

Target Date Fund Manager Search

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## County of Fresno

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# Executive Summary

## Objective:

The purpose of this analysis is to select a suitable target date fund (TDF) suite for the County of Fresno Retirement Plan. The Plan currently utilizes the Great-West Lifetime Trusts for its TDFs and qualified default investment alternative (QDIA). The current suite utilizes both active and passive investment management styles (Hybrid). Over the past decade the TDF industry has experienced exponential growth, contributing to an increased number of compelling hybrid and passive TDF suite options for plan sponsors to consider. This expanded universe offers TDF suites managed by robust teams from prominent investment management shops, utilizing impressive resources, at competitive price points. The remainder of this analysis outlines what NWCM recommends as a suitable replacement for the Great-West Lifetime Trusts.

**NWCM conducted a manager search to replace the incumbent with a target date fund provider, assessing the most compelling investment options on the metrics shown below:**

	Hybrid Management		Passive Management	
	Great-West Lifetime Trusts	T. Rowe Price Retirement Blend Trusts	Fidelity Freedom Index Funds	Vanguard Target Retirement Funds
Glide Path	✓	✓	✓	✓
Asset Allocation	✓	✓		
Performance		✓	✓	✓
Risk	✓	✓	✓	✓
Fees		✓	✓	✓

✓ Best of the category (if any)

## Conclusion:

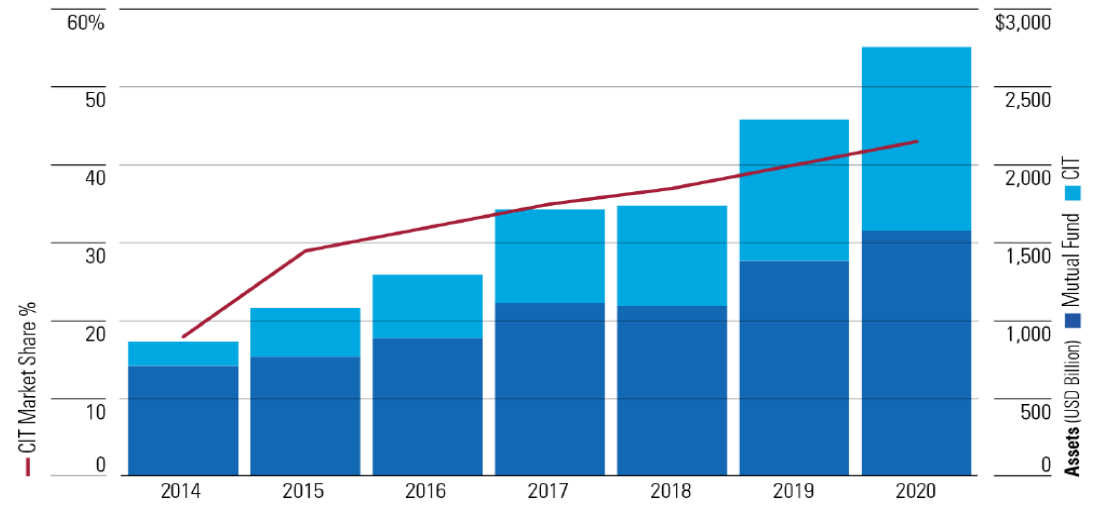
NWCM philosophically subscribes to the merits of TDF suites using hybrid management and believes the Retirement Blend series allows opportunity for cost effective excess returns, managed by a deep investment team who is backed by impressive firm resources. **NWCM sees this as the best fit for the County of Fresno target date fund mandate and as a result, NWCM recommends replacing the Great-West Lifetime target date portfolios with the T. Rowe Price Retirement Blend Trusts.** Both Fidelity and Vanguard are top-tier passively managed replacement options. If the DCMC determines that a TDF suite using fully passive management— or selecting a glidepath that more closely matches the incumbent’s asset allocations— is more appropriate, NWCM would support the utilization of either Fidelity Freedom Index Funds or Vanguard Target Date Retirement Funds.

# Target Date Fund Universe Trends

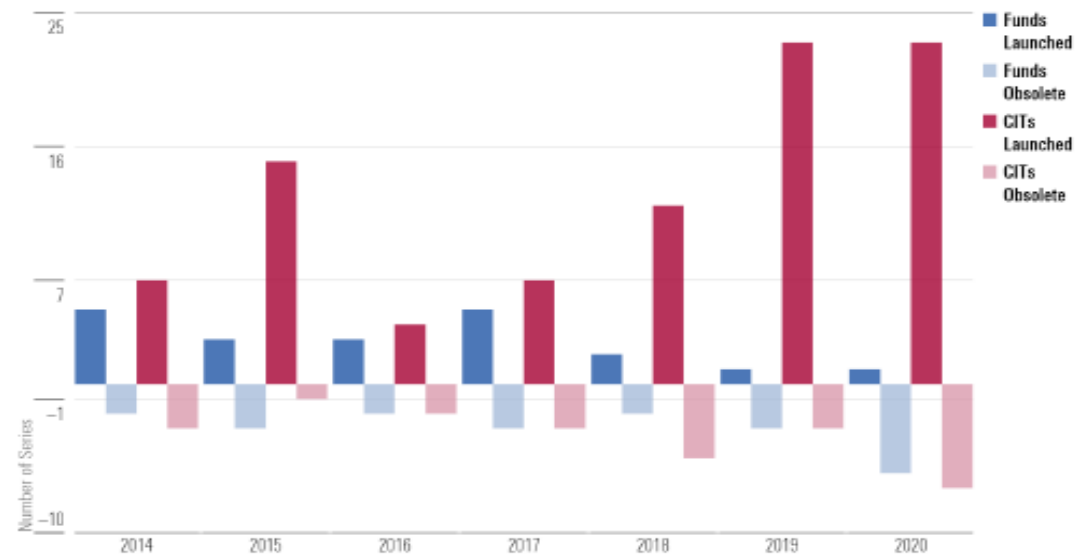
## Morningstar 2021 Target Date Landscape Report

- Total assets in target date strategies stood at approximately \$3.0 trillion as of September 2021, an increase from \$2.8 trillion at the end of 2020. Both industry assets and number of target date fund solution offerings have grown exponentially over the last decade.
- Target date fund assets in Commingled Investment Trusts (CIT) have also increasingly grown in recent years, now making up 44% of total target date strategy assets as of September 2021.
- The top five asset managers managed nearly 80% of all target-date assets as of December 2020. In order of largest to smallest market share, the top five managers consist of: Vanguard, Fidelity, T. Rowe Price, BlackRock, and American Funds.
- Fee competition continues to be fierce among target date providers. The bulk of contributions to mutual funds in 2020 went to share classes in the cheapest decile.
- Regulators in 2020 restricted sustainable investments in target date assets and opened the door for more alternatives, like private equities. The Department Of Labor announced in March 2021 that it would not seek to enforce the sustainable investments restriction rule.

## Total Target Date Fund Assets Have Grown Exponentially



## More Target Date Solutions Are Entering the Universe



# Summary of our Process

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The \$3.0 trillion target date fund industry consists of 182 target date series as of September 30, 2021. The industry remains top-heavy with the top ten largest asset management firms' consuming nearly 92% of market share\*. NWCM looked at the broader TDF universe, filtering it down to 14 prominent target date series. After setting up due diligence calls with the investment managers to discuss each series, NWCM was able to narrow the pool of target date funds further, based on the following metrics:

Stable and communicative organization that efficiently supports an experienced investment team, operating in cross departmental collaboration.

Strategic Asset Allocation (SAA) backed by considerate industry research, prioritizing both the plan sponsor and participant to achieve dependable retirement savings outcomes.

Consistent, thoughtful, and transparent investment process with proprietary framework, using Capital Markets Assumptions that are embedded in research and thoroughly reviewed.

Ongoing risk monitoring and portfolio due diligence, leading to portfolios that achieve high performance ranking relative to peers, at a reasonable cost.

After meeting with the investment managers and in consideration of the County's interest in hybrid and passive management, NWCM narrowed the universe to 3 target date series, in addition to the incumbent, consisting of one hybrid and two passively managed series. After thorough consideration, T. Rowe Price Retirement Blend was selected as a compelling investment option within the TDF universe.

# Fund Selection Process – Initial Screening



NWCM uses Morningstar Direct, a global investment analysis platform, to help screen the investment universe when conducting a manager search. The target-date fund universe is concentrated relative to other asset classes; the top five asset managers in the industry manage 78% of all assets, with the top 10 asset managers encompassing 92% of all target date fund market share.\*

## **NWCM took the following steps in order to filter down the investment universe:**

1. Established the investment universe by including all investments within the open-ended and commingled fund Morningstar Target-Date Category peer groups
2. Applied various screens to the investment universe such as whether the share class was closed to new investors, average investment manager tenure, investment performance peer group ranking, and competitive prospectus net expense ratio. The purpose of the quantitative screens was to gain a better understanding of the investment universe.
3. Simultaneously, another factor taken into consideration was proprietary information from ongoing research and meetings with the investment managers. This qualitative analysis included our perspective on the target date suite based on our professional relationship with the firm.

# Fund Selection Process – Manager Due Diligence



Filtering down the target-date investment universe based on qualitative and quantitative analysis resulted in 14 target date fund suites. NWCM scheduled hour-long virtual meetings for each target date suite being assessed. These due diligence calls included the attendance of NWCM's Senior Plan Research Analyst, Kate Allen, as well as at least one investment team member from the target date fund strategy being discussed.

## Active

American Funds  
Fidelity Freedom  
JP Morgan SmartRetirement  
T. Rowe Price Retirement

## Blend

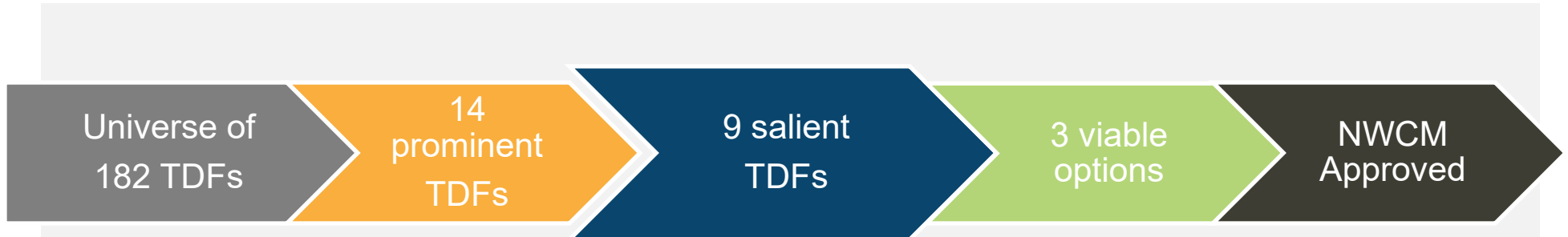
Fidelity Freedom Blend  
Great-West Lifetime  
JP Morgan SmartRetirement Blend  
T. Rowe Price Retirement Blend

## Passive

BlackRock LifePath Index  
Fidelity Freedom Index  
flexPATH Strategies  
Great-West Lifetime Index  
TIAA-CREF Lifecycle Index  
Vanguard Target Retirement

For the TDF due diligence meetings, NWCM used a proprietary TDF Due Diligence Questionnaire to direct the conversation. The Questionnaire included topics such as: Firm, Team, Investment Philosophy, Strategic Asset Allocation Process, Investment Process, Performance, Fees and Operations. The purpose of the Questionnaire was that it be used internally, to ensure consistent information is being collected across the 14 target date suites being discussed.

# Fund Selection Process – Management Style



The due diligence calls provided the necessary information to narrow the universe down further, to nine target date fund suites. The nine target date suites were then broken out by management style, which included: three active, two hybrid, and four passively managed series. Breaking up the nine suites into three styles allowed NWCM to compare funds with similar investment processes.

## Active

American Funds  
Fidelity Freedom  
T. Rowe Price Retirement

## Blend

Fidelity Freedom Blend  
T. Rowe Price Retirement Blend

## Passive

BlackRock LifePath Index  
Fidelity Freedom Index  
TIAA-CREF Lifecycle Index  
Vanguard Target Retirement

The target date suites within each management style were compared with one another. The assessment included:

- Historical peer group rankings, going back since the common fund inception date, on quantitative data points such as performance, sharpe ratio, standard deviation, and information ratio.
- Compare and contrast of each suite's TDF Due Diligence Questionnaire that NWCM completed.



# Fund Selection Process – County of Fresno



After comparing the nine target date suites by management style, NWCM concluded that the following strategies are the most viable options for the County of Fresno target date search mandate:

- T. Rowe Price Retirement Blend
- Fidelity Freedom Index
- Vanguard Target Retirement

The following analysis compares these three target date suites with the incumbent, Great-West Lifetime, assessing the managers on glide path, asset allocation, performance, risk, and fees. In conclusion of comparing these four managers, NWCM sees T. Rowe Price Retirement Blend mutual funds as the best fit for the County of Fresno and recommends replacing the Great-West Lifetime Trusts with the T. Rowe Price Retirement Blend Trusts.

NWCM views both Fidelity and Vanguard as the best-of-breed for passively managed retirement funds. If the DCMC determines that a TDF suite using fully passive management is more appropriate, NWCM would recommend replacing the incumbent with Fidelity Freedom Index Funds based on various non-investment related factors.

# The Relative Merits of Hybrid TDFs

As previously discussed with the County, the table below identifies a number relative strengths and weaknesses of hybrid and passive TDF management styles. NWCM philosophically subscribes to the merits of TDF suites using a hybrid (active and passive) construction methodology.

Strategy	Pros	Cons
Hybrid	<ul style="list-style-type: none"> <li>Hybrid strategies offer attractive fees relative to fully-active management TDF series, with similar portfolio diversification</li> <li>Utilize active management in less efficient asset classes where the potential to add value is highest</li> <li>Utilize passive management in more efficient asset classes to benefit from the availability of lower fees</li> <li>The adoption of TDFs using a hybrid approach has been gaining traction in recent years</li> </ul>	<ul style="list-style-type: none"> <li>Hybrid strategies are a relatively new innovation and most suites have relatively recent inception dates</li> <li>Care must be taken to ensure that there is an investment fee advantage over fully active strategies</li> </ul>
Passive	<ul style="list-style-type: none"> <li>Universe TDF flows have been trending towards passive management</li> <li>The majority of TDF assets in the investment universe reside in passively-managed options</li> <li>Attractive fees</li> <li>Returns have been comparable to actively-managed strategies with similar glide paths in more recent market cycles</li> </ul>	<ul style="list-style-type: none"> <li>The most prominent passive TDF series tend to be less diversified than hybrid strategies due to the priority emphasis on fee management</li> <li>The hands-off approach of passive does not include risk control beyond basic diversification</li> <li>External risks can be a headwind for returns in periods of market volatility</li> </ul>

## Glide Path – Portfolio Details

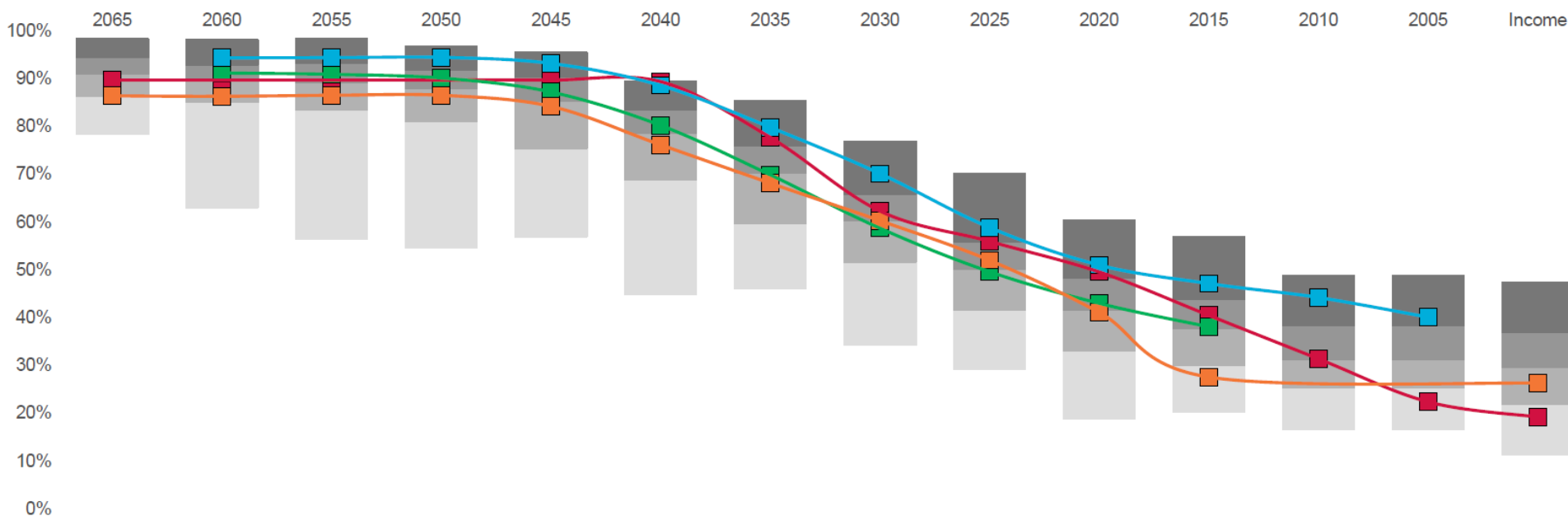
T. Rowe Price has a relatively recent inception date of February 2018 relative to the other strategies shown, which have all been available for more than five years. Great-West has an open structure, meaning the underlying fund structure may consist of funds managed both in-house and externally. Fidelity, T. Rowe Price, and Vanguard have proprietary structures, with all underlying funds managed in-house. Great-West and T. Rowe Price landing points extends 30 years through retirement, whereas Fidelity and Vanguard land only 15 and 10 years, respectively. Fidelity has the longest absolute and average manager tenure, though all funds have experienced teams who are heavily supported by investment professionals and research analysts. Great-West and T. Rowe Price have over twice the amount of underlying funds within their glidepaths compared to Fidelity and Vanguard, which can help mitigate diversification risks within the portfolio.

	Fidelity Freedom Index Series	Great-West LT Series	T. Rowe Price Retirement Blend Series	Vanguard Target Retirement Series
Share Class / Type	Instl Prem / MF	/ CIT	A / CIT	Instl / MF
Share Class Inception Date	10/02/2009	12/19/2014	2/01/2018	10/27/2003
Vintages Offered (Incl. Income)	2005 - 2065	2015 - 2060	2005 - 2065	2015 - 2065
Total # Offered	14	10	13	12
Active/Passive°	Passive	Blend	Blend	Passive
Open/Proprietary¹	Proprietary	Open	Proprietary	Proprietary
Glide Path Type (To / Through)	Through	Through	Through	Through
Landing Point	15 Years After Retirement	30 Years After Retirement	30 Years After Retirement	10 Years After Retirement
Longest Manager Tenure (Years)	12.34	7.12	4.00	6.61
Average Manager Tenure (Years)	11.18	6.10	4.00	6.44
Average Net Assets Across Vintages (\$ Millions)	\$7,421.50	\$138.97	\$293.03	\$29,912.50
Largest # Underlying Funds	11	27	25	7

# Glide Path – Equity to Fixed Income

Across the glide path, T. Rowe Price has the highest equity allocation relative to the other managers. Great-West is contracted with Morningstar, who provides Strategic Asset Allocation (SAA) consulting annually. T. Rowe Price and Fidelity utilize tactical asset allocation in addition to SAA, both of which consist of short-term allocation adjustments of the underlying asset classes (+/- 10% bounds) within the glide path that align with the firm's macro-economic, thematic bets. When done right, tactical asset allocation movements can provide portfolio protection against market volatility. In more recent years, both T. Rowe Price and Fidelity have updated their glide path to increase overall allocation to equities.

HOLDINGS-BASED EQUITY GLIDE PATH



Strategy Name	As of Date	2065	2060	2055	2050	2045	2040	2035	2030	2025	2020	2015	2010	2005	Income
Fidelity Freedom Index Series	12/31/2021	89.63	89.63	89.63	89.64	89.63	89.34	77.63	62.25	55.87	49.48	40.39	31.30	22.30	19.15
Great-West LT Series	09/30/2021		91.11	90.86	90.04	87.17	80.17	69.78	58.67	49.57	42.94	38.01			
T. Rowe Price Retirement Blend Series	12/31/2021		94.31	94.35	94.37	93.11	88.50	79.74	70.08	58.82	50.90	47.08	44.17	40.03	
Vanguard Target Retirement Series	12/31/2021	86.35	86.23	86.47	86.48	84.11	76.08	68.07	60.24	51.95	41.03	27.48			26.22

# Glide Path – Relative Comparison

Relative to Great-West, the T. Rowe Price glide path has significantly higher exposure to equities, particularly when nearing retirement. T. Rowe Price has a dedicated Life Cycle Modeling team, using behavioral research from sources such as their recordkeeping platform. T. Rowe Price positions tactical asset allocations monthly, positioning the portfolio underweight equities last quarter. For years into retirement, Fidelity's equity allocation is much lower than Great-West's, with the intention of increasing resiliency for all market environments. Vanguard's glide path is like Great-West up until retirement, with Vanguard's equity landing point being 12% lower. Like T. Rowe Price and Fidelity, Vanguard uses a team-based approach to SAA. Vanguard's assumptions are based on ongoing behavioral research datamined from their substantial recordkeeping platform.

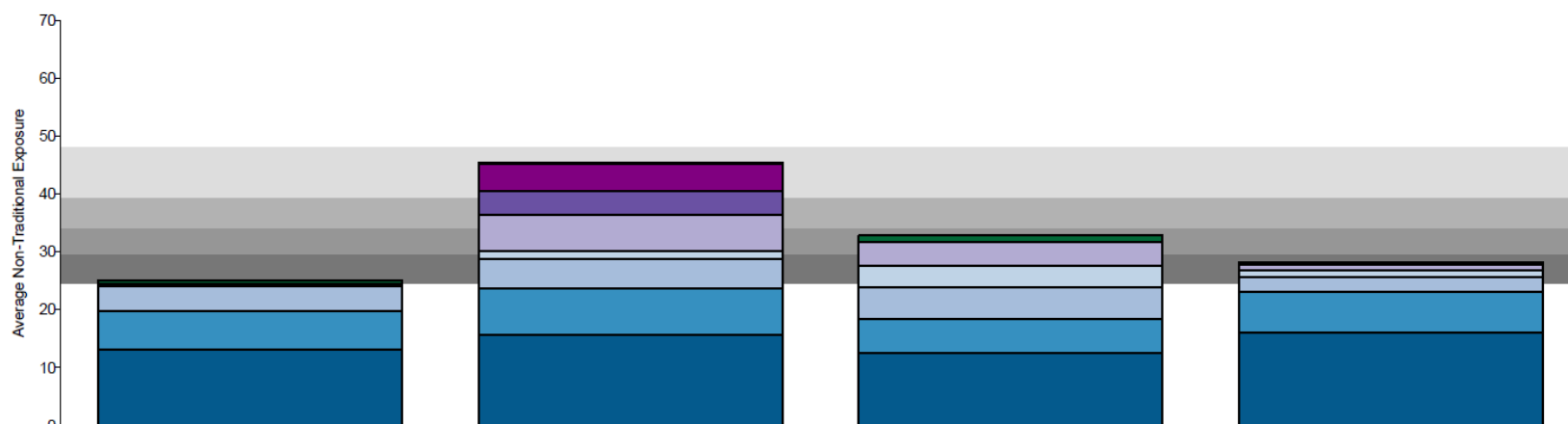
Equity Allocation Relative to Great-West



# Asset Allocation – Non-Traditional Assets

The hybrid universe offers higher average non-traditional assets exposure than the passive universe, particularly within fixed income (Debt, TIPS, and High Yield). This can meaningfully contribute to the diversification benefit within the portfolios. Fidelity and Vanguard both have low exposure to non-traditional assets within their portfolios, though in more recent years Fidelity has made efforts such as adding allocation to TIPS in 2018 and international bonds in 2021. Great-West has the highest allocation to non-traditional assets, particularly due to High Yield and REITs exposure. T. Rowe Price relies on equities, real assets, and short-term TIPS for an inflation hedge.

AVERAGE NON-TRADITIONAL ASSETS EXPOSURE

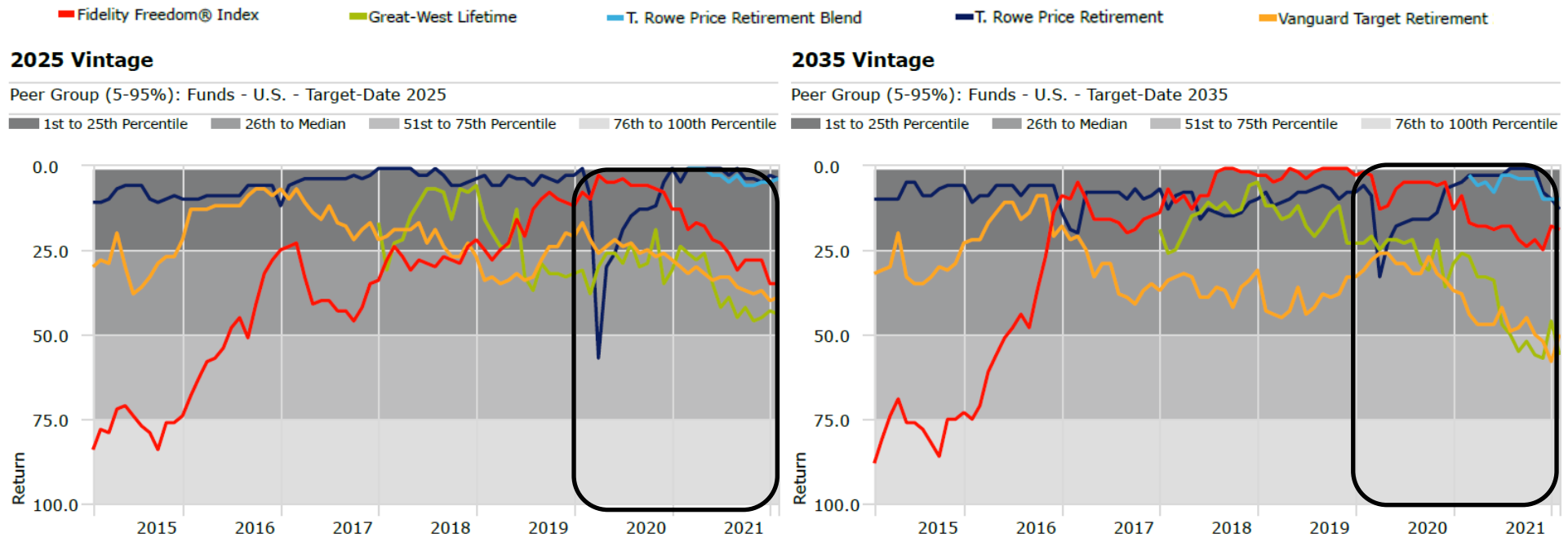


	Fidelity Freedom Index Series	Great-West LT Series	T. Rowe Price Retirement Blend Series	Vanguard Target Retirement Series
Developed Foreign Equity	13.09	15.72	12.49	16.11
Emerging Markets Equity	6.73	7.93	6.01	6.95
Developed Foreign Debt	4.21	5.13	5.28	2.61
Emerging Markets Debt	0.10	1.27	3.90	1.19
TIPS	0.30	6.41	4.13	1.01
High Yield	0.00	4.11	0.00	0.00
REITs	0.01	4.70	0.00	0.03
Commodities	0.61	0.09	0.98	0.31

# Performance – 3 Year Rolling Peer Group Rankings

Due to the relatively recent inception date of T. Rowe Price Retirement Blend, the fully-active counterpart T. Rowe Price Retirement has been pulled in for performance comparison (the two strategies share a glide path and are managed by the same investment team).

Over the last ten years, the 3-year rolling performance for T. Rowe Price has consistently ranked in the top quartile relative to target date peers. Great-West has similarly ranked in the top-quartile historically, though performance has dragged in recent years and the 3-year rolling peer group ranking has fallen near median. The T. Rowe Price 2025 and 2035 Vintage years took a hit in Q1 2020 alongside the pandemic, moreso than the other managers, though T. Rowe Price rebounded strongly enough in the months following to get both Vintage years' peer group rankings back in the top quartile.

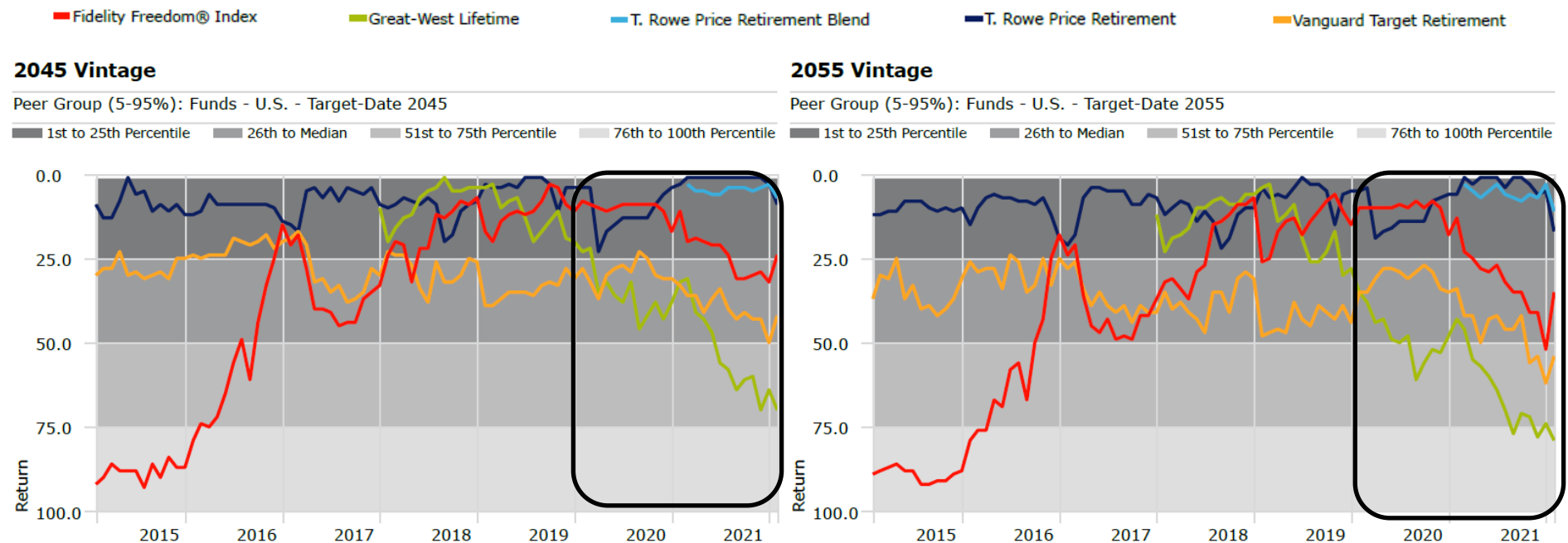


# Performance – 3 Year Rolling Peer Group Rankings

Again, over the last ten years the 3-year rolling performance for T. Rowe Price Vintage years 2045 and 2055 has consistently ranked in the top quartile relative to target date peers.

Like Vintage years 2025 and 2035, Great-West historically ranked in the top-quartile though underperformed in more recent years. Since inception, Great-West asset allocation has tilted asset allocations to favor small cap and value style which has been a significant headwind to performance. Great-West has recently made adjustments to the underlying funds within the glide path, replacing a handful of managers in hopes of turning performance around.

Performance for Fidelity in more recent years has bounced from the bottom to top quartile relative to peers, largely due to glide path updates to increase diversification within the portfolio, that NWCM finds promising.





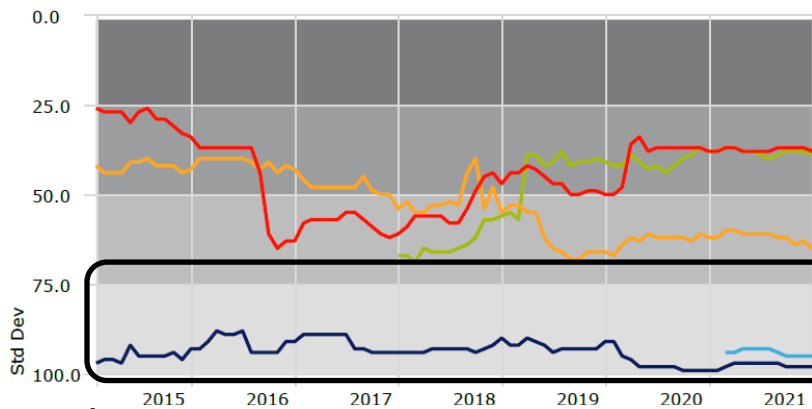
# Risk – 3 Year Rolling Standard Deviation Peer Group Rankings

Over the same ten-year time period, the 3-year rolling standard deviation risk for all four managers ranks below the first quartile. The earlier Vintage years for T. Rowe Price ranks in the bottom quartile, a result of T. Rowe Price's higher equity glide path allocation. Risk for Great-West, Vanguard, and T. Rowe Price later Vintage years has historically aligned with the respective peer group medians.

## 2025 Vintage

Peer Group (5-95%): Funds - U.S. - Target-Date 2025

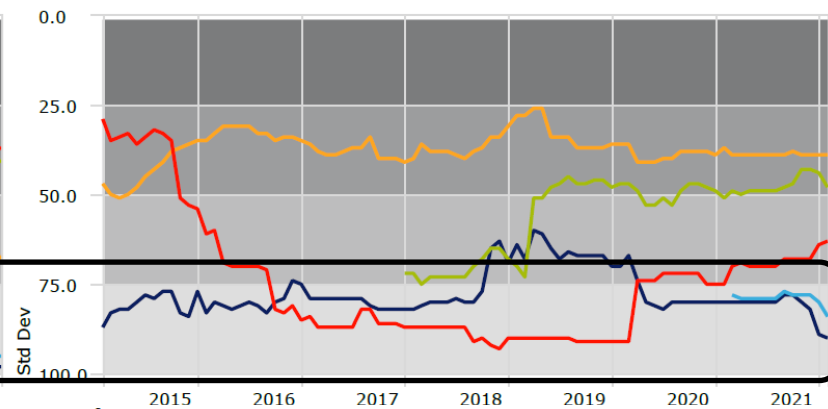
1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile



## 2035 Vintage

Peer Group (5-95%): Funds - U.S. - Target-Date 2035

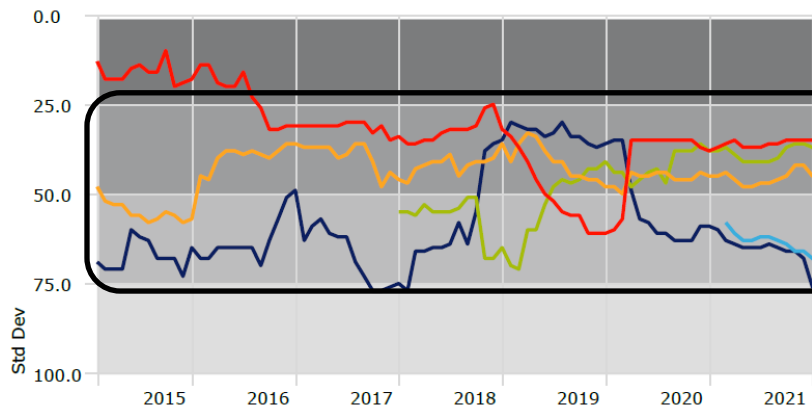
1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile



## 2045 Vintage

Peer Group (5-95%): Funds - U.S. - Target-Date 2045

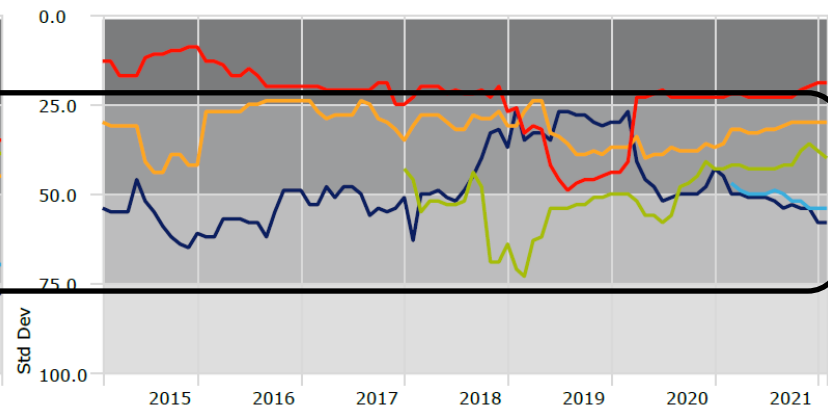
1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile



## 2055 Vintage

Peer Group (5-95%): Funds - U.S. - Target-Date 2055

1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile



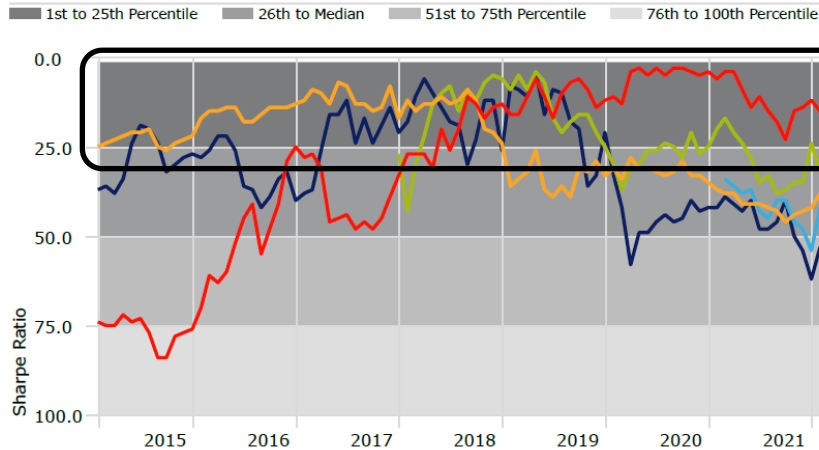
Fidelity Freedom® Index  
Great-West Lifetime  
T. Rowe Price Retirement Blend  
T. Rowe Price Retirement  
Vanguard Target Retirement

# Risk – 3 Year Rolling Sharpe Ratio Peer Group Rankings

The better ranking Sharpe Ratio indicates a higher return given the same amount of risk taken. The higher standard deviation risk of the T. Rowe Price strategy is rectified by superior returns, as displayed by the strategy's Sharpe Ratio consistently ranking in the top quartile relative to peers. Fidelity's Sharpe Ratio has ranked in the top quartile in more recent years, while Great-West's ranking has dropped into the bottom half of peers.

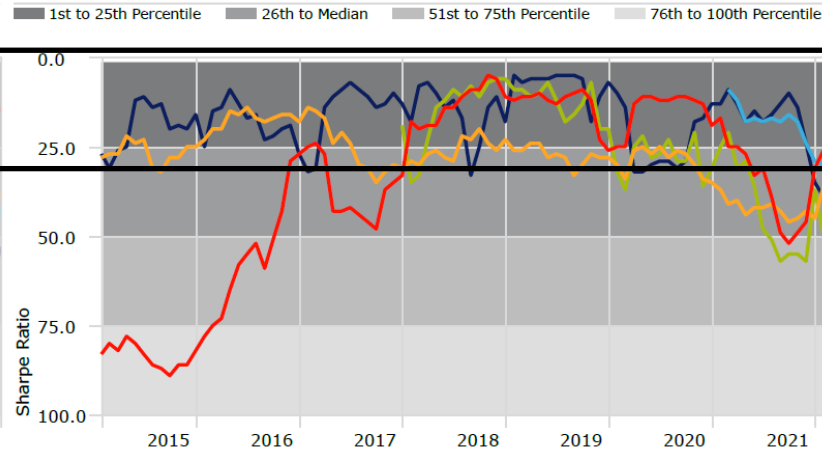
## 2025 Vintage

Peer Group (5-95%): Funds - U.S. - Target-Date 2025 Calculation Benchmark: S&P Target Date 2025 TR USD



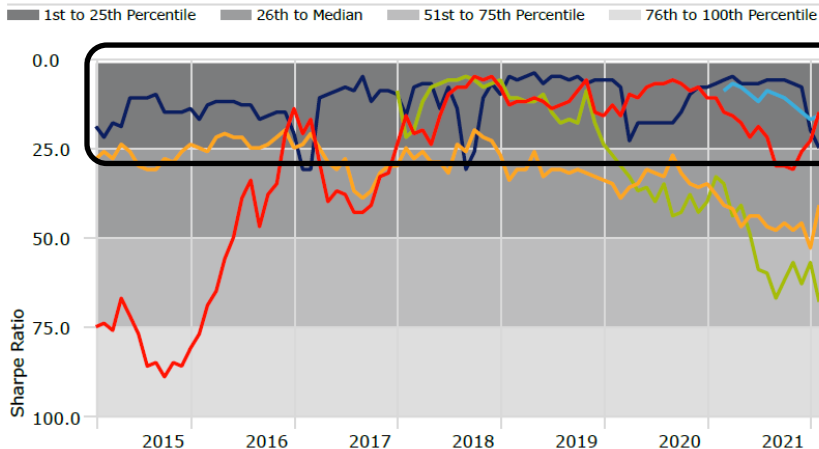
## 2035 Vintage

Peer Group (5-95%): Funds - U.S. - Target-Date 2035 Calculation Benchmark: S&P Target Date 2035 TR USD



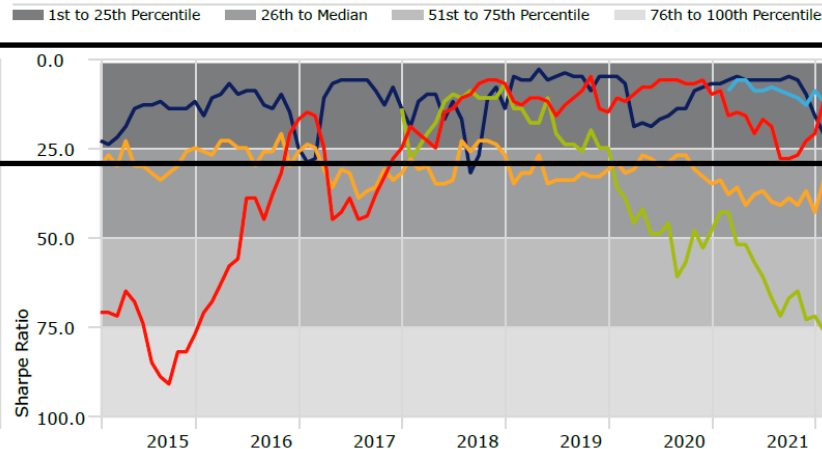
## 2045 Vintage

Peer Group (5-95%): Funds - U.S. - Target-Date 2045 Calculation Benchmark: S&P Target Date 2045 TR USD



## 2055 Vintage

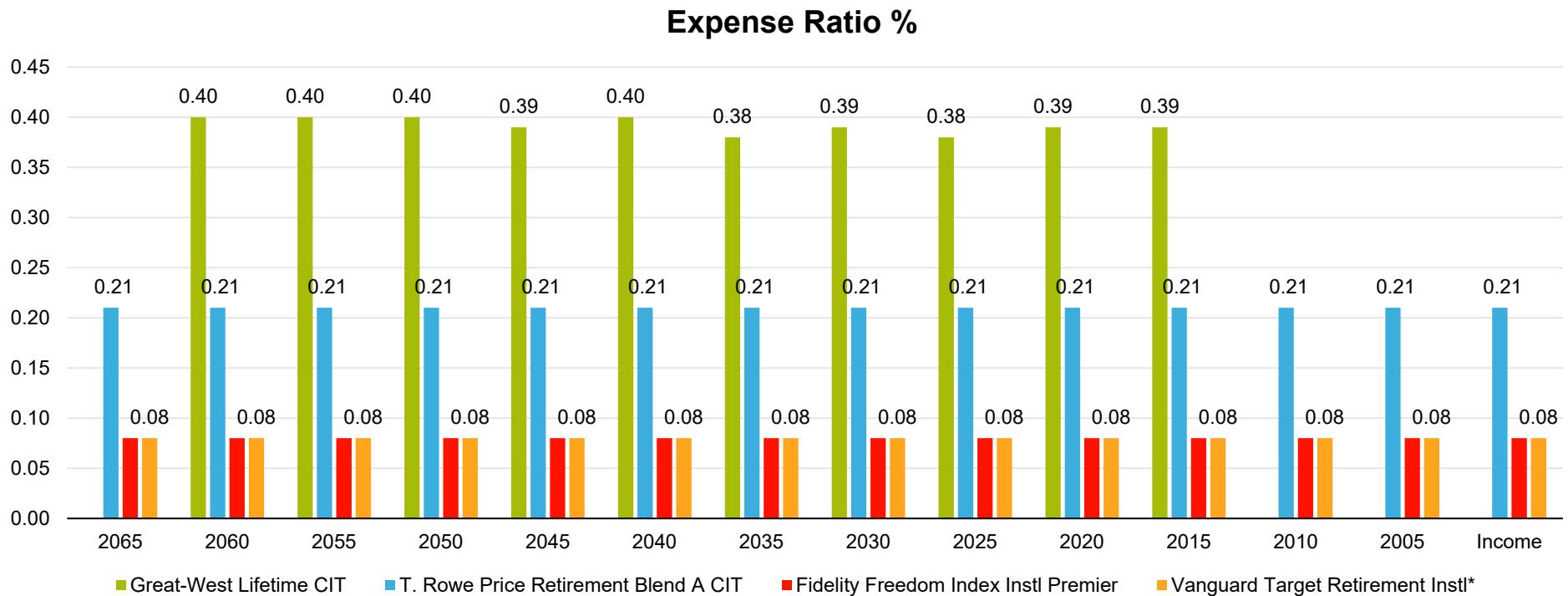
Peer Group (5-95%): Funds - U.S. - Target-Date 2055 Calculation Benchmark: S&P Target Date 2055 TR USD



Fidelity Freedom® Index  
Great-West Lifetime  
T. Rowe Price Retirement Blend  
T. Rowe Price Retirement  
Vanguard Target Retirement

## Fees – Comparison

Fees, shown as expense ratio, are the most expensive for Great-West Lifetime. County of Fresno qualifies for the A share class CIT for T. Rowe Price Retirement Blend, offering an expense ratio nearly half of that for Great-West at 0.21% across all Vintage years. Fidelity Freedom Index and Vanguard Target Retirement Index both charge an expense ratio of 0.08%.



# Conclusion

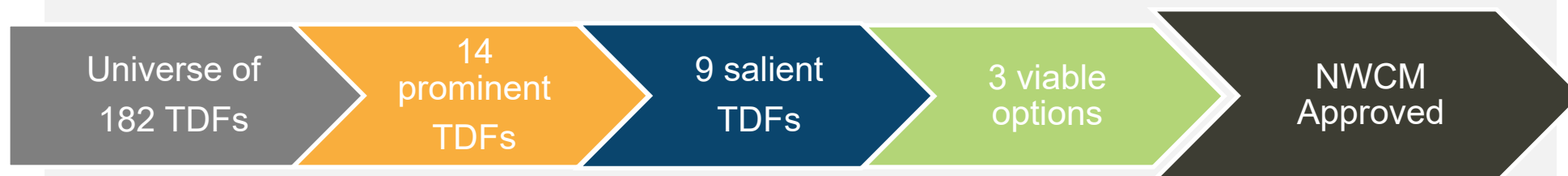
NWCM philosophically subscribes to the merits TDF suites using a hybrid construction methodology (active and passive managed investments) offer over long investment horizons. Great-West Lifetime was ahead of it's time selecting both active and passive funds to create an affordable product for plan sponsors, though in recent years faced performance headwinds due to the portfolio's historical small-cap and value-style preferences. T. Rowe Price Retirement has proven to provide consistently strong returns across all vintage years, the result of a collaborative process and diverse investment portfolio. Despite the relatively recent inception of T. Rowe Price Retirement Blend, NWCM believes the Retirement Blend series allows opportunity for cost effective excess returns considering T. Rowe Price uses the same glide path for all retirement strategies. Additionally, the deep investment team on the strategy is backed by impressive firm resources.

**NWCM sees this as the best fit for the County of Fresno target date fund mandate and as a result, NWCM recommends replacing the Great-West Lifetime target date portfolios with the T. Rowe Price Retirement Blend Trusts.** Both Fidelity and Vanguard are top-tier passively managed replacement options. If the DCMC determines that a TDF suite using fully passive management— or selecting a glidepath that more closely matches the incumbent's asset allocations— is more appropriate, NWCM would support the utilization of either Fidelity Freedom Index Funds or Vanguard Target Date Retirement Funds. Plan sponsor may select one or the other for non-investment related reasons, such as availability on recordkeepers platform.

	Hybrid Management		Passive Management	
	Great-West Lifetime Trusts	T. Rowe Price Retirement Blend Trusts	Fidelity Freedom Index Funds	Vanguard Target Retirement Funds
Glide Path	✓	✓	✓	✓
Asset Allocation	✓	✓		
Performance		✓	✓	✓
Risk	✓	✓	✓	✓
Fees		✓	✓	✓

✓ Best of the category (if any)

## Appendix – Fund Selection Process – Outcome



As a result, NWCM concluded T. Rowe Price as a suitable hybrid investment option within the target date asset class.

T. Rowe Price Retirement Blend		
Glide Path	✓	Glide path is designed to consider a spectrum of risks through retirement, constructed by a deep investment team with heavy support of firm resources.
Asset Allocation	✓	Multiple teams using a collaborative approach for life cycle modelling and strategic asset allocation, backed by research and thoroughly reviewed through ongoing risk monitoring.
Performance	✓	Rolling 3 Year return ranks in the top quartile relative to Target-Date peers for nearly all Vintage Years since strategy inception in 2018.
Fees	✓	19-26 basis point fee is very competitive, considering the 40% active management allocation within the portfolio.

## Appendix – Default Age Band Comparison: T. Rowe Price

Participants that do not elect an investment are defaulted based off their date of birth and the age bands below.

Great-West Default Age Bands		Change	T. Rowe Price Default Age Bands	
Investment Option	Birth Year		Investment Option	Birth Year
Great-West Lifetime 2015 Trust	1900 - 1954	→	T. Rowe Price Retirement Blend 2005 Trust I	1900 - 1942
			T. Rowe Price Retirement Blend 2010 Trust I	1943 - 1947
			T. Rowe Price Retirement Blend 2015 Trust I	1948 - 1952
Great-West Lifetime 2020 Trust	1955 - 1959	→	T. Rowe Price Retirement Blend 2020 Trust I	1953 - 1957
Great-West Lifetime 2025 Trust	1960 - 1964	→	T. Rowe Price Retirement Blend 2025 Trust I	1958 - 1962
Great-West Lifetime 2030 Trust	1965 - 1969	→	T. Rowe Price Retirement Blend 2030 Trust I	1963 - 1967
Great-West Lifetime 2035 Trust	1970 - 1974	→	T. Rowe Price Retirement Blend 2035 Trust I	1968 - 1972
Great-West Lifetime 2040 Trust	1975 - 1979	→	T. Rowe Price Retirement Blend 2040 Trust I	1973 - 1977
Great-West Lifetime 2045 Trust	1980 - 1984	→	T. Rowe Price Retirement Blend 2045 Trust I	1978 - 1982
Great-West Lifetime 2050 Trust	1985 - 1989	→	T. Rowe Price Retirement Blend 2050 Trust I	1983 - 1987
Great-West Lifetime 2055 Trust	1990 - 1994	→	T. Rowe Price Retirement Blend 2055 Trust I	1988 - 1992
Great-West Lifetime 2060 Trust	1995 -	→	T. Rowe Price Retirement Blend 2060 Trust I	1993 - 1997
			T. Rowe Price Retirement Blend 2065 Trust I	1998 -

## Appendix – Default Age Band Comparison: Fidelity

Participants that do not elect an investment are defaulted based off their date of birth and the age bands below.

Great-West Default Age Bands		Change	T. Rowe Price Default Age Bands	
Investment Option	Birth Year		Investment Option	Birth Year
Great-West Lifetime 2015 Trust	1900-1954	→	Fidelity Freedom Index Instl Prem. Income	1900 - 1938
			Fidelity Freedom Index Instl Prem. 2005	1938 - 1942
			Fidelity Freedom Index Instl Prem. 2010	1943 - 1947
			Fidelity Freedom Index Instl Prem. 2015	1948 - 1952
Great-West Lifetime 2020 Trust	1955 - 1959	→	Fidelity Freedom Index Instl Prem. 2020	1953 - 1957
Great-West Lifetime 2025 Trust	1960 - 1964	→	Fidelity Freedom Index Instl Prem. 2025	1958 - 1962
Great-West Lifetime 2030 Trust	1965 - 1969	→	Fidelity Freedom Index Instl Prem. 2030	1963 - 1967
Great-West Lifetime 2035 Trust	1970 - 1974	→	Fidelity Freedom Index Instl Prem. 2035	1968 - 1972
Great-West Lifetime 2040 Trust	1975 - 1979	→	Fidelity Freedom Index Instl Prem. 2040	1973 - 1977
Great-West Lifetime 2045 Trust	1980 - 1984	→	Fidelity Freedom Index Instl Prem. 2045	1978 - 1982
Great-West Lifetime 2050 Trust	1985 - 1989	→	Fidelity Freedom Index Instl Prem. 2050	1983 - 1987
Great-West Lifetime 2055 Trust	1990 - 1994	→	Fidelity Freedom Index Instl Prem. 2055	1988 - 1992
Great-West Lifetime 2060 Trust	1995 -	→	Fidelity Freedom Index Instl Prem. 2060	1993 - 1997
			Fidelity Freedom Index Instl Prem. 2065	1998 -

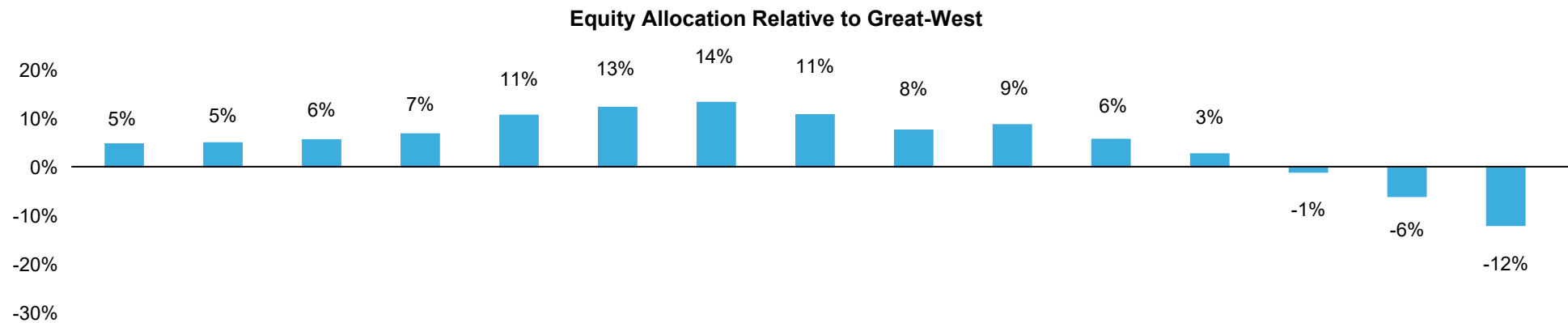
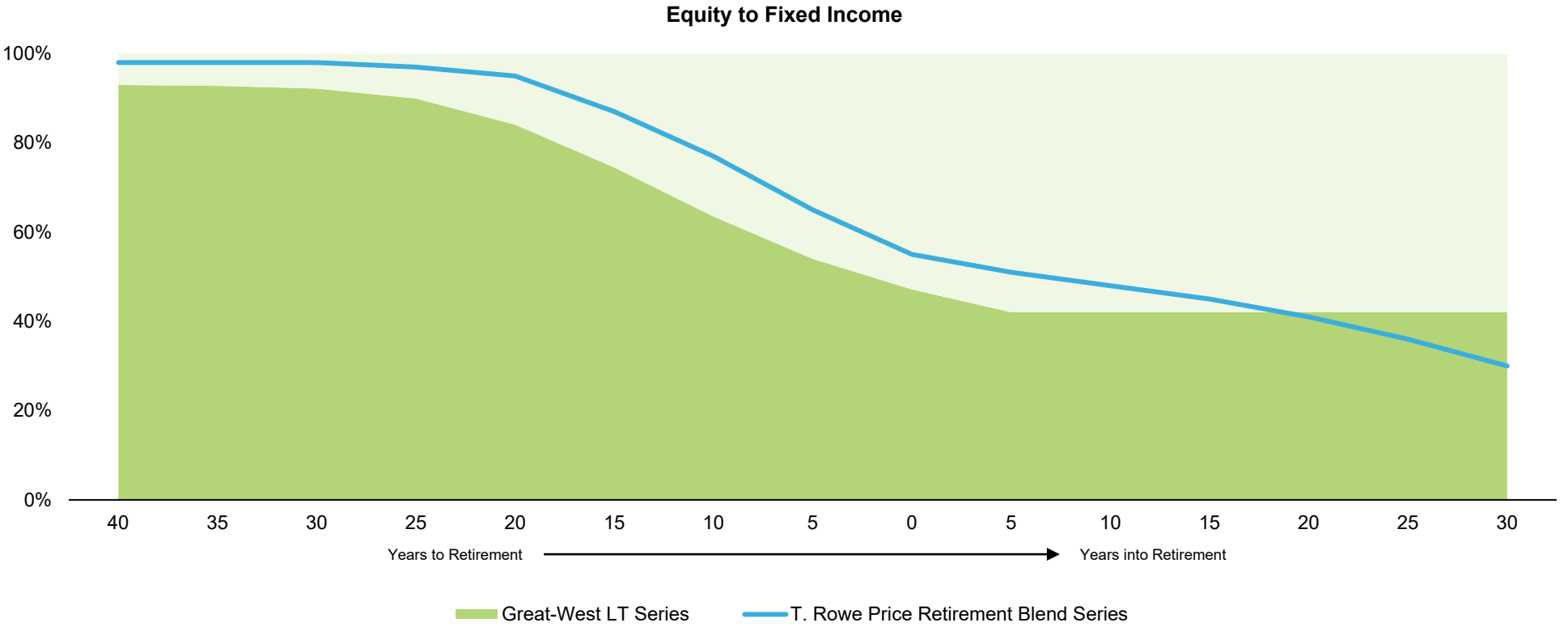
## Appendix – Default Age Band Comparison: Vanguard

Participants that do not elect an investment are defaulted based off their date of birth and the age bands below.

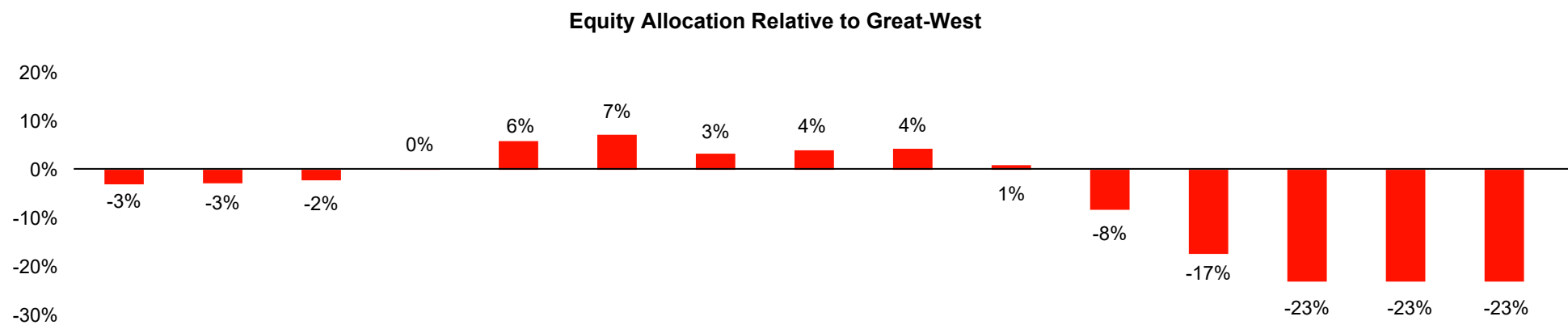
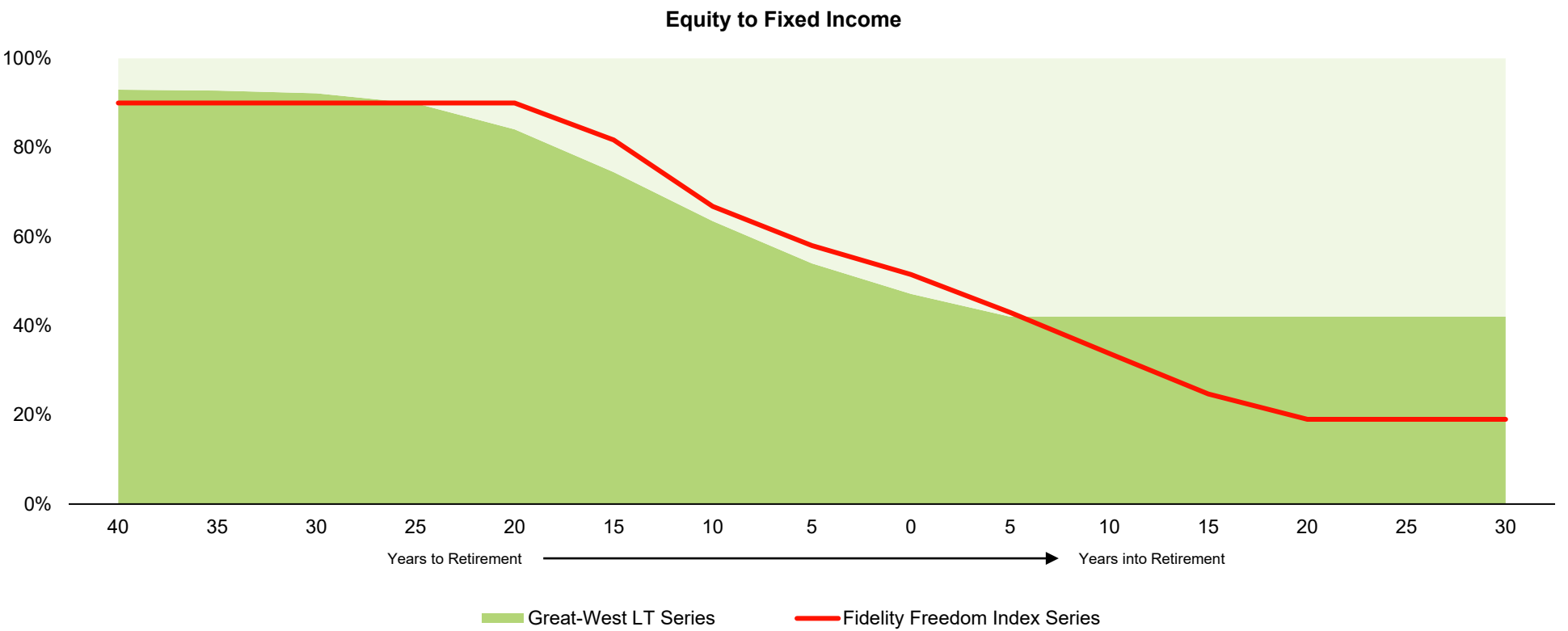
Great-West Default Age Bands		Change	T. Rowe Price Default Age Bands	
Investment Option	Birth Year		Investment Option	Birth Year
Great-West Lifetime 2015 Trust	1900 - 1954	→	Vanguard Target Retirement Income	1900 - 1948
			Vanguard Target Retirement 2015	1948 - 1952
Great-West Lifetime 2020 Trust	1955 - 1959	→	Vanguard Target Retirement 2020	1953 - 1957
Great-West Lifetime 2025 Trust	1960 - 1964	→	Vanguard Target Retirement 2025	1958 - 1962
Great-West Lifetime 2030 Trust	1965 - 1969	→	Vanguard Target Retirement 2030	1963 - 1967
Great-West Lifetime 2035 Trust	1970 - 1974	→	Vanguard Target Retirement 2035	1968 - 1972
Great-West Lifetime 2040 Trust	1975 - 1979	→	Vanguard Target Retirement 2040	1973 - 1977
Great-West Lifetime 2045 Trust	1980 - 1984	→	Vanguard Target Retirement 2045	1978 - 1982
Great-West Lifetime 2050 Trust	1985 - 1989	→	Vanguard Target Retirement 2050	1983 - 1987
Great-West Lifetime 2055 Trust	1990 - 1994	→	Vanguard Target Retirement 2055	1988 - 1992
Great-West Lifetime 2060 Trust	1995 -	→	Vanguard Target Retirement 2060	1993 - 1997
			Vanguard Target Retirement 2065	1998 -



# Appendix – Glide Path Comparison: T. Rowe Price



# Appendix – Glide Path Comparison: Fidelity



# Appendix – Glide Path Comparison: Vanguard

