



# SWIB Update

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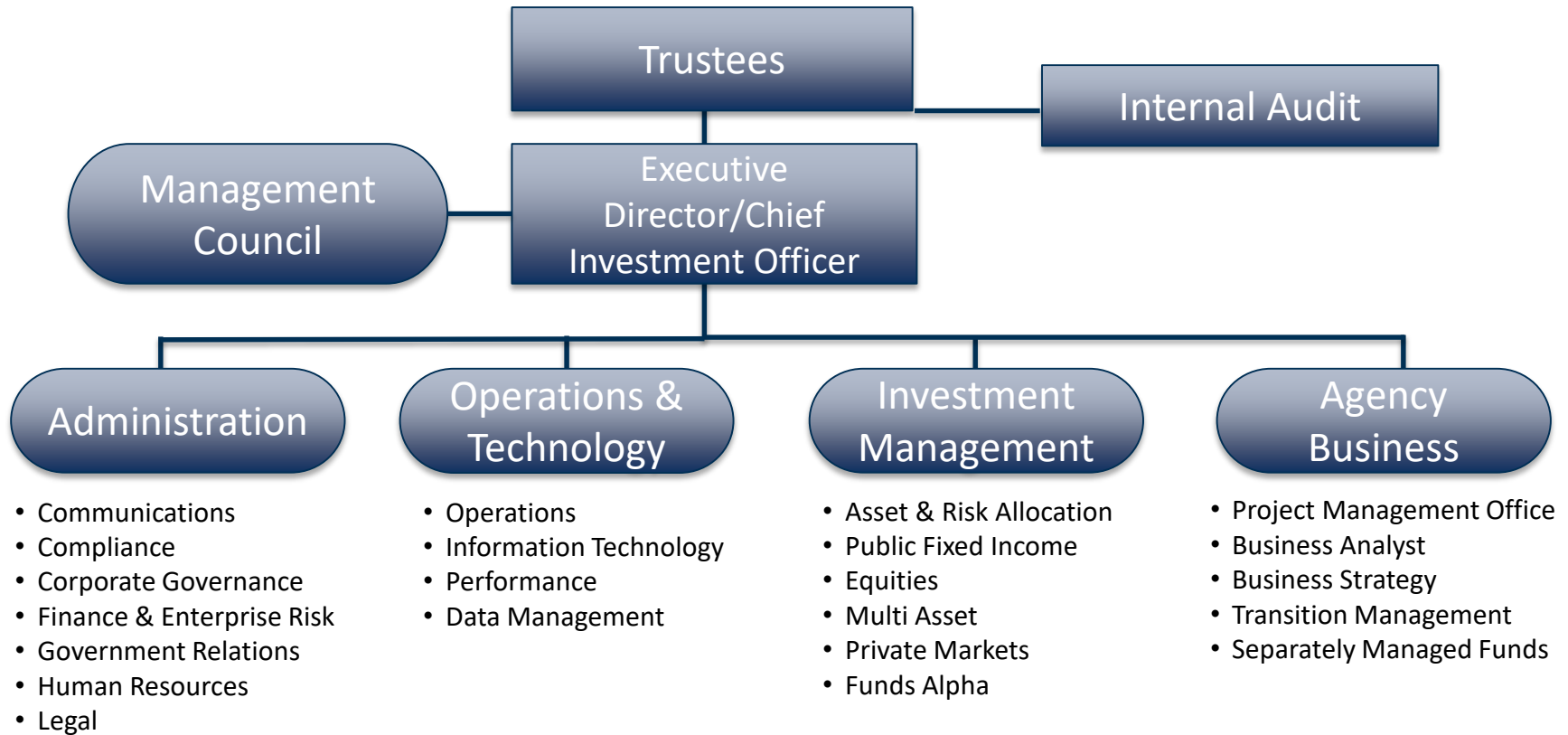
# Agenda

- Organizational Structure
- Performance
- Asset Allocation
- Peer Cost Comparison
- Questions

# Organizational Structure



# SWIB Organizational Structure



# Performance



# 2018 Gross Performance – Core Fund

*Year-to-Date as of December 31, 2018*

**-3.3%**

Benchmark: -3.5%

**3-Year**

**6.9%**

Benchmark: 6.5%

**5-Year**

**5.2%**

Benchmark: 4.9%

**10-Year**

**8.8%**

Benchmark: 8.2%

# 2018 Gross Performance – Variable Fund

*Year-to-Date as of December 31, 2018*

**-7.9%**

Benchmark: -7.8%

**3-Year**

**7.9%**

Benchmark: 7.8%

**5-Year**

**5.9%**

Benchmark: 5.9%

**10-Year**

**11.7%**

Benchmark: 11.3%

# First Quarter Gross Returns

*Preliminary as of March 31, 2019*

## Core Fund

**8.1%**

Benchmark: 8.0%

## Variable Fund

**13.0%**

Benchmark: 13.0%



# Funding Levels Impact Effective Rate of Return

*Peer group comparisons should incorporate funding levels to better understand performance and a fund's effective rate of return.*

Funding Level	Investment Return	Effective Rate of Return on Liability
100%	7%	7%
70%	7%	4.9%

When a plan is not fully funded, its effective rate decreases because all of the assets needed to fund the liability are not available to earn investment returns. 75% of the income needed to fund the WRS comes from investment returns.

# Achieving Investment Goals with Less Risk

*Midwest Peer Group Comparison as of June 30, 2018*

Public Pension Plan <sup>1</sup>	Funded Ratio <sup>2</sup>	Net 5-yr Returns (6/30/18)	Target Rate	5-Yr Effective Rate <sup>4</sup>
Wisconsin Retirement System—Core Fund	102.9%	7.63%	7.20% <sup>3</sup>	7.85%
Minnesota State Board	81.8%	9.50%	7.50%	7.77%
Ohio State Teachers Retirement System	77.3%	9.26%	7.45%	7.16%
Ohio Public Employees Retirement System	84.9%	8.37%	7.50%	7.10%
Iowa Public Employees Retirement System	83.6%	8.22%	7.50%	6.87%
Michigan Public School Employees' Retirement System	64.0%	10.20%	7.50%	6.52%
Indiana Public Retirement System	66.5%	6.30%	6.75%	4.19%
Illinois Teachers' Retirement System	40.0%	8.30%	7.00%	3.32%
Illinois State Employee Retirement System	34.6%	8.10%	7.00%	2.80%
<b>Weighted Averages for 8 Peers (excluding SWIB)</b>	<b>67.4%</b>		<b>7.36%</b>	<b>6.27%</b>

<sup>1</sup>The majority of the information other than the 6/30/18 assets under management and returns was taken from the plan CAFR dated between 9/30/17 - 6/30/2018.

<sup>2</sup>Ratio of Fiduciary Net Position to Total Pension Liability.

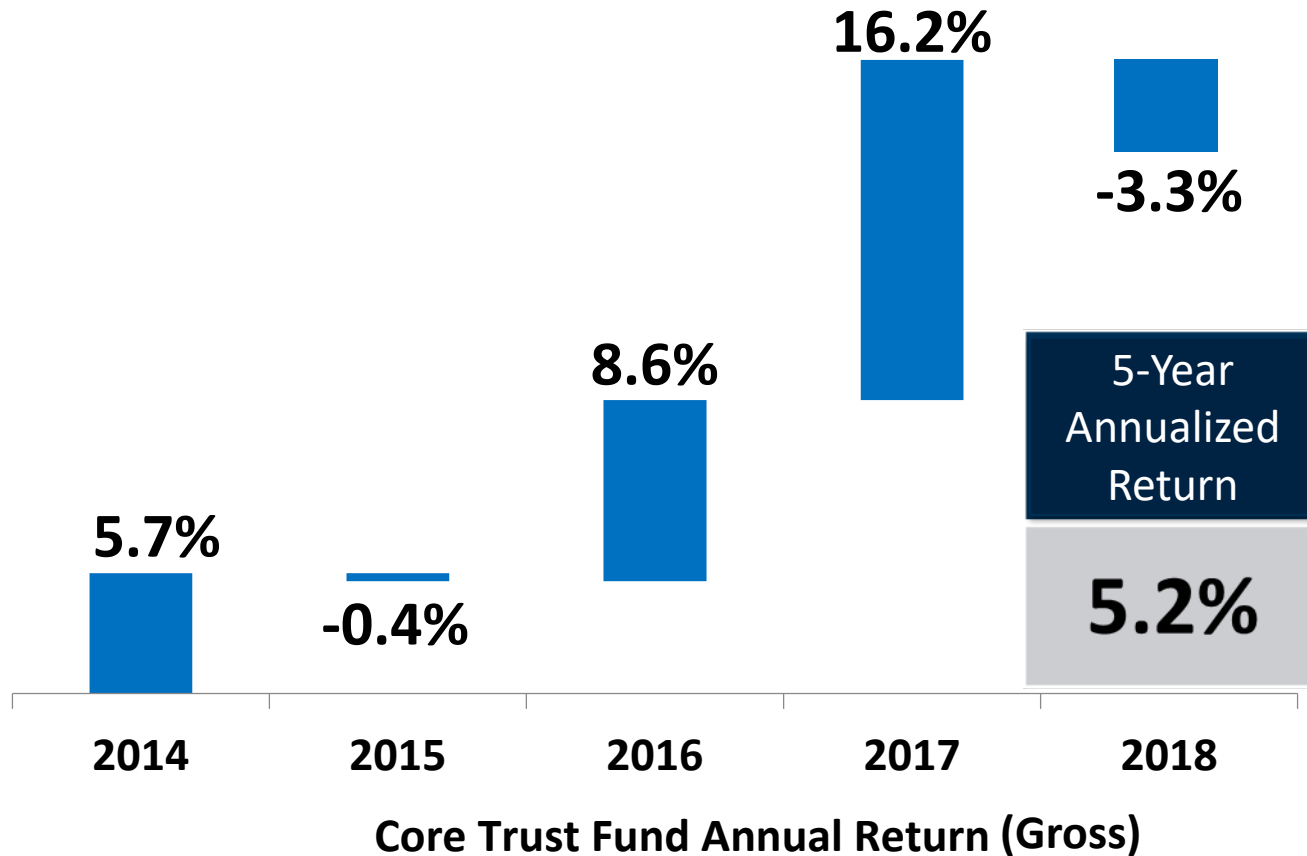
<sup>3</sup>In December 2018, the ETF Board reduced the assumed rate of investment return from 7.2% to 7.0%.

<sup>4</sup>Funded Ratio multiplied by Net 5-year Returns.

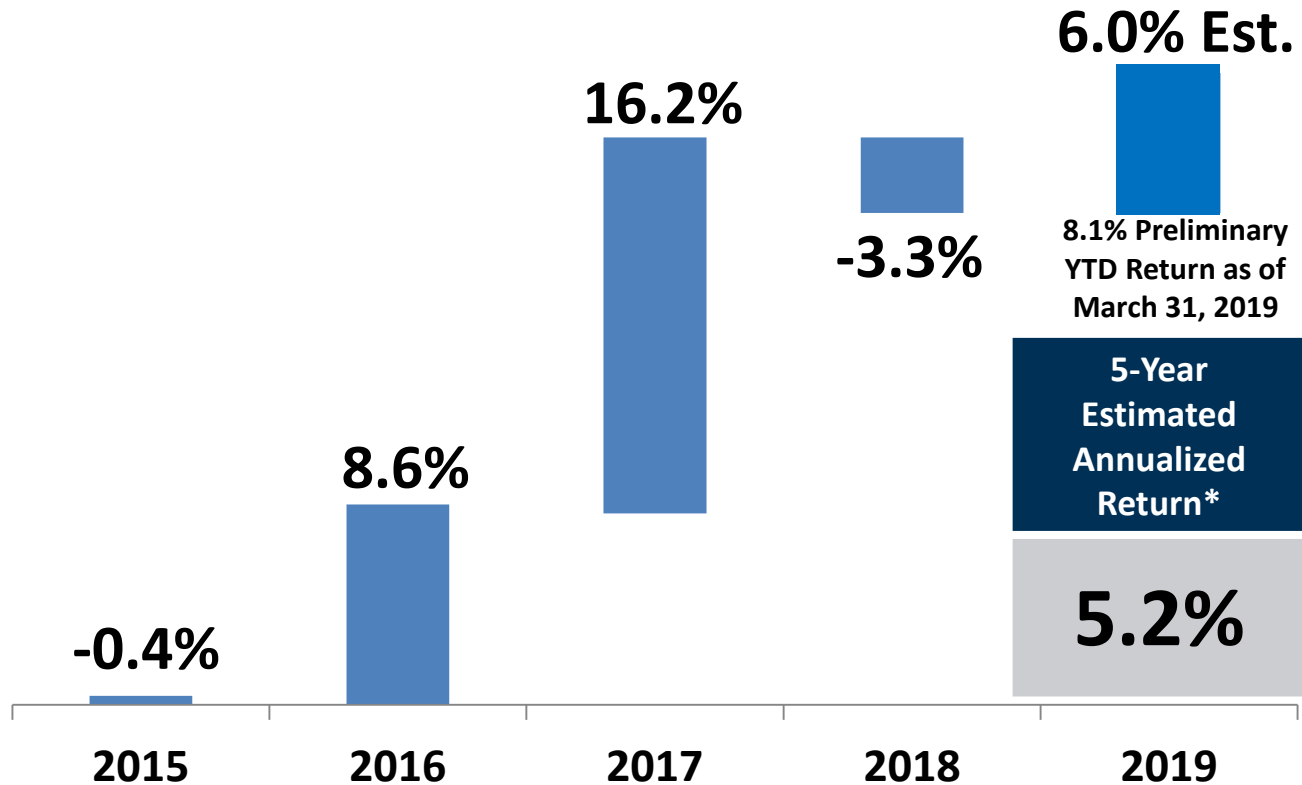
# Asset Allocation



# 2018 CTF 5-Year Return Decomposed



# 2019 CTF 5-Year Return - ?

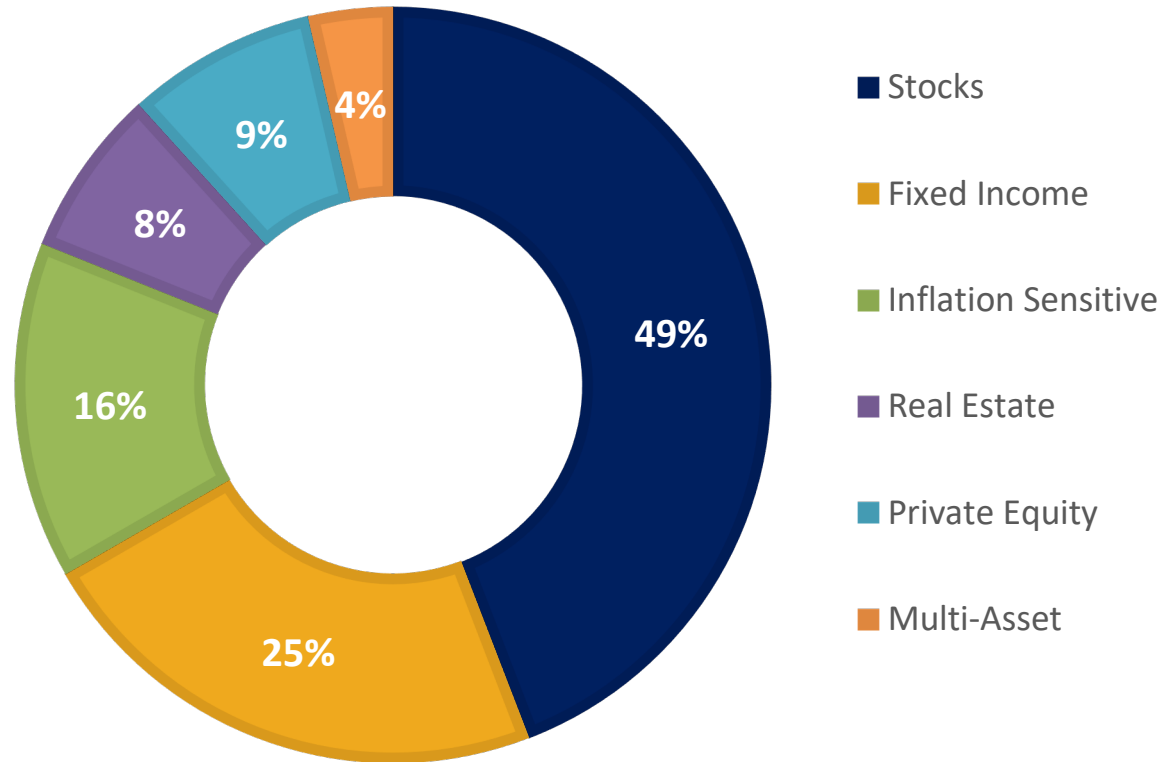


## Core Trust Fund Annual Return (Gross)

Source: SWIB; 5-year Annualized Return is forecast using NEPC's 6.0% policy portfolio assumptions for 2019 (gross of fees).

# Core Fund Asset Allocation Targets

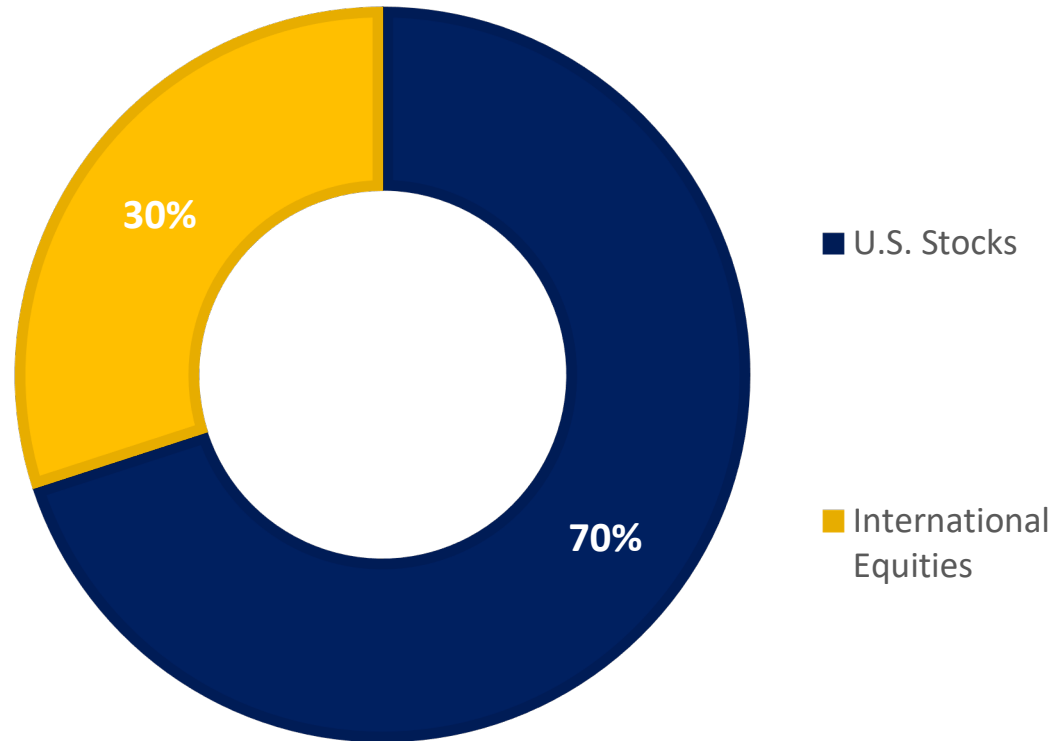
2019



Totals exceed 100% due to SWIB's overall leverage of Core Fund assets.  
SWIB's actual asset allocation may vary up to +/- 6% from the targets shown above.

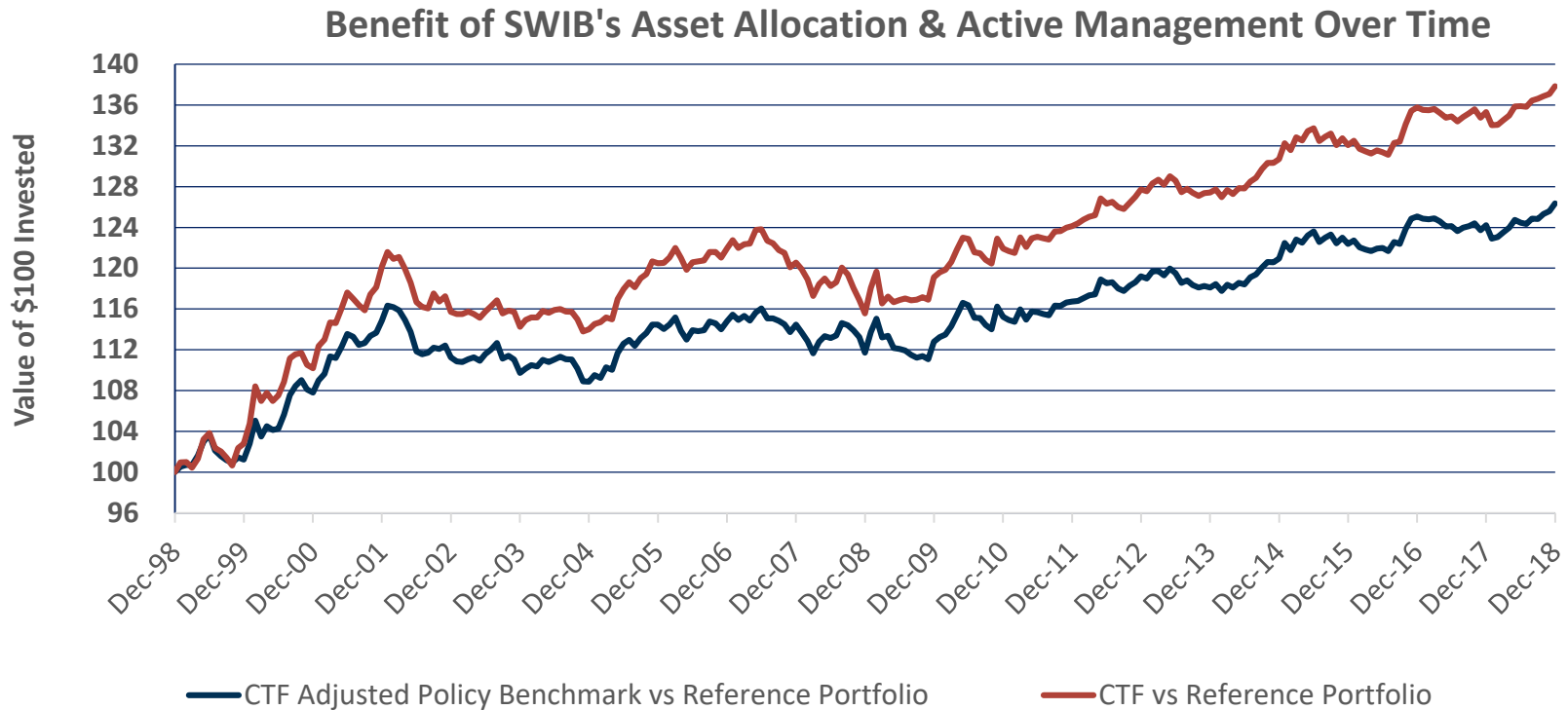
# Variable Fund Asset Allocation Targets

2019



# CTF Performance vs. 60/40 Reference Portfolio

*December 1998 to December 2018*



- CTF Adjusted Policy Benchmark outperforms Reference Portfolio by 26% over 20 years, equivalent to about +\$30.4 billion of excess value added.
- CTF outperforms Reference Portfolio by 38% over 20 years, equivalent to approximately +\$43.8b of excess value added with \$13.4b of excess value added due to active management.  
(Based on CTF market value as of December 1998 assuming no contributions or withdrawals)



# Active Return Enhances Total Return

<b>5-7 Years</b>	<b>Return Contribution</b>	<b>Risk</b>
Current Policy Portfolio	6.0%	11.8%
Active Return	0.3% to 0.8%	0.6% to 1.8%
Total	6.3% to 6.8%	12.0% to 12.4%

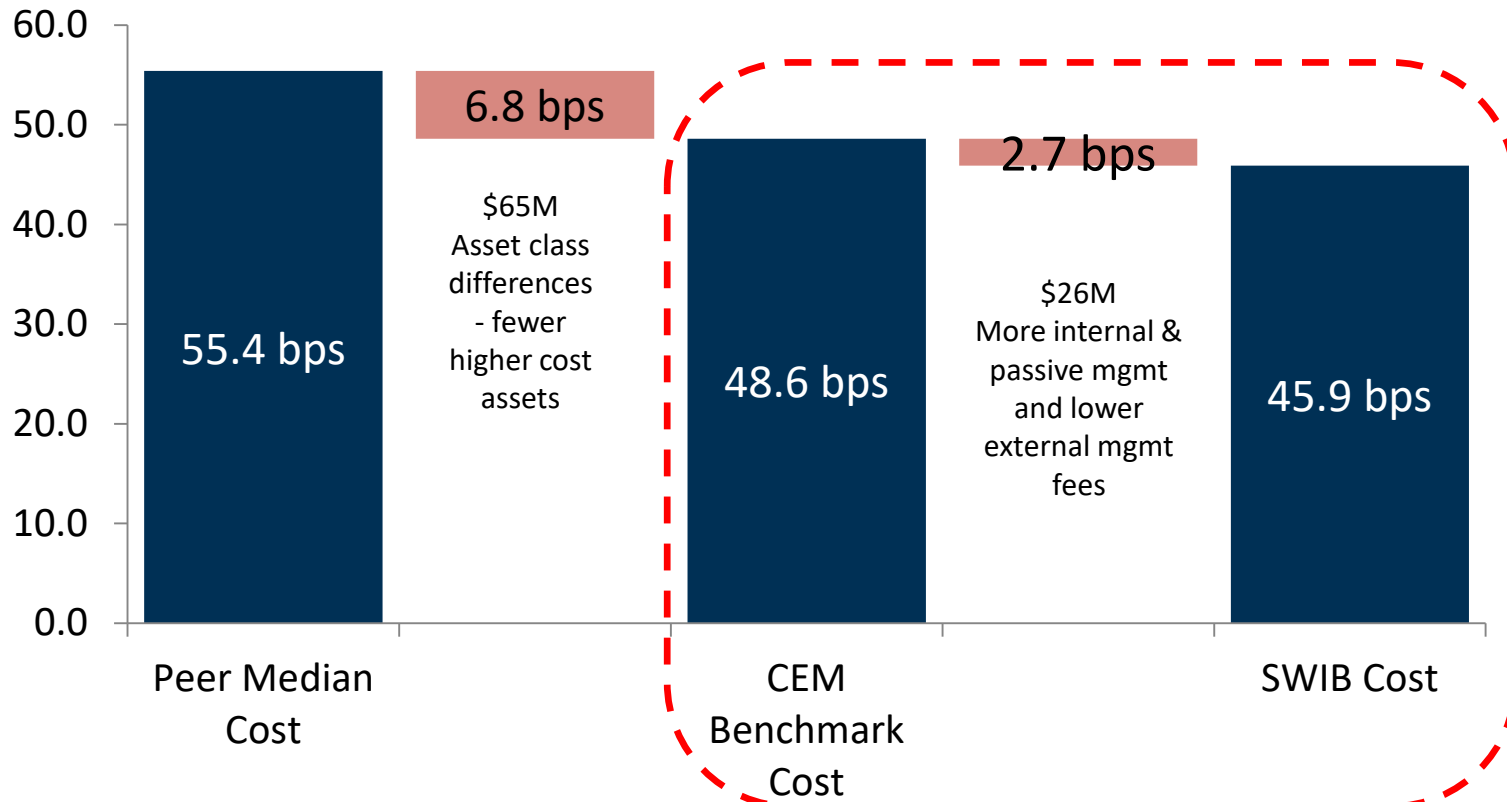
<b>30 Years</b>	<b>Return Contribution</b>	<b>Risk</b>
Current Policy Portfolio	7.3%	11.8%
Active Return	0.3% to 0.8%	0.6% to 1.8%
Total	7.6% to 8.1%	12.0% to 12.4%

# Cost



# Total Cost Comparison

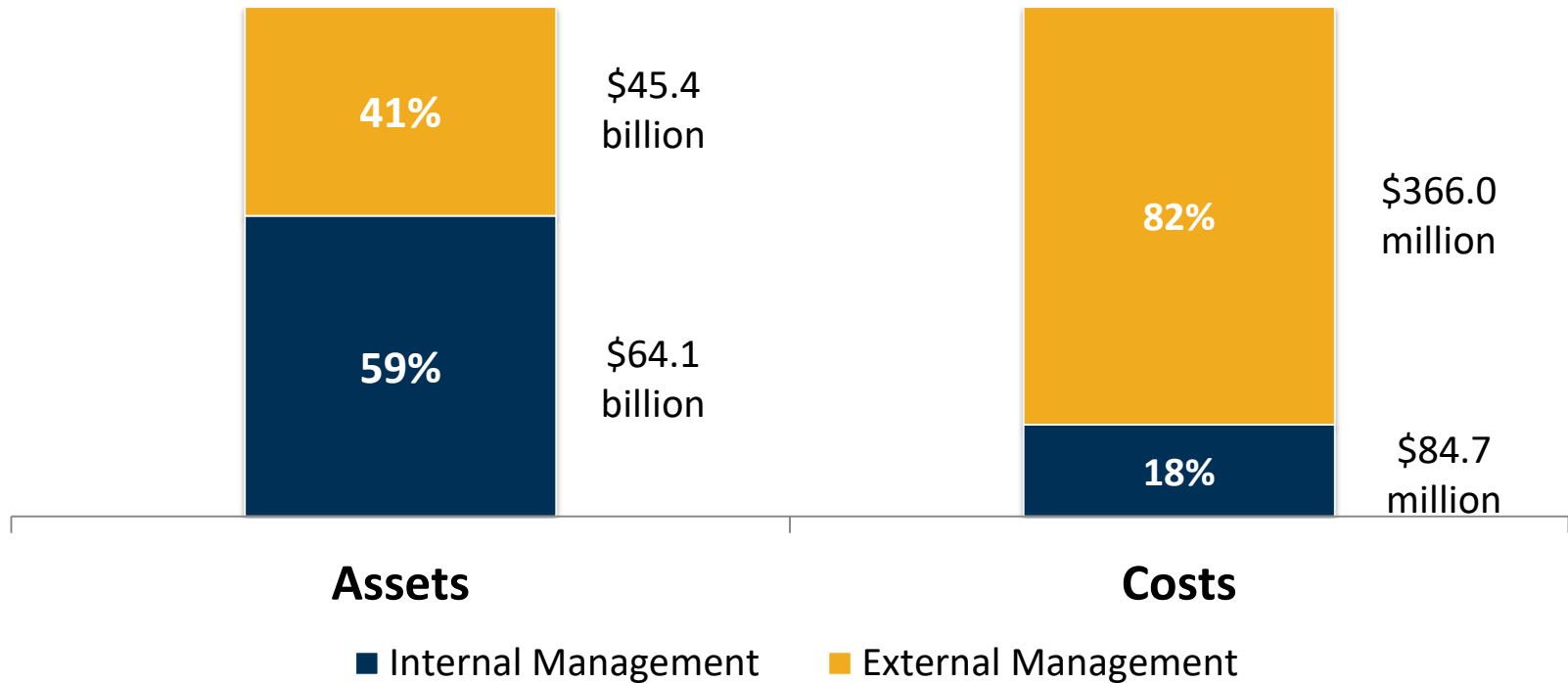
*SWIB's costs are 9.5 bps lower than its peers. On average, SWIB's savings are approximately \$90M over its peers.*



# Internal vs. External Management

*Internal management costs significantly less*

**Cost to externally manage 41% of assets represents 82% of SWIB's total costs.**



CY 2018 Costs = \$450.7 million

# Lower Cost of Internal Management

*SWIB's cost for internal active management is materially lower than the cost for external management.*

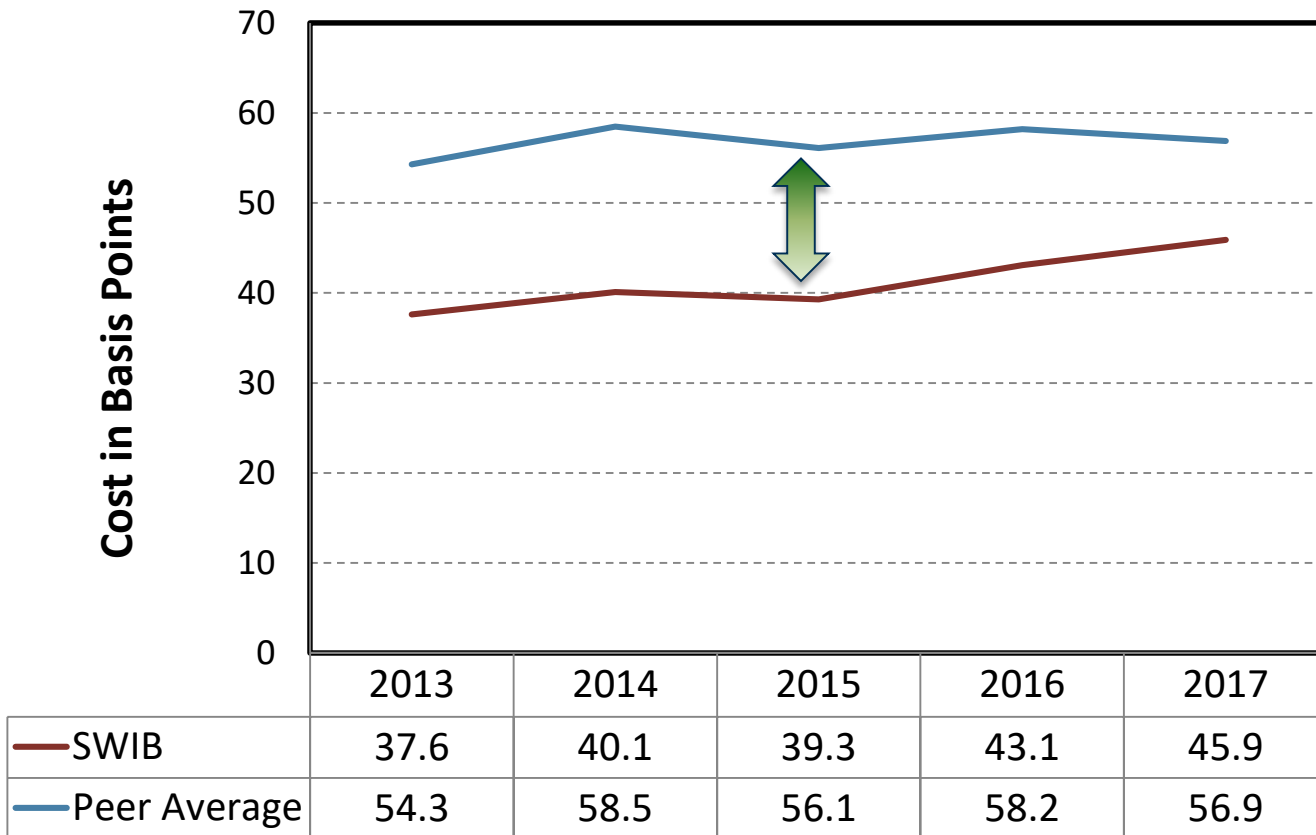
Public Market Asset Type (active strategies)	External Mgmt Cost (bps)*	SWIB Internal Mgmt Cost
Global Large Cap Equity	42.4	66-75% lower
Small Cap Equity	65.5	66-75% lower
Gov't/Credit Domestic Fixed Income	13.9	Up to 50% lower
Global Fixed Income	39.9	66-75% lower

*\* External costs represent the median cost for SWIB's CEM public fund peers  
Costs are expressed in basis points (bps) and 100 bps equals 1 percent*

Data source: CEM Benchmarking, Inc. 2017 Report

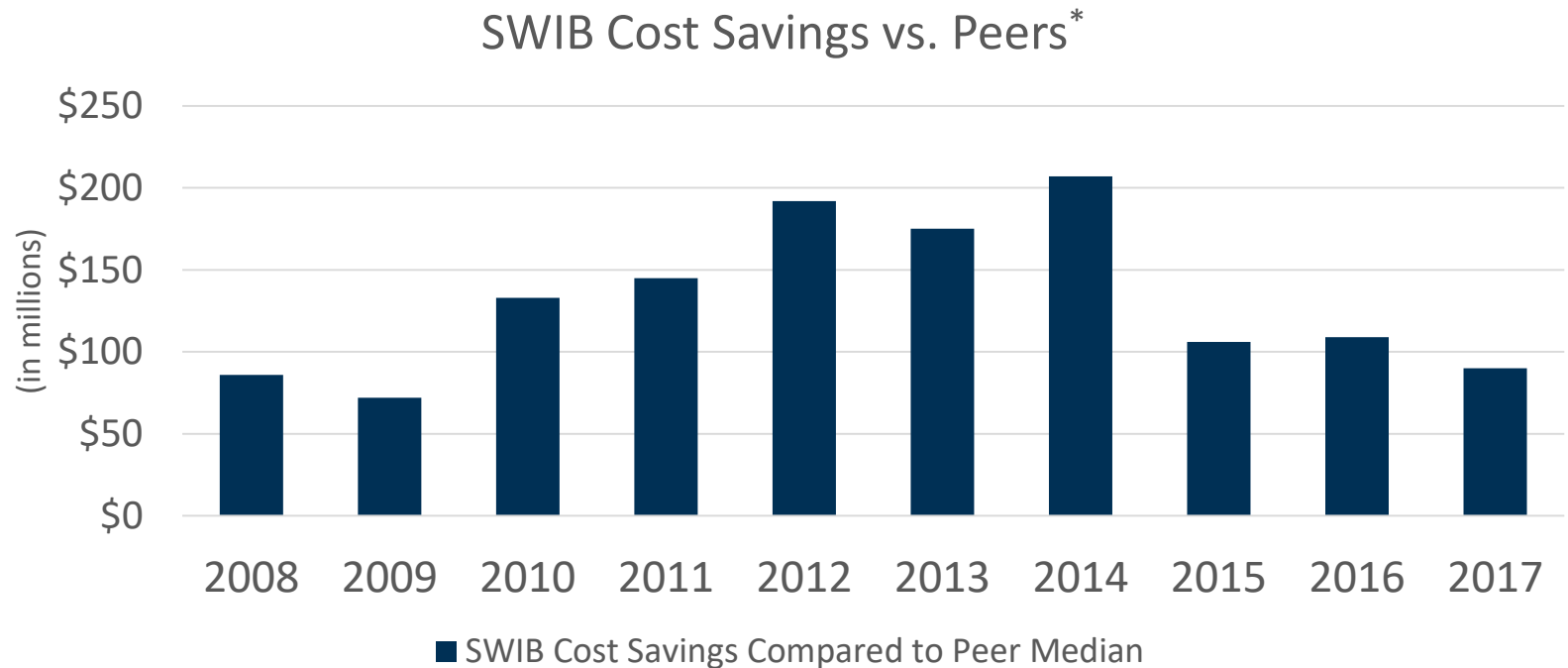
# Cost Trends – Relative to CEM Peers

*SWIB's total costs have increased since 2013, but have remained materially lower than peers due to more internal management.*



# SWIB Cost Savings vs. Peers

*SWIB saved \$1.3 billion vs. peers from 2008 to 2017*



\*This analysis compares SWIB's savings vs. the peer group median costs for every \$100 under management and multiplies that average savings by SWIB's median assets under management

# Working for You & the WRS

Cost optimization and negotiating lower fees combined with the performance of the investment strategies have added **\$2.7 billion** for the past ten years and **\$224.5 million** for the past five years of added value over benchmark returns to the WRS, which benefits over 632,000 participants.





# Summary

SWIB is:

- Positioned for future success
- Continuously focused on optimization of costs
- Protecting the WRS from future downturns
- Performing favorably compared to peers

# Stay Connected



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# Questions?