

S&P Target Date Scorecard

Contributors

Hamish Preston

Associate Director
Product Management
U.S. Equities
hamish.preston@spglobal.com

Adrián Carranza Araujo

Senior Specialist
Global Equity Indices
adrian.carranza@spglobal.com

SUMMARY

- The S&P Target Date® Scorecard provides performance comparisons, equal- and asset-weighted category averages, and analytics covering the target date fund (TDF) universe.
- **The S&P Target Date Index Series offers representative benchmarks for TDFs.** The series distinguishes itself from peer group benchmarks because it is investable, comprises consensus-derived asset allocation weights, and its composition is known in advance of evaluation periods.
- The S&P Target Date Through benchmarks represent the “Through” glide path category, while the S&P Target Date To benchmarks represent the “To” category.
- **Through TDFs outperformed To TDFs over the three-year horizon.** Each S&P Target Date Through Index posted higher returns than its corresponding S&P Target Date To Index by an average of 1.06% across the different vintages.
- **Outperformance was particularly pronounced in the nearer vintages.** The [S&P Target Date Through 2015 Index](#) and the [S&P Target Date Through 2020 Index](#) beat their To counterparts by 1.55% and 1.53%, respectively.
- **Higher equity allocations helped to explain the higher returns for Through TDFs.** On average across the different vintages, Through TDFs had a 10.9% higher equity allocation than To TDFs. This difference was especially pronounced among the 2015 and 2020 vintages.
- **Unsurprisingly, perhaps, To TDFs were less volatile than Through TDFs.** Each S&P Target Date To Index offered less volatile returns over the three-year period than the corresponding Through index vintage.
- **Overall, To TDFs offered higher risk-adjusted returns over the three-year horizon,** especially at nearer vintages.
- **Larger TDFs continued to outperform smaller TDFs.** The asset-weighted returns exceeded the equal-weighted returns over one-, three-, and five-year horizons in all but two instances. The one-year figures for the 2010 and 2060+ TDFs offered the exceptions.

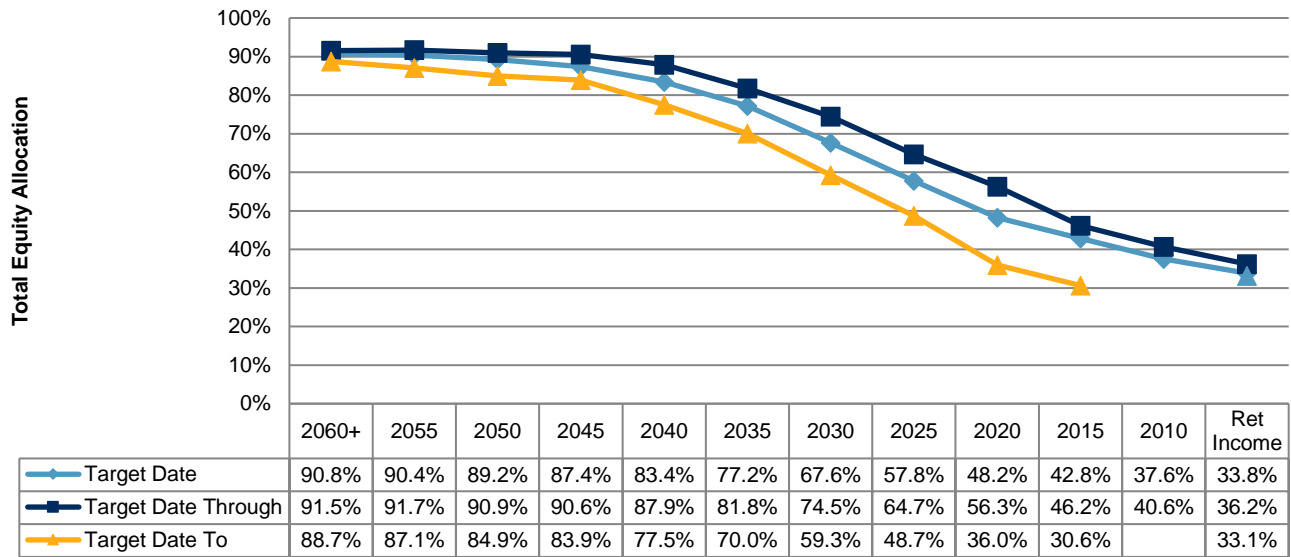
A UNIQUE SCORECARD FOR THE TARGET DATE UNIVERSE

The S&P Target Date Scorecard presents the performance of TDFs as compared to appropriate benchmark indices. We consider all target date asset allocation policies to be active decisions, so we include funds that use passive underlying investments as well as active underlying investments. The scorecard covers target dates from retirement income to 2060 and beyond, and it has the following unique features.

- **A Representative Target Date Benchmark:** The S&P Target Date Index¹ is the only consensus-driven target date benchmark offered by an independent index provider. Its asset class exposure and glide path are functions of market observations acquired from an annual survey of target date managers. The index currently includes target dates from retirement income through 2060+. The S&P Target Date To Retirement Income and the S&P Target Date Through Retirement Income series were launched in January 2015, and performance is incorporated as accumulated history becomes available.
- **Apples-to-Apples Comparison:** Target date fund returns are sometimes compared to popular asset class benchmarks such as the [S&P 500®](#) or Bloomberg Barclays U.S. Aggregate Bond Index®. The S&P Target Date Scorecard avoids this pitfall by measuring a fund's returns against the returns of the benchmark that is most appropriate for each target date category.
- **Asset Allocation Risk Revealed:** Sometimes custom, multi-asset class benchmarks are used for comparison purposes. However, these benchmarks do not measure asset allocation risk, as they are typically set with asset class exposure selected by fund managers. They also may lack transparency with respect to the method behind their calculation and may not be adjusted for changes in asset allocation policy over time. The report avoids these problems by referencing our consensus-driven target date benchmark that provides a representative proxy of asset allocation risk for each target date vintage.
- **Asset-Weighted Returns:** Average returns for a fund group are often calculated using only equal weighting, which results in the returns of a USD 10 billion fund affecting the average in the same manner as the returns of a USD 10 million fund. An accurate representation of how market participants fared in a particular period can be better ascertained by calculating weighted-average returns, in which each fund's return is weighted by net assets. The S&P Target Date Scorecard shows both equal- and asset-weighted averages. Additionally, we now use all share classes to calculate average TDF returns and performance quartiles.
- **Data Cleaning:** Appropriate peer groups are built from underlying databases so meaningful benchmark comparisons may be performed. TDFs with vintages of 2060 or beyond are compared with the [S&P Target Date 2060+ Index](#). TDFs with vintages that have already passed, such as 2005, are compared with the [S&P Target Date Retirement Income Index](#). Average TDF returns, both equal-weighted and asset-weighted, are calculated using all share classes within each fund family in order to represent the aggregate experience of TDF shareholders. The S&P Target Date Scorecard offers the only comprehensive, periodic, and publicly available source of such data. Reports are available at www.spdji.com.

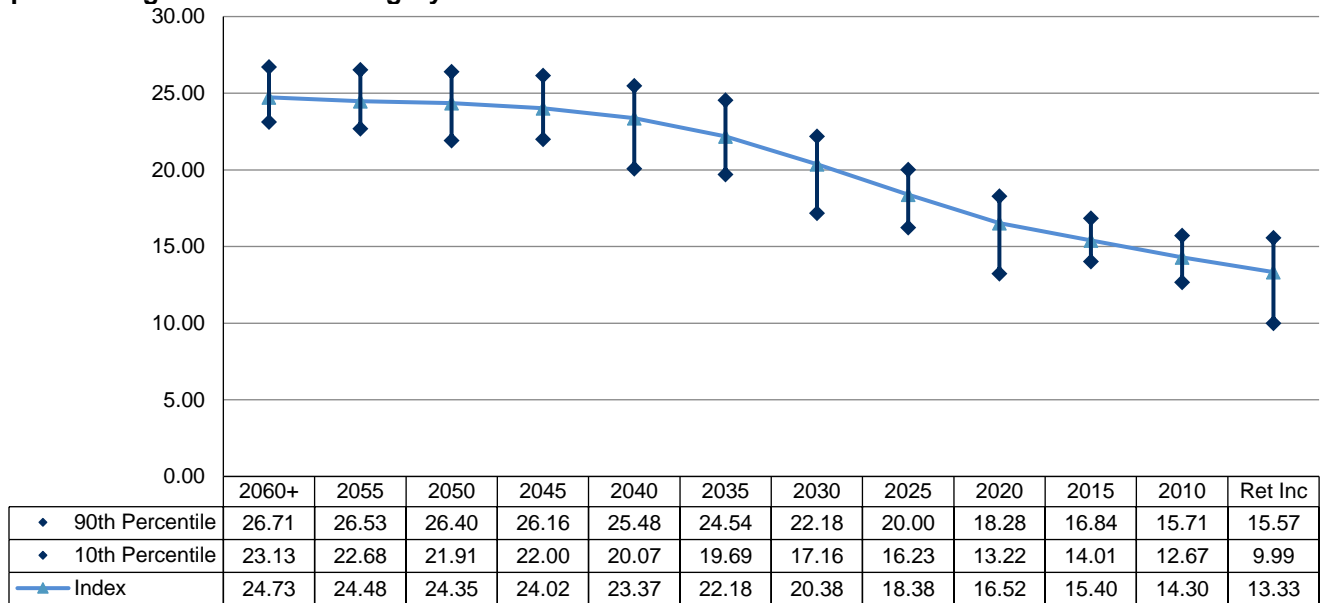
¹ It is not possible to invest directly in an index. Indices are statistical composites and their returns do not include payment of any sales charges or fees an investor would pay to purchase the securities they represent. Such costs would lower performance.

Report 1: S&P Target Date Benchmark Glide Path – Total Equity



Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes. Past performance is no guarantee of future results. The S&P Target Date To 2010 was discontinued effective June 5, 2016.

Report 2: Target Date Fund Category Performance – One Year



Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes. Past performance is no guarantee of future results.

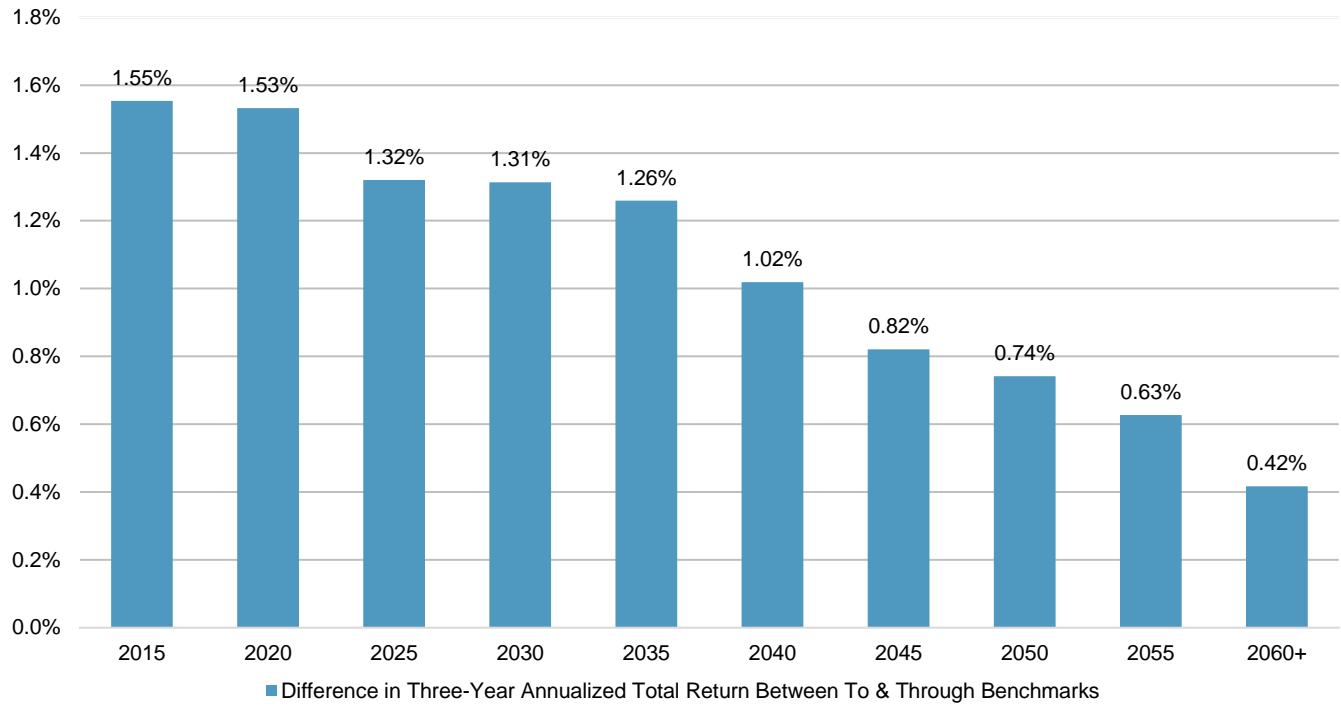
| Report 3: Average Target Date Fund Performance | | | |
|---|---------------------|----------------------------------|---------------------------------|
| CATEGORY | ONE-YEAR (%) | THREE-YEAR ANNUALIZED (%) | FIVE-YEAR ANNUALIZED (%) |
| Ret Income TDFs (equal weighted) | 12.80 | 5.85 | 4.28 |
| Ret Income TDFs (asset weighted) | 13.55 | 6.26 | 4.53 |
| S&P Target Date Ret Income | 13.33 | 6.23 | 4.67 |
| S&P Target Date To Ret Income | 13.25 | 5.90 | 4.32 |
| S&P Target Date Through Ret Income | 13.98 | 6.45 | 4.81 |
| <hr/> | | | |
| 2010 TDFs (EW) | 14.25 | 6.75 | 5.03 |
| 2010 TDFs (AW) | 14.19 | 6.96 | 5.21 |
| S&P Target Date 2010 | 14.30 | 6.79 | 5.16 |
| S&P Target Date To 2010 | - | - | - |
| S&P Target Date Through 2010 | 15.08 | 7.14 | 5.43 |
| <hr/> | | | |
| 2015 TDFs (EW) | 15.38 | 7.30 | 5.39 |
| 2015 TDFs (AW) | 15.43 | 7.61 | 5.70 |
| S&P Target Date 2015 | 15.40 | 7.39 | 5.67 |
| S&P Target Date To 2015 | 12.97 | 6.31 | 4.90 |
| S&P Target Date Through 2015 | 16.11 | 7.86 | 6.03 |
| <hr/> | | | |
| 2020 TDFs (EW) | 15.70 | 7.40 | 5.41 |
| 2020 TDFs (AW) | 16.70 | 8.25 | 6.02 |
| S&P Target Date 2020 | 16.52 | 8.00 | 6.16 |
| S&P Target Date To 2020 | 14.16 | 7.09 | 5.49 |
| S&P Target Date Through 2020 | 18.18 | 8.62 | 6.62 |
| <hr/> | | | |
| 2025 TDFs (EW) | 17.99 | 8.54 | 6.16 |
| 2025 TDFs (AW) | 18.49 | 9.12 | 6.62 |
| S&P Target Date 2025 | 18.38 | 8.80 | 6.73 |
| S&P Target Date To 2025 | 16.53 | 8.01 | 6.15 |
| S&P Target Date Through 2025 | 19.84 | 9.33 | 7.17 |
| <hr/> | | | |
| 2030 TDFs (EW) | 19.87 | 9.33 | 6.71 |
| 2030 TDFs (AW) | 20.68 | 10.21 | 7.28 |
| S&P Target Date 2030 | 20.38 | 9.55 | 7.27 |
| S&P Target Date To 2030 | 18.58 | 8.82 | 6.73 |
| S&P Target Date Through 2030 | 21.76 | 10.14 | 7.75 |

Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of Dec. 31, 2019. "EW" indicates equal weighted. "AW" represents asset weighted. Table is provided for illustrative purposes. Past performance is no guarantee of future results. See Glossary for more information.

| Report 3: Average Target Date Fund Performance (cont.) | | | |
|---|---------------------|----------------------------------|---------------------------------|
| CATEGORY | ONE-YEAR (%) | THREE-YEAR ANNUALIZED (%) | FIVE-YEAR ANNUALIZED (%) |
| 2035 TDFs (EW) | 22.02 | 10.30 | 7.32 |
| 2035 TDFs (AW) | 22.93 | 11.12 | 7.91 |
| S&P Target Date 2035 | 22.18 | 10.25 | 7.77 |
| S&P Target Date To 2035 | 20.59 | 9.49 | 7.18 |
| S&P Target Date Through 2035 | 23.11 | 10.74 | 8.18 |
| 2040 TDFs (EW) | 23.10 | 10.62 | 7.56 |
| 2040 TDFs (AW) | 24.22 | 11.61 | 8.16 |
| S&P Target Date 2040 | 23.37 | 10.73 | 8.11 |
| S&P Target Date To 2040 | 22.10 | 10.18 | 7.67 |
| S&P Target Date Through 2040 | 24.25 | 11.19 | 8.48 |
| 2045 TDFs (EW) | 24.25 | 11.14 | 7.87 |
| 2045 TDFs (AW) | 24.72 | 11.81 | 8.34 |
| S&P Target Date 2045 | 24.02 | 11.01 | 8.32 |
| S&P Target Date To 2045 | 23.07 | 10.56 | 7.96 |
| S&P Target Date Through 2045 | 24.76 | 11.38 | 8.62 |
| 2050 TDFs (EW) | 24.35 | 11.07 | 7.87 |
| 2050 TDFs (AW) | 24.97 | 11.91 | 8.34 |
| S&P Target Date 2050 | 24.35 | 11.22 | 8.49 |
| S&P Target Date To 2050 | 23.44 | 10.76 | 8.13 |
| S&P Target Date Through 2050 | 24.92 | 11.50 | 8.69 |
| 2055 TDFs (EW) | 24.73 | 11.35 | 8.00 |
| 2055 TDFs (AW) | 24.95 | 11.96 | 8.47 |
| S&P Target Date 2055 | 24.48 | 11.34 | 8.58 |
| S&P Target Date To 2055 | 23.60 | 10.90 | 8.26 |
| S&P Target Date Through 2055 | 25.00 | 11.53 | 8.69 |
| 2060+ TDFs (EW) | 25.09 | 11.48 | 8.20 |
| 2060+ TDFs (AW) | 25.00 | 12.07 | 8.41 |
| S&P Target Date 2060+ | 24.73 | 11.50 | 8.68 |
| S&P Target Date To 2060+ | 24.03 | 11.16 | 8.46 |
| S&P Target Date Through 2060+ | 25.09 | 11.58 | 8.72 |

Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of Dec. 31, 2019. "EW" indicates equal weighted. "AW" represents asset weighted. Table is provided for illustrative purposes. Past performance is no guarantee of future results. See Glossary for more information.

Report 4: Difference in Three-Year Total Return Between To and Through Indices by Vintage

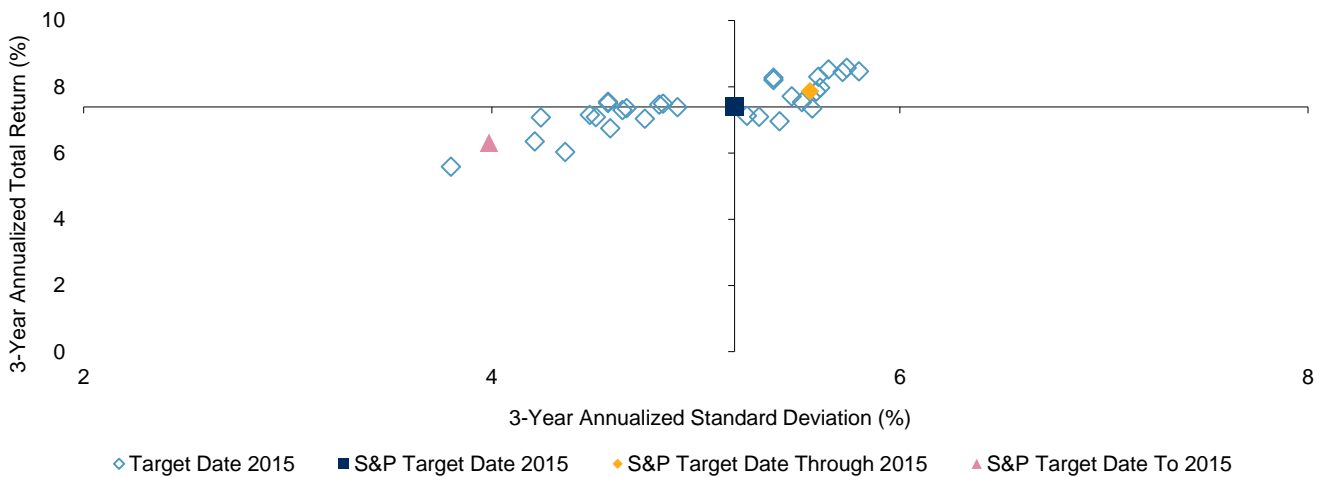
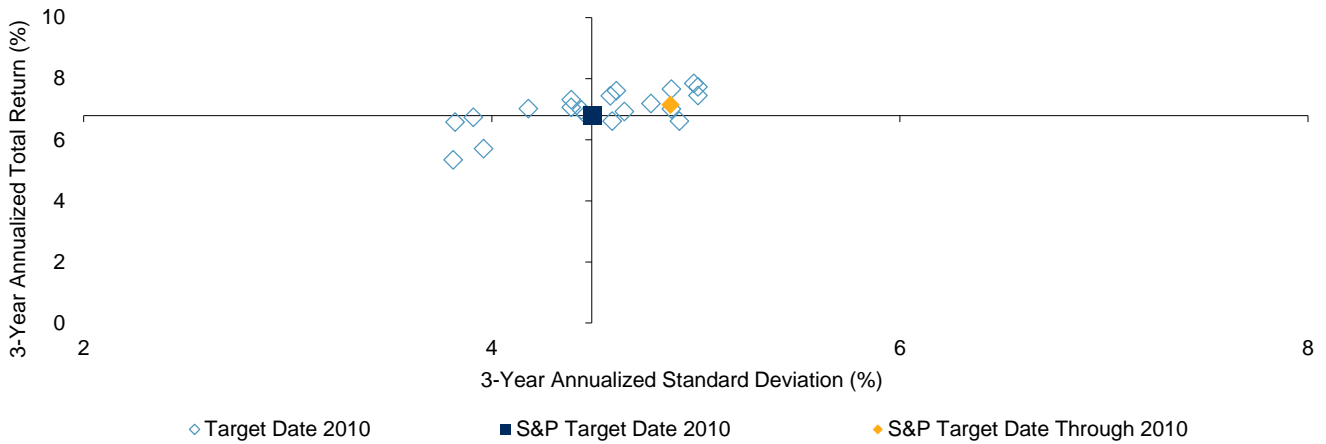
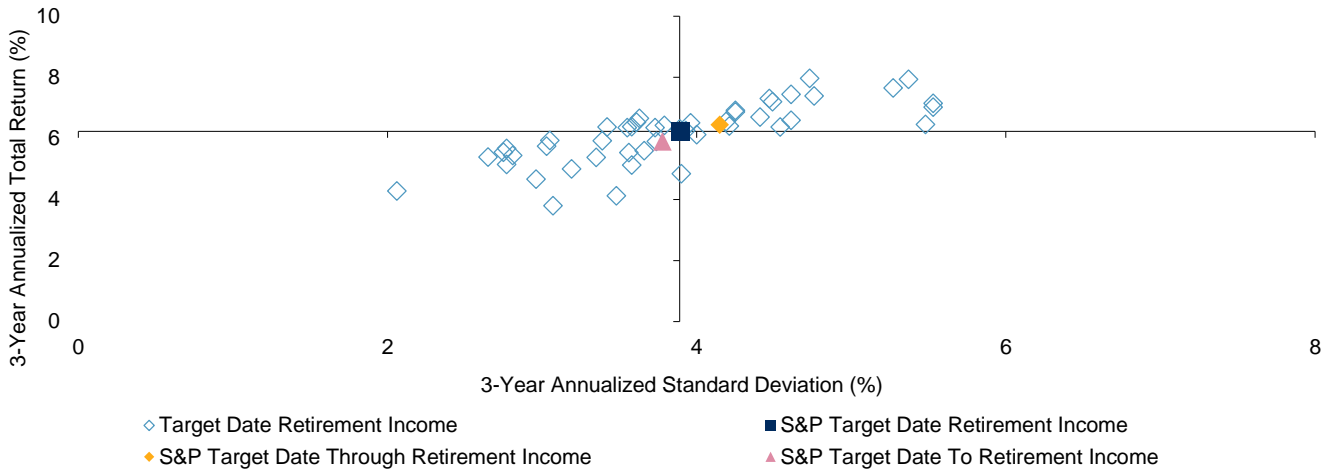


Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of Dec. 31, 2019. Chart is provided for illustrative purposes. Past performance is no guarantee of future results.

| Report 5: Quartile Breakpoints of Target Date Funds | | | |
|--|-----------------------|------------------------|-----------------------|
| FUND CATEGORY | THIRD QUARTILE | SECOND QUARTILE | FIRST QUARTILE |
| ONE-YEAR | | | |
| Ret Income | 14.40 | 12.76 | 11.10 |
| Target 2010 | 14.97 | 14.36 | 13.42 |
| Target 2015 | 16.48 | 15.22 | 14.48 |
| Target 2020 | 17.54 | 15.94 | 14.78 |
| Target 2025 | 19.24 | 18.27 | 17.15 |
| Target 2030 | 21.34 | 20.35 | 18.82 |
| Target 2035 | 23.11 | 22.24 | 21.01 |
| Target 2040 | 24.51 | 23.63 | 22.01 |
| Target 2045 | 25.41 | 24.57 | 23.16 |
| Target 2050 | 25.58 | 24.69 | 23.47 |
| Target 2055 | 25.80 | 24.85 | 23.86 |
| Target 2060+ | 26.28 | 25.09 | 24.49 |
| THREE-YEAR | | | |
| Ret Income | 6.49 | 5.90 | 5.30 |
| Target 2010 | 7.17 | 6.70 | 6.34 |
| Target 2015 | 7.65 | 7.29 | 6.83 |
| Target 2020 | 8.15 | 7.57 | 6.96 |
| Target 2025 | 9.18 | 8.60 | 8.03 |
| Target 2030 | 10.12 | 9.51 | 8.84 |
| Target 2035 | 10.96 | 10.31 | 9.74 |
| Target 2040 | 11.51 | 10.74 | 10.04 |
| Target 2045 | 11.79 | 11.09 | 10.51 |
| Target 2050 | 11.89 | 11.09 | 10.49 |
| Target 2055 | 11.96 | 11.23 | 10.71 |
| Target 2060+ | 12.06 | 11.38 | 10.92 |
| FIVE-YEAR | | | |
| Ret Income | 4.85 | 4.31 | 3.80 |
| Target 2010 | 5.44 | 5.14 | 4.67 |
| Target 2015 | 5.83 | 5.48 | 5.10 |
| Target 2020 | 6.06 | 5.57 | 4.96 |
| Target 2025 | 6.62 | 6.27 | 5.84 |
| Target 2030 | 7.35 | 6.83 | 6.25 |
| Target 2035 | 7.81 | 7.32 | 6.86 |
| Target 2040 | 8.13 | 7.60 | 7.08 |
| Target 2045 | 8.34 | 7.81 | 7.35 |
| Target 2050 | 8.36 | 7.89 | 7.40 |
| Target 2055 | 8.47 | 7.95 | 7.56 |
| Target 2060+ | 8.77 | 8.58 | 8.22 |

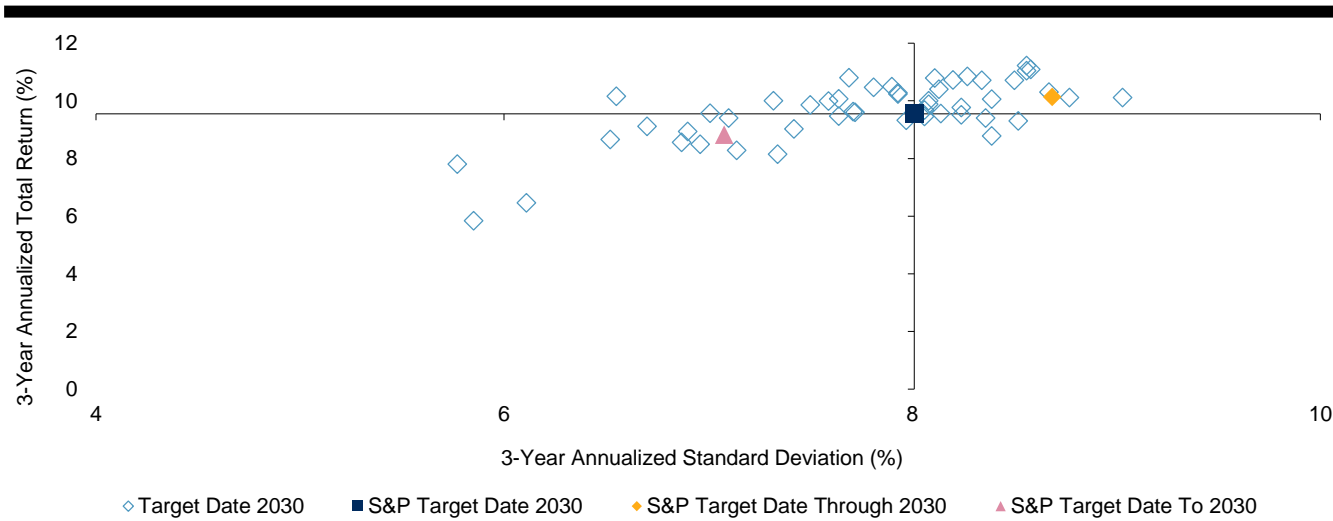
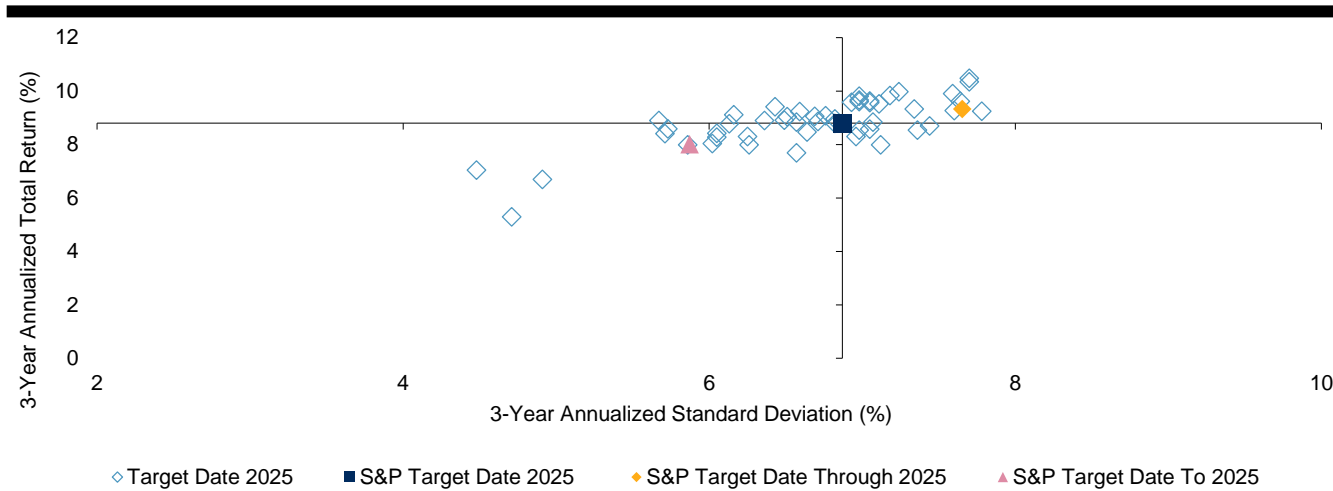
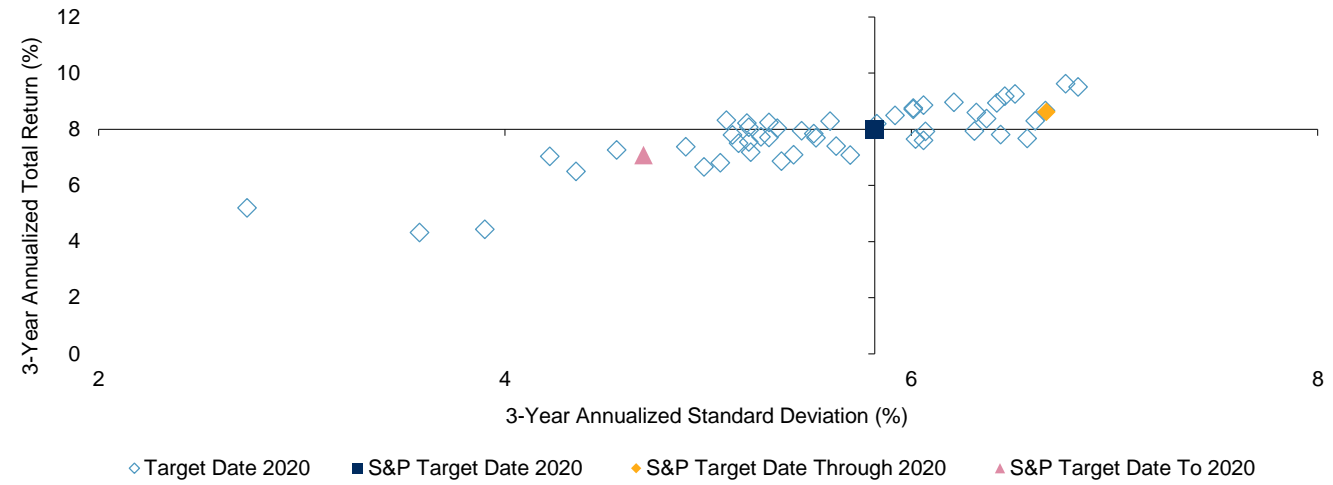
Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of Dec. 31, 2019. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 6: Three-Year Risk/Return by Target Date



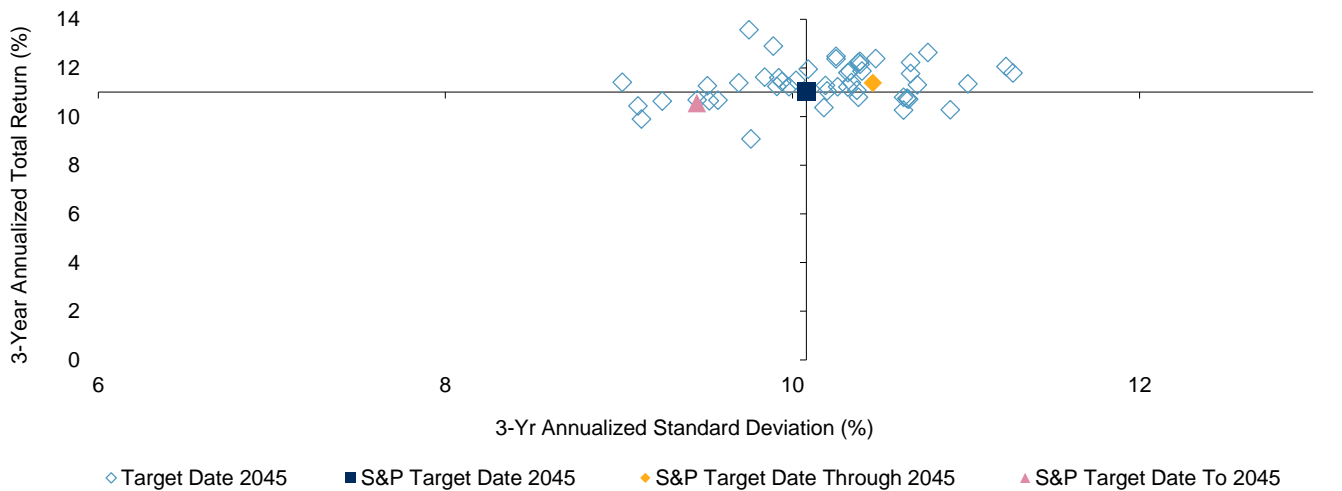
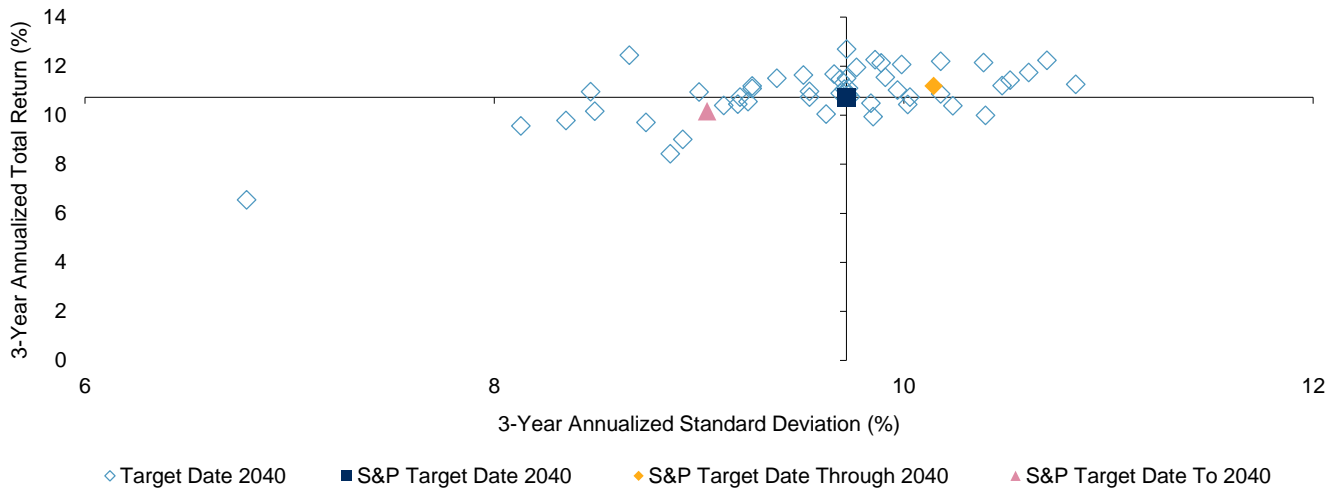
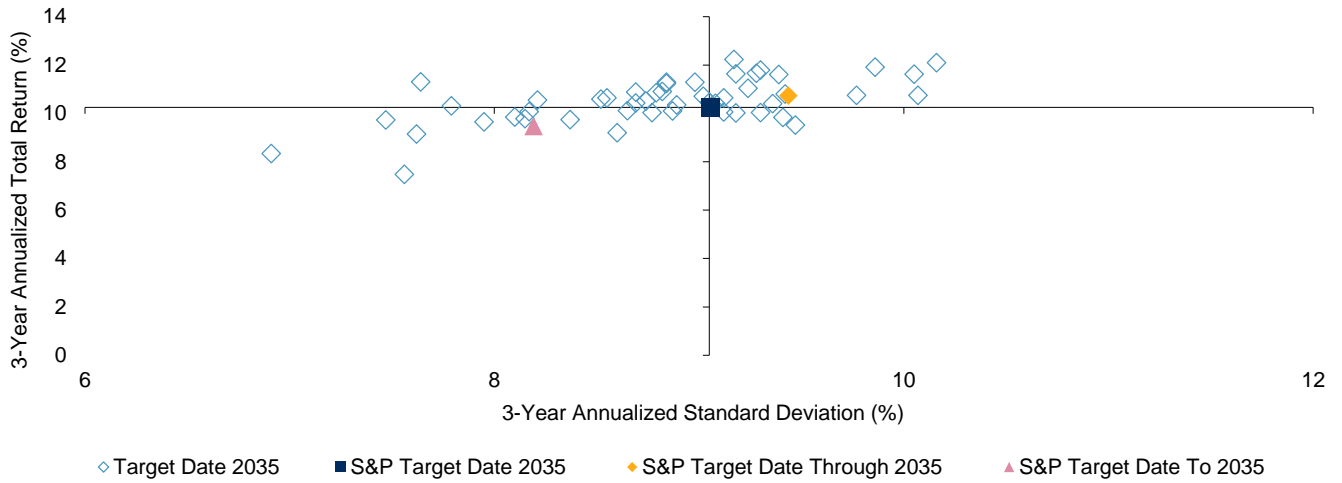
Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of Dec. 31, 2019. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

Report 6: Three-Year Risk/Return by Target Date (cont.)



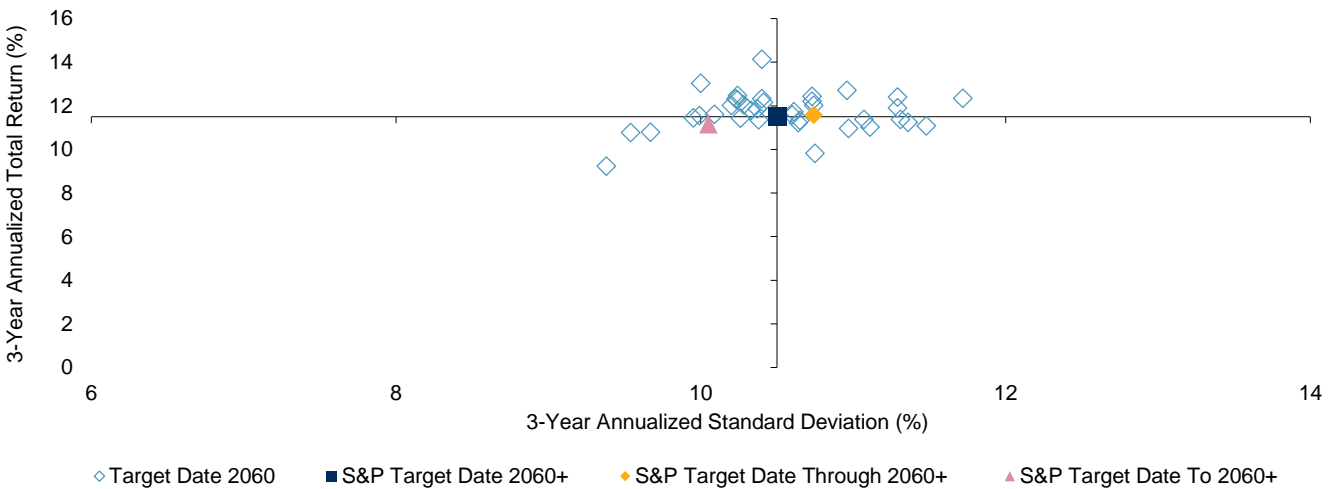
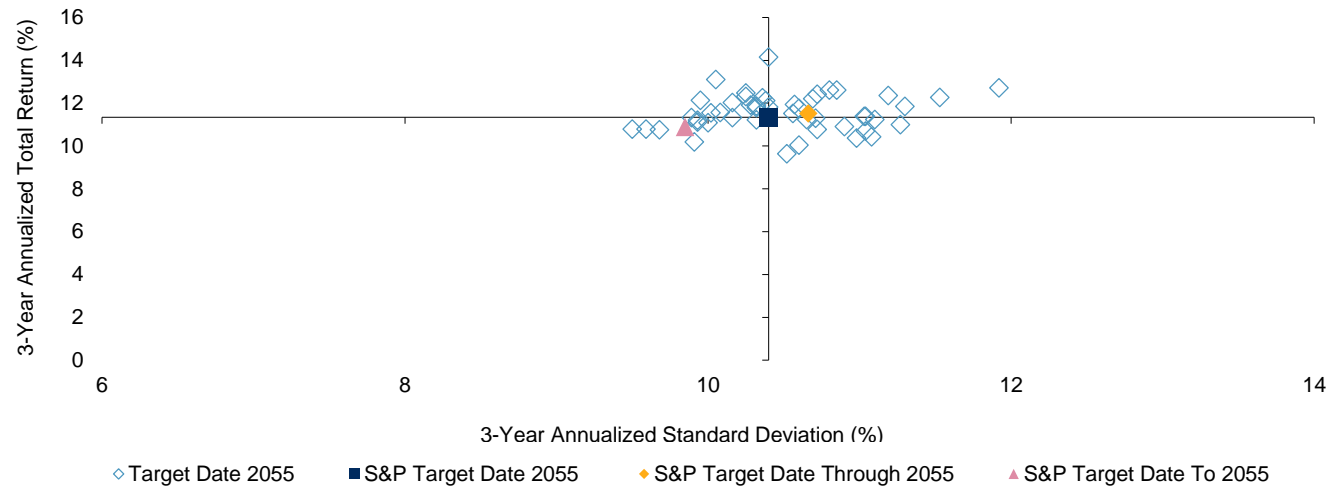
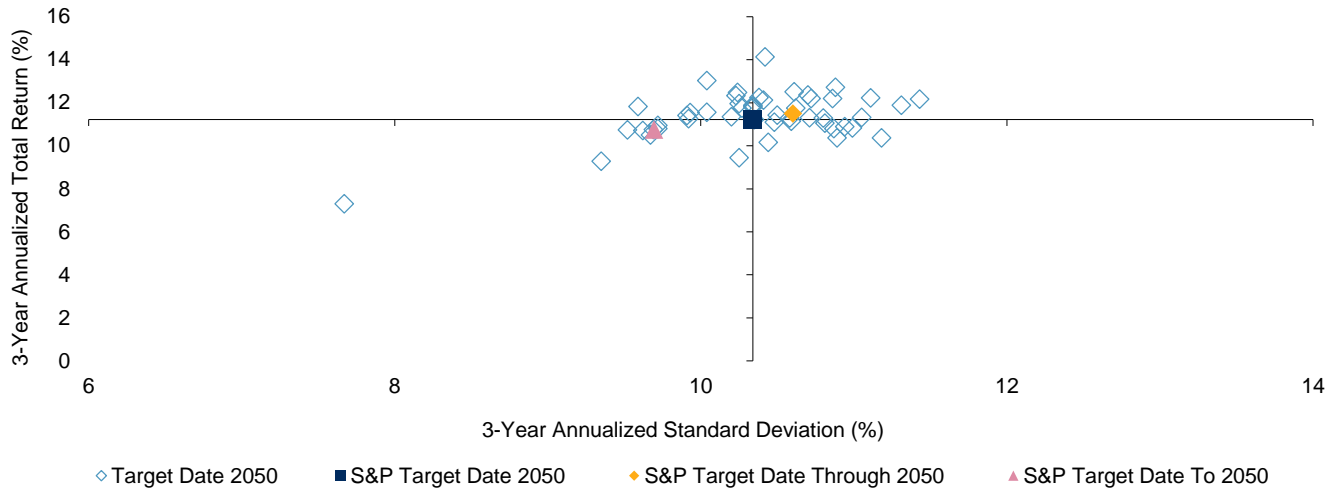
Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of Dec. 31, 2019. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

Report 6: Three-Year Risk/Return by Target Date (cont.)



Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of December 31, 2019. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

Report 6: Three-Year Risk/Return by Target Date (cont.)



Source: S&P Dow Jones Indices LLC, Morningstar Direct. Data as of December 31, 2019. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

GLOSSARY

Equal-Weighted (EW) Average TDF Performance

Equal-weighted returns for a particular style category are determined by calculating a simple average return of all active share classes in that category in a specific month. The effects of sales charges, or loads, are not included.

Asset-Weighted (AW) Average TDF Performance

Asset-weighted returns for a particular style category are determined by calculating a weighted average return of all funds in that category in a specific month, with each fund's return weighted by its total net assets. The effects of sales charges, or loads, are not included.

Quartiles Breakpoints

The p^{th} percentile for a set of data is the value that is greater than or equal to $p\%$ of the data but less than or equal to $(100 - p)\%$ of the data. In other words, it is a value that divides the data into two parts: the lower $p\%$ of the values and the upper $(100 - p)\%$ of the values. The first quartile is the 75th percentile, meaning it is the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50th percentile and the third quartile is the 25th percentile. Returns of all share classes, excluding loads, are used to calculate TDF category quartiles for specific time periods.

GENERAL DISCLAIMER

Copyright © 2020 S&P Dow Jones Indices LLC. All rights reserved. Standard & Poor's®, S&P 500® and S&P® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"), a subsidiary of S&P Global. Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"). Trademarks have been licensed to S&P Dow Jones Indices LLC. Redistribution, reproduction and/or photocopying in whole or in part are prohibited without written permission. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, Dow Jones, S&P or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. All information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties. Past performance of an index is not a guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other vehicle. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Dow Jones Indices keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P Dow Jones Indices may have information that is not available to other business units. S&P Dow Jones Indices has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.