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BOSTON | OCTOBER 20-23

Treasury's Role in Evaluating Target Date Funds

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Target Date Fund Overview

- **Professionally asset allocated funds that change risk exposure over time**
- **Increasingly popular as plan QDIAs**
- **Long-term investment strategies based on investor age**
- **Considerable differences between fund families**

Target Date Retirement Funds

Tips for ERISA Plan Fiduciaries

Department of Labor - February 2013

- **Guidelines for selecting and monitoring TDFs**
 - Establish a process for comparing/selecting TDFs
 - Periodic review of selected TDFs
 - Understand underlying funds
 - Understand different asset classes, allocation (%)
 - Review fund fees and investment expenses
 - Consider non-proprietary (not the record keeper's TDF)
 - Develop effective employee communications
 - Document the process (RFP)

TDF RFP Considerations

- **Firm, ownership, registrations**
- **Material litigation and investigation**
- **Business Continuity**
- **Conflicts of interest**
- **Multi-Asset TDF Experience**
- **Investment Professionals**
- **Glide Path**
- **Asset Classes**
- **Withdrawal Assumptions**
- **Risk Management**
- **Asset Allocation**
 - Strategic Asset Allocation
 - Tactical Asset Allocation
 - Rebalancing - Rolldown
- **Underlying Investment Strategies**
 - Proprietary, Index, Quality
- **Participant**
- **Education/Communication**
- **Fees**

What factors influence the quality of TDF

- **Asset classes used**
- **Retirement withdrawal assumptions**
- **Shape of the glidepath**
- **Quality of underlying funds**
- **Risk/return**
- **Fees**

Asset Classes Vary

Asset Classes	American Funds	American Century	BlackRock	Fidelity	JP Morgan	T. Rowe Price	Vanguard
US Large Cap	●	●	●	●	●	●	●
US Mid-Cap	●	●			●	●	●
US Small Cap	●	●	●	●	●	●	●
Int'l Equity	●	●	●	●	●	●	●
EM Equity	●	●	●	●	●	●	●
US Fixed Income	●	●	●	●	●	●	●
TIPS	●	●	●	●	●	●	●
High Yield Fixed Income	●	●		●	●	●	
Int'l Fixed Income	●	●	●	●		●	●
EM Debt	●			●	●	●	
REITs	●	●	●	●	●		
Commodities				●	●	●	
Real Estate							●

Strategic Asset Allocation

- **The long-term asset allocation that creates the glidepath**
- **Modeled using asset class performance, correlations, long-term capital market assumptions**
- **Each have their unique asset allocation by vintage**
- **Important to track changes to the asset allocation**
- **Many providers review their asset allocations annually**

Tactical Asset Allocation

- **Short-term allocation adjustments to glidepath**
- **Typically employed as an overlay**
- **Intended to enhance performance or reduce risk in the near-term**
- **Active decisions made by investment manager based on market conditions and outlook**

“To” vs. “Through”

- **Two schools of thought on when glide path reaches terminal allocation**
- **“To” retirement glide path ends at retirement, typically age 65**
- **“Through” retirement glide path continues beyond retirement**

Behavior at Retirement

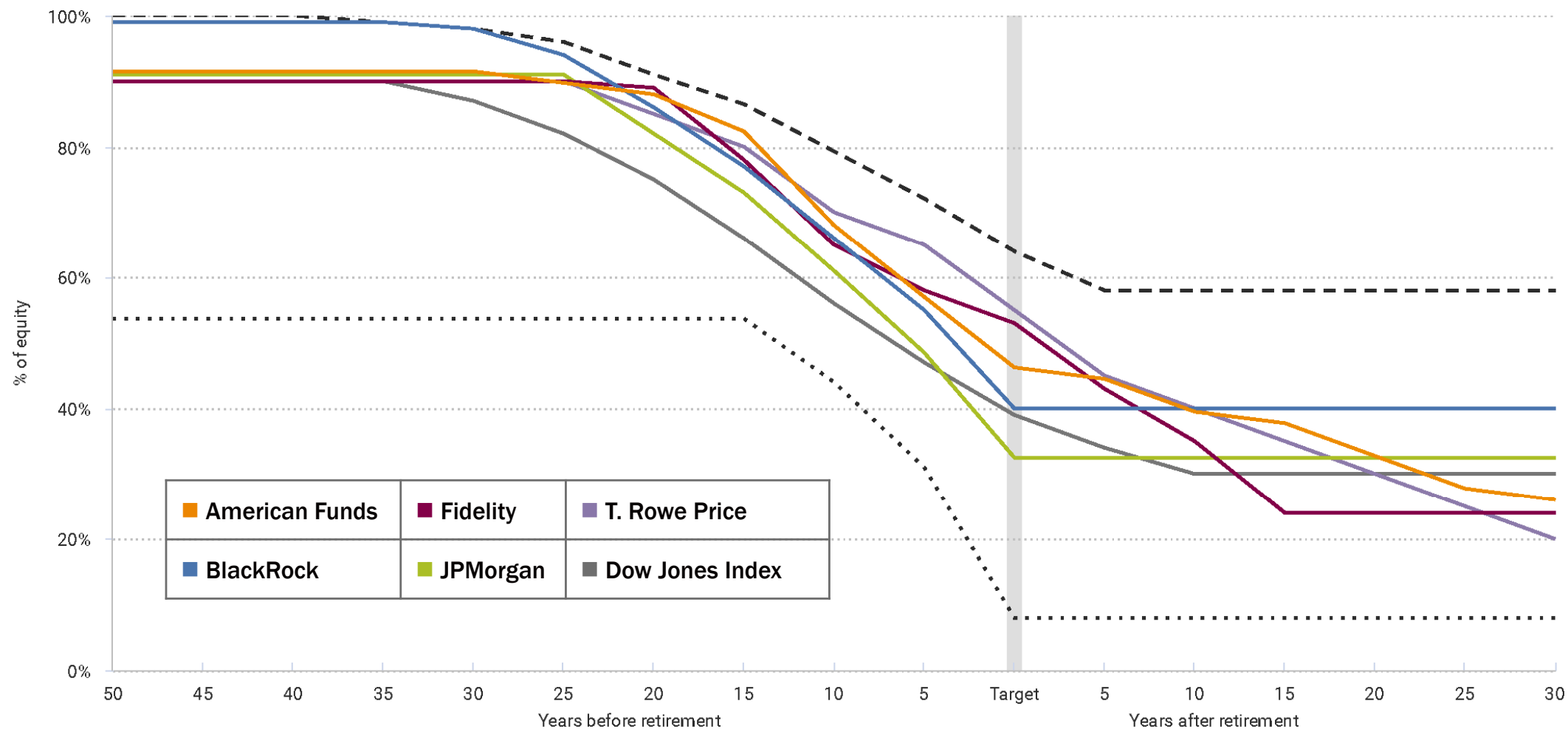
Equity Exposure at Retirement

Fund Family	To or Through Retirement	Age Glide Path Ends	Years Past Retirement	Equity % at Retirement
American Funds	Through	95	+ 30	55%
American Century	To	65	0	45%
BlackRock	To	65	0	35%
Fidelity	Through	80	+ 15	60%
JP Morgan	To	65	0	35%
T. Rowe Price	Through	95	+ 30	60%
Vanguard	Through	75	+ 10	55%

Glide Path

- **Describes the changing asset allocation of a target date fund family over time**
- **Shift from capital appreciation to principal preservation as retirement approaches**
- **Goal is to de-risk portfolio as investors approach retirement**

Wide Range of Glide Paths



Market Capture Ratios

2035 Funds	Up Market Capture Ratio	Down Market Capture Ratio	Overall Capture Ratio*
2035 Fund A	99.96	93.52	1.07
2035 Fund B	99.71	94.64	1.05
2035 Fund C	96.66	96.12	1.01
2035 Fund D	102.73	103.97	0.99
2035 Fund E	81.73	84.12	0.97
2035 Fund F	95.79	99.05	0.97
2035 Fund G	95.19	99.20	0.96

*Overall Capture Ratio = Up Market Capture Ratio divided by Down Market Capture Ratio. A value greater than 1 is favorable.

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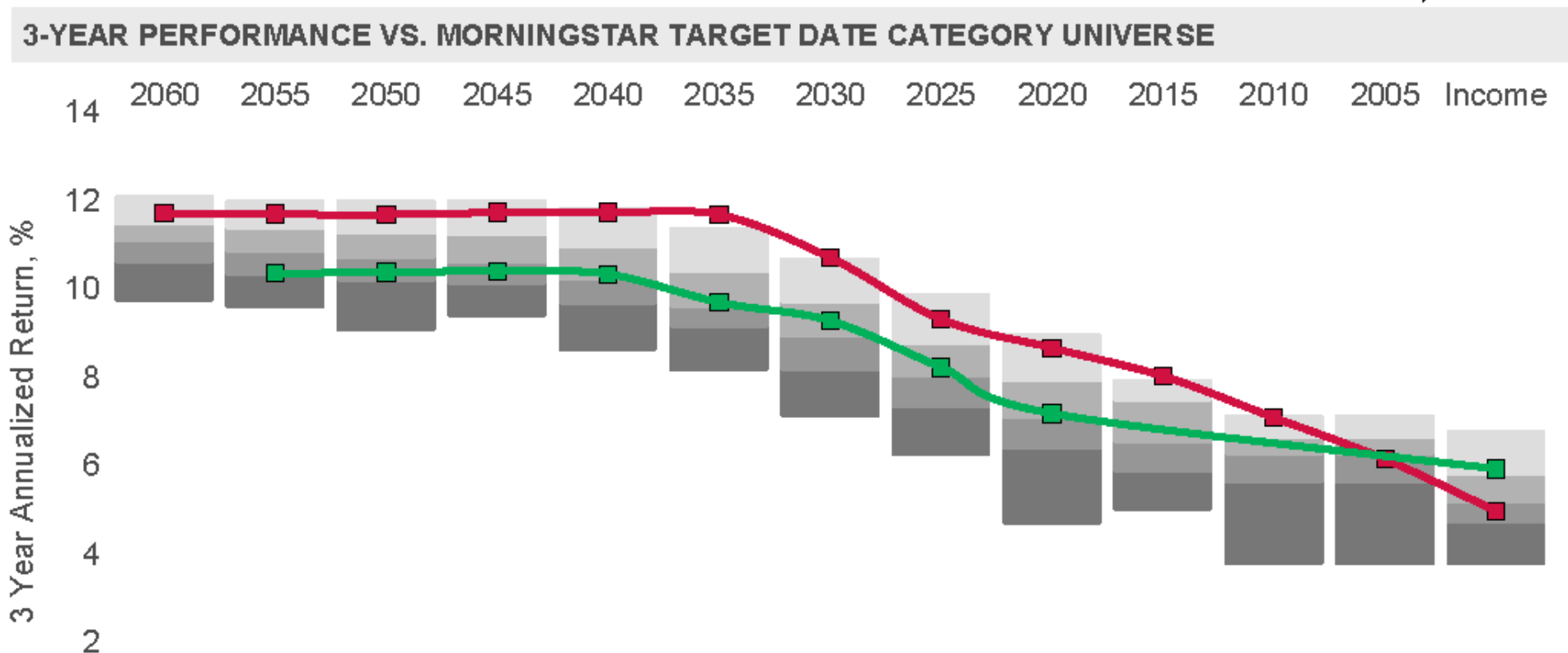
 **medidata**

Applying your Financial Knowledge

- **Performance Net of Fees (Use Specific Share class):**
 - 1, 3, 5, 7 and 10 year returns
- **Volatility (Standard Deviation)**
- **Risk-Adjusted Return (Sharpe Ratio)**
- **Downside Risk**
- **Risk/Return Trade offs**

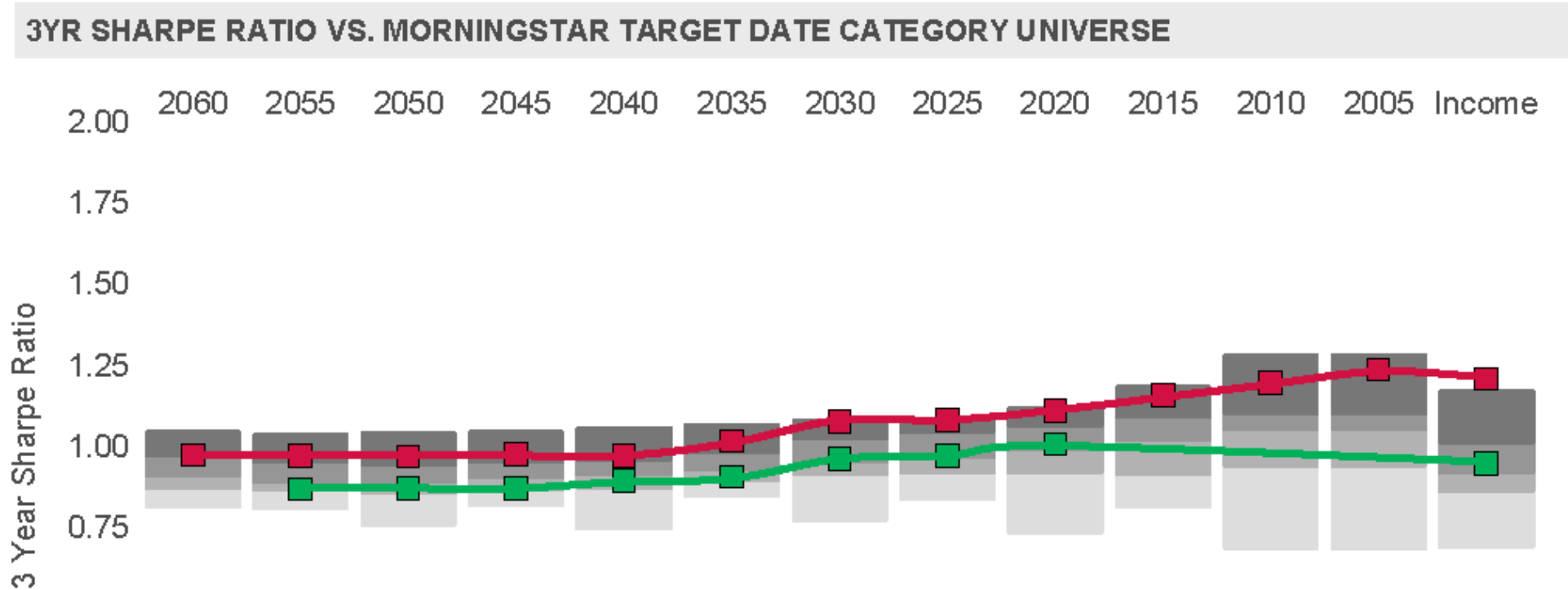
Relative Performance (Net of Fees)

As of Jun 30, 2019



Two Target Date Funds are compared to their peer group rankings and to each other. **Manager A** is consistently a top quartile performer and outperforms **Manager B**.

Risk-Adjusted Returns (Sharpe Ratios)



Target Date Funds' Sharpe Ratios compared to their peer group rankings and against each other. **Manager A** consistently ranks in the top quartile of its peer group and offers higher risk-adjusted returns than **Manager B** across all vintages (dates).

Risk vs. Return

3YR RISK VS. RETURN



Manager A consistently offers higher returns with similar volatility or risk as **Manager B** which is consistent with their risk-adjusted returns.

Benchmarking Target Date Funds

Typical Benchmarking Methods

- **S&P Target Date Indices**
- **Dow Jones Target Indices**
- **Proprietary benchmarks - provided by managers**
- **Peer ranking by vintage**

S&P Target Retirement Indices

- **The average performance of each vintage based on the peer universe**
- **Represents opportunity cost by using actual returns of other target date fund families**
- **Glide path is dictated by the average allocation of each vintage**

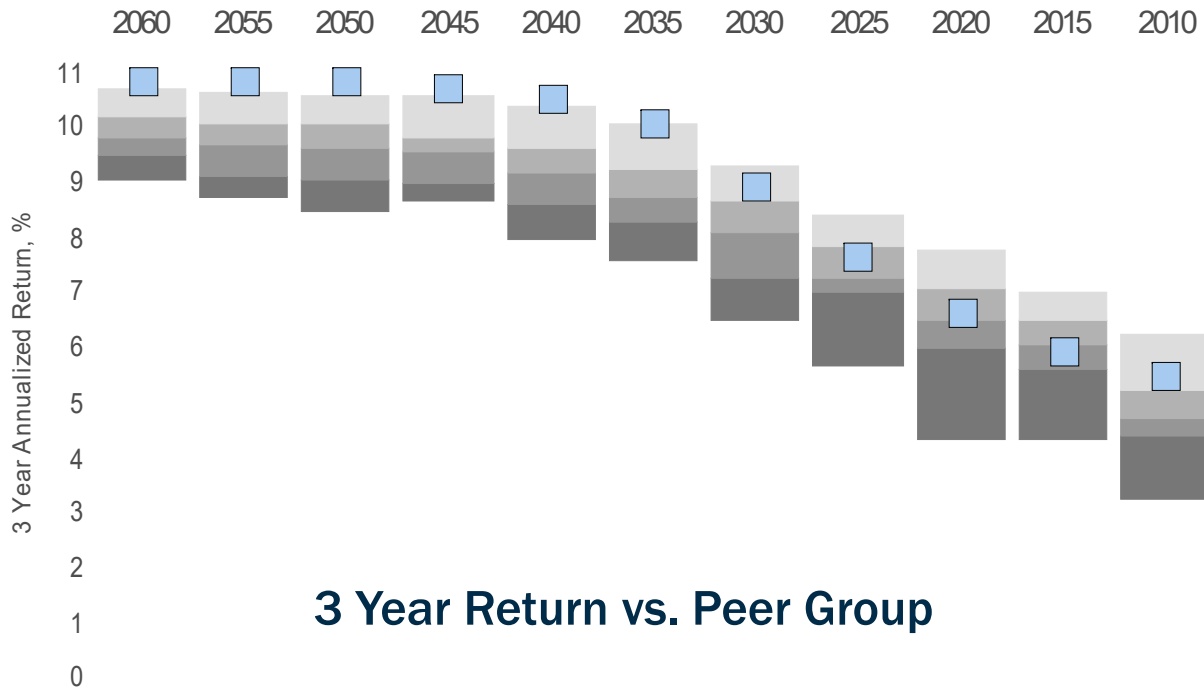
Dow Jones Target Indices

- **Use a specific glide path selected by Dow Jones**
- **Measures TDF family performance versus one of many different possible glidepaths**
- **Useful in comparing asset allocation decisions made by managers at specific parts of glide path**

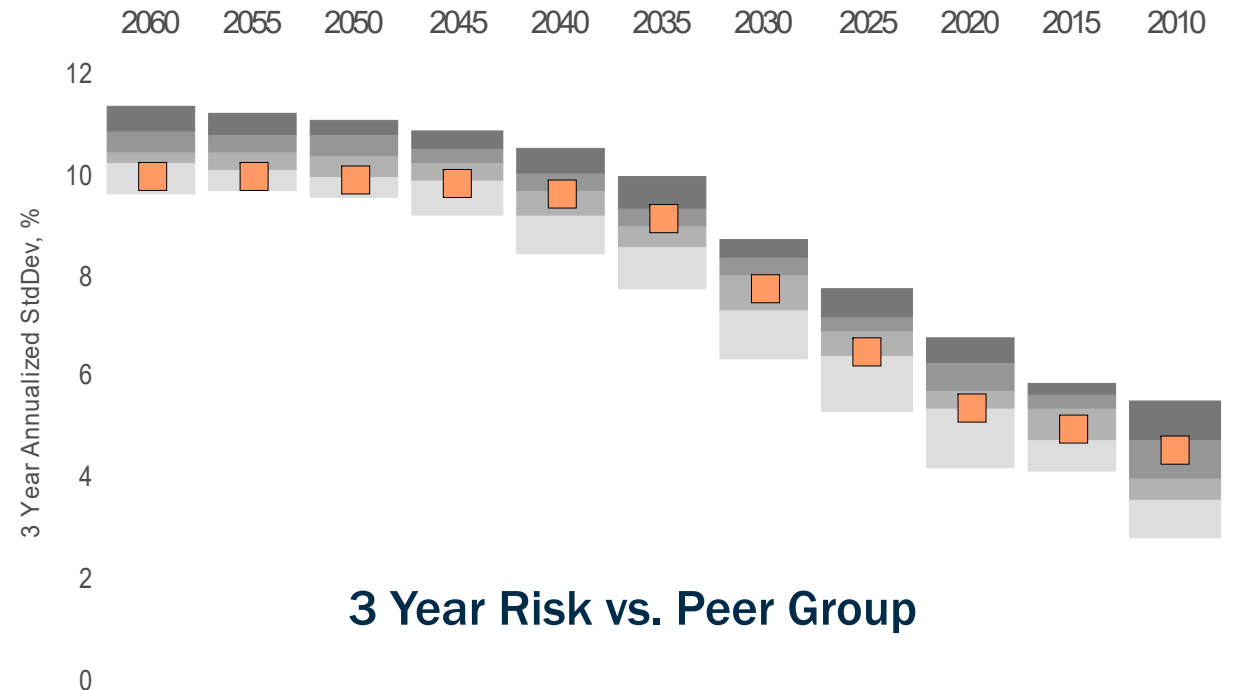
Proprietary Benchmarks

- **Replicate asset allocation of the manager's target date funds**
- **Use passive indices to represent asset classes**
- **Useful for measuring success of underlying managers**
- **Don't provide information on effectiveness of glidepath/asset allocation decisions made by manager**

Peer Universe Ranking



3 Year Return vs. Peer Group



3 Year Risk vs. Peer Group

Peer Percentile Ranking	2055	2050	2045	2040	2035	2030	2025	2020	2015	Income
Return % Rank	1	1	1	2	5	13	36	43	57	55
Risk % Rank	16	24	18	36	57	37	29	25	43	25

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Marlow Kee
Chief Financial Officer
Simons Foundation

SIMONS
FOUNDATION

Simons Foundation

- **Founded by Marilyn & James H. Simons, co-founder of Renaissance Technologies**
- **Mission is to advance frontiers of research in mathematics and basic sciences**
- **\$3.3 billion Endowment**
- **\$450+ million annual operating budget**
- **Grantmaking in Mathematics & Physical Sciences, Life Sciences, Education & Outreach and autism research**
- **Flatiron Institute has three centers for computational science:**
 - **Center for Computational Astrophysics**
 - **Center for Computational Biology**
 - **Center for Computational Quantum Physics**

Simons Foundation

- **As CFO and Committee Chair, was involved in final selection of Simons Foundation 403(b) plan providers**
- **Changed recordkeepers in 2016**
- **Selected target date funds as QDIA**

Target Date Search

- **Considered six target date fund suites**
- **Included active and index funds**
- **After multiple reviews narrowed list to:**
 - *One Actively Managed TDF*
 - *One Index TDF*

Considerations

- **Discussed with peer non-profit and 403(b) plans sponsors:**
 - Most had selected index target date funds
 - Most had not conducted a formal search
 - Decisions were based on low fees
 - Concerns about fee litigation
- **Demographics of workforce**
 - Younger workforce may want more aggressive glidepath
 - Older workforce may want more defensive glidepath

Side-by-Side Comparison

	<i>Active TDF</i>	<i>Index TDF</i>
% Equity at Age 65	47%	50%
# Asset Classes	10	7
Glide Path End	95	75
Tactical Allocation	No	No
# Underlying Funds	22	6
Expense Ratio	0.35% - 0.45%	0.10%

Asset Class Comparison

Asset Classes	Active TDF	Index TDF
US Large Cap	●	●
US Mid-Cap	●	●
US Small Cap	●	●
Int'l Equity	●	●
EM Equity	●	●
US Fixed Income	●	●
TIPS	●	●
High Yield Fixed Income	●	
Int'l Fixed Income	●	
EM Debt	●	
REITs		
Commodities		

Quantitative

- **Compared funds side-by-side:**
 - Zero revenue share funds
 - Performance net of fees **1, 3, 5, and 10 years**
 - Compared to each other
 - **S&P Target Date benchmarks**
 - **TDF universe peer rankings**
 - **Risk/return statistics**

2035 TDF Performance Comparison

As of 9/30/2016

	1 Year	3 Year	5 Year	7 Year
Active TDF	12.73	7.67	12.91	10.26
Index TDF	11.61	6.85	12.10	9.63
<i>Difference</i>	<i>+1.12</i>	<i>+0.82</i>	<i>+0.81</i>	<i>+0.63</i>
S&P Target Index	11.19	6.32	11.14	9.10
<i>Difference</i>	<i>+1.54</i>	<i>+1.35</i>	<i>+1.77</i>	<i>+1.16</i>
Funds in Category	205	160	121	71

5 Year Risk/Return Statistics Comparison

As of 9/30/2016

MPT Statistic	Standard Deviation (Risk)	Sharpe Ratio (Risk-Adjusted Return)	Information Ratio (Consistency)
Active 2035 Fund	9.67	0.77	0.91
Index 2035 Fund	9.85	0.71	0.74
S&P Target Date Index	9.52	0.66	NA

- Active TDF outperformed (net of fees) both the Index TDF and the S&P Target Date 2035 Index with less risk and higher risk-adjusted returns.
- Active TDF also had greater consistency.

Decision

Based on our analysis:

- Although the fees were higher than index funds, the *Active* still outperformed the *Index* over multiple periods net of fees
- The risk/return statistics were more attractive for the *Active*
- We chose the *Active* TDF

So how have our Active TDFs performed as of June 30, 2019?

- **Did the *Active* TDFs provide the downside protection we expected in 2018?**
- **Were the higher fees on *Active* TDFs a drag on performance?**

Downside Protection in 2018

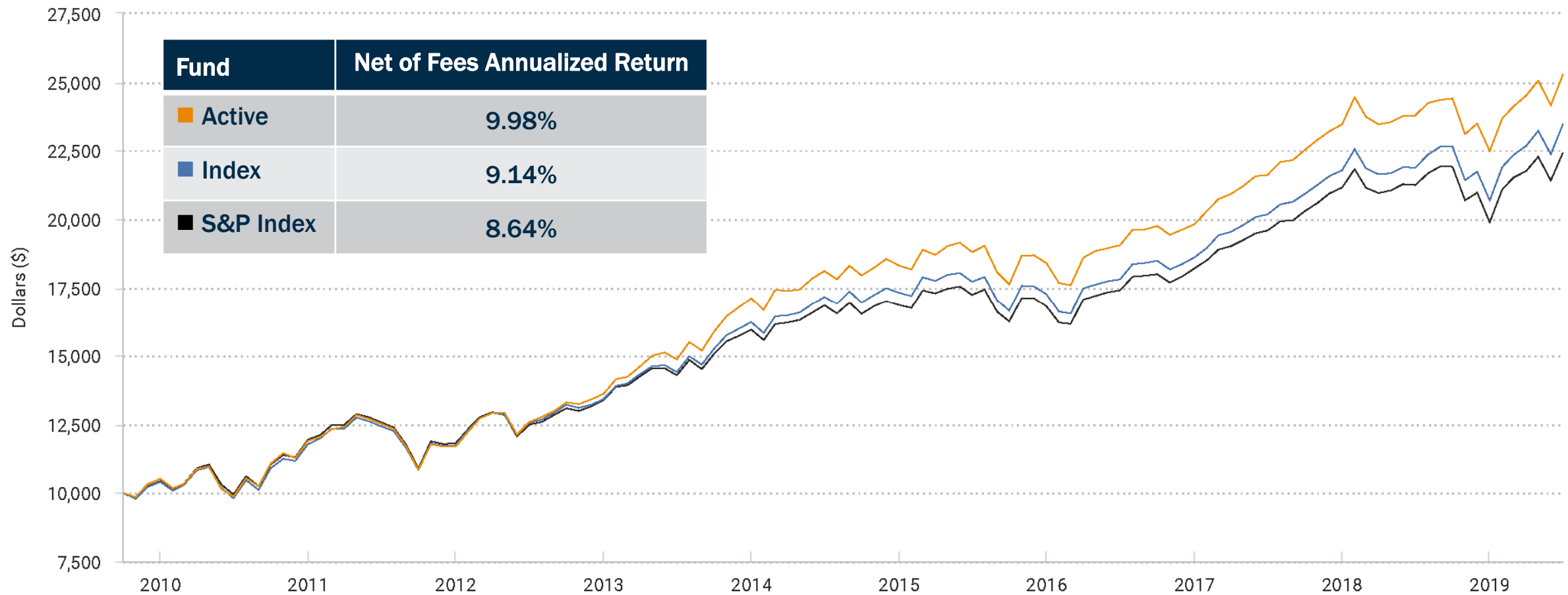
The *Active TDFs* we selected outperformed both the *Index TDFs* and the S&P benchmarks in 2018, net of fees. The *Active* funds demonstrated better downside protection as advertised.

Active TDFs outperformed net of fees in 2018 as shown below:

Outperformance versus:	Income	2015	2020	2025	2030	2035	2040	2045	2050	2055
Index Fund	+0.38	+0.57	+1.06	+0.95	+0.88	+0.59	+0.84	+1.34	+1.40	+1.49
S&P Target Index	+0.61	+0.95	+1.47	+1.55	+1.83	+1.74	+1.89	+2.16	+2.33	+2.32

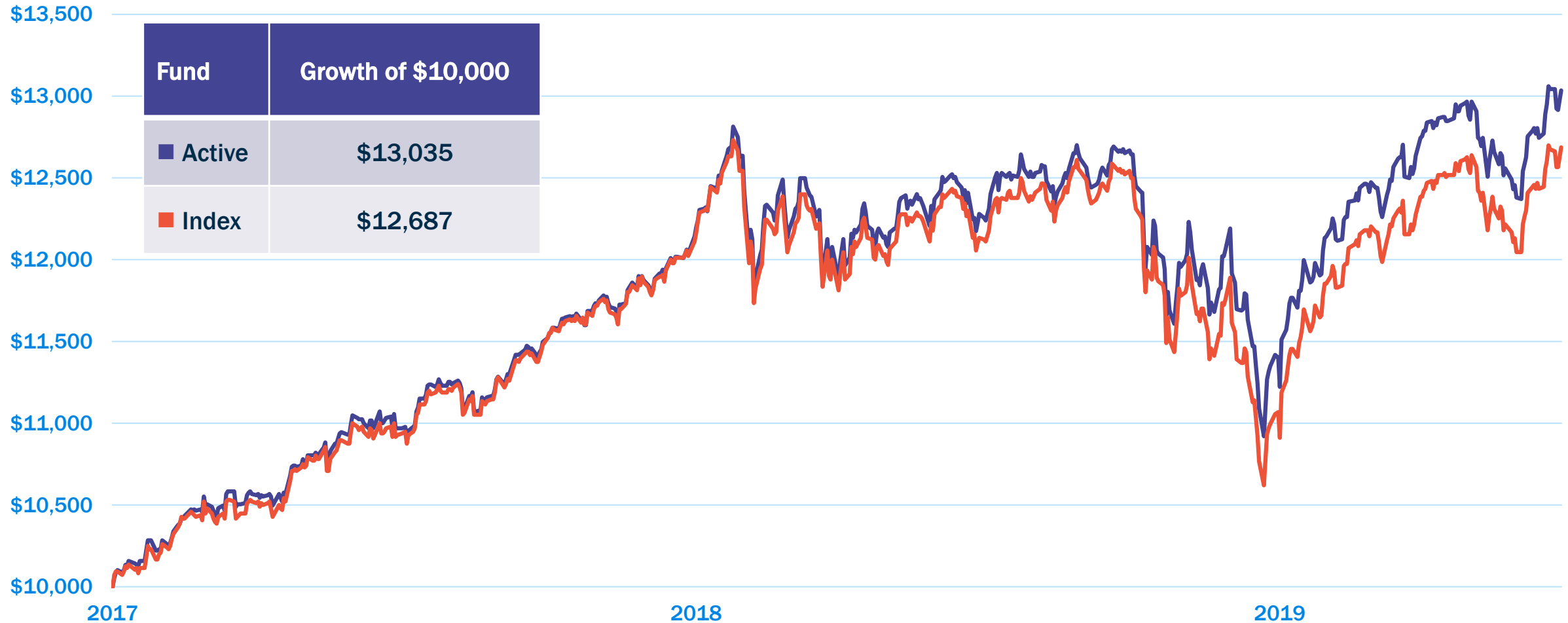
2030 TDF Cumulative Growth (Net of Fees)

10/1/2009 - 6/30/2019



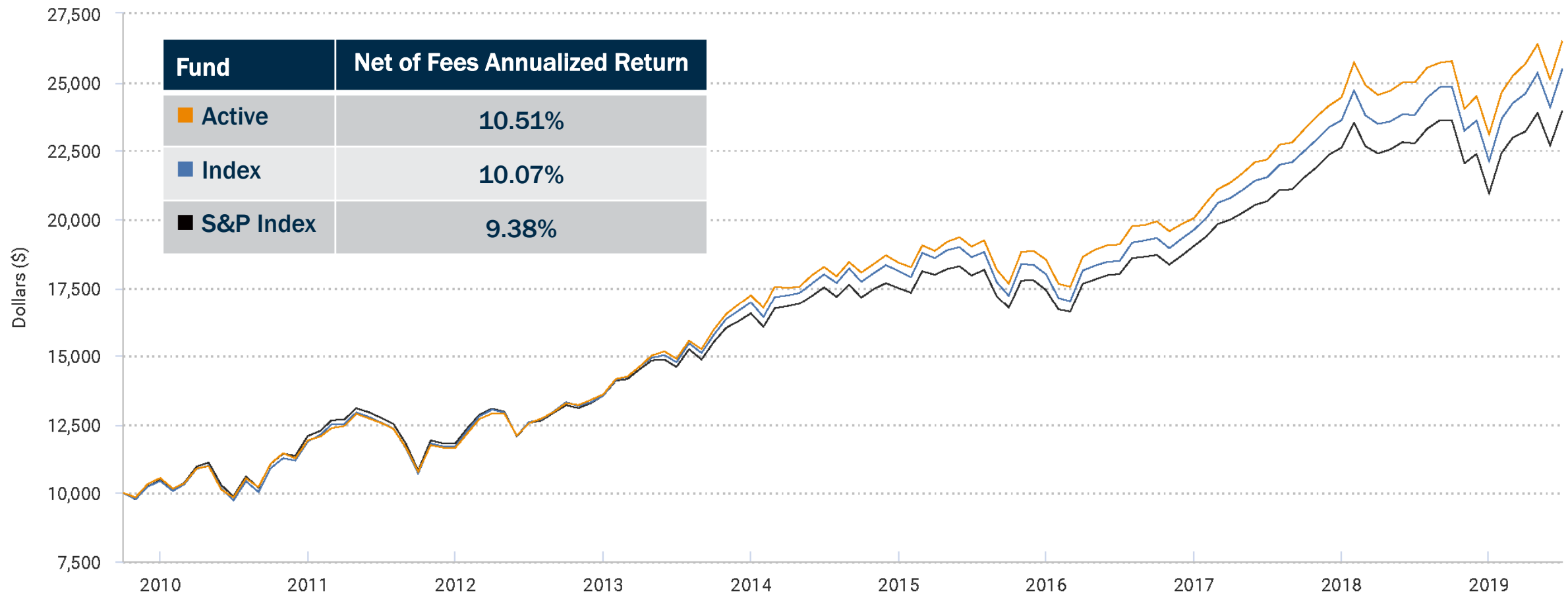
2035 TDF Cumulative Growth (Net of Fees)

1/1/2017 - 6/30/2019



2040 TDF Cumulative Growth (Net of Fees)

10/1/2009 - 6/30/2019



Conclusion/Key Takeaways

- **As a fiduciary, it is important to document a due diligence process in the selection of a TDF.**
- **Demographics play a role in selection**
- **TDF families vary widely:**
 - **Glide Path**
 - **Asset classes**
 - **Risk/reward profile**
- **Lower fees do not always ensure better results**

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Q & A

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