Public Backgrounder

Teacher Retirement System of Texas SAA Study (July 2019)

What is the SAA Study and why is it important?

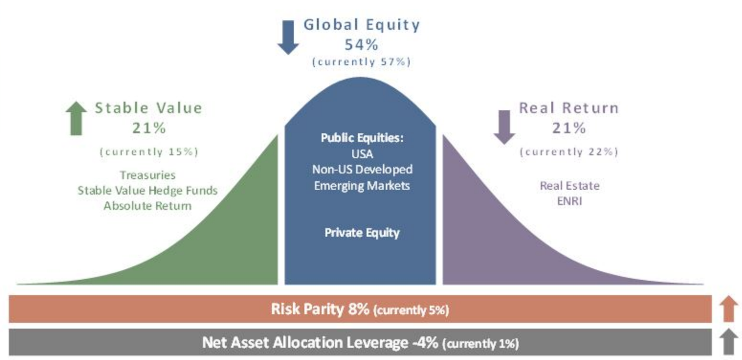
TRS' Strategic Asset Allocation (SAA) Study refines the Trust's target allocation to various asset classes that are aimed at helping the Investment Management Division (IMD) achieve the Trust's stated long-term objectives. Overseen by the Board's Investment Management Committee, the IMD researches and develops recommendations for Board discussion and approval via its Study.

The Study approved at the Board level will result in changes that are implemented in the Investment Policy Statement while also defining benchmarks for various asset classes.

How do the SAA changes break down by asset class?

	Current	Proposed	Change
USA	18%	18%	-
Non-US Developed	13%	13%	-
Emerging Markets	9%	9%	-
Directional Hedge Funds	4%	0%	-4%*
Private Equity	13%	14%	+1%
Total Global Equity	**57%**	**54%**	**-3%**
US Treasuries – Long	11%	16%	+5%
Stable Value Hedge Funds	4%	5%	+1%
Total Stable Value	**15%**	**21%**	**+6%**
Real Estate	14%	15%	+1%
US TIPS	3%	0%	-3%
ENRI	5%	6%	+1%
Total Real Return	**22%**	**21%**	**-1%**
Risk Parity	**5%**	**8%**	**+3%**
Investment Exposure	**99%**	**104%**	**+5%**
Cash	1%	2%	+1%
Asset Allocation Leverage	0%	-6%	-6%
Net Asset Allocation Leverage	**1%**	**-4%**	**-5%**

*Directional Hedge Funds incorporated into Public Equity



When will transitions happen?

In an effort to minimize market impact, diversify entry and exit points, and to ensure operational infrastructure supports changes, asset classes will gradually transition to the new policy target over the six months following the expected Board adoption in September. Implementation will begin October 1.

Public Backgrounder

Will TRS be changing its allocation to Hedge Funds?

The board-approved SAA plan does not alter the size of the Trust's investment in Hedge Funds, currently 8% of total Trust. The Stable Value Hedge Fund portfolio will be increased by 1% to 5%. Directional Hedge Fund allocation will shrink to approximately 3% of total assets.

How will changes to Hedge Fund portfolios allow TRS to be <u>more efficient</u>?

The hedge funds in the Directional strategy will be primarily incorporated within two Global Equity portfolios (USA, Non-US Developed) and benchmarked to equity indices. This allows TRS to be more efficient with the Trust's capital and make sure full equity exposure is achieved with fewer dollars invested.

How will the changes help give the Fund <u>more balance</u>?

The largest element of risk in the Trust's asset allocation is exposure to equity markets. Increasing those assets in the Trust that are less exposed to equity risk (such as U.S. Treasuries and Stable Value Hedge Funds) makes the Trust's asset mix less volatile. Combining the less volatile asset allocation with use of leverage will improve returns at an expected volatility in line with what existed before the changes.

What is 'Risk Parity' in TRS' Allocation Diversification Framework? (represented by the orange bar in the Diversification Framework graphic above)

Standard investment portfolios are very equity risk-heavy, meaning the returns are highly sensitive to the stock market. The asset allocation strategy of Risk Parity (which has been part of TRS' allocation since 2014) involves responsibly reducing that risk by investing in other diversifying assets, such as bonds and commodities. These additional assets are sensitive to different economic drivers than the stock market.

How does TRS intend to use leverage in the new SAA? (represented by the gray bar above)

Leverage allows TRS to invest in a more balanced portfolio of assets without sacrificing returns. This is a more prudent approach to improving returns than simply concentrating the portfolio in the riskiest assets with the highest expected return (such as stocks).

Public Backgrounder

Why is the Net Asset Allocation Leverage allocation moving from 1% to minus 4%?

Net Asset Allocation Leverage is the value of the Trust less investment exposures. The use of leverage is expressed as a negative number. Under the newly-approved asset allocation, the target investment exposures will be 100% Net Asset Value (NAV) minus 104% investment exposure.

TRS' SAA Study: the process

February 2019: TRS' Board of Trustees formally began its review process of long-term objectives with an examination of market conditions, the System's risk tolerance as well as a comparison of peers. Internal work commenced earlier in 2018 with SAA research projects and surveys of external partners to aggregate and analyze capital market assumptions and related research. Other work included reviews on liability, liability risks and actuarial assumptions.

April: the SAA Study team conducted a review of which asset classes to add or eliminate, compared alternate portfolios and finalized forward-looking Capital Market Assumptions (CMAs).

July: The process included a review of benchmarks, Alpha assumptions, currency considerations, active vs. passive, internal vs. external and risk tolerance & budgeting.

July: At its July 18/19 meeting, the Board of Trustees reviewed SAA Study conclusions and recommendations before voting to adopt policy weights.

September: The Board (and its Policy Committee) will be tasked with reviewing and recommending adoption of any target changes to Investment Policy regarding benchmarks, ranges and any other changes.

Q4 2019–Q1 2020: TRS staff will execute any changes as well as undertake ongoing Compliance monitoring of new targets and ranges over time.

For further information on the TRS 2019 SAA Study, please see the associated public presentation presented to the Board of Trustees' Investment Management Committee at its July 18/19 meeting.

# # #