

Fiscal Year 2018 Investment Plan

September 2017



(This page intentionally left blank)

September 1, 2017

Board of Trustees
State Universities Retirement System
1901 Fox Drive
Champaign, IL 61820

RE: *Fiscal Year 2018 Investment Plan*

Dear Board of Trustees:

The Investment Staff is pleased to provide the SURS Investment Plan for Fiscal Year 2018. This document was developed in order to formalize the strategic plans for the investment portfolio for the coming year and provide transparency of the planning process. The Investment Plan for Fiscal Year 2018 marks the seventh year of the formal plan for the SURS investment program.

The Investment Plan reviews the results of Fiscal Year 2017 and defines the strategy for Fiscal Year 2018 in accordance with the Board-approved asset/liability study and Investment Policy. Since financial markets are dynamic, revisions to the plan may be required and will be communicated to the Board in a timely manner.

The SURS portfolio returned 12.2% during Fiscal Year 2017, net of fees, exceeding the policy portfolio return of 11.7%. Strong relative performance from SURS active managers overall was the primary contributor to the above benchmark return. From a long term perspective, the SURS portfolio has performed well, earning an 8.2% annualized rate of return over the past 25 years, well in excess of both the policy portfolio return and the 7.25% assumed rate of return.

When compared to a universe of other large public funds, the SURS return ranks in the third quartile for the one- and three-year periods and at or above median for the five- and ten-year periods ending June 30, 2017. Asset allocation is the primary determinant of universe ranking. As of June 30, 2017, the defined benefit plan is valued at approximately \$18.0 billion while the Self-Managed Plan (SMP) is valued at approximately \$2.2 billion.

SURS achieved its strategic asset allocation targets during Fiscal Year 2017. The targets were established as a result of the June 2014 asset/liability study. The updated asset allocation resulted in a significant reduction in public equity exposure and introduced emerging market debt, hedge fund-of-funds, and commodities into the portfolio. Other key accomplishments during Fiscal Year 2017 include:

- Significant restructuring of the Investment Policy to better define the active/passive decision making and the investment manager evaluation processes;

- Shift from active to passive management in the TIPS and REITs asset classes;
- Approval of a 5-year private equity funding plan, totaling \$1.7 billion, to continue SURS' longstanding presence in the asset class;
- Commitment of \$50 million to an existing infrastructure manager to continue investment in the asset class;
- Implementation of a portfolio index option overlay strategy, designed to generate incremental income to a passive equity portfolio; and
- Approval of Dimensional Target Date Retirement Funds and the Vanguard Federal Money Market Fund for the Self-Managed Plan line-up.

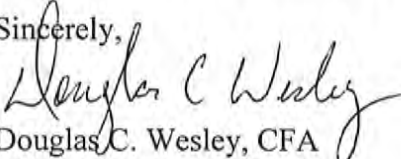
Numerous projects are planned for Fiscal Year 2018, including, but not limited to, the following:

- Completion of an investment consultant search;
- Initiation of an asset/liability study, upon conclusion of investment consultant search;
- Review of the investment procurement process;
- Completion of search for talented U.S. equity managers in the emerging manager space;
- Consideration of non-core fixed income strategies;
- Consideration of private real estate debt and other real estate strategies;
- Implementation of 2017-18 commitments in the private equity portfolio; and
- Education on the hedged strategies portfolio and consideration of potential alternative strategies.

The Manager Diversity Program (MDP), which focuses on investment management firms owned by minorities, females, and persons with a disability (MFDB), continues to be a high priority. As of June 30, 2017, the MDP is valued at approximately \$3.0 billion. In total, assets under management with MFDB firms are approximately \$5.1 billion or 28.0% of the Total Fund.

The Investment Plan for Fiscal Year 2018 contains additional details on Fiscal Year 2017 accomplishments and investment strategies for Fiscal Year 2018. The investment team is focused on successfully completing the projects planned and prudently positioning the portfolio for the future. A long term focus is of utmost importance. I look forward to discussing the *Fiscal Year 2018 Investment Plan* at future meetings.

Sincerely,



Douglas C. Wesley, CFA
Chief Investment Officer

cc: Martin Noven, Executive Director



FY 2018 Investment Plan Table of Contents

| | <u>Page</u> |
|---|-------------|
| I. Purpose..... | 1 |
| II. Overview..... | 1 |
| • Background | |
| • Fiscal Year 2017 Performance Review | |
| • Fiscal Year 2017 Accomplishments | |
| • Challenges | |
| • Trustee Education | |
| • Corporate Governanace | |
| • Investment Management Fees | |
| III. Asset Allocation / Risk Management..... | 8 |
| IV. Fiscal Year 2018 Portfolio Strategies..... | 13 |
| • Total Fund | |
| • Equity | |
| • Fixed Income | |
| • Real Estate | |
| • Private Equity | |
| • Hedged Strategies | |
| • Opportunity Fund | |
| • Commodities | |
| V. Manager Diversity Program..... | 18 |
| VI. Self-Managed Plan..... | 20 |

I. Purpose

The Investment Plan reviews the results of Fiscal Year 2017 and defines the strategy for Fiscal Year 2018 in accordance with the Board-approved asset/liability study and Investment Policy¹. **This Plan is intended to be a living document. Since financial markets are dynamic, revisions to the plan may be required during the year. In the event of changing circumstances or opportunities during the year, items will be discussed with the Board as necessary.**

II. Overview

Background

The State Universities Retirement System (SURS) is the administrator of a cost-sharing, multiple employer public employee retirement system. SURS membership includes employees of the public universities and other affiliated organizations. Currently, SURS membership totals more than 230,000 active, inactive and retired participants. SURS maintains both a defined benefit and a defined contribution plan, known as the Self-Managed Plan (SMP). As of June 30, 2017, the defined benefit plan is valued at approximately \$18.0 billion while the SMP is valued at approximately \$2.2 billion. The investment portfolio is broadly diversified across equities, fixed income, real estate, private equity, commodities and other opportunistic investments. Approximately 43% of the portfolio is currently managed in passive or structured active strategies while the remaining 57% is managed in active strategies.

Fiscal Year 2017 Performance Review

The SURS investment portfolio produced robust returns during Fiscal Year 2017, due primarily to favorable economic conditions and the resulting strong global equity market returns. During FY 2017, the portfolio returned 12.2%, net of fees, exceeding the policy portfolio return by approximately 0.5%. This total fund return exceeded the 11.7% policy portfolio benchmark return. Non-U.S. Equity markets provided the best return during the period, returning 20.5%, as measured by the MSCI All Country World ex-U.S. Index. U.S. equity markets also performed well, with a return of 18.5%, as measured by the Dow Jones Total Stock Market Index. Fixed income markets declined slightly, however, in response to an increase in interest rates during the period since bond prices move inversely to interest rates. The Bloomberg Barclays U.S. Aggregate Index, a broad index of investment grade fixed income securities, returned -0.3% during the fiscal year period. The table below illustrates the performance of the overall SURS investment portfolio relative to the policy portfolio, as of June 30, 2017.

¹ The SURS Investment Policies can be found at <http://surs.org/investment-policies>.

Investment Performance* As of June 30, 2017

| | 1 Year | 3 Years | 5 Years | 10 Years | 20 Years | 25 Years |
|-------------------------|--------|---------|---------|----------|----------|----------|
| SURS | 12.2% | 5.0% | 9.0% | 5.4% | 6.9% | 8.2% |
| Policy Portfolio | 11.7% | 5.1% | 9.0% | 5.4% | 6.8% | 8.0% |

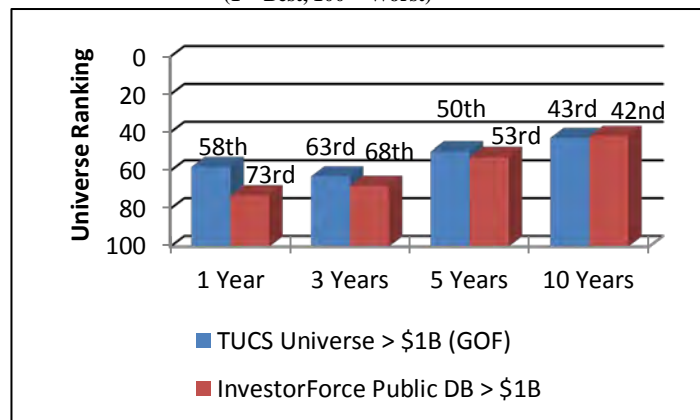
*Net of investment management fees

The Total Fund’s excess return relative to the policy portfolio for Fiscal 2017 was due primarily to strong performance of SURS’ active managers relative to the benchmark. Eight of nine liquid asset classes outperformed the benchmark over the fiscal year, with Global REITs as the lone underperforming liquid asset class, lagging the benchmark by 20 basis points. Global REITs were transitioned from active to passive management in December 2016. Of the private, illiquid asset classes, the real estate portfolio slightly exceeded the benchmark for the year while the opportunity fund portfolio (consisting of infrastructure investments) and the private equity portfolio trailed their benchmarks for the one-year period. The infrastructure portfolio has provided good relative results relative to the benchmark over longer time periods (five years), however. Although private equity provided double digit absolute returns during the year, it lagged the public equity market benchmark, detracting from relative returns during the period. Overall, 89% of the policy allocation outperformed the benchmark for the one year.

From a long term perspective, the SURS portfolio has performed well, earning an 8.2% annualized rate of return over the past 25 years, exceeding both the policy portfolio return and the 7.25% assumed rate of return². In inflation-adjusted terms, the Total Fund returned 5.9% over this time period, exceeding the actuarial real assumed rate target of 4.5% (7.25% less the 2.75% assumed rate of price inflation).

When compared to a universe of other large public funds, the SURS return ranks in the third quartile for the one- and three-year periods and ranks at or above median for the five- and ten-year periods ending June 30, 2017, as illustrated in the chart that follows. Asset allocation is the primary determinant of a fund’s ranking in a peer universe.

SURS Total Fund vs. Public Funds > \$1 Billion
Periods Ending 6/30/17
(1 = Best, 100 = Worst)



² On June 13, 2014, the SURS Board of Trustees approved lowering the System’s assumed rate of investment return to 7.25% from 7.75%. The rate was effective as of June 30, 2014. (July 2, 2015 was the effective date for the change in the Money Purchase Factors.)

Fiscal Year 2017 Accomplishments

The following projects were completed during Fiscal Year 2017.

- **Asset Allocation** – SURS achieved its strategic asset allocation targets in May 2017. The targets were established as a result of the June 2014 asset/liability study conducted by NEPC. The updated asset allocation resulted in a significant reduction in public equity exposure and introduced emerging market debt, hedge fund-of-funds, and commodities into the portfolio.
- **Self-Managed Plan (SMP)** – Target-date fund products containing an income replacement component were reviewed during FY 2017, and the Dimensional Target Date Retirement Income Funds were approved by the Board. In addition, potential replacements for the CREF Money Market Account were reviewed, and the Vanguard Federal Money Market Fund was approved by the Board.
- **Private Equity** – At the June 2017 Investment Committee meeting, the Board approved a five-year private equity funding plan. The funding plan includes annual allocations of:

| Calendar Year | Commitment Amount |
|---------------|------------------------|
| 2017 | \$300 million |
| 2018 | \$300 million |
| 2019 | \$350 million |
| 2020 | \$350 million |
| 2012 | \$400 million |
| Total | \$1,700 million |

Also, at the June 2017 meeting, the Board approved multi-year commitments to Adams Street Partners, Pantheon Ventures and Mesirow Financial Private Equity to implement the funding plan. These commitments, implementation of which will begin in FY 2018, allow for consistent funding by vintage year and further enhance the diversification of the private equity portfolio.

- **Real Estate** – As of June 30, 2017, SURS is near its 10% policy target allocation to real estate. The 10% total policy target is composed of 6% to private real estate and 4% to public Real Estate Investment Trust securities (REITs). During FY 2017, a search was initiated to identify non-core private real estate debt providers. This search, which is expected to result in the commitment of \$60 million in total to two firms, is tentatively scheduled to conclude in September 2017.
- **Infrastructure** – Currently, infrastructure investments are the sole investment in the SURS Opportunity Fund. During FY 2017, SURS committed \$50 million to an existing infrastructure manager to continue investment in this asset class.
- **Portfolio Index Option Overlay** - Implementation of the options overlay manager search was completed, resulting in the funding of Gladius Capital Management in early FY 2017. The search, which was approved by the Board at the September 2015 Investment Committee meeting, was designed to identify qualified providers for portfolio overlay strategies. The strategy, which is housed in the U.S. equity portfolio,

is designed to generate incremental income to a passive equity portfolio. Gladius is a minority-owned firm.

- **Hedged Strategies** – SURS fully implemented the 5% policy target allocation to Hedged Strategies in late FY 2017 with additional allocations to the existing accounts with PAAMCO Prisma.
- **Master Trustee Relationship** – SURS completed an Request for Information (RFI) for the Master Trustee relationship; Northern Trust continued to be retained at a savings of \$188,000 per year.
- **Investment Policy Review and Revision** – SURS completed the annual review and revision of the Investment Policies for both the defined benefit plan and Self-Managed Plan (SMP). The defined benefit policy was significantly restructured during FY 2017, including changes to the active/passive decisionmaking process and the investment manager evaluation process.
- **Investment Policy Implementation** – Implementation of revised active/passive evaluation metrics and manager performance standards has resulted in a reduction of manager count.
 - Move to passive Global REITs – resulting in \$1 million annual savings
 - Reduction in the number of active fixed income managers – resulting in \$300,000 savings annually
 - Move to passive TIPS – resulting in \$1 million per year savings
- **Alternative Investments** – SURS received net distributions of \$37 million from the alternative investments program during calendar 2016, as shown in the following table. In total, the combined alternative investments program made \$227 million in contributions and received \$264 million in distributions during calendar year 2016.

Alternative Investment Cash Flows
Calendar Year 2016

| Asset Class | Cash Distributions (\$MM) | Cash Contributions (\$MM) | Net Flows (\$MM) |
|-------------------------------|------------------------------|------------------------------|---------------------|
| Private Equity | \$ 194 | \$ (116) | \$ 78 |
| Direct Real Estate | 67 | (80) | (13) |
| Infrastructure | 3 | (31) | (28) |
| Total Alternative Investments | \$ 264 | \$ (227) | \$ 37 |

*Totals may not add due to rounding.

- **Commitment to Diversity** – SURS continues to be strongly committed to diversity throughout the investment program. In total, 16 firms owned by minorities, females, or persons with a disability (MFDB) directly manage a total of \$5.1 billion, or 28.0% of the Total Fund, as of June 30, 2017. SURS employs a multi-strategy approach designed to maximize opportunities for qualified firms.

- The Manager Diversity Program (MDP) is a SURS-sponsored initiative designed to identify and provide opportunities to highly successful MFDB investment management firms. Managers in the MDP contract directly with SURS. As of June 30, the MDP totals \$3.0 billion and includes 14 minority- or female-owned investment managers (16 strategies).
 - Increase in MDP assets of approximately \$279 million during Fiscal Year 2017.

- Second, SURS has retained Progress Investment Management (Progress), a minority-owned firm, to serve as a manager of emerging managers. This collaboration with Progress allows SURS to extend its reach into the minority manager universe. As of June 30, the Progress program includes 12 minority- or female-owned investment managers (with 14 mandates) and has total assets of \$428 million. The program includes investments in the non-U.S. equity, core fixed income, and emerging market debt asset classes.
 - Increase in assets with Progress of approximately \$45 million during Fiscal Year 2017.

- It is important to note that SURS' commitment to diversity extends beyond the bounds of the MDP and the Manager of Emerging Managers Program. In addition to the firms previously mentioned, SURS contracts with one other MFDB firm, bringing the total number of MFDB firms in direct partnership with SURS to 16. As mentioned previously, assets managed for SURS by these 16 firms are approximately \$5.1 billion, or 28.0% of the Total Fund, as of June 30, 2017.
 - Increase in total assets with diverse firms of approximately \$907 million during Fiscal Year 2017.

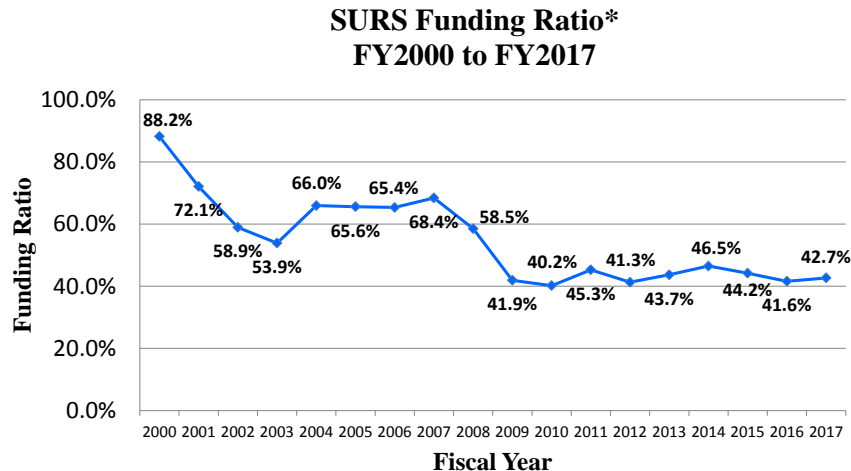
- In November 2016, SURS co-hosted the *Illinois Public Fund Collective on Diversity in Financial Services*. The Collective was a half day gathering of Illinois Public Funds committed to supporting and expanding opportunities for diverse firms. The event was well attended and addressed topics of interest including asset allocation trends, the importance of first-rate trade execution, and the role of consultants in the process.

- Trustee Education – Various educational topics were addressed during FY 2017, including private equity, actuarial stress testing, asset allocation methods, manager dashboards, and hedge funds. In addition, a Trustee Educational Forum was held in February 2017, with additional discussion on hedge funds, the Freedom of Information Act, and proxy research and reporting.

Challenges

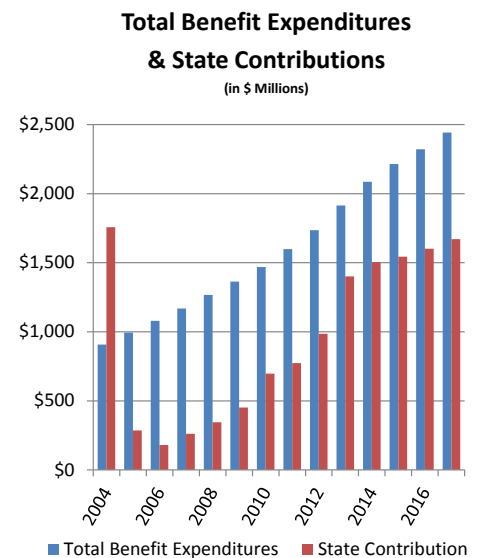
The continuing challenge to SURS remains the funding status of the Plan. Despite strong long term returns, SURS remains substantially underfunded.

- SURS is approximately 42.7% funded, as of June 30, 2017 (using the market value of assets method and a 7.25% return assumption), a slight increase from 41.6% funded, as of June 30, 2016.



*Using market value of assets

- The unfunded liability is estimated to be approximately \$24.2 billion. It is important to note, however, that since FY 2011, SURS has received the full annual statutory contribution from the State of Illinois. The FY 2017 contribution is \$1.67 billion.
- The Plan's cash needs continue to increase. SURS expects to pay approximately \$2.54 billion in benefit payments in Fiscal Year 2018, per the Fiscal Year 2016 actuarial valuation report prepared by SURS' actuary, Gabriel Roeder Smith & Company.



Trustee & Staff Education

SURS strives to provide high quality continuing education for the Board of Trustees and the staff. Educational topics are routinely included on Investment Committee agendas. In addition, longer, more in-depth educational sessions, often facilitated by guest speakers, are provided in periodic Investment Forums. These sessions provide both staff and Trustees the opportunity to expand their investment knowledge and keep current with new trends in the

marketplace. Input is sought from Trustees on topics of interest for future educational sessions. A key focus is on identifying potential investment opportunities that could positively impact the investment portfolio.

Potential educational topics being considered for the coming year include:

- Asset Allocation & Portfolio Strategy
- Hedged Strategies, including Global Macro or Liquid Alternative Strategies
- Private Equity
- Real Estate
- Fixed Income, including Private Credit

Corporate Governance

SURS continues to place a high priority on corporate governance. Proxy voting is one important component of the System's corporate governance responsibilities. During Fiscal Year 2017, SURS conducted a search for a proxy voting services provider. Glass Lewis, a well-regarded expert in this area, was ultimately selected to vote both domestic and international proxies on SURS' behalf. The Board also conducted an annual review and approval of the SURS Proxy Policy Statement.

Additional actions pertaining to corporate governance include membership in the Council for Institutional Investors (CII), a nonprofit organization of more than 120 pension funds, foundations, and endowments with combined assets of approximately \$3 trillion. CII's mission is "to educate its members, policymakers and the public about corporate governance, shareholder rights and related investment issues, and to advocate on members' behalf."

Investment Management Fees

SURS pays close attention to the level of investment management fees paid to its external investment managers. Fees are negotiated with investment managers prior to the commencement of the relationship with SURS and may be subsequently renegotiated, if appropriate, especially in instances where an investment manager receives an additional allocation(s). Fees vary significantly among investment managers, with the services of private markets managers, such as those in real estate, private equity, infrastructure, etc., being generally higher than those of public markets managers.

During Fiscal Year 2017, staff negotiated more favorable fee arrangements with four new and existing investment service providers. In addition, reallocations resulting from a manager termination and a shift from active to passive TIPS and REITs also resulted in more favorable fees for SURS. In aggregate, these fee reductions and asset reallocations are expected to result in approximately \$2.9 million in annual fee savings. In total, SURS paid approximately \$62.7 million or approximately 36 basis points in investment management fees and administrative expenses for Fiscal Year 2017. Total investment management fees for Fiscal Year 2018 are projected to increase by \$4.3 million from Fiscal Year 2017 budgeted fees.

III. Asset Allocation / Risk Management

Asset Allocation

The purpose of the asset allocation policy is to establish an Investment Policy framework for SURS with a high likelihood, in the Board's judgment, of realizing SURS' investment objective.

Over time, the investment portfolio has undergone meaningful change as a result of the availability of new investment strategies and changes in capital market assumptions. The public equity portfolio has become increasingly global in nature. In addition, alternative asset classes, including private equity and real estate, have assumed a more prominent role in the investment program over the past decade.

The most recent asset/liability study was completed in June 2014 with the assistance of NEPC. The purpose of the study was to review the projected financial status of the pension plan over the next several years and to assess the appropriateness of the current asset allocation relative to the expected progress of liabilities and cash flows. The asset mix ultimately selected by the Board is designed to improve the portfolio's risk/return profile by diversifying away from equities into relatively uncorrelated asset classes such as hedged strategies, emerging market debt and commodities. The reduced strategic policy allocation to public equities is a result of lower return expectations in these asset classes after periods of above trend returns. A similar growth profile is expected while downside protection is enhanced.

During FY 2017, SURS achieved its long term strategic policy targets.

Liquidity Considerations

Investment portfolios can benefit from a portion of assets in illiquid investments. However, illiquid investments add another dimension to liquidity management. Liquidity to pay benefits and respond to adverse funding or financial market downturns is critical. As part of the recent asset-liability study, NEPC conducted a liquidity analysis to determine how the SURS investment portfolio would respond to a stressed market scenario. The study projected sound liquidity of the portfolio in the base case environment but acknowledged that, in a stressed case, the Plan would consume a significant portion of liquidity sources over six years. Overall, NEPC determined the SURS portfolio would likely continue to benefit from maintaining diversified exposure to illiquid assets.

Although it is reasonable to plan to receive the statutory contributions from the State, it is important to acknowledge there is a risk of receiving a level of contributions less than the required amount. SURS prospective funding experience will be critical in determining the future financial health of the System.

Strategic Policy Targets

The strategic policy targets resulting from the 2014 asset/liability study are shown in the following table. Using NEPC's 2017 risk and return projections, a passive portfolio composed in such a manner is projected to produce a geometric return of 6.24% over the five to seven year period, falling short of the 7.25% actuarial rate of investment return³. (Note: SURS'

³ On June 13, 2014, the SURS Board of Trustees approved lowering the System's assumed rate of investment return to 7.25% from 7.75%. The rate is effective as of June 30, 2014.

returns have significantly exceeded the actuarial rate of return over the long term, as evidenced by the 8.1% 25-year return). Over the long term, however, the projected return is 7.37%, higher than the return assumption. Also, it is important to note active management is projected to add additional value over and above passive implementation. SURS periodically reviews the actuarial return assumption for reasonableness.

Asset/Liability Study Results

| Asset Class | Strategic Policy % (Approved June 2014) |
|----------------------------|--|
| U.S. Equity | 23% |
| Non-U.S. Equity | 19% |
| Global Equity | 8% |
| Total Public Equity | 50% |
| Core Fixed Income | 19% |
| Emerging Market Debt | 3% |
| TIPS | 4% |
| Total Fixed Income | 26% |
| Private Equity | 6% |
| Real Estate | 6% |
| REITs | 4% |
| Hedged Strategies | 5% |
| Opportunity Fund | 1% |
| Commodities | 2% |
| Total Alternatives | 24% |
| Total | 100% |

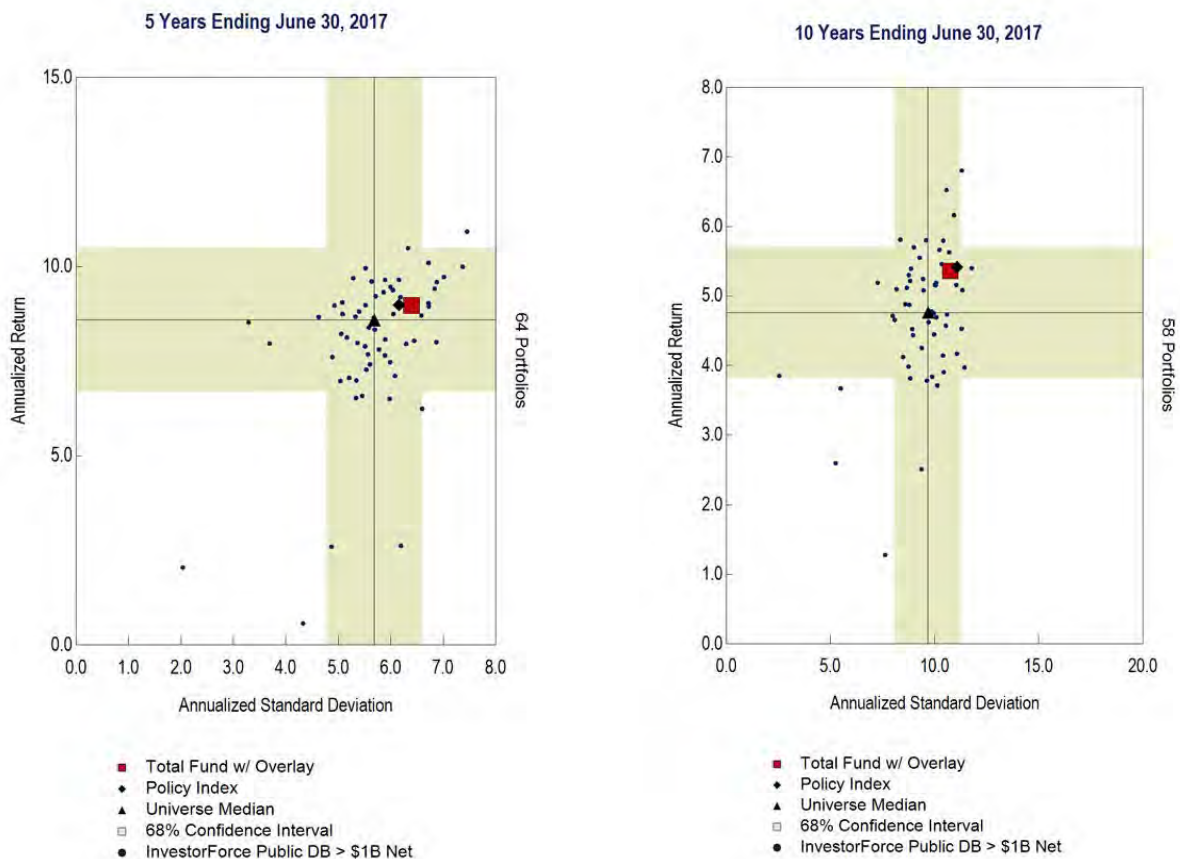
| | |
|-------------------------|--------|
| 5-7 Yr. Expected Return | 6.24% |
| Standard Deviation | 12.41% |
| 30 Yr. Expected Return | 7.37% |
| Sharpe Ratio | 0.36 |

Compared to the return projections using NEPC's 2016 capital market assumptions, the 2017 return projection is slightly lower (6.2% in 2017 vs. 6.4% in 2016). The modest decrease in the return projection is a result of slightly lower return expectations among global equity assets.

Risk Management

Risk is monitored through various forms of analysis and reporting in an attempt to understand risks within the Fund, and to ensure adequate compensation for the level of risk assumed. Analysis will occur at various levels of detail, which include individual manager, asset class and total Fund. In addition to relative performance evaluation, an analysis of diversification, benchmark risk, active risk, total risk, value at risk, and other risk measures will be reported. Analysis will be conducted on an ex-post and ex-ante basis to identify and quantify both forward looking and backward looking risk metrics. Staff will review portfolios, asset classes, and total Fund information on an ongoing basis in order to maintain an understanding of potential risks within the portfolio. Individual manager portfolios or asset classes demonstrating higher than expected levels of risk will be examined in greater detail and any necessary adjustments will be made immediately, or a plan for doing so will be developed. Alternatively, justification for maintaining the exposure will be provided to the Investment Committee. Shown below and on the following pages is a sampling of risk analytics produced by NEPC and The Northern Trust Company, SURS' custodian, to assist SURS in monitoring the risk profile of the Total Fund.

Total Fund Risk and Return



Source: NEPC

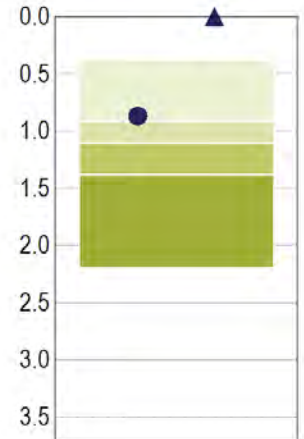
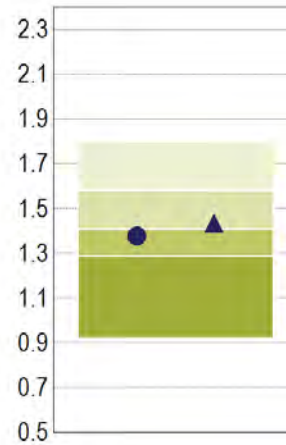
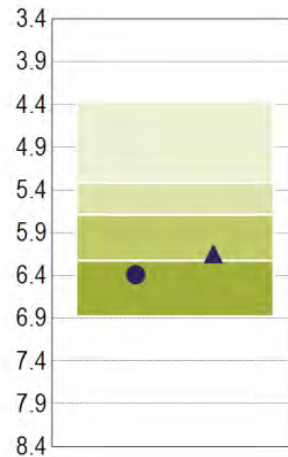
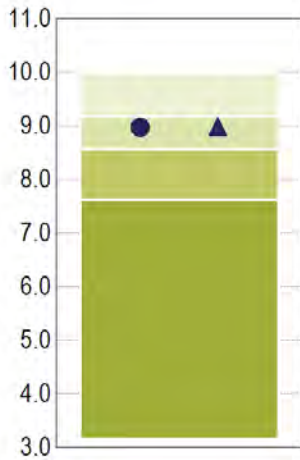
Total Fund vs. InvestorForce Public DB > \$1B Net
5 Years Ending 6/30/17

Anlzd Return

Anlzd Standard Deviation

Sharpe Ratio

Tracking Error



| | |
|-------------------------|------|
| ● Total Fund w/ Overlay | |
| Value | 9.0 |
| Rank | 35 |
| ▲ Policy Index | |
| Value | 9.0 |
| Rank | 34 |
| | |
| Universe | |
| 5th %tile | 10.0 |
| 25th %tile | 9.2 |
| Median | 8.6 |
| 75th %tile | 7.6 |
| 95th %tile | 3.2 |

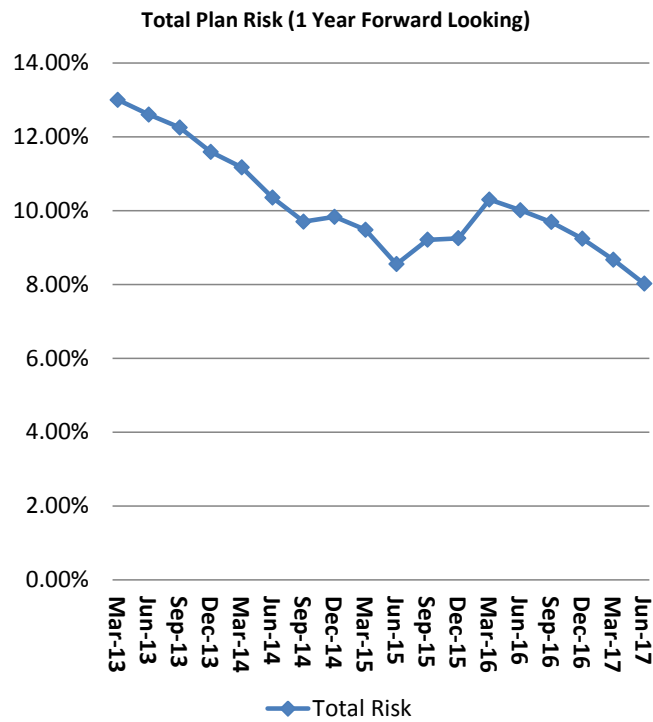
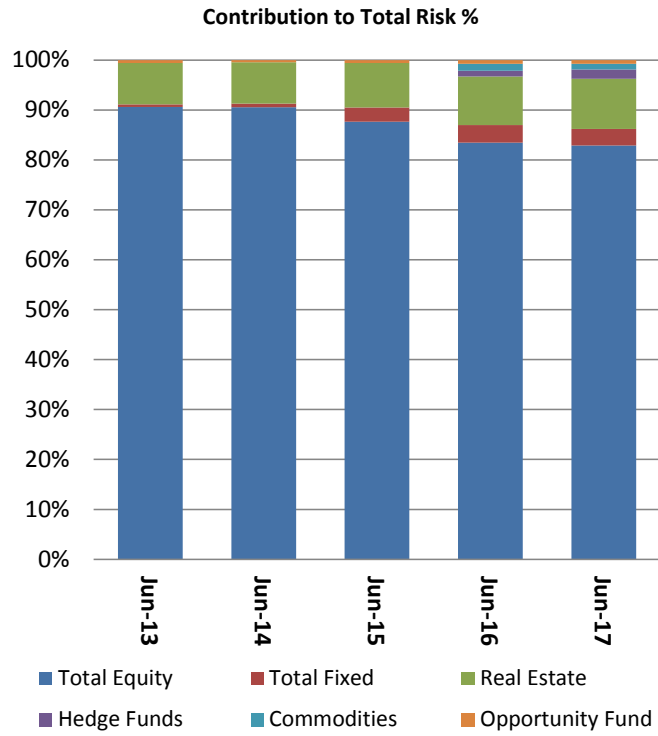
| | |
|-------------------------|-----|
| ● Total Fund w/ Overlay | |
| Value | 6.4 |
| Rank | 81 |
| ▲ Policy Index | |
| Value | 6.2 |
| Rank | 72 |
| | |
| Universe | |
| 5th %tile | 4.4 |
| 25th %tile | 5.3 |
| Median | 5.7 |
| 75th %tile | 6.2 |
| 95th %tile | 6.9 |

| | |
|-------------------------|-----|
| ● Total Fund w/ Overlay | |
| Value | 1.4 |
| Rank | 54 |
| ▲ Policy Index | |
| Value | 1.4 |
| Rank | 48 |
| | |
| Universe | |
| 5th %tile | 1.8 |
| 25th %tile | 1.6 |
| Median | 1.4 |
| 75th %tile | 1.3 |
| 95th %tile | 0.9 |

| | |
|-------------------------|-----|
| ● Total Fund w/ Overlay | |
| Value | 0.9 |
| Rank | 25 |
| ▲ Policy Index | |
| Value | 0.0 |
| Rank | 1 |
| | |
| Universe | |
| 5th %tile | 0.4 |
| 25th %tile | 0.9 |
| Median | 1.1 |
| 75th %tile | 1.4 |
| 95th %tile | 2.2 |

Source: NEPC

Risk Trends and Overview



Source: The Northern Trust Company

IV. Fiscal Year 2018 Portfolio Strategies

Fiscal Year 2018 Total Fund Strategy

The following actions are planned for the coming fiscal year.

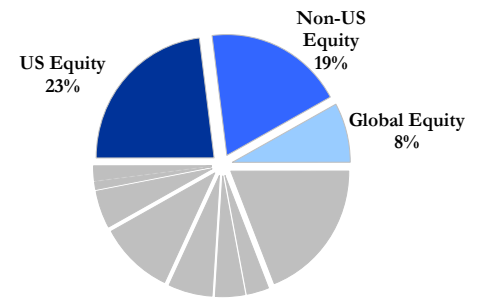
- **Investment Consultant Search** – SURS’ contract with NEPC expires in October 2018. By statute, investment consultant contracts are limited to five years and cannot be extended. A search will be completed during FY 2018 to comply with law. The first order of business for the selected consultant will likely be an asset/liability study.
- **Procurement** – Preliminary discussions have been held regarding an updated investment procurement process. A process change would allow SURS to operate more efficiently and with continued rigor. Additional consideration is scheduled for the September Investment Committee meeting.
- **Board Reporting** – Performance reporting and qualitative manager/strategy information dashboards have been constructed over the past year. Comments regarding the format and content of investment reporting will be considered as updates continue.
- **Investment Policy** – The Investment Policy was last reviewed and approved by the Board at the June 2017 Investment Committee meeting. Additional review will be conducted and potential revisions to the Policy will likely be considered in October 2017.

Ongoing Responsibilities

- **Diversity Initiatives** – SURS will continue to review opportunities in the investment program to consider the utilization of minorities, females and persons with a disability. Investment managers of diversity are always encouraged to participate in the search process if an applicable strategy/mandate is identified.
- **Investment Manager Oversight, Due Diligence and Risk Management** – A critical duty of the investment team and NEPC is to monitor the numerous investment managers under contract with SURS. Each manager plays a role in the success of the overall program and extensive resources are utilized to ensure the strategies are functioning as desired. Risk management monitoring of the program continues to expand and evolve.
- **Fees and Compliance Oversight** – SURS continuously strives to obtain the most favorable fee terms from investment providers. Negotiations and asset reallocations during FY 2017 resulted in annual savings of approximately \$2.9 million. Compliance monitoring efforts includes continuous interaction with NEPC as well as the custodian, Northern Trust.
- **Trustee and staff education** will continue to be a priority during Fiscal Year 2018.

Fiscal Year 2018 Public Equity Strategy

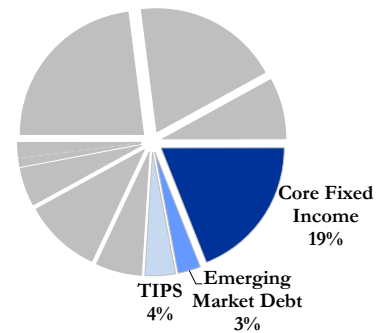
A primary focus in Fiscal Year 2018 will be an effort to identify talented investment managers who can enhance the structure and performance of the portfolio. A search for diverse U.S. equity managers was approved in June 2017 and is tentatively scheduled to conclude in the Fall of 2017. In the aggregate, the public equity portfolio (U.S., non-U.S. and global equity) is 2.2% overweight relative to the strategic policy target.



Continued emphasis will be on monitoring the portfolio and underlying investment managers for performance that meets or exceeds expectations and for compliance with the Investment Policy and investment manager guidelines. NEPC, the general investment consultant for SURS, will assist in the monitoring and strategy efforts.

Fiscal Year 2018 Fixed Income Strategy

A key focus during Fiscal Year 2018 will be a review and reassessment of the core fixed income portfolio to determine the optimal structure in what is likely to be a rising interest rate environment going forward. Potential strategies to be considered include non-core sector allocations such as bank loans, private credit, and other opportunistic strategies. These reallocations would be designed to diversify risk in the fixed income portfolio, specifically shifting a portion of the interest rate risk to credit risk.



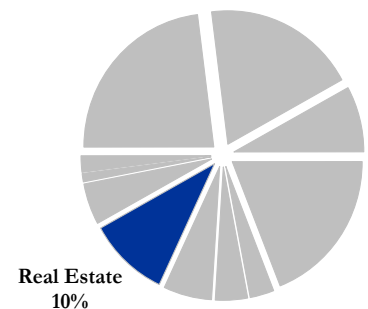
The portfolio will continue to be monitored to ensure that the underlying investment managers meet or exceed expectations for performance as well as compliance with the Investment Policy and investment manager guidelines. NEPC will assist in the monitoring and strategy efforts.

Alternative Strategies

Fiscal Year 2018 Real Estate Strategy

As of June 30, 2017, investments in real estate investment trust securities (REITs) comprise 3.9% of the total portfolio, and investments in private real estate investments total 5.7% of the portfolio. The long-term strategic policy target mix allocates 4% to REITs and 6% to private real estate.

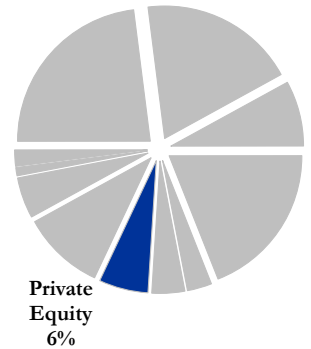
In April 2017, SURS initiated a search for non-core private real estate debt providers. This search, which is tentatively slated to conclude at the September 2017 meeting, is expected to result in the commitment of \$60 million. Other projects slated for the real estate asset class include plans to evaluate opportunities to enhance the existing core real estate portfolio. In addition, staff expects one or more existing non-core real estate General Partners to begin fundraising during FY 2018. Additional commitments to these products may be considered at that time.



Fiscal Year 2018 Private Equity Strategy

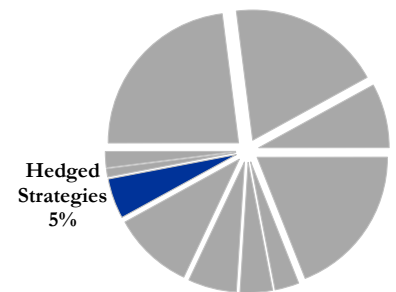
As of June 30, 2017, the private equity portfolio comprises 5.2% of the total portfolio, slightly under the strategic policy target of 6.0%. The private equity portfolio is broadly diversified by vintage year, sub-class and geography.

At the June 2017 Investment Committee meeting, the Board approved a five-year private equity funding plan, totaling \$1.7 billion. Implementation of 2017 commitments is currently underway. Also, at the June 2017 meeting, the Board approved multi-year commitments to Adams Street Partners, Pantheon Ventures and Mesirow Financial Private Equity. These commitments, implementation of which will begin in FY 2018, allow for consistent funding by vintage year and further enhance the diversification of the private equity portfolio.



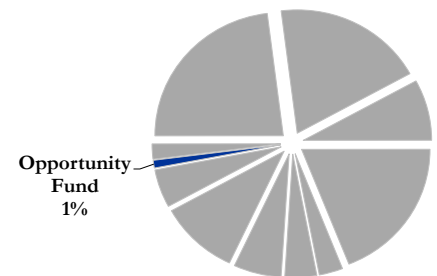
Fiscal Year 2018 Hedged Portfolio Strategy

The 5% strategic policy allocation to hedged strategies was achieved during FY 2017 by increasing the allocations to existing hedge fund-of-fund providers. Planning for an educational “Hedge Fund Day” for the SURS Board is currently underway and is tentatively slated for late 2017. Additional education will be provided during FY 2018 regarding the potential use of Alternative Beta strategies or direct Global Macro strategies as a means of reducing the cost of the hedged strategies portfolio. If desired by the Board, a search will be initiated once the specific parameters are determined.



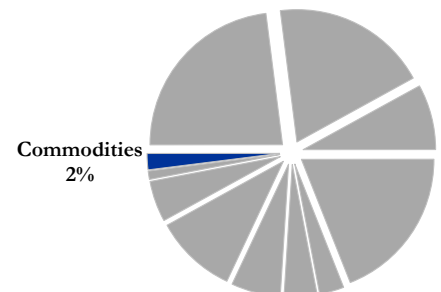
Fiscal Year 2018 Opportunity Fund Strategy

Currently, infrastructure investments are the sole component of the Opportunity Fund. Additional opportunities arising during Fiscal Year 2018 may be brought to the Board’s attention, if appropriate.



Fiscal Year 2018 Commodities Strategy

The strategic policy mix approved by the Board in June 2014 includes a 2.0% strategic policy allocation to commodities. This allocation is one element of the plan to reduce SURS’ public equity exposure and increase the portfolio’s diversification.



Fiscal Year 2018 Cash Overlay Strategy

A cash overlay program was implemented in September 2014. The program is designed to assist the Plan in remaining fully invested consistent with policy targets and to efficiently manage exposure to cash

flows. The overlay program also allows efficient implementation of rebalancing and changes to asset allocation targets.

Projected Timeline

A chart illustrating a projected timeline of the major investment projects slated for Fiscal Year 2018 is shown on the following pages. It should be noted that other projects may arise during the fiscal year, including, but not limited to, potential manager terminations or other ad hoc projects.

V. Manager Diversity Program

Overview

The Manager Diversity Program (MDP) is a SURS-sponsored initiative designed to identify and provide opportunities to highly successful investment management firms owned by minorities, females, and persons with a disability.

Key items of note:

- Developed in 2004 to identify and retain MFDB firms
- Managers contract directly with SURS
- Market Value of \$2.958 billion, as of June 30, 2017
- 5 components:

| Asset Class | Number of MFDB Firms | Market Value* as of June 30, 2017 | Commitment Amount (Private Equity & Real Estate Only) |
|--------------------------|----------------------|-----------------------------------|---|
| U.S. Equity | 4 | \$1,247 million | N/A |
| Core Fixed Income | 4 | \$741 million | N/A |
| Non-U.S. Equity | 3 | \$876 million | N/A |
| Private Equity | 2 | \$50 million | \$150 million** |
| Real Estate | 1 | \$43 million | \$165 million |
| Total | 14*** | \$2,957 million | |

*Totals may not add due to rounding

**An additional commitment of \$100 million to Muller & Monroe was approved in March 2016. Contract negotiations were completed in August 2016.

***14 firms and 16 strategies due to two strategies with one private equity investment manager and two strategies with one real estate manager.

Performance Objectives

The performance objective of the MDP is to seek annualized investment returns, net of investment management fees, in excess of the market goal for 1, 3, 5, and 10 year periods. While individual investment managers may underperform in any given year, the diversification within the program should limit the underperformance at the program level.

Fiscal Year 2017 Performance Review

The MDP fell below its benchmark during Fiscal Year 2017 primarily due to manager underperformance relative to the benchmark in the U.S. equity portfolios and the TIPS portfolios. Two underperforming U.S. equity managers were recently terminated and the two TIPS managers were recently converted to a passive manager. In terms of best absolute performance, the Franklin Templeton EMREFF Real Estate portfolio returned 19.9% versus 10.6% for the benchmark, and the U.S. midcap manager, EARNEST, returned 21.5% versus 15.9% for the benchmark. As a result, the MDP was behind the benchmark for the one-year, but ahead for the three-year, five-year, and since inception time periods.

Investment Performance* As of June 30, 2017

| | 1 Year | 3 Years | 5 Years | Since Inception |
|------------------|--------|---------|---------|-----------------|
| SURS MDP | 12.1% | 4.7% | 8.1% | 6.1% |
| Benchmark | 12.6% | 4.3% | 8.0% | 5.9% |

*Net of investment management fees

Fiscal Year 2017 MDP Accomplishments

As of June 30, 2017, the MDP is valued at approximately \$3.0 billion. A summary of MDP activities follows.

- SURS held a diversity event in November of 2016 bringing together MFDB firms and brokers to a half-day conference in Chicago.
- SURS implemented a portfolio index option overlay strategy with Gladius Capital Management, designed to generate incremental income to a passive equity portfolio.
- SURS recently issued an RFP focused on MFDB firms to provide portfolios in multiple U.S. equity asset classes.
- Implemented a graduation program for MFDB firms from the manager of managers portfolios.

SURS' commitment to diversity extends beyond the bounds of the MDP. In addition to the 14 firms utilized in the MDP, SURS contracts with two additional MFDB firms, bringing the total number of MFDB firms in partnership with SURS to 16. In the most recent Investment Policy, SURS has implemented guidelines for a graduation program for firms in the manager of manager funds to receive direct allocations from SURS. Also, SURS' hedge fund of funds providers are required to allocate at least 20% of each portfolio to MFDB firms.

Assets managed for SURS by these 16 firms are approaching \$5.1 billion, or 28.0% of the Total Fund, as of June 30, 2017.

Fiscal Year 2018 MDP Strategy

Plans for the MDP in FY 2018 include the following:

- Expand industry outreach efforts
- Continue diligent monitoring of the overall program, manager structure, and risk parameters within the program
- Provide a thorough review of the MDP to the Board at the March 2018 Board meeting
- Identify potential opportunities to increase funding for existing qualified investment managers
- Continued interaction with system consultant, NEPC, via more frequent discussions regarding MFDB investment managers

VI. Self-Managed Plan

Overview

The Self-Managed Plan (SMP) is a defined contribution option available to SURS members. The SMP has grown steadily since the plan's inception in April 1998. To date, over 31,900 members have participated in the plan. Highlights of the plan include:

- Approximately \$2.16 billion in assets as of June 30, 2017 (including the SMP forfeiture and disability reserves of more than \$104 million)
- One Lead Administrator
 - Fidelity Investments
- Two Service Providers
 - Fidelity Investments (\$1.2 billion in assets)
 - TIAA (\$0.8 billion in assets)
- 27 investment options as of June 30, 2017
 - Includes series of lifecycle funds in both TIAA and Fidelity lineups
- Over 20,400 Participants currently invested

Fiscal Year 2017 SMP Accomplishments

- During fiscal year 2017, SURS continued to utilize and monitor investment options with the lowest cost share classes available in the SMP as a means to reduce participant cost and potentially enhance investment returns.
- Target-date fund products containing an income replacement component were reviewed and the Dimensional Target Date Retirement Income Funds were approved by the Board.
- Potential replacements for the CREF Money Market Account were reviewed and the Vanguard Federal Money Market Fund was approved by the Board.

Fiscal Year 2018 SMP Strategy

Statute requires SURS utilize between two and seven service providers in the SMP. Given the diversity and number of investment options in the SMP, there are no plans to expand the offerings; however, changes may be recommended in order to eliminate duplication of similar offerings, omit weak performing options, provide lower cost options and adjust the allocation between active and passive strategies. Also, SURS takes into consideration that the SMP is a primary retirement plan, as well as participant inquiries and requests, when determining what funds to potentially include in the lineup.

Plans for the SMP in FY 2018 include the following:

- Continue diligent monitoring of the overall program, providers and investment options
- Provide a thorough review of the providers, investment options and fees at the April 2018 Board meeting
- Continue interaction with investment consultant NEPC via frequent discussions regarding the SMP
- Implement the Dimensional Target Date Retirement Income Fund series, effective August 31, 2017
- Replace the CREF Money Market Account with the Vanguard Federal Money Market Fund, effective August 31, 2017
- Transfer the Fidelity Freedom Index Funds from the Investor Class to the lower cost Institutional Premium Class