

# WRS Assumed Rate of Investment Return

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# WRS Assumed Investment Rate of Return

- Set by state law, but ETF Board may change based on recommendation of WRS actuary.
- Current rate:       Active Liability = 7.2%  
                          Retired Liability= 5.0%
- All assumptions used to value liabilities must be studied in depth every 3 years
  - Goal: Reflect changes in basic trends, but avoid changes based on random year-to-year fluctuations
  - Goal: Recognize long-term nature of liabilities and investment horizon
- Next study in 2018 based on 2015, 2016 & 2017 experience

# WRS Assumed Investment Rate of Return

- Investment Rate of Return Assumption has largest impact on actuarial valuation results
- Actuary starts with current approximation of asset allocation and capital market assumptions of various (8) investment consultants
- Actuary calculates expected geometric and expected arithmetic return averages
- Actuary reviews near-term and long-term expectations of SWIB's investment consultant
- Actuary applies judgement to determine reasonableness of assumptions going forward

# A Strong, Steady Economic Pillar for Wisconsin

*Michael Williamson, Executive Director*

*Scott Anderson, Managing Director of Asset & Risk Allocation*



# Today's Agenda

- Who we are & what we do
- Wisconsin Retirement System Performance
- Investment Strategy
- Managing Risk



# What is SWIB?



# Unique Asset

- State agency created in 1951
- Responsible for managing the trust funds of the Wisconsin Retirement System (WRS), State Investment Fund (SIF), & several other smaller trust funds
- Recognized as a premier investment organization managing over \$115 billion

# Governance

- Board of Trustees consists of nine members
- Each meets specific membership requirements outlined in state statutes
- Trustees have a fiduciary duty
- Responsibilities include establishing:
  - Asset allocation
  - Investment guidelines
  - Performance benchmarks
  - Setting budget
  - Establishing a compensation system



# Investment Strategy

| Watch         | Bids   | Ask    | Time     |
|---------------|--------|--------|----------|
| S&P 500 Index | 991.04 | -0.33% | 10:00 AM |
| S&P 500 15    | 987.1  | -0.20% | 10:00 AM |



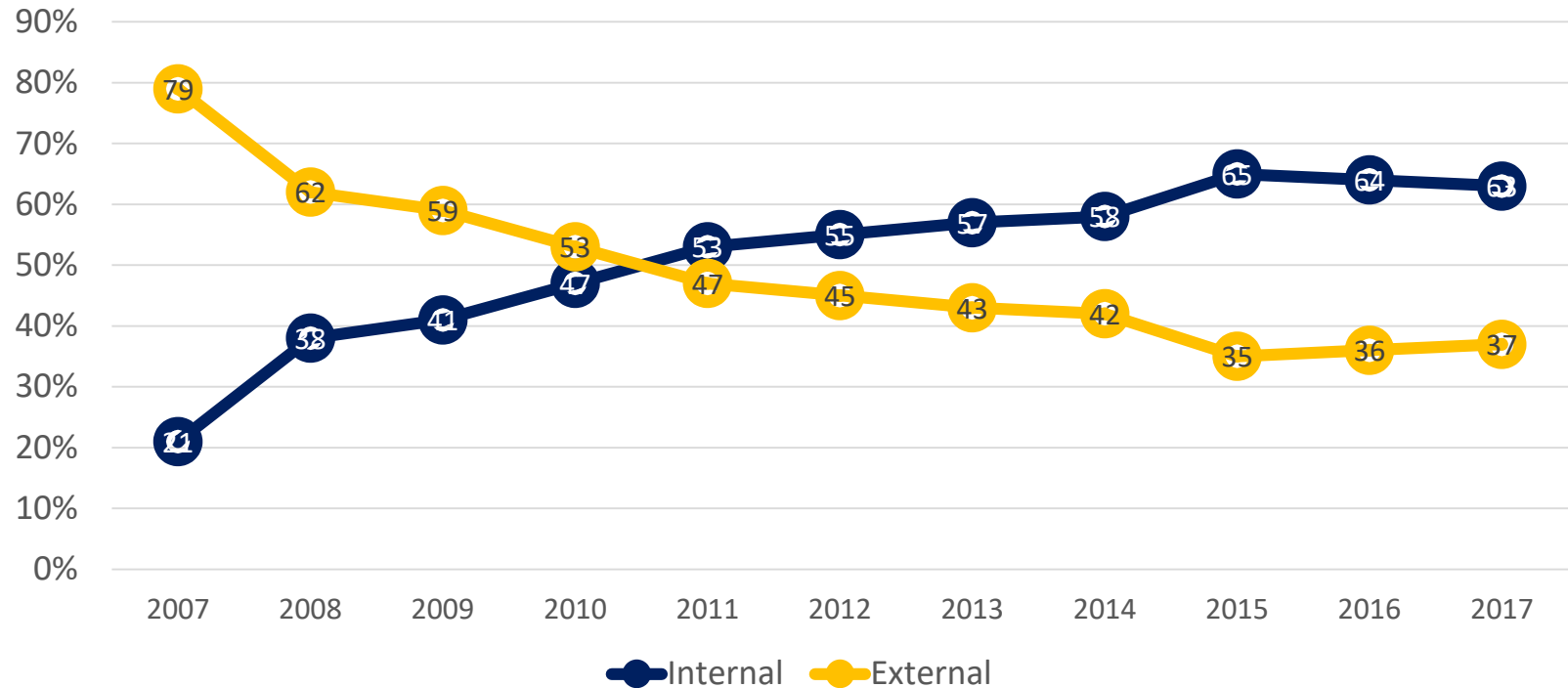
|           |        |        |          |
|-----------|--------|--------|----------|
| DAX Index | 519.45 | -0.31% | 10:00 AM |
|-----------|--------|--------|----------|

# Protecting & Growing the WRS

*Make Money, Manage Risk & Control Cost*

- Our strategy is disciplined, balanced, & focused on long-term results
- WRS is one of two fully funded public pension plans in the country.
- We invest first to protect the WRS from a major downturn & then to earn reasonable returns

# Internal vs. External Management



Percentages shown as of September 30, 2017

# Performance Update – Core Fund

*Preliminary as of Sept. 30, 2017\**

**11.9%**

Benchmark: 11.4%

**5-Year**

**8.3%**

Benchmark: 7.9%

**10-Year**

**5.4%**

Benchmark: 5.1%

**20-Year**

**6.9%**

Benchmark: 6.5%

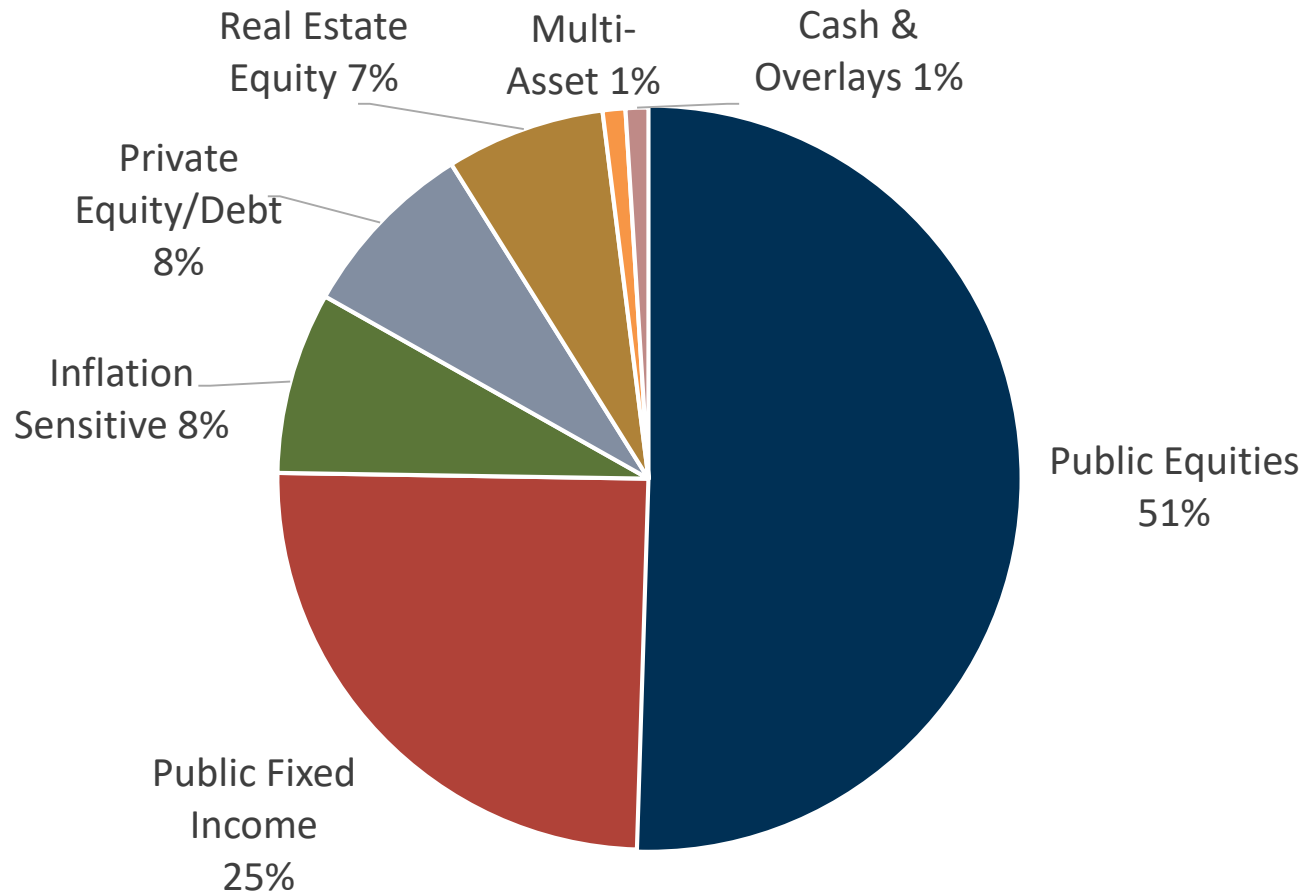
\*PRELIMINARY – Estimated returns, subject to final portfolio and benchmark valuations.

# Core Fund Historical Returns

| Year  | Benchmark | Return |
|-------|-----------|--------|
| 2017* | 11.4%     | 11.9%  |
| 2016  | 7.9%      | 8.6%   |
| 2015  | -0.3%     | -0.4%  |
| 2014  | 5.6%      | 5.7%   |
| 2013  | 12.9%     | 13.6%  |
| 2012  | 12.8%     | 13.7%  |
| 2011  | 0.9%      | 1.4%   |
| 2010  | 12.2%     | 12.4%  |
| 2009  | 19.9%     | 22.4%  |
| 2008  | -24.8%    | -26.2% |

\*PRELIMINARY – Estimated returns, subject to final portfolio and benchmark valuations.

# Core Fund Asset Allocation



Market value as of June 30, 2017.

# Asset Class Assumptions

| <b>Asset Class</b>         | <b>Long Term<br/>Expected Return</b> | <b>Standard<br/>Deviation</b> |
|----------------------------|--------------------------------------|-------------------------------|
| Global Equity              | 8.2%                                 | 18.0%                         |
| Total Fixed Income         | 4.2%                                 | 6.0%                          |
| Inflation Sensitive Assets | 3.8%                                 | 6.5%                          |
| Private Equity/Debt        | 9.4%                                 | 19.7%                         |
| Real Estate                | 6.5%                                 | 15.0%                         |
| Multi Asset                | 6.5%                                 | 10.4%                         |
| Active Return              | 0.60%                                | 1.2%                          |

# Asset Allocation

|                              | <b>Current Policy<br/>Portfolio</b> | <b>Reference<br/>Portfolio</b> |
|------------------------------|-------------------------------------|--------------------------------|
| Global Equity                | 50.0%                               | 60.0%                          |
| Total Fixed Income           | 24.5%                               | 40.0%                          |
| Inflation Sensitive Assets   | 15.5%                               | 0.0%                           |
| Private Equity/Debt          | 8.0%                                | 0.0%                           |
| Real Estate                  | 8.0%                                | 0.0%                           |
| Multi Asset                  | 4.0%                                | 0.0%                           |
| <i>30 Yr Expected Return</i> | <i>7.3%</i>                         | <i>6.5%</i>                    |
| <i>Standard Deviation</i>    | <i>11.8%</i>                        | <i>11.9%</i>                   |
| <i>Sharpe Ratio 5-7 Yr</i>   | <i>0.37</i>                         | <i>0.28</i>                    |
| <i>Active Risk</i>           | <i>1.2%</i>                         | <i>1.2%</i>                    |

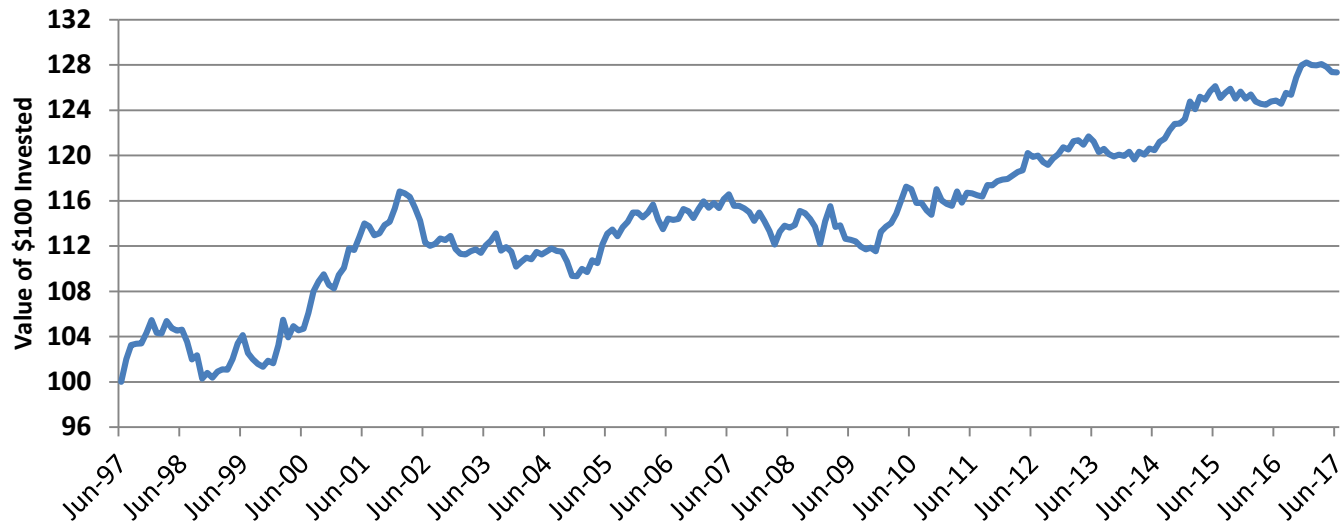
- *The policy portfolio provides additional diversification and a higher return when compared to the reference portfolio.*



# Policy Portfolio Adds 27% with Less Risk

*Over 20 years*

**Policy Benchmark versus Reference Portfolio  
July, 1997 to June, 2017**



| <b>Gross of Fees</b>       | <b>1 Year</b> | <b>Five Years</b> | <b>10 Years</b> | <b>20 Years</b> |
|----------------------------|---------------|-------------------|-----------------|-----------------|
| <b>Policy Benchmark</b>    | 10.97%        | 8.04%             | 5.03%           | 6.65%           |
| <b>Reference Portfolio</b> | 8.79%         | 6.75%             | 4.11%           | 5.37%           |
| <b>Excess Return</b>       | 2.18%         | 1.30%             | 0.93%           | 1.28%           |
| <b>Policy Risk</b>         | 3.6%          | 5.6%              | 9.9%            | 9.3%            |
| <b>Reference Risk</b>      | 5.1%          | 6.6%              | 10.9%           | 10.0%           |

# SWIB STATE OF WISCONSIN INVESTMENT BOARD