Providing Retirement Security for New York Educators Since 1921

Our Mission: To provide our members with a secure pension.

Our Vision: To be the model for pension fund excellence and exceptional customer service.

Our Values: Integrity, Excellence, Respect, Resourcefulness, Diversity, Diligence, Balance
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About NYSTRS

Established in 1921 by the New York State Legislature, the New York State Teachers’ Retirement System ("NYSTRS" or the "System") administers the fund from which New York state public school teachers and administrators (excluding those in New York City) receive retirement, disability and death benefits.

NYSTRS is one of the 10-largest public retirement systems in the nation and 30 largest in the world. We serve nearly 431,000 active and retired members, including beneficiaries.

A 10-member Board of Trustees representing various constituents sets policy and oversees System operations. By law, the Board’s composition is as follows:

- Three teacher members are elected from the membership, one each year, by delegates to the System’s Annual Meeting.
- One NYSTRS retiree is elected (if there is more than one candidate) by a mail vote of all retired members.
- Two school administrators are appointed by the state Commissioner of Education.
- Two present or former school board members, experienced in the fields of finance and investment, are elected by the Board of Regents based on recommendations of the New York State School Boards Association. At least one of these individuals must have experience as an executive of an insurance company.
- One present or former bank executive is elected by the Board of Regents.
- The State Comptroller or a designee.

Trustees serve three-year terms, except the State Comptroller (or designee) who serves while in office.

### NYSTRS Board Members
(as of 11/30/2018)

**David P. Keefe, President**  
Retired Teacher Member  
Elected by NYSTRS Retirees  
*Trustee since 2004*

**Sheila Sullivan Buck**  
Teacher Member  
Elected by NYSTRS Delegates  
*Trustee since 2017*

**Paul J. Farfaglia**  
Teacher Member  
Elected by NYSTRS Delegates  
*Trustee since 2009*

**Stephen P. Feehan**  
School Boards Association Member  
Elected by Board of Regents  
*Trustee since 2016*

**Ron Gross**  
Teacher Member  
Elected by NYSTRS Delegates  
*Trustee since 2017*

**Michael J. Masse, Vice President**  
School Boards Association Member  
Elected by Board of Regents  
*Trustee since 2009*

**Dr. Phyllis S. Harrington**  
School Administrator  
Appointed by Commissioner of Education  
*Trustee since 2010*

**Daniel J. Hogarty Jr.**  
Bank Executive  
Elected by Board of Regents  
*Trustee since 2005*

**Dr. L. Oliver Robinson**  
School Administrator  
Appointed by Commissioner of Education  
*Trustee since 2010*

**Nicholas Smirensky**  
State Comptroller Appointee  
*Trustee since 2007*
Governance Structure

Members of the NYSTRS Board, who serve without pay, have a fiduciary responsibility to safeguard the fund used to pay guaranteed retirement and ancillary benefits to the System’s members and beneficiaries. The Board receives counsel from staff, advisory committees and investment consultants to help formulate its investment policy. Board members are entrusted to invest funds at the highest possible long-term rate of return consistent with appropriate levels of diversity and risk. The funds must be invested with the care, skill and diligence that a prudent person familiar with such matters would use to ensure that sufficient assets are on hand to pay promised benefits when they come due. This must be accomplished at the lowest possible cost to participating employers.

The design, implementation and administration of appropriate internal controls protecting the security of assets are the responsibility of System management. To ensure the validity of these controls, a system of both external and internal checks and balances exists. Financial information and internal controls are subject to audit by the New York State Department of Financial Services and the System’s Internal Audit Department. In addition, KPMG LLP, an independent certified public accounting firm, audits the System’s financial statements annually. The System consistently receives favorable audit opinions.

Funding

Funds used to pay promised benefits come from employer contributions, member contributions and investment income. Assets are professionally managed and invested on a long-term basis using sound investment policies. Over the past 30 years, investment returns have accounted for 85% of all NYSTRS income.

As of June 30, 2018, System net assets totaled $119.9 billion, with total assets under management of $118.1 billion. During the fiscal year ended June 30, 2018, the System’s annual benefit payroll for its 166,000 retirees and beneficiaries was approximately $7.1 billion. About 80% of this total, or over $5.7 billion, is paid to retired members and beneficiaries living in New York state. These payments serve as an important economic stimulus.
Investments

The System’s assets are invested in the most prudent manner possible in order to achieve optimum long-term total returns with an appropriate level of risk. The System is committed to a disciplined, risk-controlled investment approach that focuses on thoughtful and prudent diversification of assets across a broad spectrum of capital market segments. The allocation of assets within the portfolio, as well as the fund’s overall structure, are continuously reviewed and adjusted as appropriate to achieve these goals.

NYSTRS’ diversification of assets helps the System earn the highest possible long-term rate of return within appropriate risk levels. In turn, this enables the System to pay guaranteed benefits to retirees and beneficiaries at the lowest possible cost to participating employers and the taxpayers that fund them.

Asset classes in which NYSTRS invests include: domestic equity; international equity; global equity; real estate equity; private equity; domestic fixed income; high yield bonds; global bonds; real estate debt; private debt; and, cash equivalents.

Approximately 61% of the System’s investments are managed internally by the System’s own investment professionals. These investments primarily consist of index-matching domestic equity funds and fixed income instruments. Internal management allows the System to control fees and helps reduce the System’s cost of operation. NYSTRS administers the plan at a very low cost in comparison to the value of assets managed.

<table>
<thead>
<tr>
<th>Asset Allocation as of 6/30/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Equity</td>
</tr>
<tr>
<td>International Equity</td>
</tr>
<tr>
<td>Global Equity</td>
</tr>
<tr>
<td>Real Estate Equity</td>
</tr>
<tr>
<td>Private Equity</td>
</tr>
<tr>
<td><strong>Total Equity</strong></td>
</tr>
<tr>
<td>Domestic Fixed Income</td>
</tr>
<tr>
<td>High Yield Bonds</td>
</tr>
<tr>
<td>Global Bonds</td>
</tr>
<tr>
<td>Real Estate Debt</td>
</tr>
<tr>
<td>Private Debt</td>
</tr>
<tr>
<td>Cash Equivalents</td>
</tr>
<tr>
<td><strong>Total Debt</strong></td>
</tr>
</tbody>
</table>

Assets Under Management

$118.1 Billion as of June 30, 2018

Internal vs. External

Internally Managed

$71.4B

61%

Externally Managed - Active

$29.8B

25%

Externally Managed - Passive

$16.9B

14%
NYSTRS’ Financial Highlights

All figures as of June 30, 2018

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets under management*</td>
<td>$119,915,517,622</td>
<td></td>
</tr>
<tr>
<td>Total assets internally managed</td>
<td>$71,366,012,140</td>
<td>(61%)</td>
</tr>
<tr>
<td>Total assets externally managed – active</td>
<td>$29,817,648,046</td>
<td>(25%)</td>
</tr>
<tr>
<td>Total assets externally managed – passive</td>
<td>$16,925,314,641</td>
<td>(14%)</td>
</tr>
<tr>
<td>Total MWBE assets under external management**</td>
<td>$3,368,581,828</td>
<td>(7.21%)</td>
</tr>
<tr>
<td>Total fees paid to external firms</td>
<td>$281,345,492</td>
<td></td>
</tr>
<tr>
<td>Total fees paid to MWBE firms</td>
<td>$35,802,869</td>
<td>(12.73%)</td>
</tr>
</tbody>
</table>

**MWBE Assets Under External Management (by Asset Class)**
(As a percentage of externally managed)**

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Market Value</th>
<th>Percent of Externally Managed**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Income</td>
<td>$0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>$1,177,324,102</td>
<td>2.52%</td>
</tr>
<tr>
<td>Public Equities</td>
<td>$1,628,195,924</td>
<td>3.48%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>$563,061,802</td>
<td>1.20%</td>
</tr>
</tbody>
</table>

**Breakdown of Private Equity Committed Capital**

<table>
<thead>
<tr>
<th># of Firms</th>
<th>Committed Capital</th>
<th>Percent of Committed Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Firms</td>
<td>$22,275,620,513</td>
<td>100.00%</td>
</tr>
<tr>
<td>MWBE Firms</td>
<td>$2,544,611,390</td>
<td>11.42%</td>
</tr>
</tbody>
</table>

**Breakdown of Fees by Category**

<table>
<thead>
<tr>
<th>Category</th>
<th>Asset Management</th>
<th>Financial Institutions***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fees Paid to All Firms</td>
<td>$276,768,662</td>
<td>$4,576,830</td>
</tr>
<tr>
<td>Total Fees Paid to MWBE Firms</td>
<td>$35,347,058</td>
<td>$455,811</td>
</tr>
<tr>
<td>Percent of Fees Paid to MWBE Firms</td>
<td>12.77%</td>
<td>9.96%</td>
</tr>
</tbody>
</table>

*System net assets as of June 30, 2018 are $119.9 billion, which include assets under management ($118.1 billion), other assets and liabilities.
**Reflects percentage of externally managed assets (active and passive).
***Includes estimated fixed income commissions.
New York's MWBE Asset Management and Financial Institution Strategy

The New York State Minority- and Women-Owned Business Enterprise (MWBE) Asset Management and Financial Institution Strategy (Chapter 171 of the Laws of 2010) was established to codify and replicate best practices for the inclusion of MWBE asset managers, investment banks, and financial and professional service providers. The strategy encourages greater utilization of the services of MWBEs by fiduciary-controlled entities established by New York State law. Such entities include the Common Retirement Fund (“CRF”) under the sole trusteeship of the Office of the State Comptroller, the New York State Insurance Fund (“NYSIF”), the New York State Deferred Compensation Plan and NYSTRS.

In keeping with the law, the System’s Retirement Board adopted the NYSTRS MWBE Asset Management and Financial Institution Guidelines (“Guidelines”) for the certification of all business entities providing asset management investment-related business or services as a financial and professional service provider. Any actions taken by NYSTRS must be consistent with its overriding fiduciary responsibility to its members, retirees and beneficiaries. The Guidelines are provided in Appendix B of this report.

Among other things, Chapter 171 authorizes NYSTRS to:

- Periodically advertise the existence of its MWBE strategy and make MWBE firms aware of opportunities to conduct business with NYSTRS.
- Provide a report to the Governor, Legislature and the State Chief Diversity Officer, within 60 days from the close of NYSTRS’ fiscal year, on MWBE provision of services to the System.
- Work with the Office of the State Comptroller, New York State Insurance Fund and the New York State Deferred Compensation Plan in creating a database of MWBEs utilized by respective parties.
- In conjunction with other fiduciary entities, hold an annual MWBE conference to promote the System’s MWBE strategy and educate MWBE firms on business opportunities with the System.

In accordance with the Strategy and Guidelines, NYSTRS, in conjunction with the CRF and NYSIF, continue to collaborate on best practices and the ongoing certification process. Further, NYSTRS submits this annual report to the Governor, Legislature and Chief Diversity Officer on the utilization of MWBEs.
NYSTRS cooperates with the Common Retirement Fund (“CRF”) under the sole trusteeship of the Office of the State Comptroller and the New York State Insurance Fund (“NYSIF”) to survey and certify asset managers, financial institutions, and financial and professional service providers (in the areas of accounting, banking, financial advisory, insurance, legal, research, valuation and other financial and professional services) to determine which existing business partners qualify as MWBEs. NYSTRS, together with the other fiduciary controlled entities, updates the MWBE certification survey and pursues certifications in which each entity separately invests.

In accordance with the New York statutory provisions and the NYSTRS MWBE Asset Management and Financial Institution Guidelines, the business entities may qualify as a traditional MWBE firm or a substantially owned and/or operated firm.

**Traditional MWBE**

A traditional MWBE is at least fifty-one percent owned by one or more minority group members, and/or by one or more women, in each case, who have significant experience in the relevant area.

**Substantially Owned and/or Operated MWBE**

A substantially owned and/or operated firm includes firms with at least thirty-three percent ownership and/or operation by members of minority groups and/or women and of the thirty-three percent have at least twenty-five percent ownership by minority group members and/or women. Under substantially owned and/or operated, each individual counted in determining percentage of ownership or operation is counted once.

**MWBE Certification**

In past years, NYSTRS certified all existing business entities with Altura Capital Group, a New York-based MWBE. In the 2018 calendar year, NYSTRS, CRF and NYSIF entered into an agreement with Lenox Park Solutions, another New York-based MWBE, to continue to conduct the annual certification review process of firms doing business with NYSTRS. The System worked together with CRF and NYSIF to engage this new firm and update the certification survey. This year, Lenox Park Solutions surveyed 233 firms providing a variety of investment and professional services to NYSTRS. As of November 2018, Lenox Park received responses from 94% of all business entities. The System's engagement with Lenox Park Solutions will continue to provide assistance with the certification process for the upcoming fiscal years.
Pursuit of MWBE Guidelines

The System’s commitment to and ongoing pursuit of MWBE Guidelines is evidenced as follows.

Ongoing Initiatives

- The public equities team continued to pursue MWBE relationships through its manager-of-managers program. In addition, the team continued to engage in introductory meetings with MWBE managers, as well as attend conferences to better understand emerging manager trends.

- The fixed income team is focused on building existing relationships, as well as establishing new ones, through the System’s annual MWBE conference. They continue to take part in introductory and firm update meetings with MWBE fixed income money managers. Additionally, the fixed income staff has taken continual proactive steps to split new issue long-term bond deals to allow MWBE co-managers to take direct orders.

- The managing director of real estate is a board member of the Pension Real Estate Association (PREA), which partners with the Robert A. Toigo Foundation to grant an annual PREA/Toigo scholarship to minority and women students. Additionally, the real estate team is currently hosting an intern through the PREA/Sponsors for Educational Opportunity internship program, which provides career opportunities to women and minority students in the real estate industry.

- The private equity team continually reviews MWBE materials and takes meetings with entities that maintain strategies aligning with our plan. Since the inception of the System’s annual MWBE conference, NYSTRS has made a number of direct fund investments stemming from relationships formed in connection with the conference.

- Legal staff continues to seek out MWBE firms to provide legal due diligence services related to investments. This past fiscal year, the Legal team retained an MWBE law firm to assist with the review of derivatives and transactions and paid $175,231 for such legal services.

- The risk management team has engaged in discussions with an MWBE expert in the field of investment compliance since NYSTRS’ February 2018 MWBE conference.

Participation in MWBE Events

- NYSTRS was an exhibitor at the New York State MWBE Forum held in October 2017. Further, System staff participated in the Forum’s sessions.

- System staff attended the Office of the State Comptroller’s MWBE Conference in February 2018.

- The private equity team attended Sponsors for Educational Opportunity’s (SEO) 9th Annual Alternative Investments Conference in February 2018. The event is a key part of SEO’s work to expand diversity in the alternative investment sector. The private equity team also attended Consortium 2018 in June 2018. The 15th annual event continued the tradition of fostering lasting connections between institutional investors and diverse and women managers.

- The Executive Director & Chief Investment Officer and Director of Human Resources attended the CFA Institute’s Workforce Diversity and Inclusion Roundtable in May 2018.

- The assistant manager of real estate acquisitions attended the 15th Annual GCM Grosvenor Consortium in June 2018 and hosted a roundtable discussion on the topic of coaching MWBE and emerging firms to grow and attract institutional investment.

- Legal staff attended the Chambers Diversity Summit in New York City in June 2018.
The following summarizes, by asset class, the status of NYSTRS’ MWBE relationships.

### Domestic, International and Global Equities

*(56.9% of all invested assets as of 6/30/18)*

#### External Portfolio Management

NYSTRS makes direct allocations and often uses managers-of-managers to invest capital on its behalf. In August 2016 and April 2018, NYSTRS' Retirement Board authorized a change in the asset allocation to domestic equities, which together with strong equity market performance, necessitated trimming of the domestic equity portfolio.

In 2017 NYSTRS made a direct investment of $125 million with Ariel Investments’ international active, long-only strategy. The System continues to monitor Ariel Investments for an opportune time to add to its investment.

In addition, Progress Investment Management Company (“Progress”), Leading Edge Investment Advisors (“Leading Edge”) and FIS are MWBE firms that serve as a manager-of-managers on NYSTRS’ behalf. The programs managed by Progress and Leading Edge are all-cap domestic equity strategies. FIS manages an international equity program for the System, including investments in developed and emerging markets.Existing contracts with Progress, Leading Edge and FIS were renewed during the fiscal year.

Details regarding our MWBE partners are summarized in the following table.

<table>
<thead>
<tr>
<th>Emerging Manager Partner</th>
<th>MWBE Status</th>
<th>Program Type</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ariel Investments</td>
<td>African-American</td>
<td>International Equity Direct Mandate</td>
<td>$134,362,078</td>
</tr>
<tr>
<td>FIS Group</td>
<td>African-American/Women</td>
<td>International Equity Manager of Managers</td>
<td>269,997,117</td>
</tr>
<tr>
<td>Leading Edge Investment Advisors</td>
<td>Asian-American</td>
<td>Domestic Equity Manager of Managers</td>
<td>406,846,683</td>
</tr>
<tr>
<td>Progress Investment Management Company</td>
<td>African American/Women</td>
<td>Domestic Equity Manager of Managers</td>
<td>816,990,046</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$1,628,195,924</strong></td>
</tr>
</tbody>
</table>

The programs referenced above include MWBE sub-managers, within their portfolios, including:

- Affinity Investment Advisors
- Ativo Capital Management
- Blackcrane Capital
- Bowling Capital
- Change Global Investment
- Denali Advisors
- Mar Vista Investment
- Martin Investment Management
- Matarin Capital
- Metis Global Partners
- Nicholas Investment Partners
- Oakbrook Investments
- Phocas Financial Corp.
- Redwood Investments

### Public Equity Brokers

During NYSTRS' 2017-2018 fiscal period, public equity trading staff continued to strengthen relationships with existing MWBE executing brokers. Currently, 22 of 34 approved brokers are MWBE certified and for
the recently completed fiscal period, $132,234 of a total of $505,196 commission dollars was paid to MWBE trading partners. A comparison of the last two fiscal years follows.

**NYSTRS’ Domestic Equity Commissions**
*(Percent Paid to MWBE)*

<table>
<thead>
<tr>
<th></th>
<th>7/1/16—6/30/17</th>
<th>7/1/17—6/30/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Commissions (,000s)</td>
<td>$811</td>
<td>$505</td>
</tr>
<tr>
<td>Paid to MWBE (,000s)</td>
<td>$196</td>
<td>$132</td>
</tr>
<tr>
<td>Total MWBE %</td>
<td>24%</td>
<td>26%</td>
</tr>
<tr>
<td>Total # of Approved Brokers</td>
<td>43</td>
<td>34</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of Approved Brokers</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>MWBE Brokers</td>
<td>22</td>
<td>27</td>
</tr>
<tr>
<td>Total MWBE %</td>
<td>63%</td>
<td>65%</td>
</tr>
</tbody>
</table>

**Approved MWBE Brokers and Year Approved**

- Blaylock Beal Van, LLC, 2011
- Bley Investment Group, Inc., 2011
- Cabrera Capital Markets, LLC, 2011
- Capital Institutional Services, 2016
- CastleOak Securities, L.P., 2011
- Cheevers & Co. Inc., 2011
- CI, King & Associates, 2011
- CV Brokerage, 2015
- Great Pacific Securities, 2016
- Ivy Securities, Inc., 2011
- Loop Capital Markets, 2011
- Montrose Securities, 2012
- North South Capital, LLC, 2011
- Penserra Securities, LLC, 2012
- Samuel A. Ramirez & Co., 2011
- Siebert Cisneros Shank & Co. LLC, 2011
- Sturdivant & Co., 2012
- Telsey Advisory Group, 2011
- The Fig Group, LLC, 2012
- Tigress Financial Partners, 2016
- Tribal Capital Markets, 2016
- Williams Capital Group, 2011

**Note:** NYSTRS’ approved broker list also includes three brokers that are VBE (Veteran Business Enterprise) or DVBE (Disabled Veteran Business Enterprise) certified: Mischler Financial Group (DVBE, 2011); Drexel Hamilton (DVBE, 2014); and, Vandham Securities (VBE, 2015).

**Fixed Income**
*(20.5% of System assets as of 6/30/18. Includes Internally managed domestic fixed income, cash equivalents, and externally managed global bonds and high yield bonds.)*

During NYSTRS’ 2017-18 fiscal year, fixed income staff continued to establish, develop and strengthen relationships with MWBE fixed income counterparties. This was accomplished through outreach at NYSTRS’ 2018 MWBE Conference, as well as by regular interaction with approved MWBE counterparties of the System’s internally managed short-term and long-term bond portfolios. This communication helps MWBE firms expand their understanding of System objectives as it relates to fixed income and, over the long term, we expect to improve System relationships with MWBE fixed income counterparties.
When compared to the prior fiscal year, fixed income’s level of transaction activity with MWBE firms increased slightly and since the 2011 fiscal year the overall level of activity is 167% higher. The year-over-year change in transaction activity with MWBE firms was the result of an increase in long-term bond transactions. This was somewhat offset by a decline in short-term bond investment activity due to lower short-term balances.

During the fiscal year, fixed income added one MWBE counterparty and continues to communicate the objectives and areas of focus in the fixed income area while simultaneously building relationships with the MWBE firms listed below.

<table>
<thead>
<tr>
<th>Firm</th>
<th>MWBE Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy Securities, Inc.</td>
<td>Hispanic*</td>
</tr>
<tr>
<td>Blaylock Beal Van, LLC</td>
<td>African-American</td>
</tr>
<tr>
<td>Cabrera Capital Markets, LLC</td>
<td>Hispanic</td>
</tr>
<tr>
<td>CL King &amp; Associates</td>
<td>Women</td>
</tr>
<tr>
<td>CastleOak Securities</td>
<td>African-American</td>
</tr>
<tr>
<td>Duncan Williams</td>
<td>Women</td>
</tr>
<tr>
<td>Great Pacific Securities</td>
<td>Hispanic</td>
</tr>
<tr>
<td>Guzman &amp; Company</td>
<td>Hispanic</td>
</tr>
<tr>
<td>Loop Capital Markets, LLC</td>
<td>African-American/Women</td>
</tr>
<tr>
<td>MFR Securities Inc.</td>
<td>Women</td>
</tr>
<tr>
<td>Ramirez &amp; Company</td>
<td>Hispanic/Women</td>
</tr>
<tr>
<td>Rice Financial Products Company**</td>
<td>African-American</td>
</tr>
<tr>
<td>Siebert Cisneros Shank &amp; Co. LLC</td>
<td>African-American/Women</td>
</tr>
<tr>
<td>Williams Capital Group</td>
<td>African-American/Women</td>
</tr>
</tbody>
</table>

*Can also be classified as a Disabled Veteran Business Enterprise firm, but for the purposes of this report is included only in the MWBE section to avoid double counting.

**Relationship established during the 2017-18 fiscal year.

As the following table illustrates, total fixed income estimated commissions paid to MWBE firms increased year over year. The change was driven by long-term estimated commissions due to NYSTRS' increased participation in new issues of corporate debt and purchases of agency mortgage-backed securities while short-term commissions decreased in the 2017-18 fiscal year.

### NYSTRS’ Estimated Fixed Income Commissions – MWBE Firms

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Short-term Bonds</th>
<th>Long-term Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-18</td>
<td>$217,335</td>
<td>$96,151</td>
</tr>
<tr>
<td>2016-17</td>
<td>$241,872</td>
<td>$70,077</td>
</tr>
<tr>
<td>2015-16</td>
<td>$104,517</td>
<td>$88,583</td>
</tr>
<tr>
<td>2014-15</td>
<td>$91,483</td>
<td>$100,362</td>
</tr>
<tr>
<td>2013-14</td>
<td>$133,614</td>
<td>$183,536</td>
</tr>
<tr>
<td>2012-13</td>
<td>$141,139</td>
<td>$105,680</td>
</tr>
<tr>
<td>2011-12</td>
<td>$151,097</td>
<td>$107,121</td>
</tr>
<tr>
<td>2010-11</td>
<td>$66,209</td>
<td>$51,194</td>
</tr>
</tbody>
</table>
For the recently completed fiscal year, estimated commissions paid to MWBE firms represented 16.8% of all commissions paid in the short-term bond category and 3.6% of all commissions paid in the long-term bond category. This compares to the 2016-17 fiscal year when estimated commissions paid to MWBE firms represented 19.2% of all commissions paid in the short-term bond category and 3.0% of all commissions paid in the long-term bond category.

Additionally, fixed income has Disabled Veteran Business Enterprise (DVBE) relationships with two firms: Drexel Hamilton LLC and Mischler Financial Group.

For the fiscal year ended June 30, 2018, Disabled Veteran firm estimated commissions represented 0.4% of short-term bond transaction activity and 0.2% of long-term bond activity. In comparison to the 2016-17 fiscal year when estimated commissions from DVBE firms represented 0.9% of short-term bond transaction activity and 0.6% of long-term bond transaction activity. Activity with DVBE firms is dependent on their inclusion in new issue corporate bond deals, access to money market instruments and ability to source secondary corporate bonds.

### NYSTRS’ Estimated Fixed Income Commissions – Disabled Veteran Firms

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Short-term Bonds</th>
<th>Long-term Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-18</td>
<td>$5,066</td>
<td>$6,360</td>
</tr>
<tr>
<td>2016-17</td>
<td>$11,593</td>
<td>$12,681</td>
</tr>
<tr>
<td>2015-16</td>
<td>$4,268</td>
<td>$16,861</td>
</tr>
<tr>
<td>2014-15</td>
<td>$4,665</td>
<td>$11,894</td>
</tr>
<tr>
<td>2013-14</td>
<td>$21,329</td>
<td>$12,404</td>
</tr>
</tbody>
</table>

As of June 30, 2018, existing MWBE asset manager relationships include Adelante Capital Management, managing $358 million in public market securities in Real Estate Investment Trusts (REITs) and Real Estate Operating Companies (REOCs); Capri Capital Partners, managing $0.1 million in structured real estate debt; Artemis Real Estate Partners, managing $43.8 million ($175 million in commitments) in three value-add real estate funds; and, Grosvenor Capital Management, managing $161.1 million ($500 million in commitments) in four separate accounts (two equity and two debt) that target a portfolio of fund, direct and co-investments sponsored by emerging managers including MWBE managers.

### Real Estate Equity and Real Estate Debt

(15.1% of all invested assets as of 6/30/18)

<table>
<thead>
<tr>
<th>Emerging Manager Partner</th>
<th>MWBE Status</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adelante Capital Management</td>
<td>Hispanic/Asian-American/Women</td>
<td>$358,032,572</td>
</tr>
<tr>
<td>Capri Capital Partners</td>
<td>African-American/Women/Asian</td>
<td>101,244</td>
</tr>
<tr>
<td>Artemis Capital Partners</td>
<td>Women</td>
<td>43,780,452</td>
</tr>
<tr>
<td>Grosvenor Capital Management</td>
<td>Hispanic/Asian-American/African-American/Women</td>
<td>161,147,534</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$563,061,802</strong></td>
</tr>
</tbody>
</table>
NYSTRS’ investments in private equity and private debt are managed externally. In line with its fiduciary obligations to members, retirees and beneficiaries, NYSTRS targets top quartile performance funds for investment.

As of June 30, 2018, private equity and private debt investments accounted for approximately $22.3 billion in committed capital. Of this total, the System has committed approximately $2.5 billion across 35 funds which are managed by 16 minority- and women-owned firms. During the fiscal year ended June 30, 2018, NYSTRS closed on four MWBE qualified commitments, totaling $450 million.

NYSTRS has a $100 million commitment to The First Capital Access Fund, a separate account established with HarbourVest Horizon. The mandate of the account is to make commitments to MWBE qualified managers with fund sizes of $500 million or less. To date, The First Capital Access Fund is fully committed with 10 commitments totaling $101 million (inclusive of the general partner commitments). Going forward, NYSTRS’ private equity staff will make direct commitments to MWBE qualified funds instead of utilizing a third-party, separately managed account.
2018 MWBE Investments and Professional Services Conference

The Retirement System’s eighth annual MWBE Investments and Professional Services Conference, entitled “Expanding Access, Increasing Opportunities,” was held Feb. 15, 2018. Nearly 175 professionals attended the event at System offices in Albany.

The conference provided a forum for potential asset managers and brokers, and professional and financial service providers, to become acquainted with the Retirement System. Attendees learned about NYSTRS’ portfolio and investment needs while also gaining greater insight into the abilities and qualifications the System expects of its business partners.

The conference began with a welcome from NYSTRS Executive Director & Chief Investment Officer Thomas K. Lee. Following his remarks, Joyce Chang, Global Head of Research at J.P. Morgan Corporate & Investment Bank, delivered a keynote address.

NYSTRS offered workshops related to: public equities (asset managers and brokers); fixed income; private equity; real estate; and, professional services in the areas of real estate, legal and financial. These two-hour workshops were led by NYSTRS’ managing directors and current managers/partners in each asset class and professional service. The participants were also given the opportunity to network with the System’s investment, professional services and senior staff.

Consistent with its previous conferences, NYSTRS coordinated the event with the Office of the State Comptroller’s annual Emerging Managers event, which was held Feb. 16, 2018. This date coincided with the weekend of the annual conference of the New York State Black, Puerto Rican, Hispanic and Asian Legislative Caucus.

A NYSTRS MWBE Conference agenda is included in this report as Appendix A.
Furthering NYSTRS’ MWBE Strategy

In support of NYSTRS’ commitment to expanding access and increasing opportunities for MWBE firms, the System continues to provide opportunities to the growing pool of MWBE managers, both through outreach efforts and the pursuit of MWBE guidelines – each of which contributes to NYSTRS’ success as one of the largest public pension funds in the country.

This effort aligns with NYSTRS’ focus on prudent diversification of investments across a broad spectrum of asset classes and its ongoing search for sound investment opportunities that will contribute to the stability of the portfolio.

The System continues to work with the other fiduciary-controlled entities, the Common Retirement Fund under the sole trusteeship of the Office of the State Comptroller and the New York State Insurance Fund, to review the certification recommendations of business enterprises certified as MWBEs.

Further, NYSTRS will make more opportunities available to MWBE firms when it hosts its 9th annual MWBE conference in February 2019. The conference is a gateway for MWBE firms to gain knowledge about NYSTRS and to be introduced to the System as it continues to seek investment managers and service providers to further enhance its MWBE strategy. NYSTRS looks forward to providing event attendees with the opportunity to visit the System’s offices, learn about its investment philosophy, and to network with its managing directors and investments and professional staff.
MWBE
MINORITY- AND WOMEN-OWNED BUSINESS ENTERPRISES

8th ANNUAL CONFERENCE FOR INVESTMENTS AND PROFESSIONAL SERVICES
EXPANDING ACCESS, INCREASING OPPORTUNITIES

AGENDA ▪ Thursday, February 15, 2018

9:30 a.m. – 11:00 a.m. Registration
Continental Breakfast

11:00 a.m. – 12:15 p.m. Welcome and Opening Remarks
Thomas K. Lee, Executive Director & Chief Investment Officer
Keynote
Joyce Chang, Global Head of Research, J.P. Morgan Corporate & Investment Bank

12:15 p.m. – 1:15 p.m. Lunch and Networking with Colleagues and NYSTRS Staff

1:15 p.m. – 1:30 p.m. Break/Transition to Workshops

1:30 p.m. – 3:30 p.m. Conference Workshops
- Public Equities (Asset Managers & Brokers) - Auditorium
- Fixed Income - Executive Board Room
- Private Equity - Board Room
- Real Estate - Video Conferencing Room
- Professional Services – Real Estate - Video Conferencing Room
- Professional Services – Legal - Legal Conference Room
- Professional Services – Financial - Executive Conference Room

3:30 p.m. – 4:00 p.m. Networking
Continue your conversations with colleagues and NYSTRS staff.
 Appendix B

NEW YORK STATE TEACHERS’ RETIREMENT SYSTEM
MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES (“MWBE”)
ASSET MANAGEMENT AND FINANCIAL INSTITUTION GUIDELINES
FOR CERTIFICATION, REPORTING AND COOPERATION
WITH OTHER FIDUCIARY-CONTROLLED ENTITIES

I. PURPOSE. In accordance with subdivisions 4, 5, 6, 7, 8 and 9 of section 176 of the
Retirement and Social Security Law and section 508-a of the Education Law, the
Retirement Board, acting as trustees of the New York State Teachers’ Retirement System
(“NYSTRS”), establishes these guidelines for the purpose of increasing the utilization of
MWBE Asset Managers, MWBE Financial Institutions and MWBE Financial and
Professional Service Firms.

These guidelines shall be implemented in accordance with, and subject to, the Retirement
Board’s fiduciary duties and obligations as trustees of NYSTRS to the members, retirees
and beneficiaries of NYSTRS and in accordance with, and subject to, such other
investment limitations as may be prescribed by the Education Law, the Retirement and
Social Security Law and any other law or rule as may be applicable, including but not
limited to the regulations of the Commissioner of Insurance.

These guidelines shall relate to the following activities:

A. Contracting with MWBE Asset Managers to invest assets of NYSTRS;

B. Subject to Best Execution:
   1. Conducting trades of public equity securities with MWBE Financial
      Institutions; and
   2. Conducting trades of fixed-income securities with MWBE Financial
      Institutions;

C. Allocating investments of assets of NYSTRS either:
   1. Directly through investments in the equities and debt securities of MWBEs; or
   2. Indirectly through programs involving MWBE Asset Managers; and

D. Awarding contracts for accounting, banking, financial advisory, insurance, legal,
   research, valuation and other financial and professional services to MWBE Financial
   Institutions and other MWBE Professional Service Firms.
II. **DEFINITIONS.** For the purposes of these guidelines, the following terms are defined as follows:

A. The terms “Asset Manager” and “Asset Management” shall mean the person, or activity by such person, who provides a comprehensive and structured approach to short-term and long-term management of funds of NYSTRS.

B. The term “Best Execution” shall refer to the obligation of Broker or Broker Dealer to ensure the optimal mix of price improvement (getting a better price than is currently quoted), speed and likelihood of execution.

C. The terms “Broker” and “Broker Dealer” shall mean an individual or firm, registered in accord with state or federal law, who acts as an intermediary between a buyer and seller.

D. The term “Business Enterprise” may include, without limitation:

1. A sole proprietorship;
2. A partnership;
3. A limited partnership;
4. A limited liability partnership;
5. A limited liability company;
6. A corporation; or
7. Another similar entity whether domestic or foreign.

E. The term "MWBE Asset Manager" may include, without limitation:

1. An Asset Manager in any of the following asset classes:
   a. Public Equity or Fixed Income Securities;
   b. Hedge Funds;
   c. Fund of Hedge Funds;
   d. Private Equity (including Venture Capital);
   e. Fund of Private Equity funds;
   f. Real estate investment funds;
   g. Fund of real estate funds; or
h. Any other asset class for which NYSTRS might engage external asset managers; and

2. An Asset Manager that is:

a. An MWBE;

b. A registered Investment Advisor or an Investment Advisor exempt from such registration; and

c. Certified in a manner consistent with subdivision 3 of section 423-c of the Retirement and Social Security Law.

F. The term "Minority Group Member" shall mean a United States citizen or permanent resident alien who is and can demonstrate membership in one of the following groups:

1. Black persons having origins in any of the Black African racial groups;

2. Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American of either Indian or Hispanic origin, regardless of race;

3. Native American or Alaskan native persons having origins in any of the original peoples of North America; or

4. Asian and Pacific Islander persons having origins in any of the Far East Countries, South East Asia, the Indian Subcontinent or the Pacific Islands.

G. The term "MWBE" for the purpose of engaging in business with NYSTRS shall mean:

1. A Business Enterprise:

   a. That is at least fifty-one percent owned by one or more minority group members, or at least fifty-one percent owned by one or more women, who, in each case, have significant experience in asset management, brokerage, other financial services or related professional services such as accounting, valuation or legal services; or

   b. That is substantially owned and/or operated by women or minority group members who have significant experience in asset management, brokerage, other financial services or related professional services such as accounting, valuation or legal services; and

2. A Business Enterprise:

   a. In which such minority or women ownership or operation is real, substantial and continuing;
b. In which such minority or women ownership or operation has and exercises the authority to control independently the day-to-day business decisions of the enterprise;

c. Authorized to do business in this State; and

d. Certified in a manner consistent with subdivision 3 of section 423-c of the Retirement and Social Security Law.

H. The term “Financial and Professional Services” shall include, but not be limited to:

1. Banking;
2. Financial Advisory;
3. Financial Research;
4. Insurance;
5. Law; and

I. The term "MWBE Financial Institution" shall mean:

1. As it relates to brokerage services, a Broker or Broker Dealer that is an MWBE certified in a manner consistent with subdivision 3 of section 423-c of the Retirement and Social Security Law; and

2. As it relates to any other financial services, a Business Enterprise that is an MWBE certified in a manner consistent with subdivision 3 of section 423-c of the Retirement and Social Security Law that provides banking, financial advisory, insurance, financial research, valuation or other financial services.

J. The term “Other Fiduciary-Controlled Entities” shall mean:

1. The New York State Common Retirement Fund;
2. The New York State Insurance Fund; and


III. CERTIFICATION. The Retirement Board hereby establishes and adopts the following certification process for the purpose of identifying and reporting on MWBE firms providing asset management, brokerage or other financial or professional services with or for NYSTRS:
A. Business Enterprises providing asset management, brokerage or other financial or professional services with or for NYSTRS shall be invited to provide the following information:

1. A copy of financial form(s), if any, filed with the federal Securities and Exchange Commission, including, but not limited to, the uniform application for investment advisor registration (ADV) and the uniform application for broker-dealer registration (BD);

2. A copy of application forms and supporting documentation, if any, filed with the Division of Minority and Women-Owned Business Development (“DMWBD”) within the New York State Department of Economic Development and any subsequent certification issued by DMWBD of MWBE status;

3. A copy of any form(s) filed with any other state or federal entity for the purpose of seeking certification by such entity as an MWBE, along with any certification issued by such governmental entity of MWBE status, if any;

4. Any registration form as the Retirement Board or the Executive Director of NYSTRS, within his or her discretion, may require; and

5. Such other information as any such Business Enterprise may deem relevant to or of assistance in determining whether such Business Enterprise is an MWBE within the meaning of these guidelines.

B. Additionally, Business Enterprises providing asset management, brokerage or other financial or professional services with or for NYSTRS are invited to provide the Retirement Board, the following information relating to any position (held by an owner, officer, manager or employee of the Business Enterprise) that the Retirement Board or the Executive Director of NYSTRS, within his or her discretion, may determine necessary, including, but not limited to, with respect to any managing director, managing principal, principal, operating principal, chief financial officer, operating vice-president, vice-president, partner and owner, or equivalent positions, for the accurate identification of a Business Enterprise as an MWBE:

1. 51%-Owned by Minority Group Members or by Women:
   a. Title;
   b. Position;
   c. Ownership percentage;
   d. History of ownership;
   e. History of ownership percentage;
   f. Ethnicity;
   g. Gender; and
h. Length of service.

2. MWBEs Substantially Owned or Operated by Minorities or Women:

   a. Title;
   b. Position;
   c. Ownership percentage;
   d. History of ownership;
   e. History of ownership percentage;
   f. Ethnicity;
   g. Gender;
   h. Length of service; and
   i. The role of individual employees and whether such individual will be performing services with or for NYSTRS and if so, to what extent such performance will occur.

C. Documentation. All information and documentation shall be provided on a form developed by NYSTRS and, pursuant to these guidelines, shall be certified as to accuracy by an Owner or Officer of the Business Enterprise, authorized by the business to make the representations contained thereon. If a Business Enterprise seeks confidential treatment of proprietary business information, such information must be clearly labeled as confidential, and denial of release thereof will occur in accordance with and to the extent permitted by applicable law. The Retirement Board or the Executive Director of NYSTRS, or their designees, may make such inquiries as he, she or they may deem appropriate to determine the accuracy of the information provided, including, but not limited to, in his, her or their discretion, field visits and/or other means of substantiation.

D. Certification of MWBE status. Separate determinations of MWBE status shall be made for Business Enterprises pursuant to subdivisions 1 and 2 of this Paragraph.

1. In determining that a Business Enterprise is at least fifty-one percent owned by one or more minority group members, or at least fifty-one percent owned by one or more women, NYSTRS may rely on bona-fide determinations of state or federal government entities or of the Other Fiduciary-Controlled Entities, or on certified filings with the Federal Securities and Exchange Commission, in addition to the responses submitted by the Business Enterprise.

2. In determining that a Business Enterprise is substantially owned and/or operated by women or minority group members, these guidelines interpret the term “substantially” as meaning at least thirty-three percent (ownership and/or operation). The thirty-three percent shall include at least twenty-five percent ownership by women or minority group members. Each individual counted in determining percentage of ownership or operation may only be counted once (e.g., an owner who is also a senior manager may not be counted as both).
E. Decertification. Any Business Enterprise previously certified as an MWBE which no longer meets the applicable certification criteria shall be decertified. All Business Enterprises certified as MWBEs must promptly inform the Retirement Board or the Executive Director of NYSTRS, or his or her designee, of any changes in ownership, management and/or control that could impact the entity’s MWBE certification.

F. Documentation of determination. In all cases, NYSTRS shall maintain a written record of the reason(s) for its determination and subsequent certification or decertification of an entity’s MWBE status.

G. Finality of determination. All determinations relating to MWBE status made under these guidelines are made solely for the purposes of identification and reporting and for no other purpose. All determinations shall be final and not appealable. However, any Business Enterprise that believes it should be certified as an MWBE is welcome to submit information demonstrating that it is eligible for certification as an MWBE.

H. Submission of false information. Any individual who submits false information on behalf of a Business Enterprise, and/or any Business Enterprise that submits false information, may be barred from doing business with NYSTRS for a period of time based on the nature and extent of the false information. False submissions shall also be reported to appropriate law enforcement entities.

IV. REPORTING. Within 60 days of the end of each fiscal year commencing with the July 1, 2010-June 30, 2011 fiscal year, NYSTRS shall report to the Governor, Legislature and the Chief Diversity Officer of the State of New York on the participation of MWBE firms providing asset management, brokerage or other financial or professional services for NYSTRS.

A. Such Report shall include:

1. A comparative analysis of such activity relative to such activity with all asset managers, financial institutions and professional service providers for the relevant period; and

2. The progress and success of the efforts undertaken during the plan fiscal year in pursuit of these guidelines.

B. Such Report shall be simultaneously published on the NYSTRS website for not less than 60 days following its release to the Governor, Legislature and the Chief Diversity Officer of the State of New York.

C. Such Report shall separately document the utilization of:

1. Entities that are at least fifty-one percent owned by one or more minority group members or at least fifty-one percent owned by one or more women; and
2. Entities that are substantially owned and/or operated by women or minority group members.

V. COOPERATION WITH OTHER FIDUCIARY-CONTROLLED ENTITIES.

In implementing these guidelines, NYSTRS may, in its discretion, utilize or participate in any MWBE certification process established by any Other Fiduciary-Controlled Entity for the purpose of identifying and reporting on MWBE firms providing Asset Management, Brokerage, or other Financial or Professional Services.

A. NYSTRS shall work with the Other Fiduciary-Controlled Entities to create a Database of Business Enterprises certified as MWBEs pursuant to or in a manner consistent with subdivision 3 of section 423-c of the Retirement and Social Security Law.

B. In addition to such advertising as NYSTRS shall implement so that MWBE Asset Managers, MWBE Financial Institutions and other MWBE Professional Service Firms are made aware of the opportunities with NYSTRS, NYSTRS shall periodically, but not less than annually, hold a conference to promote the utilization of MWBE Asset Managers, MWBE Financial Institutions and MWBE Financial and Professional Service Firms. Such conference shall be scheduled and coordinated to the extent reasonably practicable with Other Fiduciary-Controlled Entities.

C. NYSTRS shall meet periodically with the Other Fiduciary-Controlled Entities to discuss best practices and to consider such changes to these guidelines as may be appropriate or advisable.