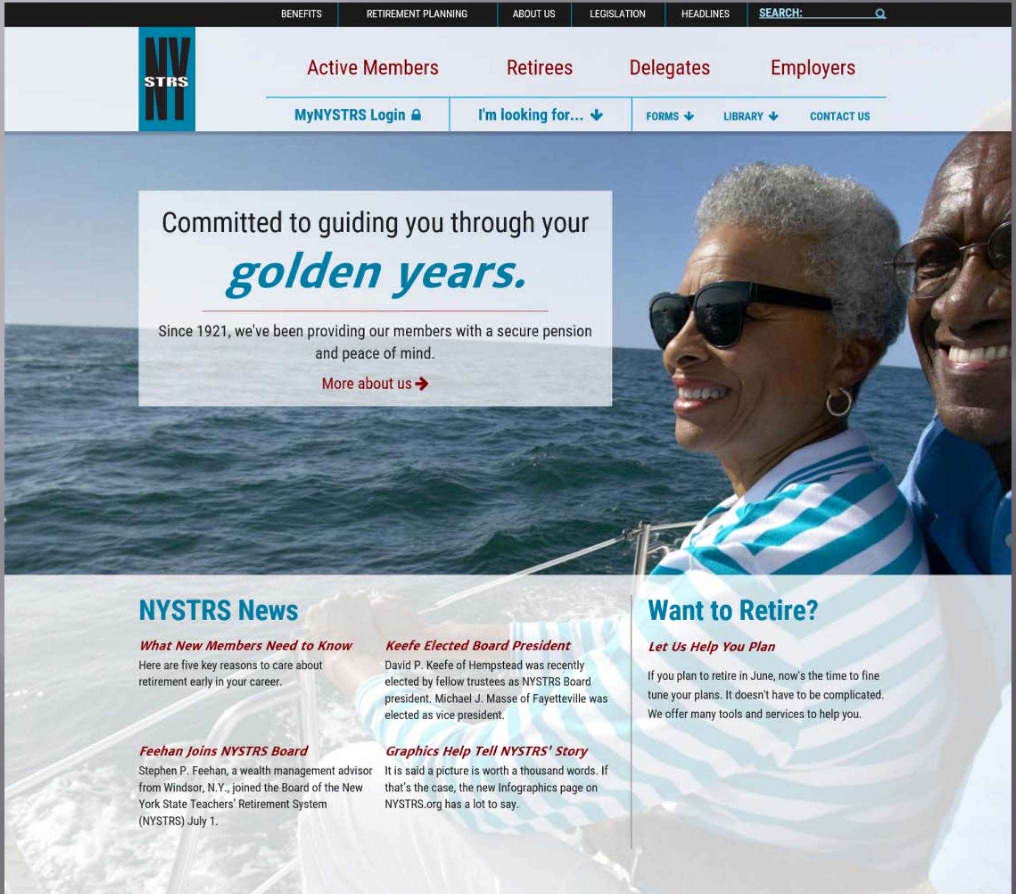

NYSTRS
Finances
NY
STRS
Funding Sources
1996-2016
84¢
16¢
Investment Income
Employer &
Employee Contributions
Investment Returns*
5-Year 8.3%
10-Year 6.2%
20-Year 7.6%
25-Year 8.7%
30-Year 8.9%
*As of 6/30/16
Total Assets**
(Net of Fees)
$88.1
$95.4
$108.2
$109.7
$107.5
2012
2013
2014
2015
2016
**Fiscal year-end 6/30 figures
Funded Ratio
100.1%
96.7%
95.5%
89.8%
100.8%
87.5%
111.6%
92.9%
104.1%
94.2%
2011
2012
2013
2014
2015
Market Value of Assets
Actuarial Value of Assets

Who Should Share the Story?

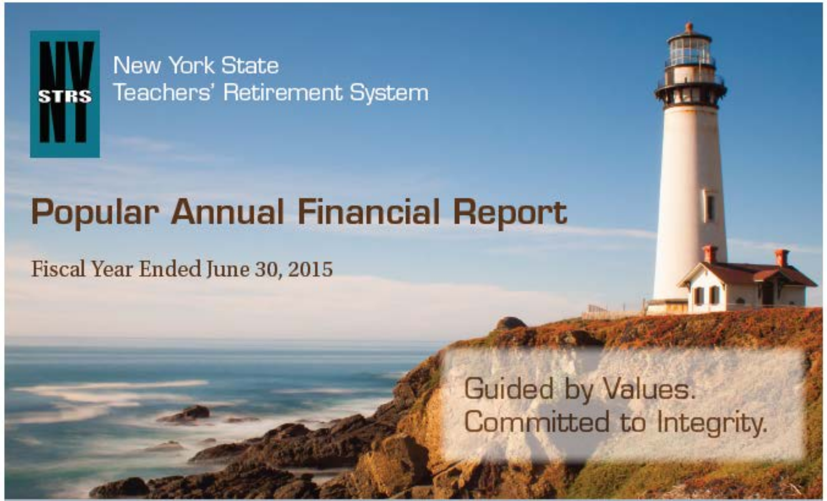


<u>YOU!</u>

Where Are the Tools to Help?



THESE TOOLS ARE ALL ON OUR WEBSITE AT NYSTRS.org!



New York State
Teachers' Retirement System

Popular Annual Financial Report

Fiscal Year Ended June 30, 2015

Guided by Values.
Committed to Integrity.

Thomas K. Lee

A Message from the Executive Director & CIO

On behalf of our Board and staff, I am pleased to present this Popular Annual Financial Report (PAFR) of the New York State Teachers' Retirement System (NYSTRS) for the fiscal year ended June 30, 2015. Our intent with this inaugural issue is to summarize the System's financial position and highlight significant accomplishments. For additional details, see our Comprehensive Annual Financial Report (CAFR) at NYSTRS.org.

NYSTRS is one of the 10-largest public funds in the U.S. based on portfolio size and is also consistently among the top-performing and best-funded public pension funds, particularly among teacher retirement systems. Consistent receipt of required employee and employer contributions; a disciplined, risk-controlled investment policy; and, relationships with top-performing fund managers are major contributing factors to our stability.

A 10-member Board representing various constituents — including public school teachers, administrators and school boards — governs the System. Trustees serve without compensation and are responsible as fiduciaries to protect the long-term value of the System's investment portfolio and provide benefit security for members. The Board receives counsel from staff, advisory committees and investment consultants to help formulate its investment policy.

The System's market value of assets totaled $109.7 billion at fiscal year-end 2015, the highest in System history. NYSTRS is well funded with a funded ratio at June 30, 2014 of 111.6% based on market value of assets and 92.9% based on actuarial value of assets.

NYSTRS' total fund return for the fiscal year was 5.2% net of fees, marking the sixth consecutive year of positive returns for the System. Our five-year rate of return is 12.4%.

Board and staff successfully navigated the System through a challenging fiscal year, never losing sight of our fiduciary responsibility to members. We remain keenly focused on meeting established fund and risk objectives in our continuing effort to meet our primary mission: To provide our members with a secure pension.

Respectfully,

Thomas K. Lee
Executive Director
& Chief Investment Officer

Pension Education Toolkit

Learn how pensions are funded and how they impact the economy.

Contact Us

(800) 348-7298

communit@nystrs.org

Public pensions are a hot topic in the news, so we developed this Pension Education Toolkit to help deepen your understanding of defined benefit public pension plans. Supplemental information is found on our Facts & Research page. Additional data is available through our Public Pension Partners.

CENTER for RETIREMENT RESEARCH at BOSTON COLLEGE

Investment Returns by Plan Type (2015) – A study conducted by the Center for Retirement Research at Boston College found defined benefit plans outperformed defined contribution plans, due in part to higher fees for defined contribution accounts.

PUBLIC PLANS DATA

PublicPlansData.org – A website offering data, analysis and research on public sector retirement plans with an eye toward educating both policymakers and the wider public.

NASRA Spotlight on Annual Required Contribution Experience (2015) – A detailed study of 112 public pension plans finds that most states are meeting their commitments to fund their public employee pension funds.

NIRS: Move to DC Did Not Save Money for States (2015) – Three states that recently shifted from defined benefit plans to defined contribution plans did not save money, according to analysis from the National Institute on Retirement Security.

NCPERS

NCPERS Public Retirement Systems Study (2015) – Public pension plans around the country report increasing confidence, growing investment returns and low administrative costs, according to this recent study.

Still a Better Bang for the Buck (2014) – The report by the National Institute on Retirement Security finds that defined benefit pension plans are more cost efficient than defined contribution plans.

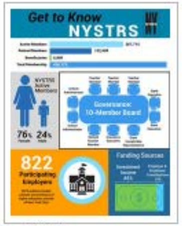
Library

- Pension Education Toolkit
  - Facts & Research
  - Public Pension Partners
- + General Reference
- + Publications
- + Videos

Want to Know More?

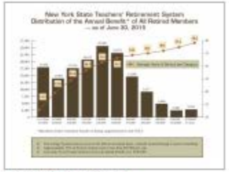
These NYSTRS numbers tell a good story. Visit Our Press Room.

Infographics



Get to Know NYSTRS
A snapshot of who we are, and how we're governed and funded.

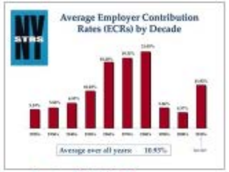
NYSTRS Finances
The facts on NYSTRS' finances. You may find these numbers surprising considering the unsteady economics of the past decade.



Distribution of Annual Pensions
54% of those receiving a NYSTRS benefit work an average of 31.5 years or more to earn it.

The Pension Dollar
The NYSTRS pension dollar shows how the System is funded and the impact pensions have on the economy.

NYSTRS: Modeling Excellence
The numbers tell the story: NYSTRS is healthy, efficient and sustainable.



Average Employer Contribution Rate
This chart illustrates the percentage of salary school districts contribute to NYSTRS on behalf of members.

Pension Education Toolkit
NYSTRS data and pension research. Learn more.

Related Items

Learning About NYSTRS
Annual Report
Pension Dollar

When Should the Story Be Told?

NOW!