



**CAPTRUST**

## Kalamazoo Valley Community College Optional Retirement Plan

### **AGENDA: December 12, 2022**

- Review and Approval of Prior Meeting Notes

#### **TIAA Review Topics**

- TIAA Plan Report
- Missing Participant Procedure Review
- Share Class Minimums

#### **CAPTRUST Review Topics**

- Industry/Fiduciary Update
- Q3 2022 Quarterly Investment Review
- Capital Market Commentary
- Plan Design Trends
- TDF/QDIA Analysis Review
- 2023 COLA Updates

#### **Additional Topics**

- Conclusions on After-Tax Contributions
- TIAA Traditional
- Goals, Objectives, & Action Items

## **MEETING NOTES**

**To:** Kalamazoo Valley Community College Optional Retirement Plan Committee

**Date:** September 28, 2022

**Re:** Meeting Notes

**Attendees:** Brian Lueth, Philipp Jonas, Valerie Owens, and Becky Craft (KVCC)  
Jeremy Tollas (CAPTRUST)  
Ruben Barrera (TIAA)

**Absent:** Aaron Hillard (KVCC)

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Review and Approval of the March 29, 2022, Meeting Notes – **Approved by Committee**

### **TIAA Review – Presented by Ruben Barrera**

#### **Plan Review Report**

TIAA reviewed key demographic statistics of the multiple KVCC plans.

Key statistics:

- 332 participants with a balance
- 88% average participant income replacement ratio.
- \$3.4 million in contributions. (Up 0.7% year-over-year)
- 36 participants received advice from a TIAA representative

Further details can be found in TIAA meeting materials provided.

#### **Participant Education**

Ruben will work internally and then with KVCC for potential future education dates (either in person or virtual). The Committee passed on positive feedback from TIAA's presentation/presence at the KVCC benefits fair. The Committee would like to have TIAA join the benefits fair annually in the future given the number of staff and faculty that can get TIAA exposure from that event.

#### **Additional TIAA Notes**

Ruben to send 2-pager on TIAA cybersecurity best practices and capabilities based on the amount of focus and importance around this area.

Ruben will revisit minimums for the Plans to move from R1 to R2 expense ratios for TIAA funds.

Discussed TIAA capabilities for IRA rollouts for small balances (manual vs. automated processes). KVCC will discuss internally on any desire to implement a different service model for rollouts.

## **CAPTRUST Investment Review – Presented by Jeremy Tollas**

### **Industry Update/Fiduciary Update**

CAPTRUST provided an industry and fiduciary update to the Committee. The topics included the use of participant data, update on default funds/QDIAs, plan design trends, and conducting a compliance self-review. Please see the meeting materials for more details on these topics.

### **Quarterly Investment Review**

CAPTRUST reviewed the quarterly investment report with the Committee in detail. The report includes performance data on all the various investment options offered in the Plan.

For the funds scored and marked for closer ongoing review, CAPTRUST reviewed quantitative and qualitative data for these funds. This typically includes an overview of CAPTRUST's outlook on the manager's current environment, investment strategy, team, performance, and process. CAPTRUST has no recommended changes to the Plan's investment options at this time. Please see the meeting materials for additional commentary.

### **Plan Expense Analysis and Benchmarking**

CAPTRUST reviewed the Plan's fees for reasonableness with the Committee. The Plan is currently below the average cost of similar sized plans according to an in-depth benchmarking resource which is comprised of thousands of plans across multiple platforms. This includes internal mutual fund expenses and recordkeeping fees.

In addition, CAPTRUST benchmarked its own fees using best in industry FI 365 benchmarking data. Advisor fees were in-line with the median fee for plans of similar size and service offerings. Please see meeting materials for more details on the benchmark.

### **Capital Market Commentary**

CAPTRUST provided a capital market and economic overview, highlighting performance of major asset classes and indices year-to-date. Please see the meeting material for market commentary topics.

### **Additional Topics**

After-Tax Contributions are still being discussed internally as a committee.

TIAA Traditional benefits and restrictions for legacy and retirement choice group contracts to be revisited in the next meeting.

### **Action Items**

- TIAA to send 2-pager on TIAA cybersecurity best practices and capabilities.



# Planning toward lifelong financial security for you and your employees

Strategic Business Plan for Kalamazoo Valley  
Community College

**Delivered by: Ruben Barrera**

December 12, 2022

# Executive summary: Snapshot



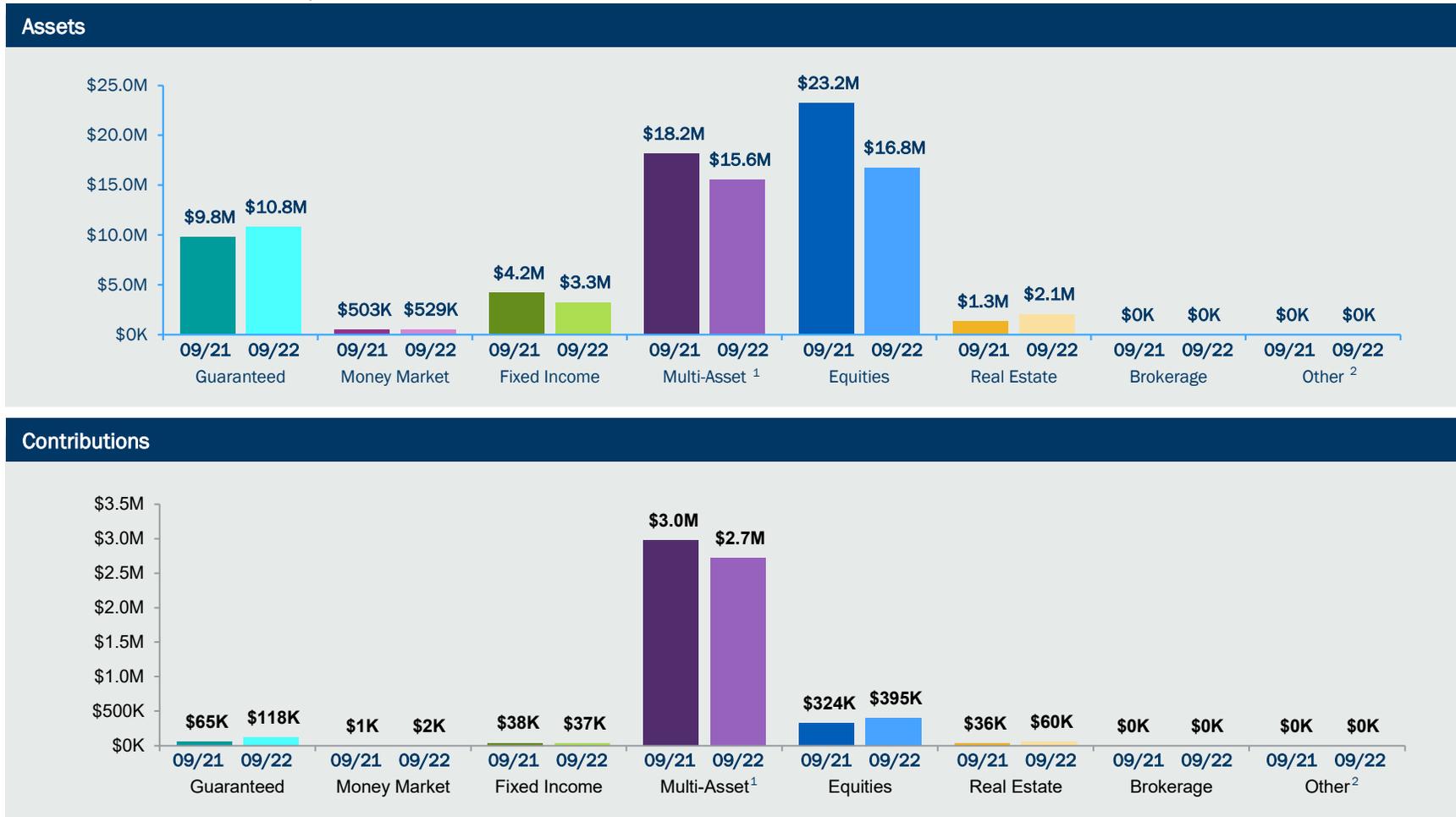
This report is as of the period ending 09/30/2022 and reflects the trailing 12 months of activity unless otherwise noted. The report includes all TIAA plans except 457(f), 457(b) Private, Nonqualified Deferred Compensation, and Retirement Healthcare plans. This report excludes details on non-participant accounts (forfeiture and revenue credit account) but includes the balances. 1. Refer to the "Income replacement ratio methodology and assumptions" page. 2. Certain Distributions (e.g., QDRO, Disability or Age 70.5 Minimum Distribution) may be categorized under In-Service, Terminated or Other. Please see the Glossary for additional information. 3. "Active" participants have a status of Active or Leave, a balance greater than zero and have made a contribution in the last 12 months. "Terminated" participants have a status of Terminated and a balance. "Other" represents all other participants in the plans (other status codes and non-contributing) with a balance.



# Assets & contributions by asset class year-over-year

**\$48,990,987**  
Total assets

**\$3,332,409**  
Total contributions



This report is as of the period ending 09/30/2022 and reflects the trailing 12 months of activity unless otherwise noted. The report includes all TIAA plans except 457(f), 457(b) Private, Nonqualified Deferred Compensation, and Retirement Healthcare plans. 1. Multi-Asset includes Lifecycle funds. 2. Other includes uncategorized assets.



# Today's market trends

## Marketplace Trends

- Individuals continue to look for retirement security and financial independence
- Pandemic increasing individuals' financial stress and anxiety about their future
- Employees are overwhelmed with myriad financial offerings in the marketplace, struggling with how to best utilize benefits offered by their employer and how to achieve retirement security and other life goals

## Key Statistics

Heightened  
employee stress

58%

of employees admit that they are stressed about their finances<sup>1</sup>

Repurposing existing benefits  
for unintended purposes

53%

of millennial employees think it's likely they'll need to use money held in retirement plan to pay for expenses other than retirement<sup>1</sup>

Looking to  
employers for help

73% of millennials  
69% of Gen Xers  
47% of boomers

say they would feel more confident if they had advice through their retirement plan<sup>2</sup>

Pandemic impact on  
higher education

27%

of higher education employees say their financial well-being has worsened since the onset of COVID-19, and 30% of these expect it will further worsen<sup>3</sup>

<sup>1</sup>PwC 9<sup>th</sup> annual Employee Financial Wellness Survey, PwC US, 2020. <sup>2</sup>Transamerica Center for Retirement Studies, "20<sup>th</sup> Annual Transamerica Retirement Survey of Workers: Retirement Security Amid COVID-19: the Outlook of Three Generations," May 2020. <sup>3</sup>2020 Higher Education Financial Wellness Survey, TIAA Institute and CUPA-HR.

# What to know about SECURE Act 2.0

SECURE 2.0 would further improve and modernize the retirement system by expanding on the Secure Act of 2019, with changes to help employees build lifetime financial security. TIAA [commends the U.S. House's passage](#) of SECURE 2.0 and the approval of the two Senate bills under consideration—both important steps on the road to a final bill. Below is a sample of key provisions:

	<b>Expanded access &amp; additional investment options</b>	<b>Increased savings &amp; income preservation</b>	<b>Simpler plan administration</b>
<b>MANDATORY</b>	<ul style="list-style-type: none"> <li>Requires auto-enrollment and auto-escalation of deferrals for new plans</li> <li>Long-term part-time workers will be eligible to contribute after 2 years (vs. 3 years)</li> </ul>	<ul style="list-style-type: none"> <li>Boosts annual cap on age-based catch-up contributions for older participants</li> <li>Increases RMD age to 75 by 2032</li> <li>Removes RMD barriers affecting annuities</li> <li>Allows for partial annuitization without RMD penalties</li> <li>Age 50+ catch-up contributions must be designated as Roth</li> </ul>	<ul style="list-style-type: none"> <li>Creates retirement savings lost &amp; found</li> <li>Increase cash-out limit</li> </ul>
<b>OPTIONAL</b>	<ul style="list-style-type: none"> <li>Increases participation incentives</li> <li>Unaffiliated employers may elect to become a participating employer in 403(b) multiple employer plans (MEPs) or 403(b) pooled employer plans (PEPs)</li> <li>Would allow collective investment trusts (CITs) as an investment for 403(b) plans</li> </ul>	<ul style="list-style-type: none"> <li>Employer plan contributions based on student loan repayments</li> <li>Emergency savings withdrawal options</li> <li>Matching contributions may be designated as Roth</li> </ul>	<ul style="list-style-type: none"> <li>Eliminates certain otherwise required notices for unenrolled employees</li> <li>Consolidate and standardize some reporting and disclosure requirements</li> <li>Would permit 403(b) participants to self-certify hardships</li> </ul>

# Planning for SECURE Act 2.0: next steps

TIAA is here to help you through the legislative process—keep in mind that the legislation is still evolving.

Now is the time to get educated so that you're ready to comply with the new law and make changes intended to benefit the plan and employees.

- 1 Consider impacts to plan design, keeping in mind that some provisions are mandatory and others are optional. For example, RMD changes are mandatory, but student loan payments and small financial incentives for contributions are optional.
- 2 Be prepared for operational impacts, such as managing your plan in accordance with amendments (required and/or optional), and a possible reduction in the number of required participant notices.
- 3 Think about your communication strategy to participants. For example, when you explain that catch-up contributions will be made on a Roth basis, do your participants understand what Roth means?



We'll keep you informed of changes every step of the way as the bill progresses.

To learn more about the key provisions under consideration, visit [TIAA.org/plansponsors/secureact](https://www.tiaa.org/plansponsors/secureact).

# Closing the door to cyber criminals

TIAA is committed to protecting your data – now and always

## Protection for data we manage

- Global 24/7 threat monitoring from our Security Operations Center (SOC)
- Encryption of sensitive data, stored and in transit
- Access granted on need-to-know basis
- Ongoing employee cyber awareness training
- Long-standing annual assessments and audits by government agencies<sup>1</sup> had us aligned with DOL cyber guidance before it was released

## Protection for client account access

- Always on multifactor authentication can be combined with additional security challenges
- Shared threat intelligence and practices with industry partners like FIN-ISAC<sup>2</sup> and REN-ISAC<sup>3</sup>
- Best practice sharing and education through our *CyberClient Engagement Program*

## Assurance if something happens

- Total Protection Promise - reinstates no-fault clients for fraud
- Cyber insurance

2B

Network events monitored daily

14M

Network events blocked or reviewed quarterly

100M

Digital logins monitored annually

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2021 CS050 Award for partnership with NYU to bridge cyber talent gap<sup>4</sup>

2022 CS050 Award Winner for Phishing Awareness Innovation<sup>5</sup>

<sup>1</sup> e.g., Fed Reserve Bank of Boston, NY State Dept. of Fin'l Services, FINRA. <sup>2</sup> Financial Services Information Sharing & Analysis Center. <sup>3</sup> Research and Education Network Information Sharing & Analysis Center. <sup>4</sup> [CSO Celebrates World Class Security Strategies with 2021 CS050 & CSO Hall of Fame Awards, May 3, 2021.](#) <sup>5</sup> [CSO Celebrates Outstanding Security Strategies with 2022 CS050 + CSO Hall of Fame Awards](#)

# Participant outcomes 2022



**10,720**

Participating institutions



**3,160,535**

Participants reached



**61.04%**

open rate



**5.78%**

Email click rate



**23.89%**

Overall action



**4.25%**

Advice sessions



**5.50%**

Reallocate/rebalance



**2.25%**

Beneficiary update



**2.05%**

eDelivery sign-up



**1.25%**

Secure site registrations



**0.20%**

Contribution increase

Data as of 6/30/2022



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# Participant outcomes 2022 Kalamazoo Valley Community College



**296**

Participants reached



**60.84%**

Email open rate



**7.22%**

Email click rate



**15.20%**

Overall action



**6.42%**

Advice sessions



**1.01%**

Reallocate/rebalance



**3.72%**

Beneficiary update



**2.05%**

eDelivery sign up



**0.68%**

Secure site registrations



**0.00%**

Contribution increase

Your plan results as of 6/30/2022



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# Financial Essentials

Live webinars, on-demand recordings and in-person workshops, covering a range of financial wellness topics

- Segmented to address individual employee needs
- Built around five foundational themes: spending, saving, planning, investing, living in retirement
- Webinars presented monthly with a rotating array of special topics

The screenshot displays a webinar interface with several components:

- Q&A:** A section for questions and answers, currently empty with a message: "New question submission has been disabled by the organizer."
- Media Player:** A video player showing a woman speaking, with a progress bar at 02:11/56:09.
- Resource List:** A list of downloadable resources:
  - My Plan Worksheet
  - Financial Advisor Worksheet
  - Estate Planning Worksheet
  - Online Tools
- Slides:** The main content area showing a slide titled "FOR WOMEN: A TIAA FINANCIAL ESSENTIALS PROGRAM" with the sub-heading "Attention to Detail" and the text "Financial finishing touches for women" by Michelle Szczepanski. The slide features a photo of Michelle Szczepanski.
- Live Webinar Help & FAQs:** A section providing technical assistance:
  - Sound Questions:** Instructions for audio issues, including using headphones or a microphone.
  - Webinar Recording:** Information about recording availability and how to access it.
  - Copies of the Slides:** Instructions on how to download or refresh the slides.
  - Video Issues:** Instructions on how to refresh the video feed.
  - A link: [Click here for additional answers to technical questions.](#)
- Webinars:** A sidebar with a "View more webinars, gain more insights" button and a "Browse webinars" button.
- Schedule Meeting with an Ad...:** A section for scheduling a meeting with an advisor, featuring a "Schedule now" button.

# We provide advice for ALL—from the simple to complex

How do I prioritize multiple goals?

Am I saving enough?



How do I protect my loved ones?

How do I guard against outliving my income?



## Build the foundation

- Assess current situation and needs
- Prioritize multiple goals
- Create a budget and a plan to reduce debt and build an emergency fund
- Maximize benefits of employer retirement plan



## Track progress

- Evaluate progress toward financial goals
- Review investment allocation
- Explore additional savings and investment opportunities



## Pursue lifelong well-being<sup>1</sup>

- Develop an income strategy
- Build plan to protect and pass along assets
- Evaluating benefits outside of retirement plan
- Ongoing check-ins



As always, TIAA continues to be committed to delivering advice and planning that is in the best interest of your employees.

<sup>1</sup>The TIAA group of companies and its employees do not offer tax or legal advice, or create and prepare legal documents. Retirement plan asset allocation advice is provided through TIAA reps and is sourced from an independent third party, not affiliated with TIAA. Such advice is a brokerage service provided by TIAA-CREF Individual & Institutional Services, LLC, a registered broker-dealer, Member FINRA, SIPC. Planning Services are provided by Advice and Planning Services, a division of TIAA-CREF Individual & Institutional Services, LLC as a registered investment adviser.

# Our advice is accessible through multiple channels to better serve your multi-dimensional workforce

**We will support you**  
if you prefer to transact and gather  
knowledge online



## Self-guided

- Access to online advice tools/resources 24/7 via custom microsite
- Retirement Advisor tool
- Retirement Income Illustration
- On-demand consultant support

**We will help you**  
validate your financial goals as your  
needs change and answer questions  
about your plan or broader financial  
goals



## Virtual

- Speak with a financial consultant or member of our Advisory consultant team
- Collaborate on a short-term immediate need or comprehensive planning

**We will be here to**  
answer questions about asset  
consolidation or complex financial  
goals



## In person

- Meet with a financial consultant or advisor for personalized advice session
- Access specialized advice for complex financial needs

Retirement plan asset allocation advice is provided through TIAA reps and is sourced from an independent third party, not affiliated with TIAA. Such advice is a brokerage service provided by TIAA-CREF Individual & Institutional Services, LLC, a registered broker-dealer, Member FINRA, SIPC. Planning Services are provided by Advice and Planning Services, a division of TIAA-CREF Individual & Institutional Services, LLC as a registered investment adviser.

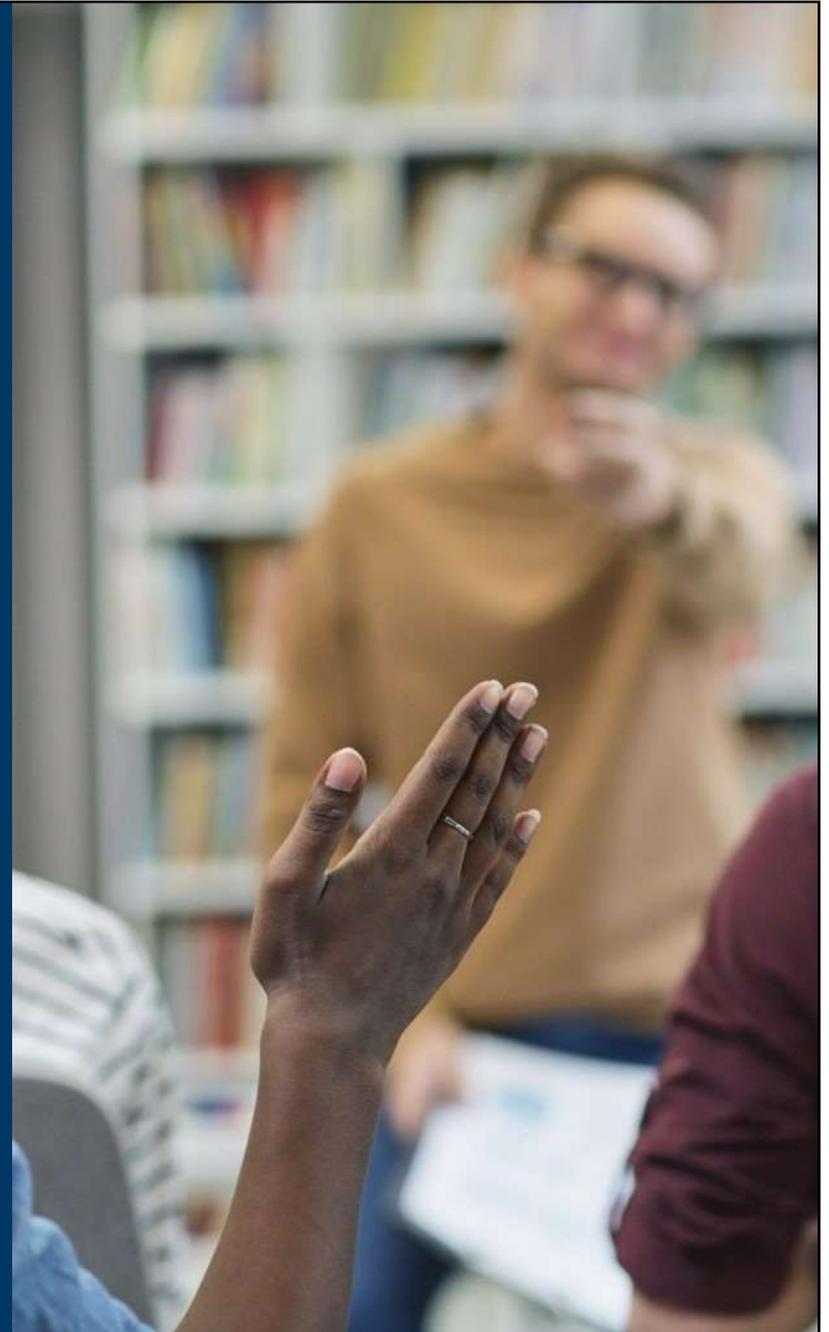
# Quantify outcomes in terms of income replacement



Measure retirement readiness and income replacement gaps

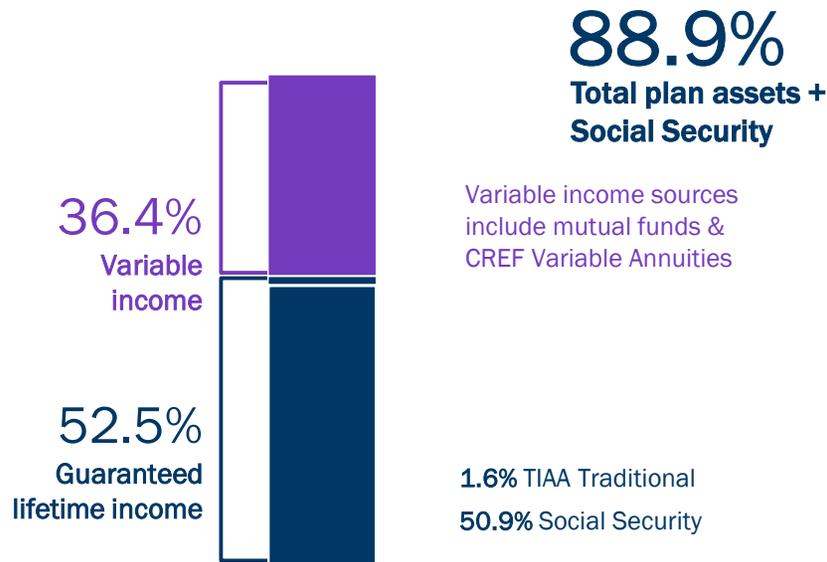


Focus on creating retirement income that will last



# Diversified lifetime income sources drive plan outcomes

Your participants' average retirement income replacement ratio<sup>1</sup>



## Your actively contributing participants

Average account balance	\$149,353
Average annual salary (pretax)	\$95,319
Average annual retirement income (after-tax)	\$59,777
Average contribution rate	14
Average age	47
Average tenure in years	8

## Did you know?



Providing participant salary data helps strengthen your plan outcome assessment, reporting and outreach.

This data is as of 09/30/2022 and is based on 214 participants who are actively contributing to KALAMAZOO VALLEY COMMUNITY COLLEGE plan. This report uses estimated salary and/or compensation data to calculate the average income replacement ratio. Please refer to "Income replacement ratio methodology and assumptions" page for more information.

<sup>1</sup> The median income replacement ratio for this analysis is 85.0%.

# Your plan's retirement outcomes for annuitized participants<sup>1</sup>

## Kalamazoo Valley Community College annuitant profile (as of 12/31/2021)

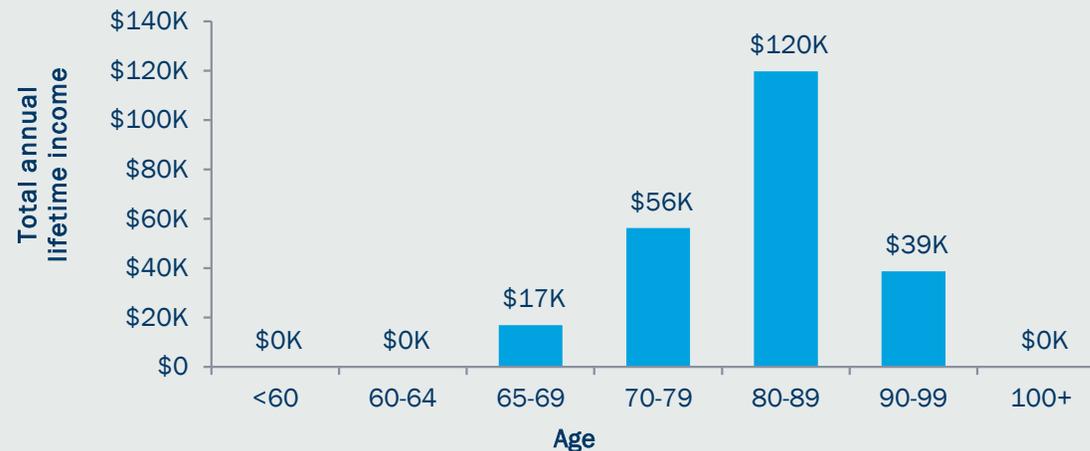
**7**  
Total annuitants with assets

**79**  
Average age

**14**  
Average years annuitized

Age Group	50-59	60-64	65-69	70-79	80-89	90-99	100+
Annuitants	0	0	1	3	2	1	0
Average annual payout	\$0	\$0	\$16,859	\$18,735	\$59,850	\$38,623	\$0

### Kalamazoo Valley Community College annual lifetime income payout by age



**\$0.23 million**  
Total annual payout

**\$33,055**  
Average annual payment

**\$84,395**  
Largest annual payment

**35 years**  
Longest number of years paid

<sup>1</sup>Please note: these individuals may not be active participants or included in the data set used to calculate the plan's income replacement ratio.



# Guaranteed lifetime income

Help solve key retirement risks facing your employees



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# Retirement plans must be able to tackle important risks that erode savings

## Participant retirement risks

### Longevity



Chance that one partner of a couple age 65 will live to 95<sup>1</sup>

### Market



2008–2009 drop in the market from risk of withdrawing money in a down market

### Cognitive



Over 5 million Americans may have dementia caused by Alzheimer's<sup>2</sup>

### Inflation



Inflation diminishes your purchasing power over time



*Retirement income planning is a really hard problem... the hardest problem I've ever looked at.*

**Dr. William Sharpe,  
Economist, Nobel Laureate<sup>3</sup>**

1. Based on January 2021 TIAA dividend mortality tables. 2. Source: 2019 National Institute on Aging [www.nia.nih.gov](http://www.nia.nih.gov). 3. Avery Phillips, Smarter Time, June 2019

# SECURE Act: Closing today's gaps in retirement readiness



## Coverage gap

Not enough Americans have access to a plan



## Savings gap

Americans aren't saving enough



## Guarantee gap

Americans aren't managing their savings after they retire to ensure income for life

Over the past few years, a variety of legislative and regulatory decisions have focused on helping improve the U.S. retirement saving system's coverage and savings gaps.

Retirement providers can leverage 403(b) model's proven ability to provide guaranteed lifetime income to help solve the guarantee gap.

# A promise of lifelong income in retirement

TIAA Traditional has supported the retirements of millions of participants in the not-for-profits space for more than 100 years

## While saving



**Guaranteed growth no matter the market**

Your retirement savings are protected and guaranteed to increase every single day—even in the most volatile markets.<sup>1</sup>

## In retirement



**Guaranteed lifetime income participants can count on**

Pension-like retirement income that lasts for life to help cover everyday living costs—or any expenses you choose.<sup>2</sup>

## Plus more



**Opportunity for more growth and income**

The opportunity for higher interest as you save and higher income in retirement with a loyalty bonus, because we share profits with you.<sup>3,4</sup>

Issued by Teachers Insurance and Annuity Association of America (TIAA), New York, NY. <sup>1</sup>All guarantees are based on TIAA's claims-paying ability. Past performance is no guarantee of future results. <sup>2</sup>"Pension-like" retirement income is the annuity income received in retirement. Guarantees of fixed monthly payments are only associated with TIAA's fixed annuities. <sup>3</sup>TIAA may share profits with TIAA Traditional retirement annuity owners through declared additional amounts of interest and through increases in annuity income throughout retirement. These additional amounts are not guaranteed other than for the period for which they were declared. <sup>4</sup>TIAA may provide a loyalty bonus based on the length of time the funds are held in TIAA Traditional. This additional income is only available upon annuitization and the amount of the bonus is discretionary and determined by the TIAA Board of Trustees on an annual basis.

# TIAA Traditional provides guaranteed growth, guaranteed income and the opportunity for more



## While saving

- Competitive interest rates that are declared in advance
- Regularly contributing has the effect of dollar cost averaging into various interest rate environments
- Guaranteed minimum rate of return<sup>1</sup> + a potential rate in excess of the guaranteed rate<sup>2</sup>
- Potential boost to lifetime income payments in retirement by contributing early and regularly<sup>3</sup>
- Principal protection<sup>1</sup>
- Fully liquid withdrawal options for amounts not converted to lifetime income (annuitized), depending on plan type
- Diversified asset class for portfolios that acts as equity risk hedge and low volatility



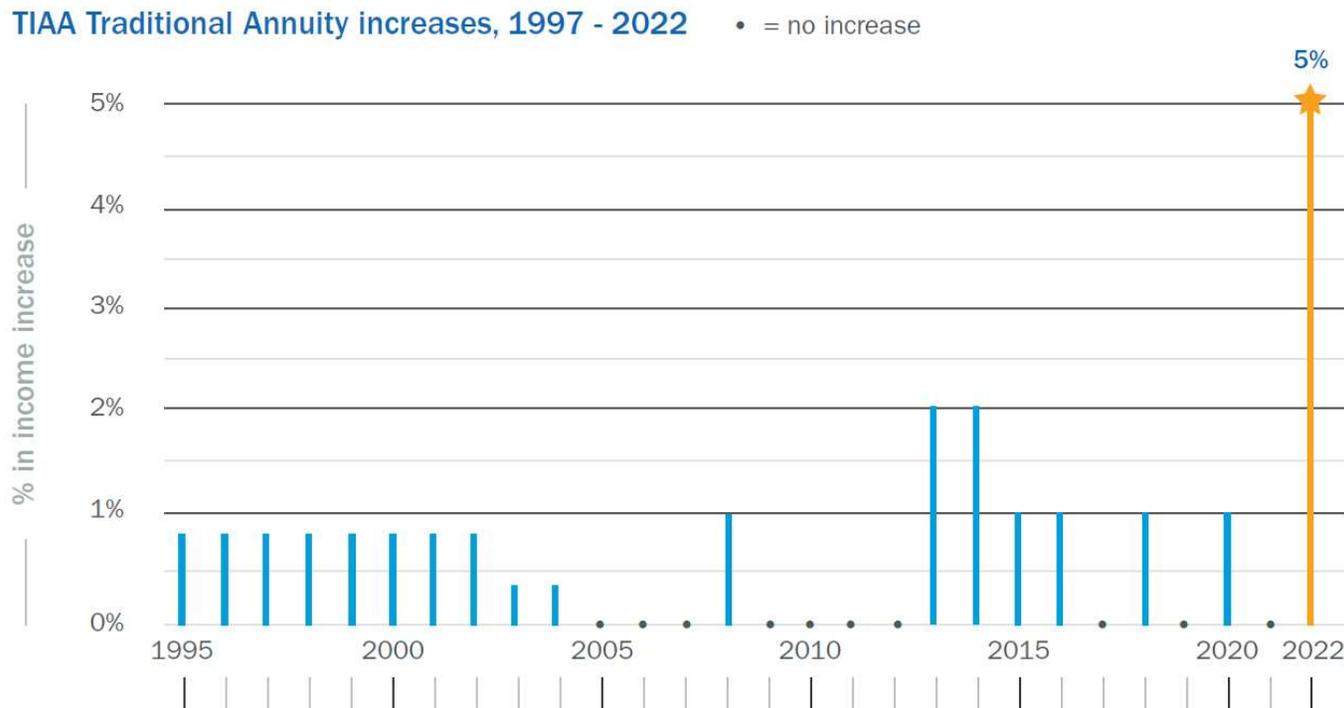
## In retirement

- Competitive guaranteed lifetime income payout options retirees will not outlive<sup>1</sup>
- Potential for enhanced payouts as a result of TIAA's sharing the profits approach<sup>4</sup>
- Highly rated for financial strength (TIAA)<sup>5</sup>
- Potential for lifetime income payments to increase post-retirement<sup>3</sup>
- Guaranteed growth, principal protection apply to unconverted amounts; employees can access when they are ready and/or convert to additional amounts of lifetime income in the future

1. Any guarantees under annuities issued by TIAA are subject to TIAA's claims-paying ability. 2. Interest credited to TIAA Traditional Annuity accumulations includes a guaranteed rate, plus additional amounts as may be established on a year-by-year basis by the TIAA Board of Trustees. The additional amounts, when declared, remain in effect through the "declaration year," which begins each March 1 for accumulating annuities and January 1 for payout annuities. Interest in excess of the guaranteed amount is not guaranteed for periods other than the period for which it is declared. 3. TIAA may provide a loyalty bonus that is only available when electing lifetime income. The amount of the bonus is discretionary and determined annually. 4. TIAA may share profits with TIAA Traditional Annuity owners through declared additional amounts of interest during accumulation, higher initial annuity income, and through further increases in annuity income benefits during retirement. These additional amounts are not guaranteed beyond the period for which they were declared. 5. For its stability, claims-paying ability and overall financial strength, Teachers Insurance and Annuity Association of America (TIAA) is a member of one of only three insurance groups in the United States to currently hold the highest rating available to U.S. insurers from three of the four leading insurance company rating agencies: A.M. Best (A++ as of 7/22), Fitch (AAA as of 11/21) and Standard & Poor's (AA+ as of 9/21), and the second highest possible rating from Moody's Investors Service (Aa1 as of 6/22). There is no guarantee that current ratings will be maintained. The financial strength ratings represent a company's ability to meet policyholders' obligations and do not apply to variable annuities or any other product or service not fully backed by TIAA's claims-paying ability. The ratings also do not apply to the safety or the performance of the variable accounts, which will fluctuate in value.

# Our profits are your employees' profits

With its goal of generating dependable income for life, the TIAA Traditional Annuity has provided millions with financially secure retirements for 100+ years. **Our disciplined money management style has never changed, and with good reason. It's consistently delivered, no matter the market, and always with potential added income.** In fact, in the last 25 years, our clients' share of profit increased 15 times without a single decrease, including a historic 5% increase in 2022 – the largest increase in 40 years.



# TIAA Traditional interest rates

## Total effective interest rates credited on TIAA Traditional Annuity accumulations<sup>1</sup> (As of 9/1/2022 — guaranteed through 2/28/2023)

Contribution date <sup>2</sup>	RA/GRA	SRA/GSRA	RC <sup>3</sup>	RCP <sup>3</sup>
Pre-2006	4.65%	3.90%	4.90%	N/A
2006-2011	4.35%	3.60%	4.60%	3.85%
2012-2019	4.10%	3.35%	4.35%	3.60%
2020-2021	3.70%	3.00%	3.95%	3.20%
January - February 2022	4.00%	3.25%	4.25%	3.50%
March - April 2022	4.25%	3.50%	4.50%	3.75%
May 2022	4.75%	4.00%	5.00%	4.25%
June 2022	5.00%	4.25%	5.25%	4.50%
July 2022	5.25%	4.50%	5.50%	4.75%
August - September 2022	5.50%	4.75%	5.75%	5.00%
Minimum Guaranteed Rate <sup>4</sup>	3.00% (premiums since 1979)	3.00% (premiums since 1979)	Between 1% and 3% <sup>5</sup> (current is 1.00%)	Between 1% and 3% <sup>6</sup> (current is 1.00%)

### Contract types shown that include TIAA Traditional:

(G)RA—(Group) Retirement Annuity, (G)SRA—(Group) Supplemental Retirement Annuity, RC(P)—Retirement Choice (Plus).

1. Interest in excess of the guaranteed amount is not guaranteed for periods other than the period for which it is declared. 2. For accumulations in contracts other than Retirement Choice (RC) and Retirement Choice Plus (RCP), additional amounts earned on older vintages are applied to the most recent contribution date vintage. 3. RC contracts have no accumulations in vintages prior to August 2005. RCP contracts have no accumulations in vintages prior to June 2006. 4. Subject to TIAA's claims-paying ability. 5. RC Minimum Guaranteed Rate is re-determined annually on January 1. Applies to premiums deposited during the applicable calendar year and is guaranteed for 10 years, at which point the minimum rate for these premiums will be reset. 6. RCP Minimum Guaranteed Rate re-determined annually on March 1. Applies to all accumulations and premiums deposited during the period. Past performance is no guarantee of future performance.



# Working together to drive better outcomes



## Show each employee a clear path to retirement

- Meet the needs of a highly diverse workforce with a more engaging, tailored approach.
- Consider personalized, in-plan asset allocation advice for all employees regardless of their net worth or income.



## Quantify outcomes in terms of income replacement

- Measure retirement readiness and income replacement gaps.
- Provide the options participants need to properly diversify and generate lifetime income in retirement.



## Increase efficiency and optimize plan management

- Consolidate recordkeeping solutions to provide simplicity and control.
- Evaluate innovative investment offerings designed to help meet emerging needs.
- Simplify plan administration for your HR team while making it easier for participants to understand and make choices.



# Important information: TIAA Traditional

All guarantees are based on TIAA's claims-paying ability. TIAA Traditional is a guaranteed insurance contract and not investments for federal securities law purposes. Past performance is no guarantee of future results.

TIAA Traditional may not be available under all employer-sponsored retirement plans recordkept by TIAA but is available to eligible individuals through a TIAA IRA. The terms of TIAA Traditional differ between contract forms. Some contracts allow for full withdrawals and transfers. Other contracts only permit withdrawals and/or transfers to be paid in multi-year installments and certain withdrawals may be subject to a surrender charge. Review your contract, certificate, or other product literature, or contact TIAA for complete details. When TIAA Traditional Annuity is made available within an employer-sponsored retirement plan, income and withdrawal options are subject to the terms of the employer plan. Withdrawals prior to age 59½ may be subject to a 10% federal tax penalty, in addition to ordinary income taxes.

Transfers and withdrawals from TIAA Traditional are restricted by its underlying agreements that can affect the liquidity of the product.

Exchanging your savings for income payments (referred to as "annuitization") is a permanent decision and once lifetime income payments has been selected you are unable to change to another option. All guarantees are based on TIAA's claims-paying ability. TIAA Traditional is a guaranteed insurance contract and not an investment for federal securities law purposes. Past performance is no guarantee of future results.

TIAA Traditional may not be available under all employer-sponsored retirement plans recordkept by TIAA but is available to eligible individuals through a TIAA IRA. The terms of TIAA Traditional differ between contract forms. Some contracts allow for full withdrawals and transfers. Other contracts only permit withdrawals and/or transfers to be paid in multi-year installments and certain withdrawals may be subject to a surrender charge. Review your contract, certificate, or other product literature, or contact TIAA for complete details. When TIAA Traditional Annuity is made available within an employer-sponsored retirement plan, income and withdrawal options are subject to the terms of the employer plan. Withdrawals prior to age 59½ may be subject to a 10% federal tax penalty, in addition to ordinary income taxes.

TIAA Traditional is a fixed annuity product issued by Teachers Insurance and Annuity Association of America (TIAA), New York, NY. Annuity contracts contain terms for keeping them in force. Exclusions, restrictions, limitations and reductions in benefits will, in certain situations, apply to annuity contracts. Your financial consultant or advisor can provide you with costs and complete details.

TIAA Traditional is a fixed annuity product issued through these contracts by Teachers Insurance and Annuity Association of America (TIAA), 730 Third Avenue, New York, NY, 10017: Form series 1000.24; G-1000.4 or G-1000.5/G1000.6 or G1000.7; 1200.8; G1250.1; IGRS-01-84-ACC and IGRS-02-ACC; IGRS-CERT2-84-ACC and IGRS-CERT3-ACC; IGRSP-01-84-ACC and IGRSP-02-ACC; IGRSP-CERT2-84-ACC and IGRSP-CERT3-ACC; 6008.8 and 6008.9-ACC; 1000.24-ATRA; 1280.2, 1280.4, or 1280.3 or 1280.5, or G1350. Not all contracts are available in all states or currently issued.



# Income replacement ratio methodology and assumptions

## Participant-related salary, contribution, retirement age, income replacement ratio and advice assumptions

- TIAA estimates participant salary based on a regression-tested analysis of more than 60,000 active, premium-paying participants across 48 institutions. Participant salaries are estimated based on a function of the participant's life stage, organization type, age, TIAA recordkept assets, gender, and region and contribution rate. The participant's gross annual income is used for various calculations, including retirement income replacement ratio, estimated Social Security benefits, and estimated federal and state taxes.
- Participant contributions are aggregated for a 12-month period for participants with a balance at the beginning of the period. For participants without a beginning balance, the contribution amount from the last month of the 12-month period is annualized. IRS contribution limits are applied and adjusted for participants eligible for catch-up provisions. Morningstar Investment Management LLC shifts any contribution amount above the annual limit to after-tax contributions for modeling purposes.
- All retirement plan contributions are considered to be dedicated solely for retirement. Assets will not be liquidated for use prior to retirement, and all contributions will end at the Target Retirement Age (TRA).
- The TRA value is defaulted to 67 for most plan participants. Participants aged 66 or higher have a TRA that is set two years from the current age. Life expectancy values are estimated by Morningstar and are based on participant age and gender.
- The participant's balance is aggregated for all selected plans. Amounts are designed as pretax and Roth contributions, as appropriate.
- The participant's asset allocation, for the purposes of this analysis, is categorized into simplified asset classes (i.e., stable value, equities, real estate, fixed income, multi-asset and money market).
- The advice provided by Morningstar consists of model portfolios composed of target allocations for the asset classes. Based on the target retirement goals, Morningstar will recommend a specific tolerance level designed to adjust over time based on Morningstar's proprietary methodology which customizes a risk-level trajectory for the participant.
- The hypothetical advice target for the model is a 100% replacement ratio.
- The Morningstar tool's advice is based on statistical projections of the likelihood that an individual will achieve their retirement goals. The projections rely on financial and economic assumptions of historical rates of return of various asset classes that may not reoccur in the future, volatility measures and other facts, as well as information the individual provides. Morningstar's advice engine includes tax-rate assumptions, mortality tables, and Social Security estimates.

## Retirement income replacement ratio calculation assumptions:

- TIAA measures retirement income replacement ratios by calculating the projected stream of distributions from participants' assets and estimated Social Security benefits in current dollars as a percentage of employees' current salaries.
- Using the participant's estimated salary, current contribution rates and asset allocation, TIAA leverages the advice engine from Morningstar, an independent expert retained by TIAA, to perform a sophisticated Monte Carlo analysis (500 total simulations) to project the retirement income replacement ratio.
- The results indicate the participant's 70% probability of achieving the retirement goal. A lower probability of success is associated with better (and less likely) estimated income. Your participants can also model different outcomes for themselves by going online to [TIAA.org/retirementadvisor](https://www.tiaa.org/retirementadvisor) (online Retirement Advisor tool).
- Data provided represents inputs into the Morningstar advice engine for plan management purposes. If a participant uses Retirement Advisor online or has an advice session with a consultant, estimated retirement income is not replaced with any of the information used in the Plan Outcome Assessment report calculations.
- The plan-level retirement income replacement ratio is determined by calculating the average retirement income replacement ratio of all participants in the plan analysis. All actively contributing participants are included in the analysis, unless the participant has annual compensation of less than \$25,000, has contributed less than \$300 in the previous 12-month period, has a current balance less than \$500, or is less than 23 or greater than 65 years of age.
- **IMPORTANT:** Projections, and other information generated through the TIAA Plan Outcome Assessment and the Morningstar tool regarding the likelihood of various investment outcomes are hypothetical, do not reflect actual investment results, and are not a guarantee of future results. The projections are dependent in part on subjective and proprietary assumptions, including the rate of inflation and the rate of return for different asset classes, and these rates are difficult to accurately predict. The projections also rely on financial and economic historical assumptions that may not reoccur in the future, volatility measures and other facts. Results may vary with each use and over time.

# Income replacement ratio methodology and assumptions

## Annual Updates to Capital Market Assumptions

Morningstar routinely updates TIAA's advice engine methodology, which powers the POA, to better align assumptions with future market expectations and life expectancy changes. Effective 12/31/2018, our advice applications and tools will reflect the most recent Capital Market Assumptions (CMAs) provided by Morningstar. This routine update, which typically occurs annually, includes the following:

- Adjustment to the long-term average inflation rate, rates of return, risk (standard deviation), and correlation coefficients for all asset classes
- Adjustment of forecasted/projected rates of return used in Monte Carlo simulations, used to assess the likelihood of achieving goals.

This year, there have been slight decreases in the 10- and 20-year rates of return for most Equities and Fixed Income asset classes. As a result, those with more aggressive portfolios closer to retirement will see more of an impact such as a greater decrease in wealth values and a decrease in the probability of achieving goals success while those with more conservative forecasted equity return assumptions will experience reduced equity projections.

Note: The CMAs are available upon request. You have the option to request specific capital market assumptions.

## Updates to Social Security

- Additional enhancements to our advice engine are being made to update Social Security projections. Morningstar has refined the Social Security calculations for individuals that have turned 62 years old. The new engine dynamically calculates wage index factors depending on when the investor turns 60 years old, and bend points depending on when the investor turns 62 years old. This may reduce Social Security income projected for active participants over 67.
- Over the past few years we have noted in the POA that uncertainty around the role of Social Security in its current form represents a potential risk to participants and should be factored into interpreting your plan-level outcomes. To help you understand the potential magnitude of this risk, included in this POA is an alternative hypothetical projection of your plan's income replacement ratio assuming participants retiring after 2034 receive reduced level of income (21% less) from Social Security based on the 2018 Social Security Trustees Report. We are not trying to predict what Social Security reform will look like if and when it occurs. But we felt that quantifying the potential impact to plan outcomes absent reforms using the Trustee report as a source could add value to the discussion on the role of Social Security in your plan. This alternative calculation can be found in the footnote on page titled 'Different income sources provide various benefits and risks.'

## Updated assumptions about life expectancy

Our Morningstar-driven retirement planning applications and tools have been enhanced to reflect increased life expectancy. The POA, as all our tools, now assumes life expectancy to be longer than average. Please note that this change may have caused the estimated retirement income result to be lower (and the estimated retirement savings needs to be higher) than if a shorter life expectancy was assumed.

The retirement income projection assumes the following estimated life expectancies: a male, age 67, will live until age 91 and a female, age 67, will live until age 93. These assumptions are based on an approach which uses the Gompertz Law of Mortality and the 2012 Society of Actuaries Immediate Annuity Mortality table to determine life expectancy. The approach is developed and owned by Morningstar Investment Management. It is important to note that these life expectancy assumptions are longer than average, meaning that only 30% of the population is estimated to reach these ages. This may cause the estimated retirement income result to be lower (and estimated retirement savings needs to be higher) than if a shorter life expectancy was assumed. These assumptions may not be appropriate for all investors. Forecasts involve known and unknown risks, uncertainties and other factors which may cause the actual results to differ materially and/or substantially from the estimated retirement income result.

## What is the potential impact of all these methodology changes to the POA?

Taken together, these changes may impact plan-level income-replacement ratios provided via the TIAA Plan Outcome Assessment<sup>®</sup>. Ultimately, the level of impact to a specific participant or plan sponsor will be unique.

While every plan may be different depending on the demographics and participant savings and investing behaviors, we expect the combined impact of these changes could result in a decrease in a plan's average retirement income replacement ratio of approximately 5-7 percentage points, of which the change in life expectancy represents 4-5 percentage points. Plans with more younger participants and/or active participants over age 67 may be impacted more.

These ranges exclude the impact from the down equity markets in 2018. For example, the S&P 500 was down 13.8% in the fourth quarter of 2018 and down 4.4% for the year.



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***You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877-518-9161 for product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.***

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Kalamazoo Valley Community College | 12/12/2022 | 27

KALAMAZOO VALLEY COMMUNITY  
COLLEGE  
3RD QUARTER, 2022

**DEFINED CONTRIBUTION  
QUARTERLY REVIEW**

**CAPTRUST**

3000 Town Center Boulevard, Suite 2650, Southfield, MI, 48075  
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Our mission is to enrich the lives of our clients, colleagues and communities through sound financial advice, integrity, and a commitment to service beyond expectation.



**Kalamazoo Valley Community College Employee Optional  
Retirement Plan**

3rd Quarter, 2022 Quarterly Review

prepared by:

**Jeremy Tollas, CPFA ,CIMA®**  
Vice President | Financial Advisor

Section 1

**RETIREMENT INDUSTRY UPDATES**

Section 2

**MARKET COMMENTARY AND REVIEW**

Section 3

**PLAN INVESTMENT REVIEW**

Section 4

**FUND FACT SHEETS**

Appendix

**SECTION 1: RETIREMENT INDUSTRY UPDATES**

Industry Updates.....



## FIDUCIARY UPDATE

Retirement plan fiduciaries should be mindful of recent Department of Labor (DOL) and Internal Revenue Service (IRS) activity that may be relevant to their plans.



### DOL AUDITOR INDEPENDENCE UPDATE

Guidance from 1975 limited the pool of audit firms from which plan sponsors can select. The DOL's Interpretive Bulletin (IB) 2022-01 loosens the guidance on independence to allow plan sponsors wider access to qualified auditors for Form 5500 purposes.

- In the past, no member of the auditing firm could have ownership—of even one share—in a publicly traded company under audit. Under the new IB, shares can be sold prior to the audit engagement.
- The previous ownership rule applied to certain employees located in an office of the firm participating in a significant part of the audit. As office definitions have changed, the IB modified this to include a subgroup within the firm that works with the same clients or on the same issues.



### IRS ACTIVITY

- Plan Amendment Deadlines—In Notice 2022-33, the IRS extended the amendment deadline for nongovernmental plans from the end of the 2022 plan year to December 31, 2025. This reflects regulatory actions in provisions of the Setting Every Community Up for Retirement Enhancement (SECURE) Act, the Miners Act, and the Coronavirus Aid, Relief, and Economic Security (CARES) Act that have yet to be finalized. Plans are still required to operate in accordance with required and elected provisions. For governmental plans, the deadline is 2024 at the earliest.
- Pre-Examination Pilot Program—The IRS announced a new pilot program to provide 90 days advance notice of plan audits. The notice period is favorable to plan sponsors as it allows time to correct plan defects.

## FIDUCIARY TRAINING – COMMON RETIREMENT PLAN FAILURES

Fiduciary training is a critical part of being a fiduciary and a way to minimize risk through education and governance. The DOL views this as an important element to managing a retirement plan and frequently looks for evidence of formal training during plan investigations. A good fiduciary curriculum covers a range of topics—from an overview of ERISA to best practices for monitoring investments. In this installment, we review the top ten retirement plan failures submitted to the IRS for the Voluntary Correction Program.

### WHAT IS A VCP?

The Voluntary Correction Program (VCP) allows for the correction of errors that cannot be self-corrected through the IRS Employee Plans Correction Resolution System (EPCRS).

### PLAN SPONSOR ACTIONS

If a plan operational error has been made, contact your plan provider or legal counsel to determine the best approach to correct the issue.

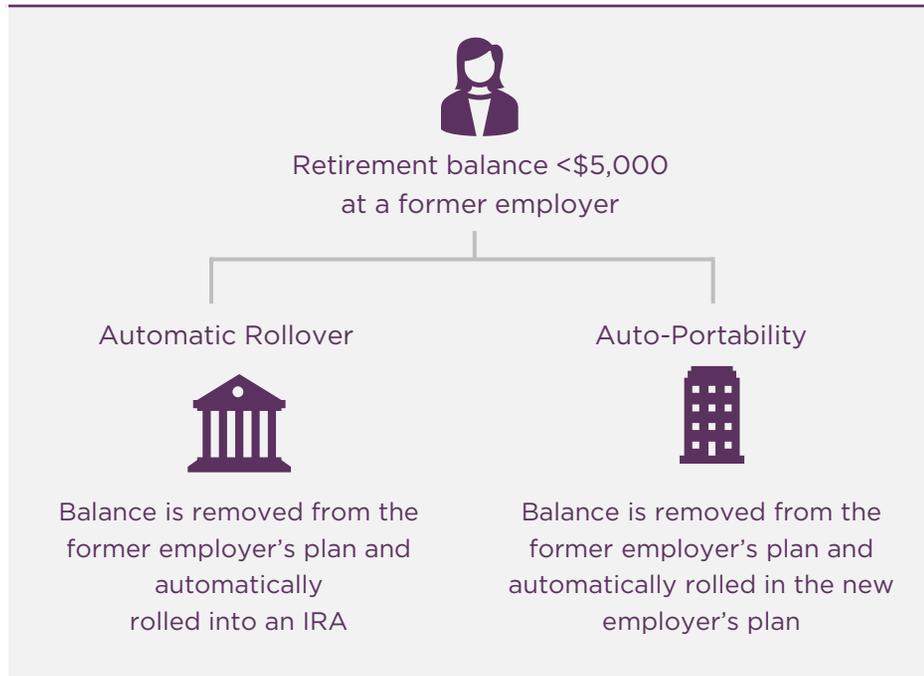
### TOP TEN FAILURES

- ① Failure to amend the plan for tax law changes by the end of the period required by the law
- ② Failure to follow the plan's definition of compensation for determining contributions
- ③ Failure to include eligible employees in the plan or failure to exclude ineligible employees from the plan
- ④ Failure of plan loans to comply with IRC 72(p)
- ⑤ Impermissible in-service withdrawals
- ⑥ Failure to satisfy IRC 401(a)(9) minimum distribution rules
- ⑦ Failed employer eligibility
- ⑧ Failed ADP/ACP nondiscrimination tests under IRC 401(k) and 401(m) not corrected in a timely manner
- ⑨ Failure to properly provide the minimum top-heavy benefit or contribution under IRC 416 to non-key employees
- ⑩ Failure to satisfy the limits of IRC 415

## WHAT IS AUTO-PORTABILITY?

The Advancing Auto-Portability Act of 2022 is a bipartisan bill introduced in the Senate in June. The bill encourages plan sponsors to adopt auto-portability features by offering a \$500 tax credit to offset the implementation cost. There are identical provisions in the Senate’s proposed Enhancing American Retirement Now (EARN) Act. At a high level, auto-portability identifies a participant’s retirement account at a previous employer and automatically moves those assets to their new employer’s plan.<sup>1</sup> This impacts participants with balances below \$5,000 who are subject to automatic distribution to an individual retirement account (IRA).

### OPTIONS FOR TERMINATED PARTICIPANTS WITH A SMALL BALANCE



### THE ARGUMENT FOR AUTO-PORTABILITY

<p><b>9.9</b></p> <p>is the number of jobs an average 401(k) participant will have over their working career.<sup>2</sup></p>	<p><b>36%</b></p> <p>of average 401(k) participants have balances under \$5,000.<sup>2</sup></p>
<p><b>63%</b></p> <p>of Black and 57% of Latino people cash out their small account balances compared to less than one-third of all participants.<sup>3</sup></p>	<p><b>\$2 trillion</b></p> <p>in additional retirement savings is estimated from full adoption of auto-portability.<sup>2</sup></p>
<p>Auto-portability remains a newer initiative. Interested plan sponsors must confirm whether their retirement plan provider and small-balance IRA provider offer auto-portability.</p>	

<sup>1</sup> Auto-portability functionality must be in place at both recordkeepers and the plan must accept rollovers. A fee is charged to the participant for the automatic transfer to the new employer’s plan.

<sup>2</sup> EBRI, “The Impact of Auto-Portability on Preserving Retirement Savings Currently Lost to 401(k) Cashout Leakage”

<sup>3</sup> Retirement Clearinghouse, “How Sponsors Can Help Minorities Save More for Retirement”



## RECORDKEEPING SERVICE LEVELS AND PLAN SPONSOR IMPACT

The Great Resignation has impacted nearly every industry—and retirement plan recordkeeping is no exception. Plan sponsors and participants may be feeling the effects of decreased service levels due to a combination of the COVID-19 pandemic, recordkeeper consolidation, fee compression, and labor market challenges. According to a recent survey, plan sponsors are 65% more likely to actively look to change recordkeepers in 2022 compared to 2021 and more than twice as likely to seek a change compared to pre-pandemic in 2019.<sup>1</sup>

When asked why they were looking to make a change, an overwhelming majority of plan sponsors indicated servicing issues—ahead of technology, financial wellness options, and recordkeeping costs.

# 48%

of plan sponsors are actively looking to change their recordkeeper.

# 65%

of plan sponsors are more likely to change recordkeepers in 2022 compared to 2021 due to service issues.

# #1

reason plan sponsors are seeking a change in recordkeepers is to service issues.

### IMPACTED SERVICE LEVELS

- Slow or delayed response times to service requests
- Errors made on the recordkeeping of plans
- Multiple personnel changes
- Increased wait times for participant call center
- Tenured service team retirements and buyouts

### ACTION ITEMS TO CONSIDER

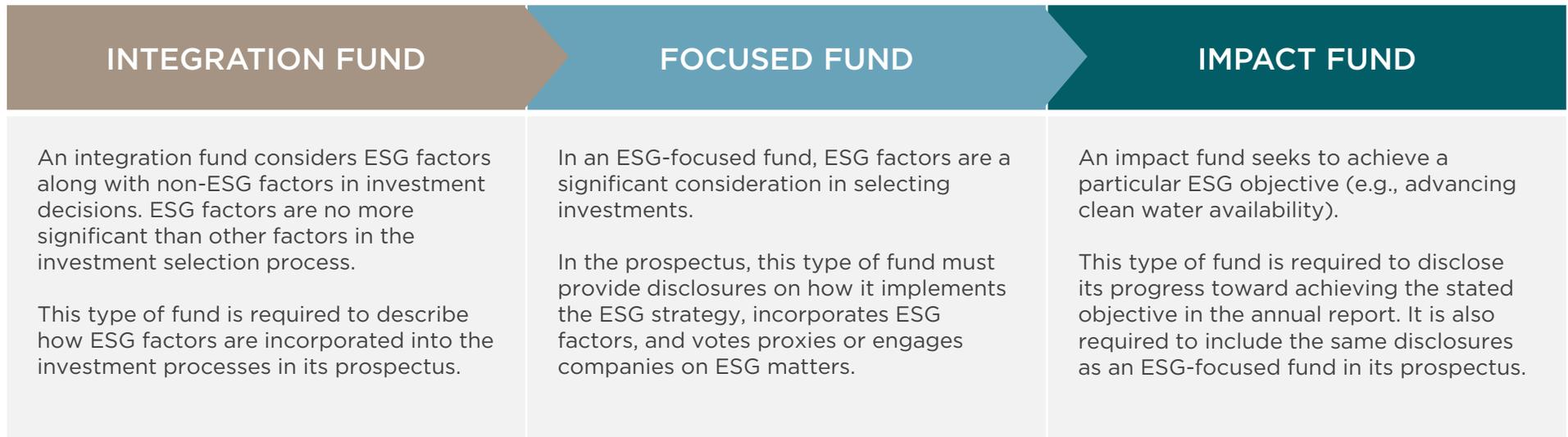
- Provide feedback to your relationship manager, management team, and your financial advisor so issues can be addressed
- Request service team changes, if needed
- Conduct a recordkeeper search

<sup>1</sup>Fidelity, “Plan Sponsor Attitudes Survey, 13th Edition”

## ENHANCED DISCLOSURE FOR ESG INVESTMENTS

This year, the SEC proposed changes under the rules of the Investment Adviser Act of 1940 that aim to create a standardized disclosure and reporting framework for funds that market themselves as environmental, social, and governance (ESG) investments. These changes will help plan sponsors and participants understand the materiality of an investment’s use of ESG factors. The proposal distinguishes three ESG fund categories that would require specific disclosures.

INCREASED USE OF ESG FACTORS →



**DOL ESG Update:** The DOL’s 2021 proposed rule, Prudence and Loyalty in Selecting Plan Investments and Exercising Shareholder Rights, is expected to be released in December and take effect in 2023. The rule would amend the investment duties regulation, adding language that makes room for plan sponsors to consider the economic effects of ESG factors.

Source: Harvard Law School Forum on Corporate Governance, “Long-Awaited ESG Rules”

**SECTION 2: MARKET COMMENTARY AND REVIEW**

Market Commentary.....

Market Review.....

Asset Class Returns.....

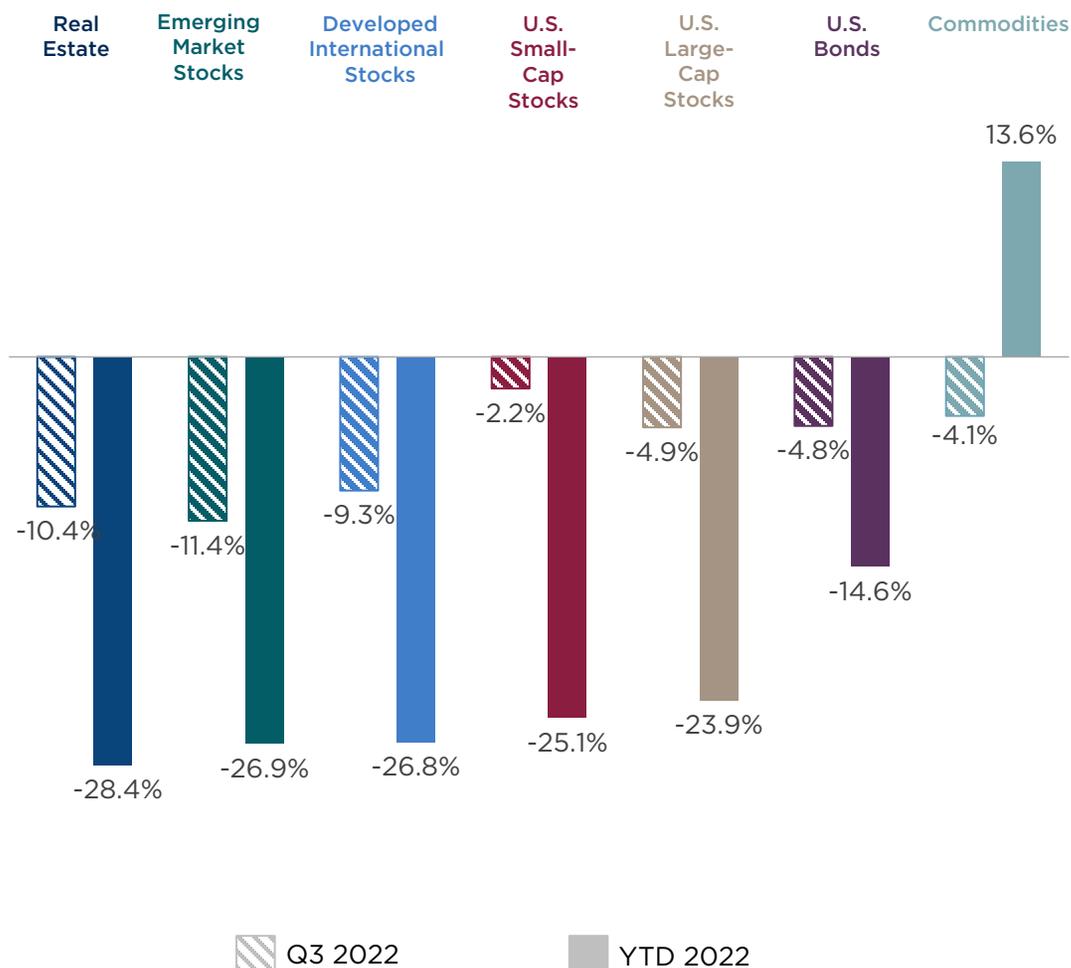
Index Performance.....



## ANOTHER CHALLENGING QUARTER

All asset classes ended the third quarter with modest losses, adding to their year-to-date woes. Stocks and bonds climbed in the first half of the quarter as concerns about inflation abated, but the Federal Reserve brought investors back to reality with its aggressive interest rate policy and messaging.

- After an initial rally, U.S. stocks ended the quarter back near 2022 lows. Small-cap stocks fared a little better than their large-cap counterparts; growth stocks outperformed value stocks for the quarter.
- Outside the U.S., stocks continued to face the perfect storm of economic, geopolitical, and currency headwinds. Inflation has reached double-digit levels across much of Europe as energy disruptions driven by the war in Ukraine put central bankers in difficult positions.
- For bonds, a historically bad calendar year continued into the third quarter. An upward shift in the yield curve led to a third consecutive quarterly decline and added to the double-digit losses generated in the first half of the year.
- Rising interest rates and emerging recession concerns have added to 2022 difficulties for public real estate.
- Commodities, a bright spot for most of 2022, declined in the third quarter on rising recession concerns. They remain the lone asset class in positive territory for the year.



Asset class returns are represented by the following indexes: Bloomberg U.S. Aggregate Bond Index (U.S. bonds), S&P 500 Index (U.S. large-cap stocks), Russell 2000® (U.S. small-cap stocks), MSCI EAFE Index (international developed market stocks), MSCI Emerging Market Index (emerging market stocks), Dow Jones U.S. Real Estate Index (real estate), and Bloomberg Commodity Index (commodities).



## DIGGING DEEPER: STOCKS AND BONDS

### Equities

	Q3 2022	YTD 2022	Last 12 Months
U.S. Stocks	-4.9%	-23.9%	-15.5%
• Q3 Best Sector: Consumer Discretionary	4.4%	-29.9%	-20.9%
• Q3 Worst Sector: Communication Service	-12.7%	-39.0%	-39.1%
International Stocks	-9.3%	-26.8%	-24.7%
Emerging Markets Stocks	-11.4%	-26.9%	-27.8%

### Fixed Income

	9.30.22	6.30.22	9.30.21
1-Year U.S. Treasury Yield	4.05%	2.80%	0.09%
10-Year U.S. Treasury Yield	3.83%	2.98%	1.52%
	QTD 2022	YTD 2022	Last 12 Months
10-Year U.S. Treasury Total Return	-5.83%	-16.85%	-16.29%

### Equities - Relative Performance by Market Capitalization and Style

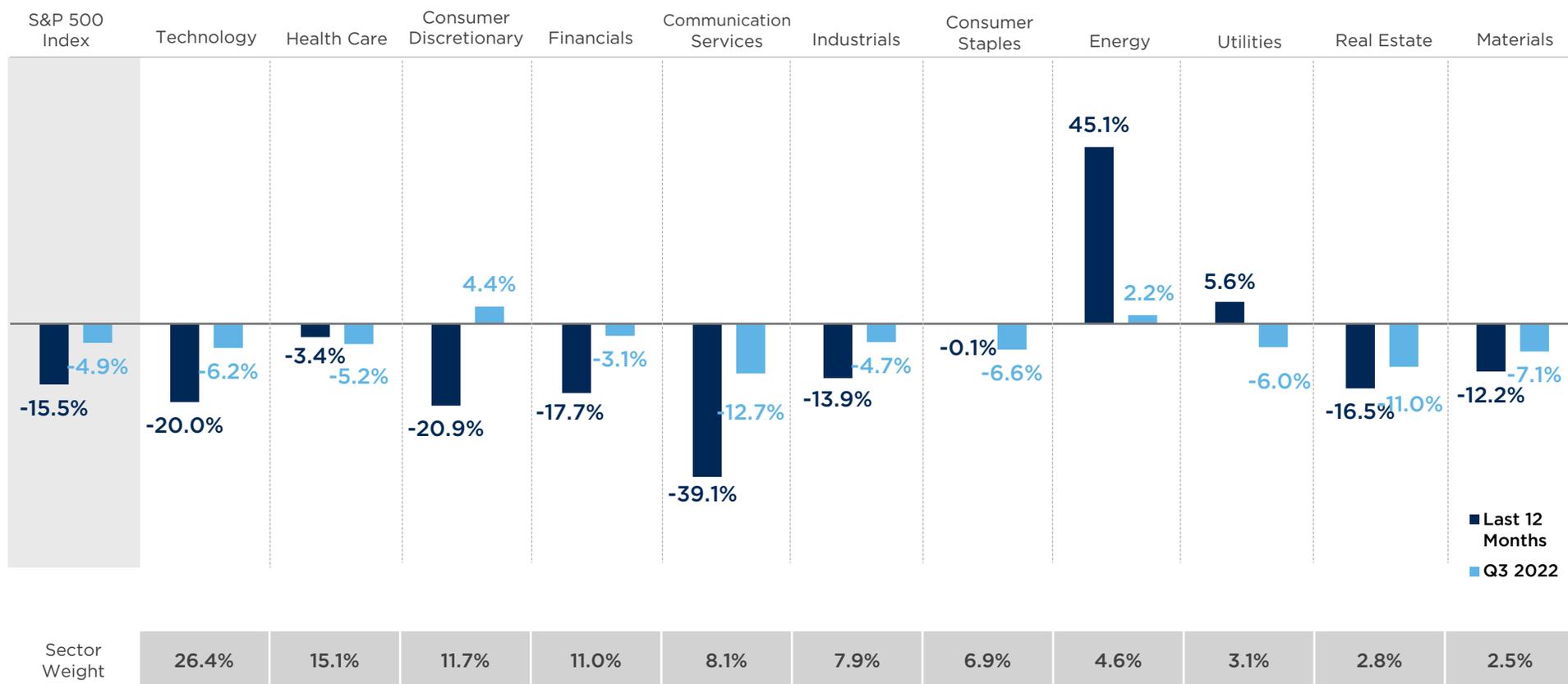
	Q3 2022			YTD 2022			Last 12 Months				
	Value	Blend	Growth	Value	Blend	Growth	Value	Blend	Growth		
Large	-5.6%	-4.9%	-3.6%	Large	-17.8%	-23.9%	-30.7%	Large	-11.4%	-15.5%	-22.6%
Mid	-4.9%	-3.4%	-0.7%	Mid	-20.4%	-24.3%	-31.5%	Mid	-13.6%	-19.4%	-29.5%
Small	-4.6%	-2.2%	0.2%	Small	-21.1%	-25.1%	-29.3%	Small	-17.7%	-23.5%	-29.3%

Sources: Bloomberg, U.S. Treasury. Asset class returns are represented by the following indexes: S&P 500 Index (U.S. stocks), MSCI EAFE Index (international developed market stocks), and MSCI Emerging Markets Index (emerging market stocks). Relative performance by market capitalization and style is based upon the Russell US Style Indexes except for large-cap blend, which is based upon the S&P 500 Index.

## DIGGING DEEPER: U.S. EQUITY MARKETS

The S&P 500 Index is a market-capitalization-weighted index of U.S. large-cap stocks across a diverse set of industry sectors. The stocks represented in these 11 sectors generated a range of returns for the last 12 months and the most recent quarter.

Returns by S&P 500 Sector



Source: Bloomberg. All calculations are cumulative total return, not annualized, including dividends for the stated period. Past performance is not indicative of future returns.



## DIGGING DEEPER: FIXED INCOME MARKET

Interest Rates	3 Months	2 Years	5 Years	10 Years	30 Years	Mortgage Rate
June 2022	1.72%	2.92%	3.01%	2.98%	3.14%	5.83%
September 2022	3.33%	4.22%	4.06%	3.83%	3.79%	7.06%
Change	1.61%	1.30%	1.05%	0.85%	0.65%	1.23%

U.S. Treasury yields continued moving higher this quarter, driven by persistently high inflation and an aggressive Fed policy response. Mortgage rates are near their highest level in two decades, cooling demand in a hot housing market.

Bloomberg U.S. Aggregate Bond Index	Yield to Worst	Duration	Total Return Q3 2022	Spread	Treasury Rate	AA Spread	BBB Spread
June 2022	3.72%	6.44	-4.75%	0.55%	3.17%	0.79%	1.92%
September 2022	4.75%	6.20		0.62%	4.13%	0.79%	1.93%
Change	1.03%	-0.24		0.07%	0.96%	0.00%	0.01%

Performance for core bonds was negative for the quarter and has now declined over 14% year to date. Credit spreads changed little for core fixed income, with rising interest rates driving the majority of the underperformance.

Bloomberg U.S. Long Credit Index	Yield to Worst	Duration	Total Return Q3 2022	Spread	Treasury Rate	AA Spread	BBB Spread
June 2022	5.09%	13.38	-8.57%	1.84%	3.25%	1.24%	2.27%
September 2022	5.89%	12.63		1.96%	3.93%	1.31%	2.38%
Change	0.80%	-0.75		0.12%	0.69%	0.07%	0.11%

Performance for longer-maturity bonds was hit significantly this quarter due to rising interest rates. Higher duration impacts the price of longer-maturity bonds more dramatically when rates move.

Sources: Bloomberg, U.S. Treasury, CAPTRUST Research

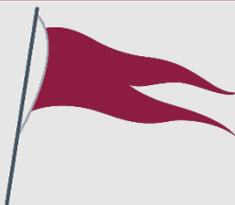
## ECONOMIC OUTLOOK

With the Federal Reserve doubling down on its inflation-fighting intentions, investors have shifted their focus to recession scenarios. Economic indicators are flashing opposing signals. While the labor market and household and business balance sheets remain strong, consumer spending and corporate profitability have come under pressure, and geopolitical risks persist.

### HEADWINDS

#### Inflation-Fighting Resolve

- The Fed is moving with unwavering resolve to fight inflation. The pace and scale of tightening is unprecedented, raising recession risks.
- The question is: Will the Fed's resolve persist if the economy slips into recession?



#### Leading Indicators Are Lagging

- Rising mortgage rates have had the intended effect of slowing home sales.
- While home prices have remained fairly stable, sales volume has declined for seven consecutive months, and new home building permits have plummeted.
- Despite modest improvement, consumer pessimism about overall business conditions remains elevated.

#### Midterms on the Horizon

- Historically, markets have performed well under any division of power. However, election outcomes could create policy uncertainty, particularly if results are contested or delayed.

### TAILWINDS

#### Input Costs Improving

- Supply-chain constraints and rising gas prices have been key drivers of inflation. As companies right-size their inventories and transportation bottlenecks ease, global logistics are showing signs of recovery.
- Gas prices are falling as additional supply, tax holidays, and anticipation of an economic slowdown contribute to falling crude oil prices, a primary driver of prices at the pump.



#### Strong Labor Market

- The U.S. labor market remains resilient despite the Federal Reserve's efforts to cool the economy.
- The Fed has been able to pump the economic brakes without an increase in unemployment or a decrease in wages—a goldilocks outcome so far.

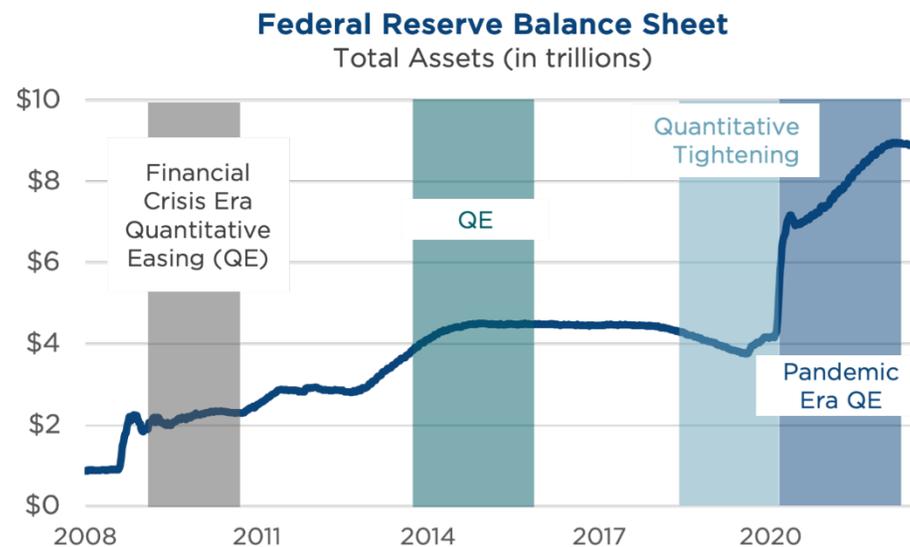
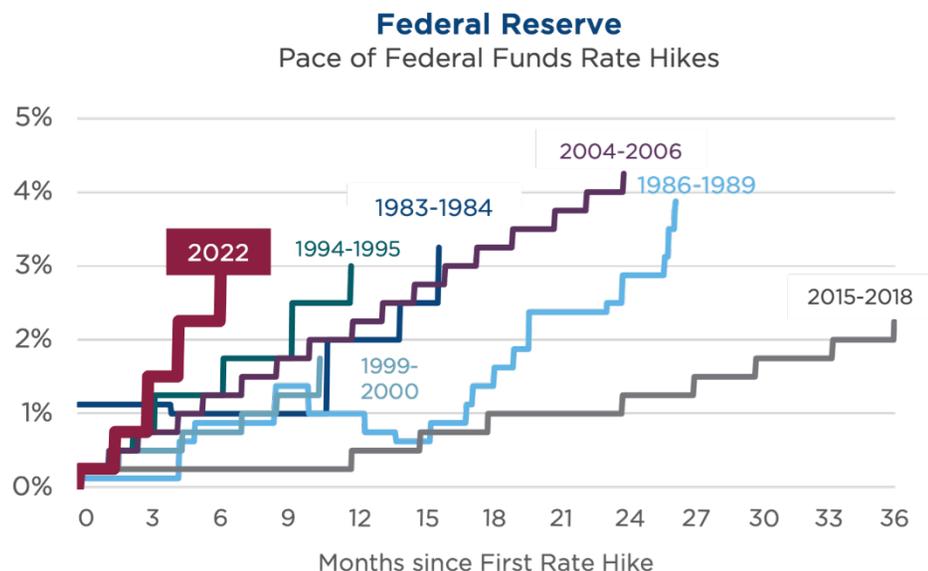
#### Low Expectations

- Investors remain bearish as widespread pessimism is weighing on investor sentiment across global markets. However, periods of extreme pessimism can provide attractive entry points as low expectations set the stage for positive surprises.

The potential range of future outcomes has narrowed slightly, but policy risks remain high. With a recession looming, investors should remain vigilant, diversified, and prepared for ongoing volatility.

## INFLATION-FIGHTING RESOLVE

The Federal Reserve has been clear in its commitment to bring inflation down to its long-term target, even at the cost of a potential recession. While its tools remain limited given the nature of the inflation environment, the Fed is acting with unprecedented speed and scale.

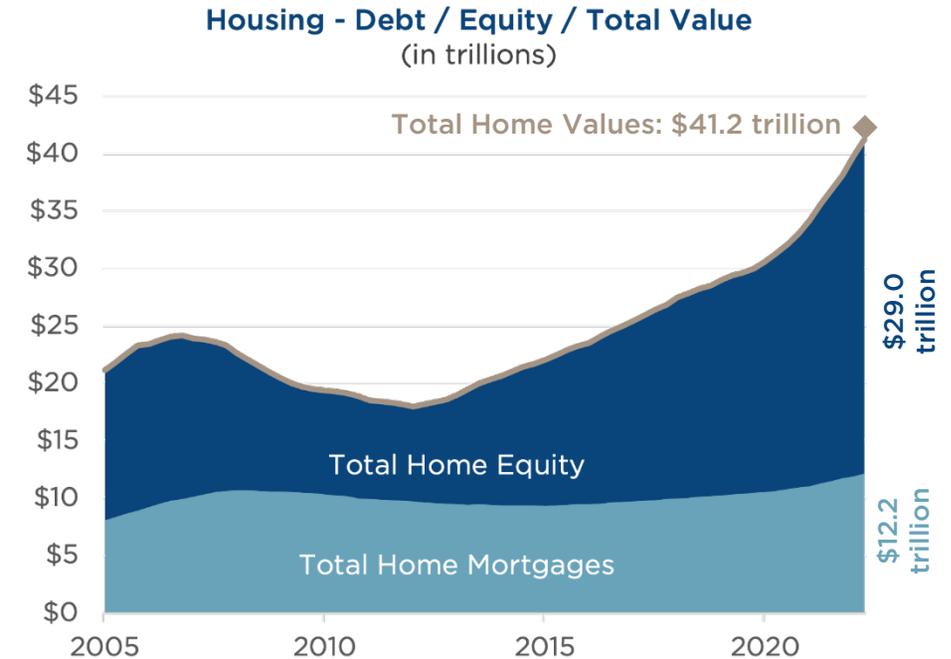
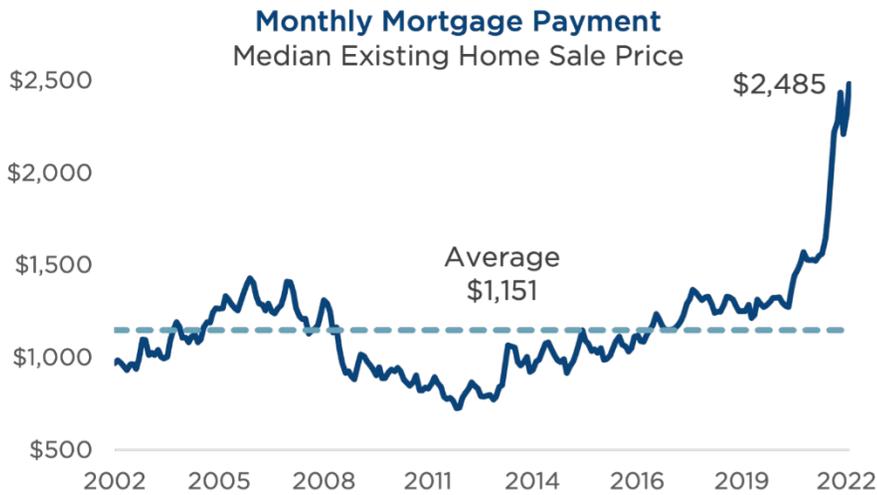


### OBSERVATIONS

- In less than six months, the Federal Reserve has raised the fed funds rate from 0 to over 3%. This pace exceeds all tightening cycles over the last 40 years, reaching the same level of tightening experienced during the 1994-1995 cycle in half the time. According to market indicators, investors believe this accelerated pace of rate hikes will continue for the foreseeable future.
- The central bank has also begun a program of quantitative tightening—reducing its inventory of bonds purchased during the pandemic to spur economic activity. On June 1, the Fed began selling \$45 billion of bonds monthly, accelerating to \$90 billion in September. This is only the second balance sheet reduction program in the Fed’s history, and it’s occurring at roughly twice the pace of the prior.
- The pace and magnitude of tightening imply a Fed that is behind the curve. All eyes are focused on the economy’s resiliency in response to hawkish monetary policy.

Sources: Board of Governors of the Federal Reserve System, CAPTRUST Research

# HOUSING WEAKNESS, NOT HOUSING CRISIS



## OBSERVATIONS

- A 59% increase in monthly mortgage payments since the beginning of the year is pushing many home buyers out of the market, as evidenced by seven consecutive months of declining home sales.
- Year to date, home values have held up or even risen, but rising mortgage rates are likely to weigh on home prices. Even so, homeowners are in a better financial position—with far less leverage—now than at the height of the financial crisis.

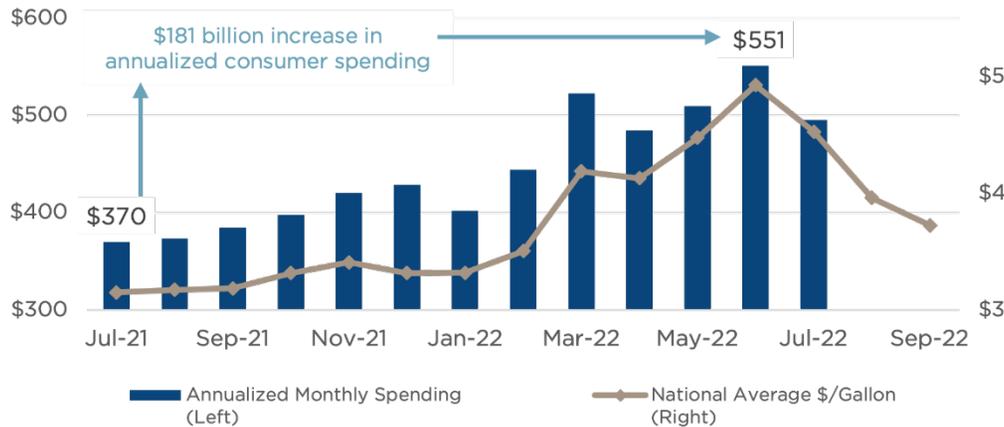
Sources: Bloomberg, St. Louis FRED, CAPTRUST Research; data as of 9.23.2022



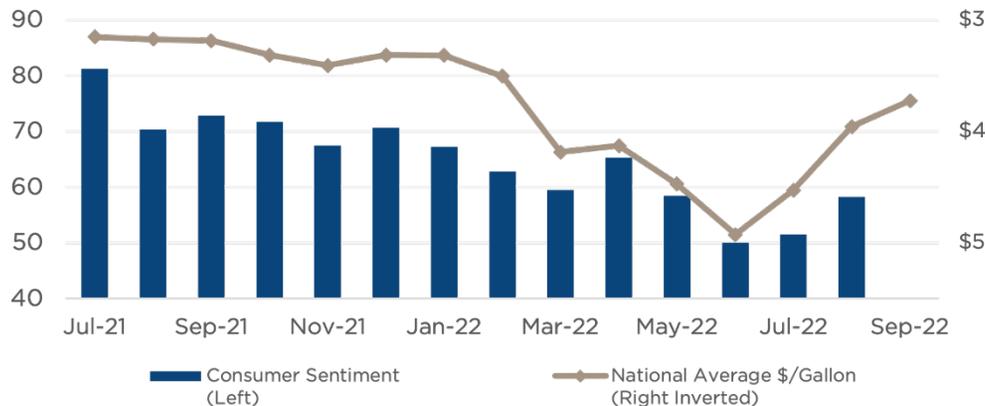
## FUELING THE ECONOMY

The price of gas is one of the most impactful metrics for both the financial and emotional state of consumers. It also flows through to the cost structure of nearly every corner of the U.S. economy.

**Financial Impact**  
(in billions)



**Emotional Impact**



### OBSERVATIONS

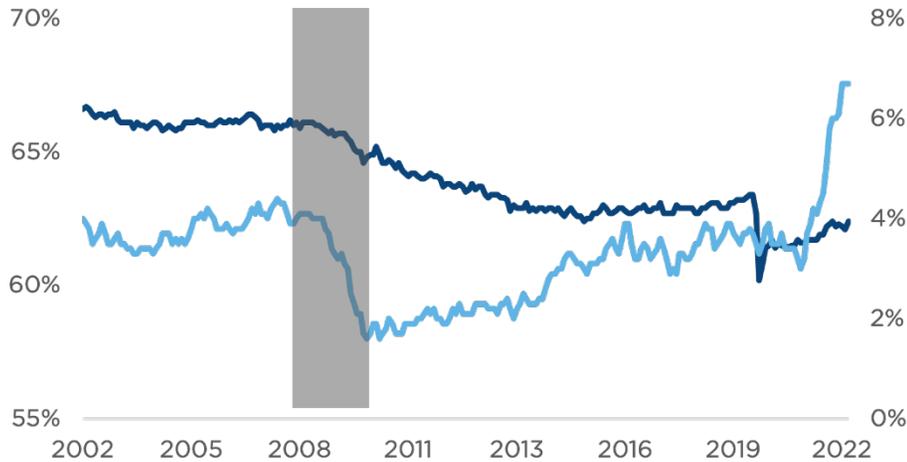
- Demand for gasoline doesn't react quickly to price changes because much of the consumption is not discretionary. As a result, rising prices typically result in lower spending in other areas, particularly for lower-income consumers.
- Average gas prices peaked at \$4.93/gallon in June, resulting in a \$181 billion increase in annualized spending on gasoline and other energy products (compared to June 2021). However, since June, the price of gas has declined by more than 20%, providing additional cash for discretionary spending.
- Consumers drive past gas stations every day and see prices prominently displayed on large, brightly lit signs, creating real-time awareness of current pricing.
- This billboard pricing, combined with the inability to meaningfully decrease consumption, creates a strong inverse relationship between gas prices and consumer sentiment.
- Over the past year, consumer sentiment has steadily declined as gas prices have climbed, reaching an all-time low in June when gas prices peaked. Sentiment is improving as gas prices retreat but remains below historical averages.

Sources: American Automobile Association, U.S. Bureau of Economic Analysis, Bloomberg, CAPTRUST Research; data as of 9.28.2022



## RESILIENT LABOR MARKET

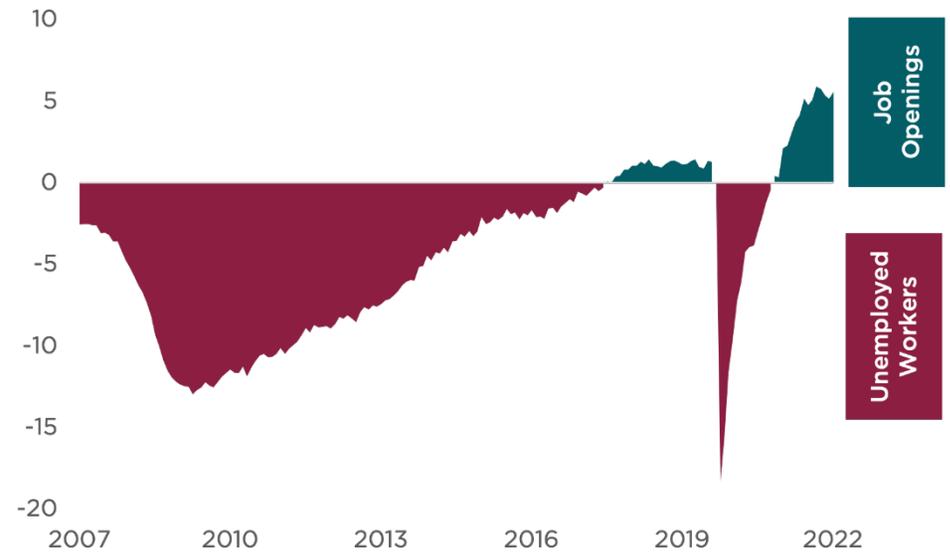
Fewer Workers Post-Pandemic Push Wages Higher



Labor Force Participation Rate (Left)

Wage Growth (Right)

More Job Openings than Unemployed Workers (in millions, on a net basis)



Job Openings

Unemployed Workers

### OBSERVATIONS

- Despite recent improvements, the labor force participation rate has yet to recover to pre-pandemic levels, with over 3 million workers having exited the job force due to early retirements, long COVID, and stimulus-led delays in returning to work. This shortage has resulted in businesses raising wages to draw in workers across income levels. While wage growth is a benefit to the consumer, it has also been a contributor to the high levels of inflation seen in the last year.
- The 11 million current job openings is a two-decade high and nearly double the number of unemployed workers. The Federal Reserve's efforts are focused on reducing this imbalance by slowing the economy to reduce open positions while protecting the wage gains that are attracting more people back to the job market.
- This balancing act is essential for an economic soft landing. Based on the resiliency of the labor market, early signs are encouraging.

Sources: U.S. Bureau of Labor Services, St. Louis FRED, CAPTRUST Research

# ASSET CLASS RETURNS

Period Ending 9.30.22 | Q3 22

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Q3 2022
Mid-Cap Growth 46.29%	Small-Cap Growth 29.09%	Fixed Income 7.84%	Mid-Cap Value 18.51%	Small-Cap Growth 43.30%	Mid-Cap Value 14.75%	Large-Cap Growth 5.67%	Small-Cap Value 31.74%	Large-Cap Growth 30.21%	Cash 1.87%	Large-Cap Growth 36.39%	Large-Cap Growth 38.49%	Mid-Cap Value 28.34%	Cash 0.61%
Large-Cap Growth 37.21%	Mid-Cap Growth 26.38%	Large-Cap Growth 2.64%	Small-Cap Value 18.05%	Mid-Cap Growth 35.74%	Large-Cap Value 13.45%	Fixed Income 0.55%	Mid-Cap Value 20.00%	International Equities 25.62%	Fixed Income 0.01%	Mid-Cap Growth 35.47%	Mid-Cap Growth 35.59%	Small-Cap Value 28.27%	Fixed Income -14.61%
Small-Cap Growth 34.47%	Mid-Cap Value 24.75%	Large-Cap Value 0.39%	International Equities 17.90%	Small-Cap Value 34.52%	Large-Cap Growth 13.05%	Cash 0.05%	Large-Cap Value 17.34%	Mid-Cap Growth 25.27%	Large-Cap Growth -1.51%	Small-Cap Growth 28.48%	Small-Cap Growth 34.63%	Large-Cap Growth 27.60%	Large-Cap Value -17.75%
Mid-Cap Value 34.21%	Small-Cap Value 24.50%	Cash 0.10%	Large-Cap Value 17.51%	Large-Cap Growth 33.48%	Mid-Cap Growth 11.90%	Mid-Cap Growth -0.20%	Small-Cap Growth 11.32%	Small-Cap Growth 22.17%	Mid-Cap Growth -4.75%	Mid-Cap Value 27.06%	International Equities 8.28%	Large-Cap Value 25.16%	Mid-Cap Value -20.36%
International Equities 32.46%	Large-Cap Growth 16.71%	Mid-Cap Value -1.38%	Mid-Cap Growth 15.81%	Mid-Cap Value 33.46%	Fixed Income 5.97%	International Equities -0.39%	Mid-Cap Growth 7.33%	Large-Cap Value 13.66%	Large-Cap Value -8.27%	Large-Cap Value 26.54%	Fixed Income 7.51%	Mid-Cap Growth 12.73%	Small-Cap Value -21.12%
Small-Cap Value 20.58%	Large-Cap Value 15.51%	Mid-Cap Growth -1.65%	Large-Cap Growth 15.26%	Large-Cap Value 32.53%	Small-Cap Growth 5.60%	Small-Cap Growth -1.38%	Large-Cap Growth 7.08%	Mid-Cap Value 13.34%	Small-Cap Growth -9.31%	International Equities 22.66%	Mid-Cap Value 4.96%	International Equities 11.78%	International Equities -26.76%
Large-Cap Value 19.69%	International Equities 8.21%	Small-Cap Growth -2.91%	Small-Cap Growth 14.59%	International Equities 23.29%	Small-Cap Value 4.22%	Large-Cap Value -3.83%	Fixed Income 2.65%	Small-Cap Value 7.84%	Mid-Cap Value -12.29%	Small-Cap Value 22.39%	Small-Cap Value 4.63%	Small-Cap Growth 2.83%	Small-Cap Growth -29.28%
Fixed Income 5.24%	Fixed Income 5.89%	Small-Cap Value -5.50%	Fixed Income 4.22%	Cash 0.07%	Cash 0.03%	Mid-Cap Value -4.78%	International Equities 1.51%	Fixed Income 3.54%	Small-Cap Value -12.86%	Fixed Income 8.72%	Large-Cap Value 2.80%	Cash 0.05%	Large-Cap Growth -30.66%
Cash 0.21%	Cash 0.13%	International Equities -11.73%	Cash 0.11%	Fixed Income -2.02%	International Equities -4.48%	Small-Cap Value -7.47%	Cash 0.33%	Cash 0.86%	International Equities -13.36%	Cash 2.28%	Cash 0.67%	Fixed Income -1.54%	Mid-Cap Growth -31.45%

Source: Markov Processes, Inc., Bloomberg, Mobius

- Small-Cap Value Stocks (Russell 2000 Value)
- Large-Cap Value Stocks (Russell 1000 Value)
- International Equities (MSCI EAFE)
- Small-Cap Growth Stocks (Russell 2000 Growth)
- Mid-Cap Growth Stocks (Russell Mid-Cap Growth)
- Fixed Income (Bloomberg Barclays U.S. Aggregate Bond)
- Large-Cap Growth Stocks (Russell 1000 Growth)
- Mid-Cap Value Stocks (Russell Mid-Cap Value)
- Cash (Merrill Lynch 3-Month Treasury Bill)

The information contained in this report is from sources believed to be reliable but is not warranted by CAPTRUST to be accurate or complete.



# INDEX PERFORMANCE

Period Ending 9.30.22 | Q3 22

INDEXES	Q3 2022	YTD	2021	2020	2019	2018	2017	1 YEAR	3 YEARS	5 YEARS	10 YEARS
90-Day U.S. Treasury	0.46%	0.61%	0.05%	0.67%	2.28%	1.87%	0.86%	0.62%	0.59%	1.15%	0.68%
Bloomberg Barclays Government 1-3 Year	-1.54%	-4.50%	-0.60%	3.14%	3.59%	1.58%	0.45%	-5.05%	-0.53%	0.54%	0.60%
Bloomberg Barclays Intermediate Govt	-3.05%	-8.65%	-1.69%	5.73%	5.20%	1.43%	1.14%	-9.18%	-1.71%	0.18%	0.59%
Bloomberg Barclays Muni Bond	-3.46%	-12.13%	1.52%	5.21%	7.54%	1.28%	5.45%	-11.50%	-1.85%	0.59%	1.79%
Bloomberg Barclays Intermediate Govt/Credit	-3.06%	-9.62%	-1.44%	6.43%	6.80%	0.88%	2.14%	-10.14%	-1.64%	0.38%	1.00%
Bloomberg Barclays Intermediate Credit	-3.08%	-11.33%	-1.03%	7.08%	9.52%	0.01%	3.67%	-11.82%	-1.73%	0.60%	1.60%
Bloomberg Barclays Aggregate Bond	-4.75%	-14.61%	-1.54%	7.51%	8.72%	0.01%	3.54%	-14.60%	-3.25%	-0.27%	0.89%
Bloomberg Barclays Corporate IG Bond	-5.06%	-18.72%	-1.04%	9.89%	14.54%	-2.51%	6.42%	-18.53%	-3.65%	-0.03%	1.70%
Bloomberg Barclays High Yield	-0.65%	-14.74%	5.28%	7.11%	14.32%	-2.08%	7.50%	-14.14%	-0.45%	1.57%	3.94%
Bloomberg Barclays Global Aggregate	-6.94%	-19.89%	-4.71%	9.20%	6.84%	-1.20%	7.39%	-20.43%	-5.73%	-2.32%	-0.93%
Bloomberg Barclays U.S. Long Corporate	-8.65%	-29.43%	-1.13%	13.94%	23.89%	-7.24%	12.09%	-28.40%	-6.95%	-1.14%	1.80%
S&P 500	-4.88%	-23.87%	28.71%	18.40%	31.49%	-4.38%	21.83%	-15.47%	8.16%	9.23%	11.70%
Dow Jones Industrial Average	-6.17%	-19.72%	20.95%	9.72%	25.34%	-3.48%	28.11%	-13.40%	4.36%	7.42%	10.45%
NASDAQ Composite	-4.11%	-32.40%	21.39%	43.64%	35.23%	-3.88%	28.24%	-26.81%	9.75%	10.23%	12.99%
Russell 1000 Value	-5.62%	-17.75%	25.16%	2.80%	26.54%	-8.27%	13.66%	-11.36%	4.36%	5.28%	9.17%
Russell 1000	-4.61%	-24.59%	26.45%	20.96%	31.43%	-4.78%	21.69%	-17.22%	7.94%	8.99%	11.60%
Russell 1000 Growth	-3.60%	-30.66%	27.60%	38.49%	36.39%	-1.51%	30.21%	-22.59%	10.67%	12.16%	13.69%
Russell Mid-Cap Value Index	-4.93%	-20.36%	28.34%	4.96%	27.06%	-12.29%	13.34%	-13.56%	4.50%	4.75%	9.43%
Russell Mid-Cap Index	-3.44%	-24.27%	22.58%	17.10%	30.54%	-9.06%	18.52%	-19.39%	5.19%	6.48%	10.29%
Russell Mid-Cap Growth Index	-0.65%	-31.45%	12.73%	35.59%	35.47%	-4.75%	25.27%	-29.50%	4.26%	7.62%	10.85%
MSCI EAFE	-9.29%	-26.76%	11.78%	8.28%	22.66%	-13.36%	25.62%	-24.75%	-1.38%	-0.36%	4.15%
MSCI ACWI ex U.S.	-9.80%	-26.18%	8.29%	11.13%	22.13%	-13.78%	27.77%	-24.79%	-1.07%	-0.34%	3.48%
Russell 2000 Value	-4.61%	-21.12%	28.27%	4.63%	22.39%	-12.86%	7.84%	-17.69%	4.72%	2.87%	7.94%
Russell 2000	-2.19%	-25.10%	14.82%	19.96%	25.52%	-11.01%	14.65%	-23.50%	4.29%	3.55%	8.55%
Russell 2000 Growth	0.24%	-29.28%	2.83%	34.63%	28.48%	-9.31%	22.17%	-29.27%	2.93%	3.59%	8.80%
MSCI Emerging Markets	-11.42%	-26.89%	-2.22%	18.69%	18.90%	-14.25%	37.75%	-27.80%	-1.71%	-1.44%	1.41%
Dow Jones U.S. Real Estate Index	-10.41%	-28.35%	38.99%	-5.29%	28.92%	-4.03%	9.84%	-17.90%	-1.67%	3.66%	6.40%
HFRX Absolute Return Index	2.14%	1.16%	2.10%	2.72%	4.37%	-0.49%	3.39%	1.44%	2.52%	1.98%	2.15%
Consumer Price Index (Inflation)	0.49%	5.94%	7.10%	1.28%	2.26%	1.92%	2.13%	8.22%	4.97%	3.79%	2.54%
BLENDING BENCHMARKS	Q3 2022	YTD	2021	2020	2019	2018	2017	1 YEAR	3 YEARS	5 YEARS	10 YEARS
25% S&P 500/5% MSCI EAFE/70% BB Agg	-4.95%	-17.49%	6.13%	10.87%	14.96%	-1.55%	8.93%	-15.12%	-0.08%	2.33%	3.88%
30% S&P 500/10% MSCI EAFE/60% BB Agg	-5.18%	-18.57%	8.27%	11.56%	16.79%	-2.44%	10.90%	-15.67%	0.63%	2.84%	4.61%
35% S&P 500/15% MSCI EAFE/50% BB Agg	-5.42%	-19.65%	10.44%	12.18%	18.63%	-3.34%	12.90%	-16.23%	1.31%	3.32%	5.33%
40% S&P 500/20% MSCI EAFE/40% BB Agg	-5.66%	-20.72%	12.64%	12.75%	20.48%	-4.25%	14.93%	-16.81%	1.96%	3.78%	6.03%
45% S&P 500/25% MSCI EAFE/30% BB Agg	-5.90%	-21.80%	14.87%	13.25%	22.33%	-5.17%	16.99%	-17.40%	2.59%	4.22%	6.72%
60% S&P 500/40% Bloomberg Barclays Agg	-4.75%	-20.10%	15.86%	14.73%	22.18%	-2.35%	14.21%	-14.85%	3.85%	5.70%	7.50%

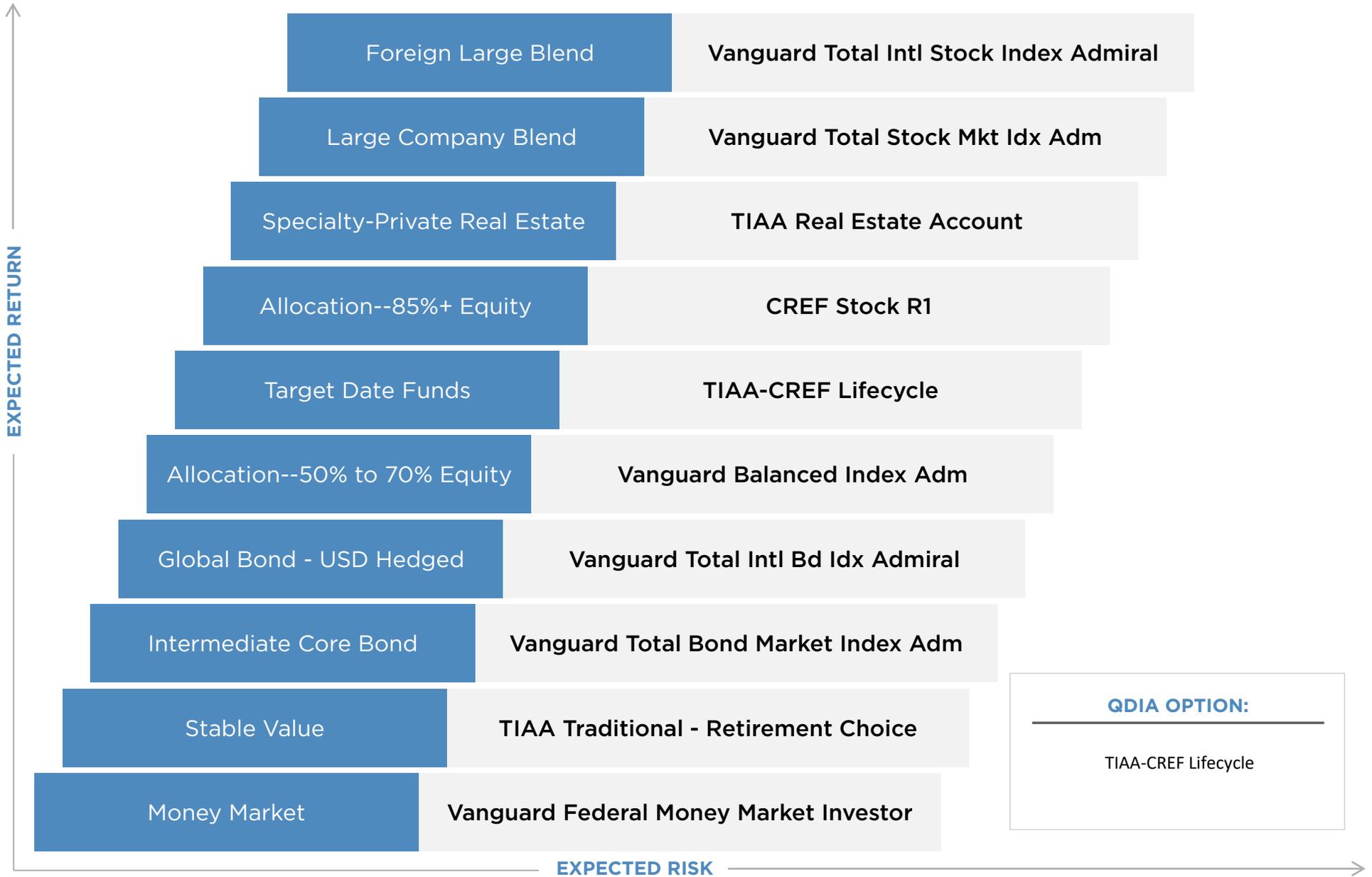
Sources: Morningstar Direct, MPI. The opinions expressed in this report are subject to change without notice. This material has been prepared or is distributed solely for informational purposes and is not a solicitation or an offer to buy any security or to participate in any investment strategy. The performance data quoted represents past performance and does not guarantee future results. Index averages are provided for comparison purposes only. The information and statistics in this report are from sources believed to be reliable but are not guaranteed to be accurate or complete. CAPTRUST is an investment adviser registered under the Investment Advisers Act of 1940.



SECTION 3: PLAN INVESTMENT REVIEW	
Plan Investment Menu Review.....	
Plan Assets.....	
Investment Policy Monitor.....	
Investment Review Select Commentary.....	
Investment Performance Summary.....	



Kalamazoo Valley Community College Employee Optional Retirement Plan



**QDIA OPTION:**  


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TIAA-CREF Lifecycle



# PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.22 | Q3 22

Kalamazoo Valley Community College Employee Optional Retirement Plan

FUND OPTION	CURRENT INVESTMENT NAME	— MARKET VALUE —			
		12.31.2021	(%)	CURRENT	(%)
Money Market	Vanguard Federal Money Market Investor	\$3,229	0.04%	\$7,692	0.10%
Stable Value	TIAA Traditional - Retirement Choice	\$393,451	5.12%	\$605,998	7.79%
Intermediate Core Bond	Vanguard Total Bond Market Index Adm	\$44,907	0.58%	\$80,153	1.03%
Global Bond - USD Hedged	Vanguard Total Intl Bd Idx Admiral	\$21,144	0.27%	\$33,840	0.43%
Allocation--50% to 70% Equity	Vanguard Balanced Index Adm	\$296,221	3.85%	\$449,256	5.77%
Target Date Ret Income Aggressive	TIAA-CREF Lifecycle Retire Income Instl	\$2,257	0.03%	\$2,125	0.03%
Target Date 2000-2010 Aggressive	TIAA-CREF Lifecycle 2010 Institutional	\$106,650	1.39%	\$123,936	1.59%
Target Date 2015 Aggressive	TIAA-CREF Lifecycle 2015 Institutional	\$77,459	1.01%	\$79,981	1.03%
Target Date 2020 Aggressive	TIAA-CREF Lifecycle 2020 Institutional	\$983,867	12.79%	\$832,948	10.70%
Target Date 2025 Aggressive	TIAA-CREF Lifecycle 2025 Institutional	\$738,693	9.61%	\$542,506	6.97%
Target Date 2030 Aggressive	TIAA-CREF Lifecycle 2030 Institutional	\$896,856	11.66%	\$503,930	6.48%
Target Date 2035 Aggressive	TIAA-CREF Lifecycle 2035 Institutional	\$847,287	11.02%	\$858,140	11.03%
Target Date 2040 Aggressive	TIAA-CREF Lifecycle 2040 Institutional	\$930,188	12.10%	\$836,489	10.75%
Target Date 2045 Aggressive	TIAA-CREF Lifecycle 2045 Institutional	\$461,283	6.00%	\$469,193	6.03%
Target Date 2050 Aggressive	TIAA-CREF Lifecycle 2050 Institutional	\$593,312	7.71%	\$613,082	7.88%
Target Date 2055 Aggressive	TIAA-CREF Lifecycle 2055 Institutional	\$146,152	1.90%	\$146,512	1.88%
Target Date 2060 Aggressive	TIAA-CREF Lifecycle 2060 Institutional	\$71,476	0.93%	\$73,390	0.94%
Target Date 2065+ Aggressive	TIAA-CREF Lifecycle 2065 Institutional	-	-	\$1,066	0.01%

CONTINUED...

Information provided by Record Keeper. For informational purposes. Not a substitute for official statements produced by the plan custodian. Information has been obtained from sources considered reliable, but its accuracy and completeness are not guaranteed. This report is not an illustration of investment performance, but rather a historical illustration of asset allocation.



# PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 9.30.22 | Q3 22

Kalamazoo Valley Community College Employee Optional Retirement Plan

FUND OPTION	CURRENT INVESTMENT NAME	— MARKET VALUE —			
		12.31.2021	(%)	CURRENT	(%)
Allocation--85%+ Equity	CREF Stock R1	\$118,318	1.54%	\$137,394	1.77%
Specialty-Private Real Estate	TIAA Real Estate Account	\$135,356	1.76%	\$276,171	3.55%
Large Company Blend	Vanguard Total Stock Mkt Idx Adm	\$606,413	7.89%	\$699,604	8.99%
Foreign Large Blend	Vanguard Total Intl Stock Index Admiral	\$214,118	2.78%	\$307,965	3.96%
Loan	Loan Deemed	\$1,975	0.03%	\$2,035	0.03%
Loan	Loan Fund	-	-	\$97,987	1.26%
<b>TOTALS</b>		\$7,690,613	100%	\$7,781,393	100%

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Kalamazoo Valley Community College Employee Optional Retirement Plan

INVESTMENT	QUANTITATIVE								QUALITATIVE		TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Style		Confidence		Fund Management	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr				

LEGEND

	IN GOOD STANDING		MARKED FOR REVIEW		CONSIDER FOR TERMINATION
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The CAPTRUST Investment Policy Monitor ("Scorecard") is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields for actively managed investment options. Quantitative scoring areas include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; Style Attribution; and Confidence. Qualitative Scoring Areas measure the quality of the Management Team while also considering the stewardship of the investment option's parent company under Investment Family Items. Qualitative areas of analysis are subjective in nature. CAPTRUST typically requires at least 3 months of monitoring before including an investment in this report. Investments that have been added to our system less than 3 months prior to a report being generated may have a Fund Management assessment of '25' as a default, but will be updated, if necessary, after the first quarter of monitoring to more accurately reflect our system. Investments that are not mutual funds or have less than 3 years of performance history may not be scored. This material is for institutional investor use only and is not intended to be shared with individual investors.

Kalamazoo Valley Community College Employee Optional Retirement Plan

TARGET DATE INVESTMENTS

INVESTMENT	QUANTITATIVE						QUALITATIVE				TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Glidepath		Portfolio Construct.	Underlying Inv. Vehicles	Fund Mgmt	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	% of Equities	Beta to Equities						
TIAA-CREF Lifecycle	●	●	●	●	●	●	●	●	▼	●	●	82

CAPITAL PRESERVATION INVESTMENTS

INVESTMENT	Overall	Commentary
Vanguard Federal Money Market Investor	●	This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
TIAA Traditional - Retirement Choice	●	This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.

CONTINUED...

The CAPTRUST Financial Advisors Investment Scorecard is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields. Quantitative scoring areas for target date funds include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; and Glidepath. Qualitative Scoring Areas for target date funds measure the quality of the Management Team while also considering the stewardship of the investment option's parent company under Investment Family Items. Qualitative areas of analysis are subjective in nature. Qualitative Scoring for Target Date funds also includes a score for Portfolio Construction and Underlying Investment vehicles to express CAPTRUST's views on the manager or strategy. CAPTRUST typically requires at least 3 months of monitoring before including an investment in this report. Investments that have been added to our system less than 3 months prior to a report being generated may have a Fund Management assessment of '25' as a default, but will be updated, if necessary, after the first quarter of monitoring to more accurately reflect our system. Investments that are not mutual funds or have less than 3 years of performance history may not be scored. Capital Preservation options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics, depending on the type of capital preservation option being evaluated, and may include quantitative criteria such as: Crediting Rate/Yield, Market to Book Ratio, Average Crediting Quality, Insurer Quality/Diversification, Duration, and Sector Allocations, and/or qualitative criteria such as quality and experience of the Management Team and stewardship of the investment option's parent company. Passively Managed options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics and may include quantitative criteria such as: Tracking Error, Fees, and Performance versus relevant peer group, and/or qualitative criteria such as index replication strategy, securities lending practices, and fair value pricing methodology. Distinct investment options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics. This material is for institutional investor use only and is not intended to be shared with individual investors.



PASSIVE INVESTMENTS

INVESTMENT	Overall	Commentary
Vanguard Total Bond Market Index Adm		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Total Intl Bd Idx Admiral		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Balanced Index Adm		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Total Stock Mkt Idx Adm		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Total Intl Stock Index Admiral		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.

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**INVESTMENTS IN DISTINCT ASSET CLASSES**

INVESTMENT	Overall	Commentary
<p><b>CREF Stock R1</b></p>		<p>This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.</p>
<p><b>TIAA Real Estate Account</b></p>		<p>This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.</p>

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FUND MANAGEMENT ITEMS	COMMENTARY
TIAA-CREF Lifecycle	<p>Nuveen has increased the equity allocation in the section of the glidepath 20-15 years from retirement by 4%. This change impacts three current vintages, the 2045, 2040, and 2035 vintage funds. The equity allocation was increased by 1.8% in the 2045 vintage, by 4% in the 2040 vintage, and by 2.2% in the 2035 vintage. To fund these increases, the vintages' fixed income allocations were reduced. For the Lifecycle (active) series, there was no impact to the private real estate allocation. Jeff Sun joined the Target Date Multi-Asset team as an associate portfolio manager.</p>

# PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.22 | Q3 22

Kalamazoo Valley Community College Employee Optional Retirement Plan

INVESTMENT NAME	Q3 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>MONEY MARKET</b>											
Vanguard Federal Money Market Investor	0.50%	0.67%	0.01%	0.45%	2.14%	1.78%	0.81%	0.67%	0.52%	1.06%	0.62%
ICE BofA ML US Treasury Bill 3 Mon USD	0.46%	0.61%	0.05%	0.67%	2.28%	1.87%	0.86%	0.62%	0.59%	1.15%	0.68%
<b>STABLE VALUE</b>											
TIAA Traditional - Retirement Choice	-	-	-	-	-	-	-	-	-	-	-
ICE BofA ML US Treasury Bill 3 Mon USD	0.46%	0.61%	0.05%	0.67%	2.28%	1.87%	0.86%	0.62%	0.59%	1.15%	0.68%
Morningstar US Stable Value GR USD	0.43%	1.11%	1.39%	1.88%	2.15%	1.84%	1.58%	1.46%	1.64%	1.78%	1.59%
<b>INTERMEDIATE CORE BOND</b>											
Vanguard Total Bond Market Index Adm	-4.65%	-14.59%	-1.67%	7.72%	8.71%	-0.03%	3.56%	-14.66%	-3.27%	-0.26%	0.85%
Bloomberg US Agg Bond TR USD	-4.75%	-14.61%	-1.55%	7.51%	8.72%	0.01%	3.54%	-14.60%	-3.26%	-0.27%	0.89%
Intermediate Core Bond Universe	-4.72%	-14.90%	-1.55%	7.96%	8.48%	-0.43%	3.39%	-15.05%	-3.25%	-0.36%	0.82%
<b>GLOBAL BOND - USD HEDGED</b>											
Vanguard Total Intl Bd Idx Admiral	-3.26%	-12.87%	-2.22%	4.54%	7.88%	2.93%	2.39%	-13.06%	-4.20%	0.00%	-
Bloomberg Global Aggregate TR Hdg USD	-4.26%	-16.55%	-0.96%	7.78%	11.85%	-0.47%	5.36%	-16.52%	-3.60%	0.05%	1.84%
Global Bond- USD Hedged Universe	-3.27%	-13.21%	-1.74%	6.31%	8.47%	0.18%	3.97%	-13.43%	-3.43%	-0.11%	1.31%
<b>ALLOCATION--50% TO 70% EQUITY</b>											
Vanguard Balanced Index Adm	-4.49%	-20.78%	14.22%	16.40%	21.79%	-2.86%	13.89%	-16.42%	3.53%	5.31%	7.28%
60% S&P 500, 40% Bloomberg Agg	-4.75%	-20.10%	15.86%	14.73%	22.18%	-2.35%	14.21%	-14.85%	3.85%	5.70%	7.50%
Allocation--50% to 70% Equity Universe	-5.11%	-20.16%	13.52%	12.35%	19.48%	-5.91%	14.06%	-16.16%	2.43%	3.60%	5.96%

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# PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.22 | Q3 22

Kalamazoo Valley Community College Employee Optional Retirement Plan

INVESTMENT NAME	Q3 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>TARGET DATE RET INCOME AGGRESSIVE</b>											
TIAA-CREF Lifecycle Retire Income Instl	-4.02%	-16.37%	7.08%	11.10%	15.30%	-3.84%	12.10%	-14.53%	1.01%	2.50%	4.37%
Morningstar Lifetime Aggressive Income Index	-4.91%	-18.04%	9.86%	11.49%	15.79%	-3.15%	10.78%	-15.31%	1.49%	3.00%	4.35%
Retirement Income Aggressive	-4.56%	-17.07%	8.88%	10.98%	15.63%	-4.33%	11.44%	-14.44%	0.82%	2.30%	3.04%
<b>TARGET DATE 2000-2010 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2010 Institutional	-3.86%	-16.21%	6.88%	11.24%	15.43%	-3.92%	12.76%	-14.45%	1.07%	2.56%	4.70%
Morningstar Lifetime Aggressive 2010 Index	-5.23%	-19.59%	10.36%	12.46%	17.62%	-4.03%	12.78%	-16.67%	1.38%	3.13%	5.03%
2000-2010 Aggressive	-4.65%	-17.27%	8.07%	11.78%	15.36%	-3.42%	11.07%	-15.16%	1.18%	2.63%	4.51%
<b>TARGET DATE 2015 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2015 Institutional	-4.00%	-16.91%	7.74%	11.80%	16.51%	-4.41%	13.85%	-14.93%	1.38%	2.79%	5.13%
Morningstar Lifetime Aggressive 2015 Index	-5.67%	-21.29%	11.11%	13.13%	19.08%	-4.69%	14.17%	-18.15%	1.21%	3.14%	5.43%
2015 Aggressive	-4.83%	-18.13%	9.39%	12.33%	17.04%	-4.04%	13.41%	-15.71%	1.38%	2.77%	5.06%
<b>TARGET DATE 2020 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2020 Institutional	-4.22%	-17.81%	8.46%	12.38%	17.79%	-5.18%	15.58%	-15.66%	1.54%	2.94%	5.62%
Morningstar Lifetime Aggressive 2020 Index	-5.99%	-22.62%	12.15%	13.48%	20.68%	-5.45%	15.85%	-19.28%	1.22%	3.24%	5.95%
2020 Aggressive	-5.01%	-18.99%	10.29%	13.20%	18.99%	-4.80%	15.48%	-16.40%	1.85%	3.08%	5.72%
<b>TARGET DATE 2025 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2025 Institutional	-4.40%	-19.09%	9.85%	13.44%	19.44%	-6.05%	17.40%	-16.62%	1.98%	3.27%	6.20%
Morningstar Lifetime Aggressive 2025 Index	-6.19%	-23.63%	13.61%	13.51%	22.45%	-6.34%	17.73%	-20.05%	1.46%	3.44%	6.52%
2025 Aggressive	-5.26%	-20.25%	11.78%	13.47%	20.56%	-5.78%	16.34%	-17.50%	2.15%	3.30%	6.18%

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# PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.22 | Q3 22

Kalamazoo Valley Community College Employee Optional Retirement Plan

INVESTMENT NAME	Q3 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>TARGET DATE 2030 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2030 Institutional	-4.70%	-20.50%	11.23%	14.54%	21.27%	-7.09%	19.21%	-17.66%	2.40%	3.54%	6.73%
Morningstar Lifetime Aggressive 2030 Index	-6.27%	-24.31%	15.32%	13.26%	24.11%	-7.27%	19.48%	-20.48%	1.86%	3.68%	6.98%
2030 Aggressive	-5.61%	-21.95%	13.53%	15.78%	22.17%	-6.08%	18.86%	-18.51%	2.69%	3.78%	6.74%
<b>TARGET DATE 2035 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2035 Institutional	-4.97%	-21.91%	12.70%	15.48%	23.04%	-8.04%	21.11%	-18.81%	2.74%	3.79%	7.23%
Morningstar Lifetime Aggressive 2035 Index	-6.28%	-24.64%	16.84%	12.91%	25.28%	-8.04%	20.68%	-20.62%	2.27%	3.88%	7.24%
2035 Aggressive	-6.11%	-23.50%	15.34%	15.42%	23.86%	-7.17%	19.71%	-19.50%	2.91%	3.97%	7.23%
<b>TARGET DATE 2040 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2040 Institutional	-5.22%	-23.08%	14.33%	16.44%	24.56%	-8.92%	22.91%	-19.57%	3.25%	4.08%	7.64%
Morningstar Lifetime Aggressive 2040 Index	-6.28%	-24.79%	17.67%	12.74%	25.78%	-8.50%	21.23%	-20.67%	2.53%	3.95%	7.29%
2040 Aggressive	-6.18%	-24.22%	16.37%	17.64%	24.60%	-7.17%	21.38%	-19.99%	3.39%	4.36%	7.70%
<b>TARGET DATE 2045 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2045 Institutional	-5.42%	-24.10%	15.94%	17.31%	25.87%	-9.59%	23.62%	-20.32%	3.76%	4.36%	7.84%
Morningstar Lifetime Aggressive 2045 Index	-6.33%	-24.86%	17.81%	12.71%	25.80%	-8.72%	21.41%	-20.74%	2.57%	3.91%	7.22%
2045 Aggressive	-6.51%	-25.20%	17.66%	16.68%	25.62%	-8.11%	21.16%	-20.79%	3.51%	4.35%	7.83%
<b>TARGET DATE 2050 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2050 Institutional	-5.57%	-24.60%	16.48%	17.44%	26.19%	-9.82%	24.04%	-20.67%	3.79%	4.35%	7.88%
Morningstar Lifetime Aggressive 2050 Index	-6.40%	-24.89%	17.62%	12.67%	25.69%	-8.86%	21.53%	-20.84%	2.49%	3.82%	7.12%
2050 Aggressive	-6.35%	-24.94%	17.44%	18.17%	25.57%	-7.36%	21.60%	-20.73%	3.69%	4.56%	8.00%

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# PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.22 | Q3 22

Kalamazoo Valley Community College Employee Optional Retirement Plan

INVESTMENT NAME	Q3 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>TARGET DATE 2055 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2055 Institutional	-5.60%	-24.71%	16.64%	17.52%	26.36%	-9.86%	24.23%	-20.79%	3.85%	4.39%	7.93%
Morningstar Lifetime Aggressive 2055 Index	-6.47%	-24.93%	17.39%	12.65%	25.56%	-8.98%	21.63%	-20.96%	2.40%	3.71%	7.00%
2055 Aggressive	-6.64%	-25.52%	18.03%	16.02%	25.83%	-8.19%	21.17%	-20.97%	3.42%	4.48%	7.92%
<b>TARGET DATE 2060 AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2060 Institutional	-5.55%	-24.78%	16.80%	17.75%	26.70%	-10.06%	24.40%	-20.79%	3.96%	4.46%	-
Morningstar Lifetime Aggressive 2060 Index	-6.55%	-24.98%	17.15%	12.63%	25.42%	-9.10%	21.73%	-21.07%	2.31%	3.60%	-
2060 Aggressive	-6.53%	-25.12%	17.82%	17.23%	25.78%	-7.85%	21.38%	-20.87%	3.55%	4.53%	-
<b>TARGET DATE 2065+ AGGRESSIVE</b>											
TIAA-CREF Lifecycle 2065 Institutional	-5.58%	-24.70%	17.15%	-	-	-	-	-20.65%	-	-	-
Morningstar Lifetime Aggressive 2065 Index	-6.62%	-25.01%	16.91%	12.62%	25.22%	-	-	-21.17%	2.23%	-	-
2065+ Aggressive	-6.54%	-25.20%	18.44%	15.43%	-	-	-	-20.73%	3.00%	-	-
<b>ALLOCATION--85%+ EQUITY</b>											
CREF Stock R1	-6.60%	-26.10%	18.67%	17.64%	27.13%	-9.86%	23.01%	-21.53%	3.94%	4.55%	8.07%
85% S&P 500, 15% Bloomberg Agg	-4.82%	-22.45%	23.77%	17.14%	27.97%	-3.58%	18.92%	-15.20%	6.59%	7.96%	10.15%
Allocation--85%+ Equity Universe	-6.05%	-25.47%	18.36%	16.19%	25.65%	-9.38%	21.05%	-20.89%	3.60%	4.25%	7.54%
<b>SPECIALTY-PRIVATE REAL ESTATE</b>											
TIAA Real Estate Account	1.16%	12.11%	17.87%	-0.84%	5.51%	4.79%	4.37%	18.78%	9.86%	7.97%	8.01%
NCREIF Property Index	0.57%	9.35%	17.70%	1.60%	6.42%	6.72%	6.96%	16.08%	9.91%	8.62%	9.48%
NCREIF ODCE Index	0.52%	13.08%	22.18%	1.18%	5.34%	8.35%	7.61%	22.09%	12.37%	10.24%	10.91%

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# PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 9.30.22 | Q3 22

Kalamazoo Valley Community College Employee Optional Retirement Plan

INVESTMENT NAME	Q3 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
<b>LARGE COMPANY BLEND</b>											
Vanguard Total Stock Mkt Idx Adm	-4.46%	-24.89%	25.71%	20.99%	30.80%	-5.17%	21.17%	-18.01%	7.59%	8.55%	11.33%
S&P 500 Index	-4.88%	-23.87%	28.71%	18.40%	31.49%	-4.38%	21.83%	-15.47%	8.16%	9.24%	11.70%
Large Blend Universe	-4.97%	-23.97%	26.63%	16.98%	29.75%	-5.79%	21.12%	-16.19%	7.12%	8.06%	10.62%
<b>FOREIGN LARGE BLEND</b>											
Vanguard Total Intl Stock Index Admiral	-10.51%	-26.76%	8.62%	11.28%	21.51%	-14.43%	27.55%	-25.21%	-1.18%	-0.70%	3.31%
MSCI EAFE	-9.29%	-26.76%	11.78%	8.28%	22.66%	-13.36%	25.62%	-24.75%	-1.38%	-0.36%	4.15%
Foreign Large Blend Universe	-10.41%	-28.02%	10.07%	9.53%	21.99%	-15.17%	25.46%	-26.10%	-1.77%	-1.08%	3.30%

\*ANNUALIZED

This summary is intended for "Institutional (Plan Sponsor) Use Only" and only includes historical performance of the funds currently in the plan's fund lineup as compared to the peer group (universe) maintained/developed by CAPTRUST (using Morningstar open-end mutual fund data), which may include other investment types such as collective investment trusts. Fund and peer group returns are shown net of investment management fees, unless otherwise indicated, but gross of CAPTRUST advisory fees. The plan's overall performance will be reduced by CAPTRUST's advisory fees and other plan level fees not contemplated in this summary. Therefore, each participant's account performance will differ substantially. Past performance is not indicative of future results. Information from sources believed to be reliable, but not warranted by CAPTRUST to be accurate or complete.



SECTION 4: FUND FACT SHEETS

Kalamazoo Valley Community College Employee Optional Retirement Plan

SECTION 4: FUND FACT SHEETS	
Fund Fact Sheets.....	



**INDUSTRY ANALYSIS**

The Federal Reserve increased the overnight lending rate to a target between 3.00% - 3.25%, resulting in an increase in short-term interest rates. As such, yields on money market funds have increased year-to-date and are expected to continue to closely track short-term interest rates as the Federal Reserve contemplates further action. Inflation levels continue to post record numbers in the third quarter accelerating the Fed's response timeline and two hikes to the overnight lending rate, 0.75% each, making it a total of five year-to-date. In December 2021, the SEC proposed amendments that would improve the resilience of money market funds through increased transparency and liquidity requirements for money market funds, aiming to provide funds a more substantial liquidity buffer in the event of rapid redemptions. The proposed amendments remain under regulatory review and are susceptible to changes before they are finalized and made effective.

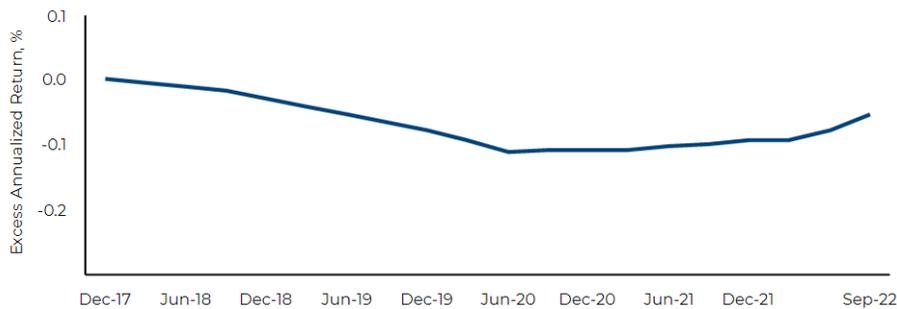
	Last Qtr.	YTD	1 Year	3 Years	5 Years	10 Years
Vanguard Federal Money Market Investor	0.50	0.67	0.67	0.52	1.06	0.62
FTSE 3 Month T-Bill	0.45	0.62	0.63	0.57	1.13	0.66

	2021	2020	2019	2018	2017
Vanguard Federal Money Market Investor	0.01	0.45	2.14	1.78	0.81
FTSE 3 Month T-Bill	0.05	0.58	2.25	1.86	0.84

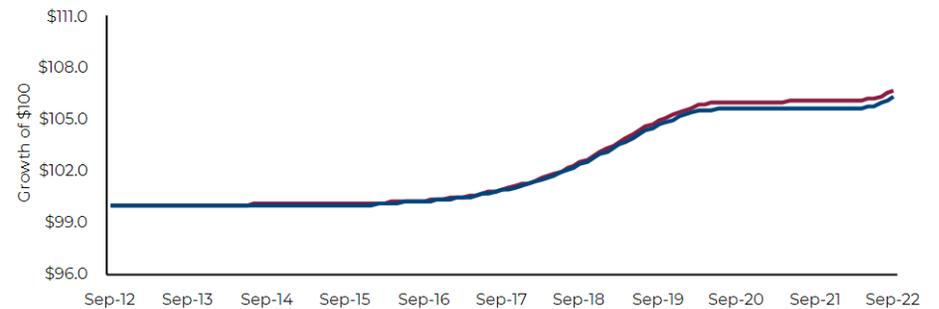
**KEY MEASURES / 5 YEAR**

Vanguard Federal Money Market Investor	0.26
FTSE 3 Month T-Bill	0.27

**Rolling 3 Year Annualized Excess Return (Dec-17 - Sep-22)**

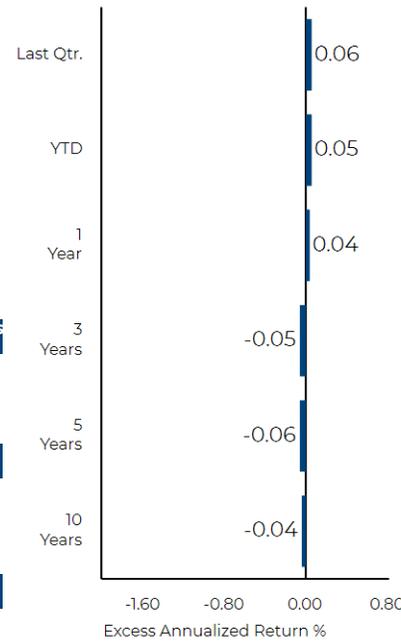


**Cumulative Performance (Oct 2012 - Sep 2022)**

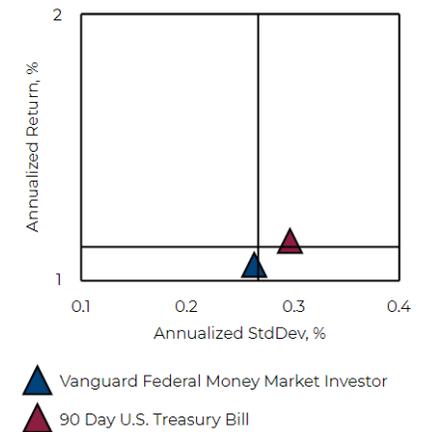


**INVESTMENT PROFILE**

Ticker	VMFXX
Fund Inception Date	1981
Prospectus Expense Ratio	0.11 %
SEC Yield	-



**Performance vs Risk - 5 Year**



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**INDUSTRY ANALYSIS**

Inflation eased relatively in the third quarter, but concerns persist as levels remain high. The Federal Reserve increased the overnight lending rate twice in the third quarter, an increase of 75 basis-points in each instance, to a final target range between 3.00% - 3.25%. Guaranteed contract providers continue to operate as expected, with increases to guaranteed crediting rates overall year-to-date. Following the Fed's rate increase and announcement of plans for seven or eight rate increases in total for 2022, we can expect guaranteed products to continue increasing crediting rates. When determining the guaranteed rate for a fund, insurance companies use forward-looking projections of the interest rate environment. Rising interest rates present negative pressure on current general account underlying portfolios, in the short-term, as the value of current portfolio holdings decline, but give insurer's comfort that higher yields will support the ability to offer higher guaranteed rates future quarters.

**CAPTRUST ANALYSIS**

The TIAA Traditional Annuity is a guaranteed annuity account (group annuity contract) that is backed by the financial strength and claims-paying ability of TIAA. The product offers participants guaranteed principal and a contractually specified interest rate. The contractually agreed upon minimum annual interest rate is between 1 – 3%. The TIAA Board of Trustees also reserves the right each year to declare a higher crediting rate to participants which remains effective for a twelve month period that begins each March 1.

**GROSS CREDITING RATES - For Contributions Applied:**

7/1/2021 - 9/30/2021	10/1/2021 - 12/31/2021	1/1/2022 - 3/31/2022	4/1/2022 - 6/30/2022	7/1/2022 - 9/30/2022
2.75%	2.75%	4.50%	5.25%	5.75%

**INVESTMENT DETAILS**

<b>Crediting Rate Details:</b>	Current contributions are invested at the new money rate, which can change monthly but is guaranteed until the last day of February. Old Money is grouped by time period into vintages, rates on all vintages are reviewed for reset every March 1 <sup>st</sup> .
<b>Competing Options:</b>	Allowed.
<b>Minimum Rate:</b>	1.00 – 3.00% floor during accumulation stage and 2.00% during annuity payout stage, reset annually.

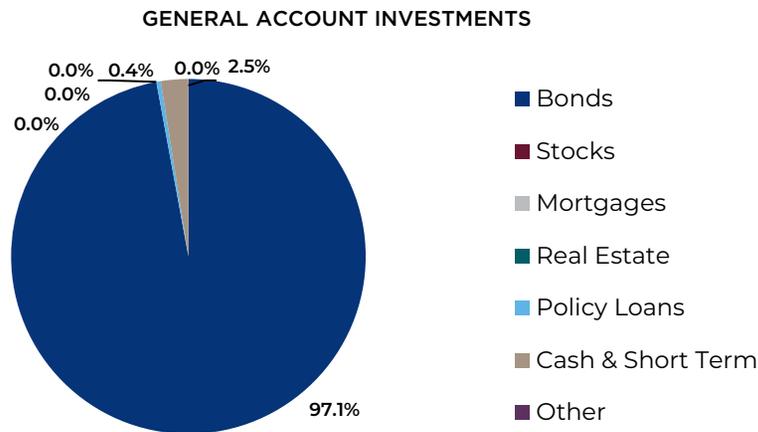
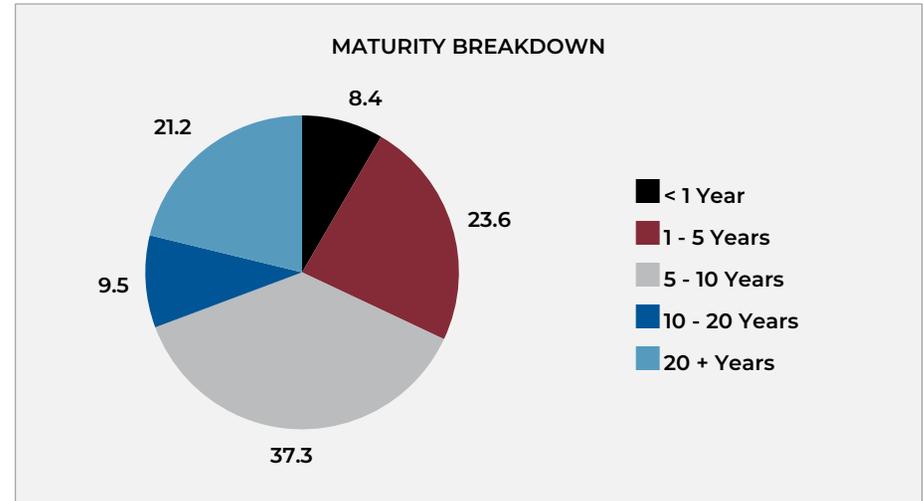
**LIQUIDITY PROVISIONS**

Plan Sponsor	Participant
Allowed over a 60-month (5 years) period without a surrender charge with 90-day advance notice from institution.	Transfers and withdrawals can be made in 84 monthly installments (7 years). Lump sum withdrawals are only available within 120 days of termination of employment with a 2.5% surrender charge.

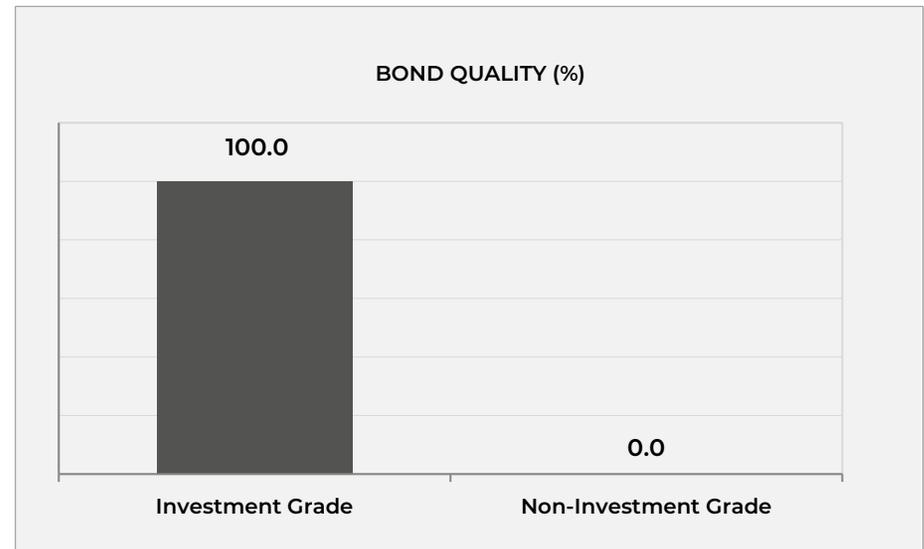
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AGENCY RATINGS*	
A.M. Best (15 ratings)	A++ (1/15)
Standard & Poors (20)	AA+ (2)
Moody's (21)	Aa1 (2)
Fitch (21)	AAA (1)
Weiss (16)	B (5)
Comdex Ranking (Percentile Rank)	99

Comdex Ranking: Insurers are assigned a percentile rank, per agency, based on their ratings relative to peers. Percentiles are then averaged to arrive at one Comdex Ranking; over 1,100 companies are currently ranked.



Total Surplus & Asset Valuation Reserve (as % of GA Assets): 6.2%



Source: Vital Signs \*Agency ratings as of most recent quarter-end, all other data as of most recent year end.

Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800.216.0645. Agency ratings are sourced from Bloomberg. Index averages are derived from Morningstar. The opinions expressed in this report are subject to change without notice. This material is not a solicitation or an offer to buy any security or to participate in any investment strategy and is not guaranteed as to accuracy. Any such solicitation must be made by prospectus only. To obtain a prospectus, please contact your financial advisor. CAPTRUST Financial Advisors. Member FINRA/SIPC.

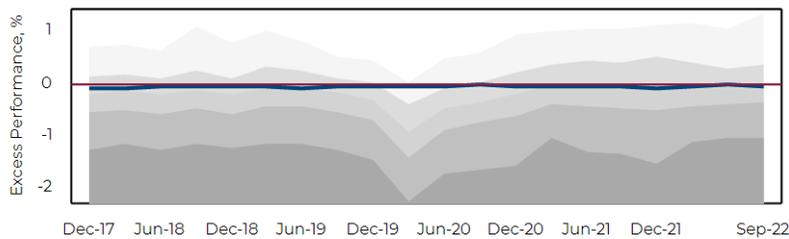
TRAILING AND CALENDAR RETURNS

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
Vanguard Total Bond Market Index Adm	-4.65	-14.59	-14.66	-3.27	-0.26	0.85	-1.67	7.72	8.71	-0.03	3.56
Blmbg. U.S. Aggregate Float Adjusted	-4.68	-14.65	-14.61	-3.22	-0.23	0.91	-1.58	7.75	8.87	-0.08	3.63
Intermediate Core Bond Median	-4.72	-14.90	-15.05	-3.25	-0.36	0.82	-1.55	7.96	8.48	-0.43	3.39
Rank (%)	41	35	32	52	41	48	57	57	36	29	41
Population	408	408	408	392	371	345	411	413	431	432	486

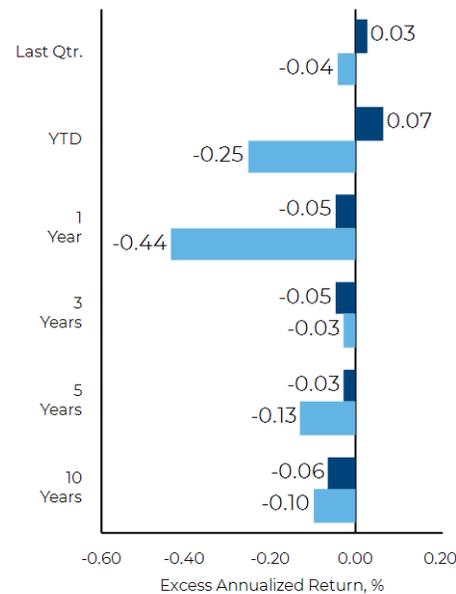
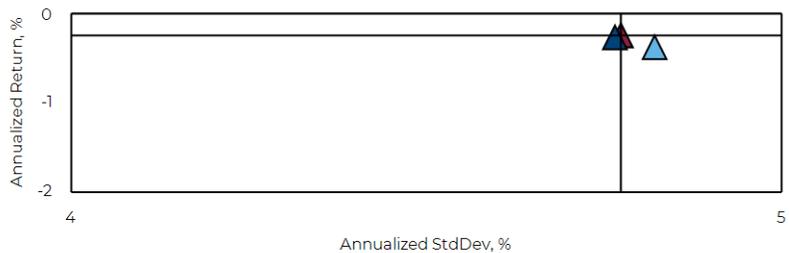
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Vanguard Total Bond Market Index Adm	-0.27	-0.03	1.00	1.00	99.21	99.67	-0.11
Blmbg. U.S. Aggregate Float Adjusted	-0.27	0.00	1.00	1.00	100.00	100.00	-
Intermediate Core Bond Median	-0.28	-0.11	0.99	0.95	98.95	101.04	-0.11

Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



INVESTMENT PROFILE

Ticker	VBTLX
Portfolio Manager	Barrickman,J
Portfolio Assets	\$94,935 Million
PM Tenure	9 Years 7 Months
Net Expense(%)	0.05 %
Fund Inception	2001

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	4.80 %
Number of Holdings	17264
Turnover	69.00 %
Avg. Effective Duration	6.67 Years
SEC Yield	3.97 %

▲ Vanguard Total Bond Market Index Adm ▲ Intermediate Core Bond Median  
 ▲ Blmbg. U.S. Aggregate Float Adjusted

■ Vanguard Total Bond Market Index Adm ■ Intermediate Core Bond Median

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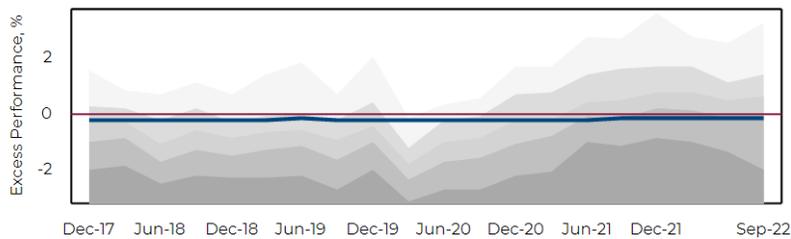
TRAILING AND CALENDAR RETURNS

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
Vanguard Total Intl Bd Idx Admiral™	-3.31	-12.92	-13.10	-4.22	-0.01	-	-2.22	4.54	7.88	2.93	2.39
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	-3.09	-12.79	-12.89	-4.06	0.17	-	-2.10	4.75	8.06	3.16	2.57
Global Bond-USD Hedged Median	-3.26	-13.21	-13.44	-3.40	-0.16	1.30	-1.74	6.36	8.61	0.03	4.11
Rank (%)	57	33	35	76	39	-	65	85	70	3	88
Population	127	127	127	115	100	78	124	118	114	110	96

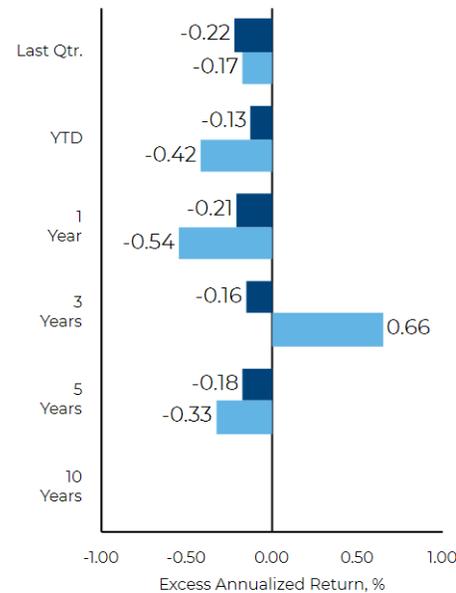
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Vanguard Total Intl Bd Idx Admiral™	-0.24	-0.18	1.01	1.00	98.16	101.23	-0.74
Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)	-0.20	0.00	1.00	1.00	100.00	100.00	-
Global Bond-USD Hedged Median	-0.24	-0.27	0.99	0.81	89.79	96.49	-0.17

Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



INVESTMENT PROFILE

Ticker	VTABX
Portfolio Manager	Barrickman,J/Talone,T
Portfolio Assets	\$24,120 Million
PM Tenure	9 Years 4 Months
Net Expense(%)	0.11 %
Fund Inception	2013

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	4.96 %
Number of Holdings	6843
Turnover	25.00 %
Avg. Effective Duration	7.70 Years
SEC Yield	2.47 %

▲ Vanguard Total Intl Bd Idx Admiral™    ▲ Global Bond-USD Hedged Median  
 ▲ Blmbg. Global Agg ex-USD Flt Adj RIC Cpd (H)

■ Vanguard Total Intl Bd Idx Admiral™    ■ Global Bond-USD Hedged Median

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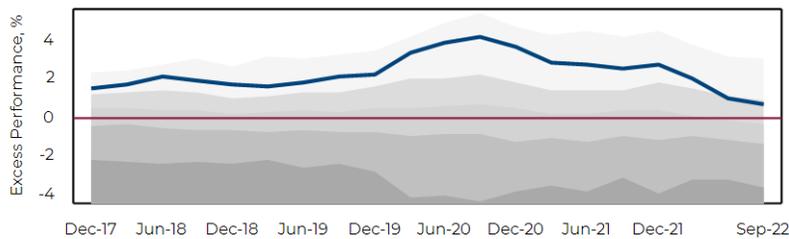
TRAILING AND CALENDAR RETURNS

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
Vanguard Balanced Index Adm	-4.49	-20.78	-16.42	3.53	5.31	7.28	14.22	16.40	21.79	-2.86	13.89
Allocation--50% to 70% Equity	-4.44	-18.54	-14.69	2.80	3.66	5.54	13.91	11.44	18.89	-5.86	13.22
Allocation--50% to 70% Equity Median	-5.11	-20.16	-16.16	2.43	3.60	5.96	13.52	12.35	19.48	-5.91	14.06
Rank (%)	30	67	55	29	16	17	40	15	19	11	54
Population	691	691	691	661	631	565	708	711	744	780	795

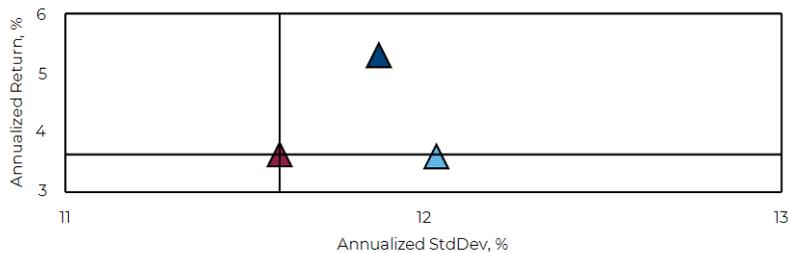
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Vanguard Balanced Index Adm	0.40	1.60	1.01	0.97	106.99	97.20	0.80
Allocation--50% to 70% Equity	0.27	0.00	1.00	1.00	100.00	100.00	-
Allocation--50% to 70% Equity Median	0.26	-0.08	1.02	0.97	101.20	101.80	0.03

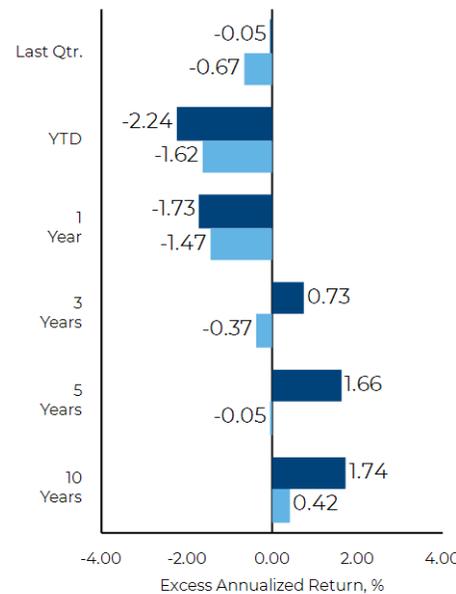
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ Vanguard Balanced Index Adm  
▲ Allocation--50% to 70% Equity  
▲ Allocation--50% to 70% Equity Median



■ Vanguard Balanced Index Adm  
■ Allocation--50% to 70% Equity Median

INVESTMENT PROFILE

Ticker	VBIAX
Portfolio Manager	Team Managed
Portfolio Assets	\$36,245 Million
PM Tenure	9 Years 7 Months
Net Expense(%)	0.07 %
Fund Inception	2000

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	13.98 %
Number of Holdings	15277
Turnover	35.00 %
Avg. Market Cap	\$106,700 Million
Dividend Yield	1.73 %
Avg. Effective Duration	6.67 Years
SEC Yield	2.58 %

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# TIAA CREF LIFECYCLE

## Investor Assumptions/Glidepath Methodology

Glidepath Management	• 30 years after retirement (assumed at age 65)
Assumed Investor Savings Rate:	• 10%
Assumed Investor Income Growth Rate	• Equal to inflation
Income Replacement	• A range of percentages was used to design the glidepath
Assumed Accumulated Savings at Retirement	• No such assumption was made
Life Expectancy	• Determined according to RP-2000 mortality tables
Asset Allocation Flexibility	• Up to 10% from targets
Other Assumptions	• Made conservative capital market assumption that equity risk premiums will be lower going forward

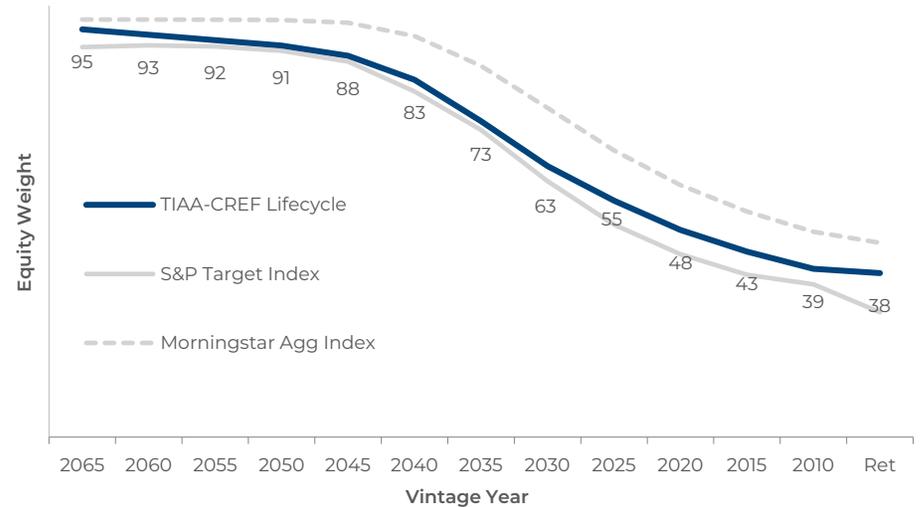
The TIAA CREF Lifecycle portfolios are constructed to achieve favorable retirement outcomes over time horizons and circumstances that broadly represent the investors of the funds. Reflecting this goal, TIAA models their portfolios to consider a large range of assumptions and focus not just on average or expected investment returns, but on the distribution of anticipated results at different points in time over the course of one's investment time horizon. This is why the Lifecycle Fund's glidepath is constructed with the objective of maximizing risk-adjusted outcomes at and in retirement for investors, based on their target retirement date.

## Investment Profile

% Open Architecture:	0%	Active/Passive:	Active
Inception Date:	10-15-2004	% Active:	100%
Net Assets \$MM:	\$32,265	Manager Tenure:	16.58 Yrs (longest)
Manager Name:	Erickson, Cunniff, Sedmak	Expense Range:	0.37%-0.70%
Avg # of Holdings:	20	Investment Structure:	Mutual Fund

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## Target Asset Allocation Glidepath per Vintage Year



## Dedicated Asset Class Granularity/Diversification

Emerging Market Equities	Yes
International/Global Debt	Yes
Inflation-Protected Securities	Yes
High Yield Fixed Income	Yes
Real Estate	Yes
Commodities	No

The equity exposure within TIAA CREF Lifecycle target date funds is well diversified between domestic and international equities. TIAA maintains a 70/30 split between domestic and international, with the 30% in international also encompassing an exposure to emerging market equities. As a participant gets closer to retirement, the mix of fixed income securities gradually transitions from more aggressive funds to a more conservative mix.



# TIAA CREF LIFECYCLE

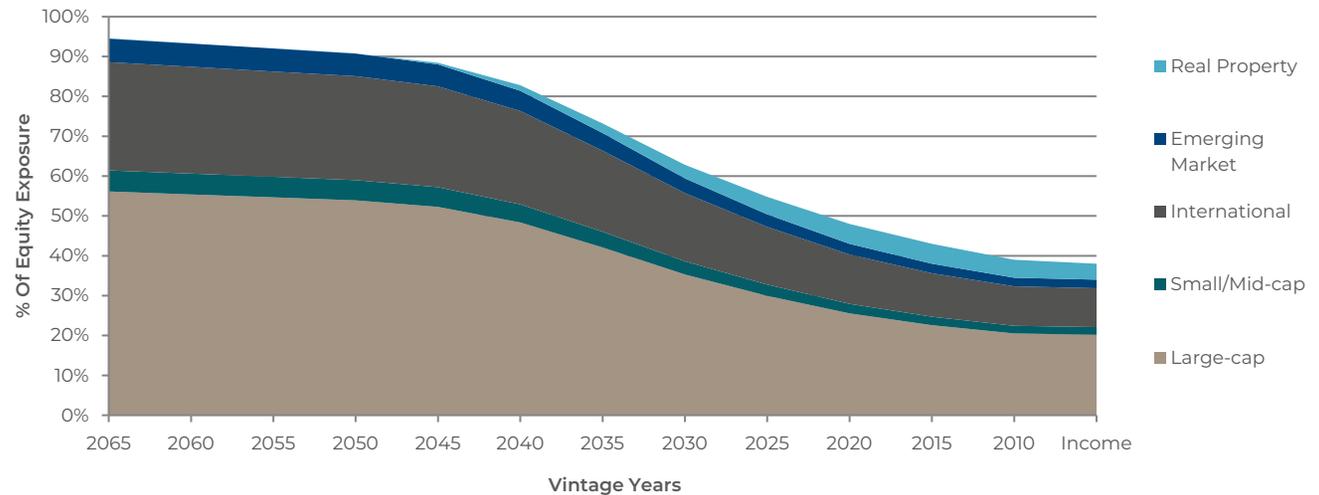
## Material Changes to the Series

- 2012:
- Introduced the tactical management program
- 2013:
- Increased allocation to international equity from 25% to 30%
- 2015:
- Added emerging markets debt
- 2016:
- Increased equity from 90% to 95% in longer dated vintage years
- 2016:
- Added a Direct Real Estate Fund
- 2017:
- Addition of International Bond, Small/Mid Cap Equity and International Small Cap Equity to strategic glidepath
- 2019:
- End of glidepath extended to 30 years with an allocation of 80% fixed income, 20% equity. The Nuveen Dividend Value fund was also added
- 2021:
- Moved the U.S./non-U.S. equity split within the series from 70% U.S./30% non-U.S. to 65% U.S./35% non-U.S.
- 2022:
- Increased equity allocation in the glidepath section that is 20 – 15 years away from retirement. The equity allocation was increased by 1.8% in the 2045 vintage, by 4% in the 2040 vintage, and by 2.2% in the 2035 vintage. To fund these increases, the vintages' fixed income allocations were reduced.

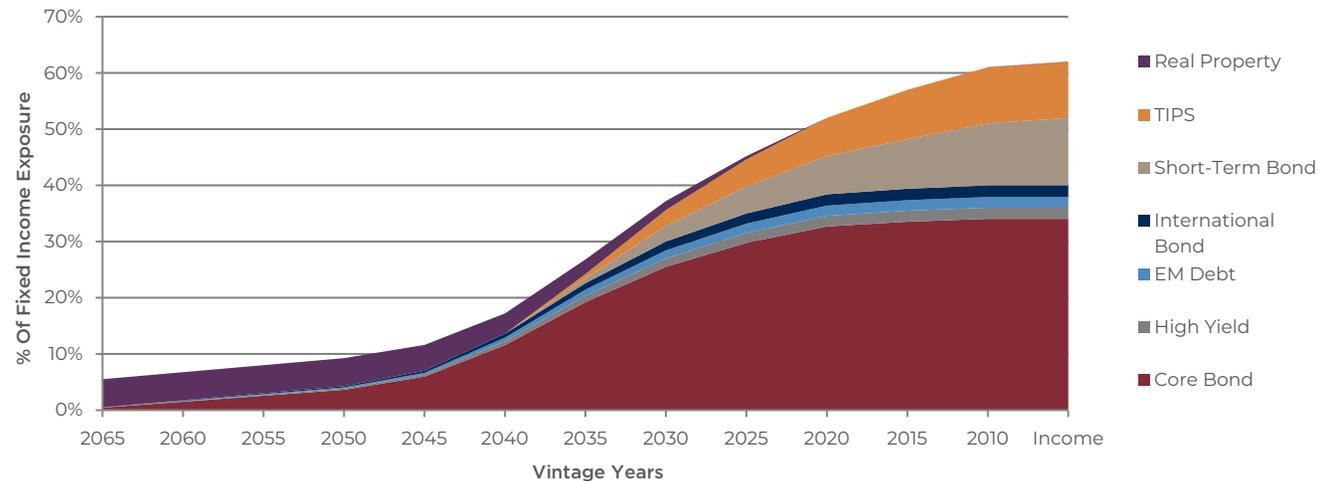
\*All information provided by the asset manager, as of 12/31/21. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

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## Equity Exposure



## Fixed Income Exposure



# TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
TIAA-CREF Lifecycle 2010 Institutional	1.11	0.10	112.70	109.93	1.10	0.21	110.05	109.62
S&P Target Date 2010 Index	1.00	0.06	100.00	100.00	1.00	0.19	100.00	100.00
Target-Date 2000-2010 Median	1.00	0.02	102.51	101.97	1.00	0.16	99.75	101.62
TIAA-CREF Lifecycle 2015 Institutional	1.08	0.13	109.78	107.60	1.08	0.22	107.24	106.93
S&P Target Date 2015 Index	1.00	0.09	100.00	100.00	1.00	0.21	100.00	100.00
Target-Date 2015 Median	1.03	0.09	103.39	106.12	1.02	0.19	100.88	103.59
TIAA-CREF Lifecycle 2020 Institutional	1.07	0.14	109.52	105.88	1.07	0.23	106.96	105.62
S&P Target Date 2020 Index	1.00	0.09	100.00	100.00	1.00	0.20	100.00	100.00
Target-Date 2020 Median	1.03	0.11	104.91	103.78	1.03	0.21	102.98	102.17
TIAA-CREF Lifecycle 2025 Institutional	1.06	0.17	106.49	105.85	1.06	0.24	104.75	105.33
S&P Target Date 2025 Index	1.00	0.16	100.00	100.00	1.00	0.24	100.00	100.00
Target-Date 2025 Median	1.02	0.13	100.86	103.67	1.01	0.21	99.05	102.39
TIAA-CREF Lifecycle 2030 Institutional	1.03	0.20	103.72	103.28	1.03	0.25	102.27	102.84
S&P Target Date 2030 Index	1.00	0.19	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2030 Median	1.01	0.17	100.53	102.73	1.01	0.24	99.96	101.57
TIAA-CREF Lifecycle 2035 Institutional	1.00	0.21	100.56	100.66	1.00	0.25	100.07	100.76
S&P Target Date 2035 Index	1.00	0.21	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2035 Median	0.99	0.20	99.67	101.12	1.00	0.25	98.45	100.14
TIAA-CREF Lifecycle 2040 Institutional	1.00	0.24	101.67	101.14	1.02	0.26	101.60	102.24
S&P Target Date 2040 Index	1.00	0.23	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2040 Median	1.01	0.22	100.92	101.83	1.01	0.26	99.51	100.83
TIAA-CREF Lifecycle 2045 Institutional	1.03	0.26	105.98	104.47	1.05	0.27	105.54	106.00
S&P Target Date 2045 Index	1.00	0.24	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2045 Median	1.02	0.23	102.21	102.75	1.02	0.27	101.22	101.82
TIAA-CREF Lifecycle 2050 Institutional	1.03	0.26	105.73	104.71	1.05	0.27	105.06	105.87
S&P Target Date 2050 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2050 Median	1.01	0.24	101.64	102.08	1.01	0.27	100.24	100.66

For use with CAPTRUST institutional clients only. Historical performance summarized here does not guarantee future results. Data has been obtained from Morningstar and is not guaranteed to be accurate or complete. This Target Date Series overview includes a Target Asset Allocation Glidepath per Vintage Year illustration, however only select vintage years have been included for comparison in the Target Date Analysis. Investing always involves risk. For a prospectus with a complete description of the risks associated with investing in a specific target date fund in this series, please call CAPTRUST at (800)216-0645. For a detailed description of the risks associated with investing by asset class, please visit <https://www.captrust.com/important-disclosures/>



# TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
TIAA-CREF Lifecycle 2055 Institutional	1.03	0.26	105.78	104.73	1.05	0.27	105.07	105.89
S&P Target Date 2055 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2055 Median	1.01	0.24	101.93	102.09	1.01	0.27	100.92	101.28
TIAA-CREF Lifecycle 2060 Institutional	1.04	0.27	106.81	105.47	1.05	0.27	105.78	106.64
S&P Target Date 2060+ Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2060 Median	1.01	0.24	101.22	101.60	1.00	0.27	100.13	100.42
TIAA-CREF Lifecycle 2065 Institutional	-	-	-	-	-	-	-	-
S&P Target Date 2065+ Index	1.00	0.25	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2065+ Median	1.00	0.25	101.57	102.04	1.02	0.28	101.39	101.85
TIAA-CREF Lifecycle Retire Income Instl	1.23	0.09	129.80	120.09	1.22	0.20	123.78	120.91
S&P Target Date Retirement Income Index	1.00	-0.03	100.00	100.00	1.00	0.14	100.00	100.00
Target-Date Retirement Median	0.82	-0.11	79.49	84.42	0.80	0.08	78.95	79.88

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# PLAN INVESTMENT REVIEW | TARGET DATE REVIEW

## TIAA-CREF LIFECYCLE

MEETING DATE: OCTOBER 19, 2022

### FOCUS AREA

#### Organizational Update

##### COMMENTARY

There were no changes to the target date portfolio management team during the quarter.

#### Investments Update

##### COMMENTARY

Nuveen recently changed its glidepath for the target date suite. Nuveen has increased the equity allocation in the glidepath section that is 20 – 15 years away from retirement. This change is a result of Nuveen's human capital model research. Previously, the glidepath began rolling down 8% every 5 years starting at age 40 until age 65. However, Nuveen finds that human capital does not change that significantly when a participant turns 40. The glidepath has been adjusted to better align with the gradual decline of participants' human capital from age 40 to 50. To reflect this, the glidepath has been smoothed out to decrease equity by 4% every 5 years at 40 and 45. There were no changes to the near retirement vintages or the beginning of the glidepath.

The change was implemented on October 1, 2022, and impacts three vintages, the 2045, 2040, and 2035 funds. The equity allocation was increased by 1.8% in the 2045 vintage, by 4% in the 2040 vintage, and by 2.2% in the 2035 vintage. To fund these increases, the vintages' fixed income allocations were reduced. There have been no changes to the sub-asset class allocations.

TIAA-CREF Emerging Markets Equity remains on the watch list since being added in the fourth quarter 2021. The strategy had previously been a strong performer; however, it had its worst quarter ever in the third quarter of 2021 resulting from China's crackdown on large technology companies. The portfolio manager added to the strategy's overweight to China, and this raised a red flag for the target date team. The portfolio has since re-allocated its China overweight and continues to work through stages of correction. Emerging Markets Equity has seen improved performance more recently, but the team continues to monitor the fund before taking it off watch.

Nuveen International Growth also remains on watch. The strategy was added to the list in the second quarter of 2021. It has underperformed its peers due to poor security selection. As a result, Nuveen is merging International Growth into TIAA-CREF International Opportunities. TIAA-CREF International Opportunities is already being used in the Lifecycle series, so we expect Nuveen to add another manager to the international equity line-up in the coming months.



### FOCUS AREA

#### Performance and Positioning Update

##### COMMENTARY

#### **TIAA-CREF Lifecycle Performance Update:**

TIAA-CREF Lifecycle outperformed its peers and the benchmark in the third quarter.

- Lifecycle's asset allocation and manager selection were positive contributors to performance during the quarter.
- The series' allocation to TIAA Real Property was the largest contributor to the portfolio during the quarter with a return of 1.4%, outpacing both equities and fixed income.
- Within equities, the portfolio's overweight to U.S. large-cap and underweight to non-U.S. equities added to performance relative to the benchmark and peers as international markets underperformed U.S. markets during the quarter.
- The series' underweight to short-term fixed income and cash was the largest asset allocation detractor for the quarter. An underweight to core fixed income in further-dated vintages also weighed on relative performance.
- Lifecycle's active managers positively impacted performance across equity and fixed income.
- TIAA-CREF International Opportunities, Nuveen Dividend Value, and TIAA-CREF Core Bond each outperformed their benchmarks and were the leading contributors for Lifecycle in the third quarter.
- The leading detractors for Lifecycle were Nuveen Growth Opportunities, TIAA-CREF Large Cap Growth, and TIAA-CREF Quant International Small Cap Equity, which struggled in the third quarter as a result of poor security selection.

#### **Positioning Update:**

- TIAA-CREF continued to maintain its overweight position to emerging markets debt relative to core fixed income during the third quarter.
- The portfolio management team continued to maintain the 0.50% overweight to large-cap value at the expense of large-cap growth that they initiated in June.
- The team initiated a 0.50% overweight to high yield at the expense of large-cap core in July given the sub-asset class's attractive yields and valuations.
- In July, the team also initiated a 0.50% overweight to U.S. small/mid-cap equities from the large-cap core allocation. The team views the small-cap space as oversold in comparison to large-cap stocks.

*Note: Benchmark relative performance refers to fund performance compared to the S&P Target Date Indexes. This quarter, we have observed consistent underperformance by target date managers compared to the S&P Target Date Indexes. This appears to be due to a change in the Indexes' methodology, which has resulted in the Indexes being under allocated to equities across the glidepath compared to the universe.*

# PLAN INVESTMENT REVIEW | TARGET DATE REVIEW

## TIAA-CREF LIFECYCLE

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>TIAA-CREF Lifecycle 2010 Fund</b>	<b>-3.86</b>	<b>-16.21</b>	<b>-14.45</b>	<b>1.07</b>	<b>2.54</b>	<b>4.70</b>
S&P Target Date 2010 Index	-4.07	-15.66	-13.60	0.71	2.30	3.99
TIAA-CREF Lifecycle 2010 Custom Benchmark	-4.78	-12.82	-14.87	1.17	2.85	4.63
<b>TIAA-CREF Lifecycle 2015 Fund</b>	<b>-4.00</b>	<b>-16.91</b>	<b>-14.93</b>	<b>1.38</b>	<b>2.75</b>	<b>5.13</b>
S&P Target Date 2015 Index	-4.23	-16.50	-13.95	1.05	2.57	4.65
TIAA-CREF Lifecycle 2015 Custom Benchmark	-4.98	-13.67	-15.55	1.41	3.08	5.07
<b>TIAA-CREF Lifecycle 2020 Fund</b>	<b>-4.22</b>	<b>-17.81</b>	<b>-15.66</b>	<b>1.54</b>	<b>2.90</b>	<b>5.62</b>
S&P Target Date 2020 Index	-4.59	-17.57	-14.75	0.98	2.64	5.11
TIAA-CREF Lifecycle 2020 Custom Benchmark	-5.13	-14.44	-16.16	1.65	3.32	5.61
<b>TIAA-CREF Lifecycle 2025 Fund</b>	<b>-4.40</b>	<b>-19.09</b>	<b>-16.62</b>	<b>1.98</b>	<b>3.24</b>	<b>6.20</b>
S&P Target Date 2025 Index	-4.57	-18.31	-15.16	1.82	3.24	5.80
TIAA-CREF Lifecycle 2025 Custom Benchmark	-5.32	-15.43	-16.87	2.14	3.72	6.25
<b>TIAA-CREF Lifecycle 2030 Fund</b>	<b>-4.70</b>	<b>-20.50</b>	<b>-17.66</b>	<b>2.40</b>	<b>3.52</b>	<b>6.73</b>
S&P Target Date 2030 Index	-4.98	-19.79	-16.23	2.26	3.58	6.34
TIAA-CREF Lifecycle 2030 Custom Benchmark	-5.53	-16.56	-17.67	2.60	4.10	6.87
<b>TIAA-CREF Lifecycle 2035 Fund</b>	<b>-4.97</b>	<b>-21.91</b>	<b>-18.81</b>	<b>2.74</b>	<b>3.79</b>	<b>7.23</b>
S&P Target Date 2035 Index	-5.50	-21.51	-17.42	2.75	3.92	6.83
TIAA-CREF Lifecycle 2035 Custom Benchmark	-5.74	-17.67	-18.48	3.04	4.46	7.45
<b>TIAA-CREF Lifecycle 2040 Fund</b>	<b>-5.22</b>	<b>-23.08</b>	<b>-19.57</b>	<b>3.25</b>	<b>4.10</b>	<b>7.64</b>
S&P Target Date 2040 Index	-5.83	-22.65	-18.21	3.08	4.16	7.18
TIAA-CREF Lifecycle 2040 Custom Benchmark	-5.91	-18.68	-19.09	3.58	4.85	7.93
<b>TIAA-CREF Lifecycle 2045 Fund</b>	<b>-5.42</b>	<b>-24.10</b>	<b>-20.32</b>	<b>3.76</b>	<b>4.37</b>	<b>7.84</b>
S&P Target Date 2045 Index	-6.01	-23.33	-18.70	3.25	4.27	7.40
TIAA-CREF Lifecycle 2045 Custom Benchmark	-6.05	-19.62	-19.59	4.16	5.21	8.20
<b>TIAA-CREF Lifecycle 2050 Fund</b>	<b>-5.57</b>	<b>-24.60</b>	<b>-20.67</b>	<b>3.79</b>	<b>4.40</b>	<b>7.88</b>
S&P Target Date 2050 Index	-6.07	-23.62	-18.88	3.37	4.35	7.61
TIAA-CREF Lifecycle 2050 Custom Benchmark	-6.13	-20.07	-19.88	4.22	5.26	8.26
<b>TIAA-CREF Lifecycle 2055 Fund</b>	<b>-5.60</b>	<b>-24.71</b>	<b>-20.79</b>	<b>3.85</b>	<b>4.44</b>	<b>7.93</b>
S&P Target Date 2055 Index	-6.07	-23.69	-18.94	3.42	4.39	7.74
TIAA-CREF Lifecycle 2055 Custom Benchmark	-6.15	-20.22	-19.96	4.31	5.32	8.33
<b>TIAA-CREF Lifecycle 2060 Fund</b>	<b>-5.55</b>	<b>-24.78</b>	<b>-20.79</b>	<b>3.96</b>	<b>4.48</b>	<b>-</b>
S&P Target Date 2060 Index	-6.09	-23.73	-18.99	3.43	4.44	7.78
TIAA-CREF Lifecycle 2060 Custom Benchmark	-6.17	-20.37	-20.04	4.39	5.38	-
<b>TIAA-CREF Lifecycle 2065 Fund</b>	<b>-5.58</b>	<b>-24.70</b>	<b>-20.65</b>	<b>-</b>	<b>-</b>	<b>-</b>
S&P Target Date 2065+ Index	-6.04	-23.61	-18.84	3.52	4.50	-
TIAA-CREF Lifecycle 2065 Custom Benchmark	-6.20	-20.51	-20.12	-	-	-

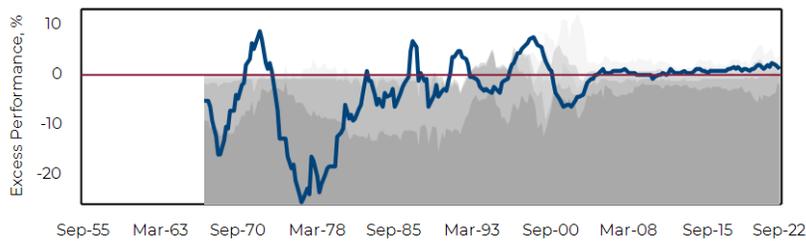
TRAILING AND CALENDAR RETURNS

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
CREF Stock R1	-6.60	-26.10	-21.53	3.94	4.55	8.07	18.67	17.64	27.13	-9.86	23.01
Allocation--85%+ Equity	-5.63	-25.01	-21.16	2.49	3.49	6.95	18.06	13.25	24.45	-9.24	19.73
Allocation--85%+ Equity Median	-6.05	-25.47	-20.89	3.60	4.25	7.54	18.36	16.19	25.65	-9.38	21.05
Rank (%)	80	65	59	35	37	29	45	44	26	58	24
Population	179	179	179	174	171	154	188	185	196	219	236

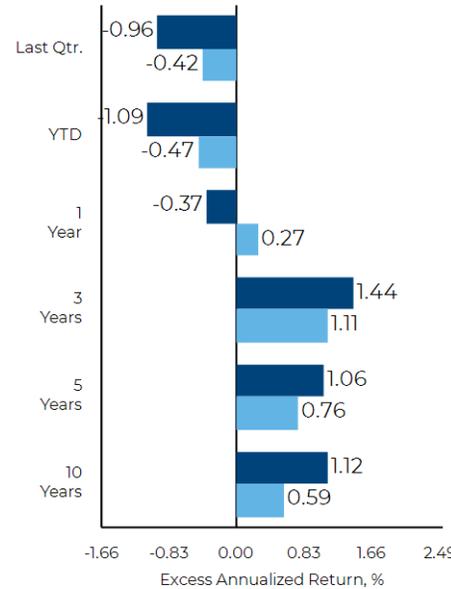
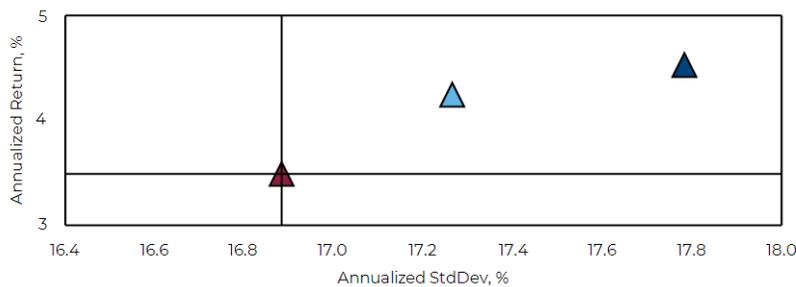
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
CREF Stock R1	0.28	0.93	1.05	0.99	108.75	105.02	0.73
Allocation--85%+ Equity	0.22	0.00	1.00	1.00	100.00	100.00	-
Allocation--85%+ Equity Median	0.26	0.72	1.01	0.98	103.01	100.92	0.36

Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



INVESTMENT PROFILE

CUSIP	194408803
Portfolio Manager	Chalupnik,D/Erickson,H/Malik,S
Portfolio Assets	\$11,342 Million
PM Tenure	26 Years 6 Months
Net Expense(%)	0.46 %
Fund Inception	1952

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	15.28 %
Number of Holdings	9868
Turnover	50.00 %
Avg. Market Cap	\$67,786 Million
Dividend Yield	2.43 %
Avg. Effective Duration	-
SEC Yield	-

▲ CREF Stock R1    ▲ Allocation--85%+ Equity    ▲ Allocation--85%+ Equity Median    ▲ Allocation--85%+ Equity Median

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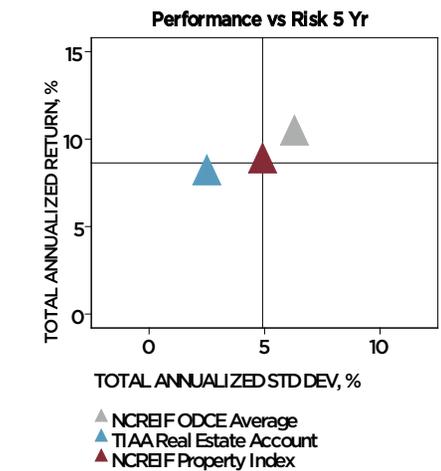
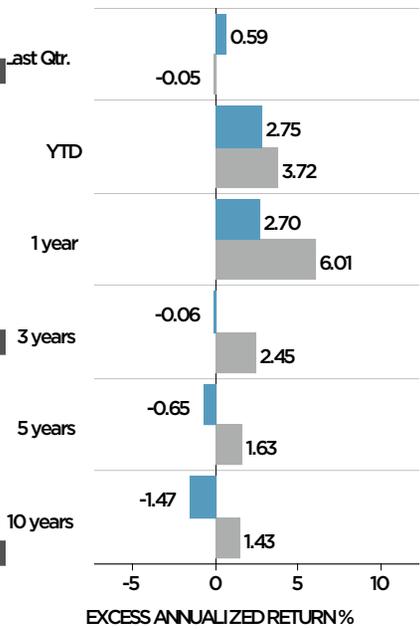
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# TIAA REAL ESTATE ACCOUNT

Period Ending 9.30.22 | Q3 22

	TIAA Real Estate Account	Peer Group Rank	NCREIF Property Index	NCREIF ODCE	# of Funds
<b>KEY MEASURES / 5 YEAR</b>					
Standard Deviation	2.46	NA	4.90	6.32	1
Sharpe Ratio	2.78	NA	1.52	1.44	1
Alpha	5.08	NA	0.00	-0.44	1
Beta	0.23	NA	1.00	1.28	1
R-Squared	20.13	NA	100.00	98.28	1
Up Mkt Capture	90.63	NA	100.00	119.90	1
Down Mkt Capture	15.98	NA	100.00	157.94	1
Information Ratio	-0.14	NA	NA	0.98	1
<b>TRAILING RETURNS</b>					
Last Qtr.	1.16	NA	0.57	0.52	1
YTD	12.11	NA	9.35	13.08	1
1 Year	18.78	NA	16.08	22.09	1
3 Years	9.86	NA	9.92	12.37	1
5 Years	7.97	NA	8.62	10.24	1
10 Years	8.01	NA	9.48	10.91	1
<b>CALENDAR RETURNS</b>					
2021	17.87	NA	17.70	22.18	1
2020	-0.84	NA	1.61	1.18	1
2019	5.51	NA	6.42	5.34	1
2018	4.79	NA	6.71	8.35	1
2017	4.37	NA	6.98	7.61	1



**INVESTMENT PROFILE**

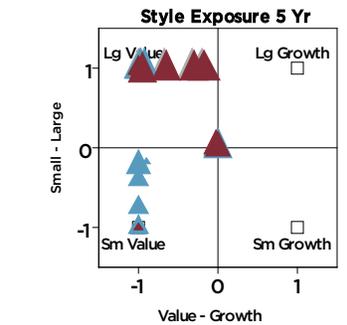
ID	FVUSA04B8Y
CUSIP	878094200
Net Assets	\$31,571,190,878.00
Manager Name	Randy Giraldo
Manager Tenure	5.1 Years
Prospectus Exp Ratio	0.86%
Tot Ret Annlzd Since Incept	6.66%
Inception Date	10/02/1995
Phone Number	877-518-9161
Sub Advisor	N/A

**HOLDINGS OVERVIEW**

Number of Holdings	389
% Assets in Top 10 Holdings	18.95%
Mkt Cap \$MM	N/A
Turnover Ratio	7.10%

**TOP HOLDINGS**

Ontario Industrial Portfoli	2.70%
1001 Pennsylvania Avenue	2.62%
Simpson Housing Portfoli	2.23%
The Florida Mall	1.98%
Fashion Show	1.80%



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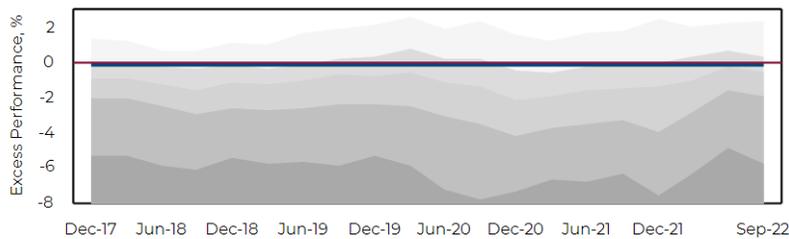
TRAILING AND CALENDAR RETURNS

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
Vanguard Total Stock Mkt Idx Adm	-4.46	-24.89	-18.01	7.59	8.55	11.33	25.71	20.99	30.80	-5.17	21.17
CRSP U.S. Total Market TR Index	-4.44	-24.86	-17.98	7.60	8.56	11.35	25.72	20.99	30.84	-5.17	21.19
Large Blend Median	-4.97	-23.97	-16.19	7.12	8.06	10.62	26.63	16.98	29.75	-5.79	21.12
Rank (%)	27	70	73	38	36	26	60	18	38	40	48
Population	1,228	1,228	1,222	1,173	1,137	1,010	1,227	1,259	1,304	1,337	1,397

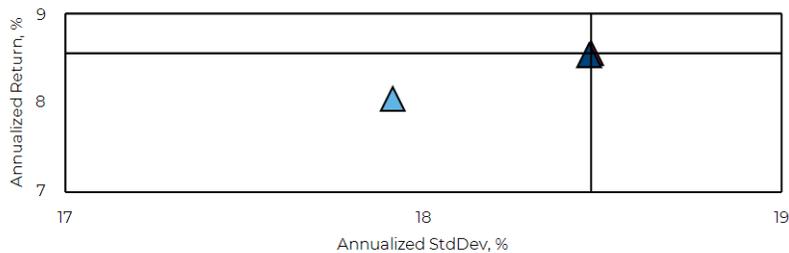
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Vanguard Total Stock Mkt Idx Adm	0.47	-0.01	1.00	1.00	99.95	100.01	-0.64
CRSP U.S. Total Market TR Index	0.48	0.00	1.00	1.00	100.00	100.00	-
Large Blend Median	0.46	-0.10	0.96	0.97	96.71	98.10	-0.18

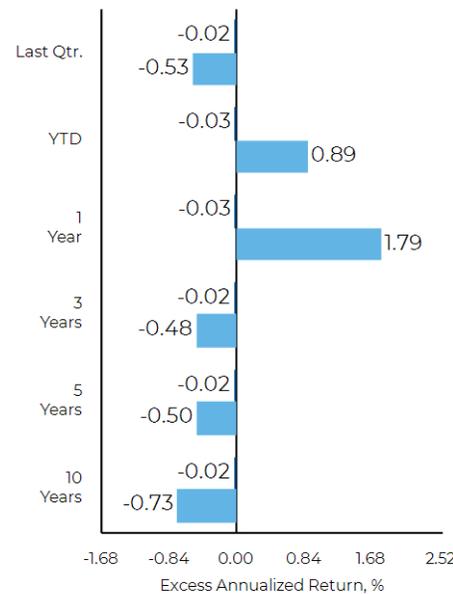
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ Vanguard Total Stock Mkt Idx Adm ▲ Large Blend Median  
▲ CRSP U.S. Total Market TR Index



INVESTMENT PROFILE

Ticker	VTSAX
Portfolio Manager	Team Managed
Portfolio Assets	\$257,611 Million
PM Tenure	27 Years 9 Months
Net Expense(%)	0.04 %
Fund Inception	2000

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	23.27 %
Number of Holdings	4059
Turnover	4.00 %
Avg. Market Cap	\$106,735 Million
Dividend Yield	1.73 %

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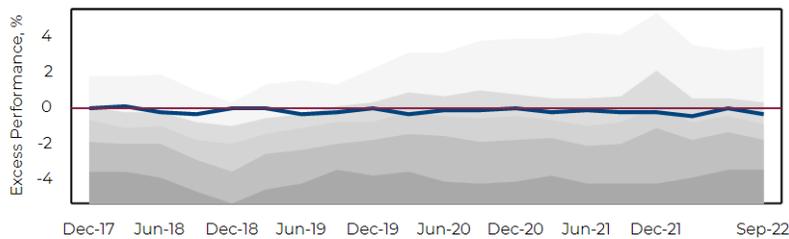
TRAILING AND CALENDAR RETURNS

	Last Quarter	YTD	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
Vanguard Total Intl Stock Index Admiral	-10.51	-26.76	-25.21	-1.18	-0.70	3.31	8.62	11.28	21.51	-14.43	27.55
FTSE Global ex USA All Cap Index (Net)	-9.66	-26.49	-25.20	-0.93	-0.50	3.41	8.84	11.24	21.80	-14.61	27.41
Foreign Large Blend Median	-10.41	-28.02	-26.10	-1.77	-1.08	3.30	10.07	9.53	21.99	-15.17	25.46
Rank (%)	54	27	30	36	37	50	65	40	60	40	27
Population	684	684	682	661	618	529	713	749	757	752	798

KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Vanguard Total Intl Stock Index Admiral	-0.03	-0.18	1.00	0.99	99.83	100.66	-0.10
FTSE Global ex USA All Cap Index (Net)	-0.02	0.00	1.00	1.00	100.00	100.00	-
Foreign Large Blend Median	-0.05	-0.54	0.99	0.95	99.16	101.98	-0.15

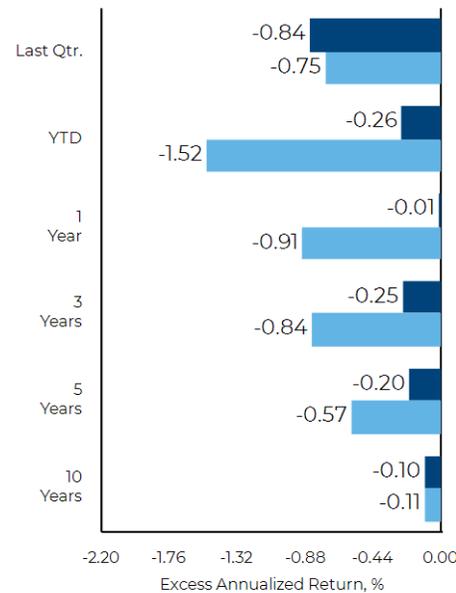
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ Vanguard Total Intl Stock Index Admiral ▲ Foreign Large Blend Median  
 ▲ FTSE Global ex USA All Cap Index (Net)



■ Vanguard Total Intl Stock Index Admiral  
 ■ Foreign Large Blend Median

INVESTMENT PROFILE

Ticker	VTIAX
Portfolio Manager	Franquin,C/Perre,M
Portfolio Assets	\$57,743 Million
PM Tenure	14 Years 1 Month
Net Expense(%)	0.11 %
Fund Inception	2010

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	8.95 %
Number of Holdings	7929
Turnover	8.00 %
Avg. Market Cap	\$24,541 Million
Dividend Yield	4.02 %

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<https://www.captrust.com/important-disclosures/>



APPENDIX	
Your CAPTRUST Service Team.....	
Glossary of Terms.....	
Evaluation Methodology.....	



TEAM MEMBERS	RESPONSIBILITIES
<p><b>Jeremy Tollas, CPFA ,CIMA®</b>                      Vice President   Financial Advisor                      Jeremy.Tollas@captrust.com</p>	<p><b>Account Role: Lead Consultant</b>                      Our Lead Consultants serve as the primary relationship manager for the fiduciaries of corporate retirement plans. They oversee and ensure quality delivery of comprehensive investment advisory services. They are available to assist with any aspect of clients' accounts, or put them in contact with the appropriate resources here at CAPTRUST.</p>
<p><b>Lisa Mason</b>                      Senior Client Management Associate   Institutional Client Service                      Lisa.Mason@captrust.com</p>	<p><b>Account Role: Client Management Consultant</b>                      The Client Management Consultants are focused on overall client management from initial conversion of new plans to CAPTRUST throughout their 'life' at CAPTRUST. As the primary contact for day-to-day client service needs, the main goal of the Client Management Consultant is to deliver exceptional proactive client service. On a daily basis, the Client Management Consultants are available to assist employees with questions related to plan enrollment and education, available investment options, and other areas.</p>
<p><b>Max M. Gates</b>                      Client Management Associate   Institutional Client Service                      Max.Gates@captrust.com</p>	<p><b>Account Role: Client Management Consultant</b>                      The Client Management Consultants are focused on overall client management from initial conversion of new plans to CAPTRUST throughout their 'life' at CAPTRUST. As the primary contact for day-to-day client service needs, the main goal of the Client Management Consultant is to deliver exceptional proactive client service. On a daily basis, the Client Management Consultants are available to assist employees with questions related to plan enrollment and education, available investment options, and other areas.</p>

**ALPHA**

Alpha measures a manager's rate of return in excess of that which can be explained by its systematic risk, or Beta. It is a result of regressing a manager's returns against those of a benchmark index. A positive alpha implies that a manager has added value relative to its benchmark on a risk-adjusted basis.

**BATTING AVERAGE**

Batting Average, an indicator of consistency, measures the percentage of time an active manager outperformed the benchmark.

**BETA**

Beta measures a manager's sensitivity to systematic, or market risk. Beta is a result of the analysis regressing a manager's returns against those of a benchmark Index. A manager with a Beta of 1 should move perfectly with a benchmark. A Beta of less than 1 implies that a manager's returns are less volatile than the market's (i.e., selected benchmarks). A Beta of greater than 1 implies that a manager exhibits greater volatility than the market (i.e., selected benchmark).

**CAPTURE RATIO**

Up Market Capture is the average return of a manager relative to a benchmark index using only periods where the benchmark return was positive. Down Market Capture is the average return of a manager relative to a benchmark index using only periods where the benchmark return was negative. An Up Market Capture of greater than 100% and a Down Market Capture of less than 100% is considered desirable.

**INFORMATION RATIO**

The Information Ratio measures a manager's excess return over the passive index divided by the volatility of that excess return, or Tracking Error. To obtain a higher Information Ratio, which is preferable, a manager must demonstrate the ability to generate returns above its benchmark while avoiding large performance swings relative to that same benchmark.

**PERCENTILE RANK**

Percentile Rankings are based on a manager's performance relative to all other available funds in its universe. Percentiles range from 1, being the best, to 100 being the worst. A ranking in the 50th percentile or above demonstrates that the manager has performed better on a relative basis than at least 50% of its peers.

**RISK-ADJUSTED PERFORMANCE**

Risk-adjusted Performance, or RAP, measures the level of return that an investment option would generate given a level of risk equivalent to the benchmark index.

**R-SQUARED**

R-squared measures the portion of a manager's movements that are explained by movements in a benchmark index. R-squared values range from 0 to 100. An R-squared of 100 means that all movements of a manager are completely explained by movements in the index. This measurement is identified as the coefficient of determination from a regression equation. A high R-squared value supports the validity of the Alpha and Beta measures, and it can be used as a measure of style consistency.

**SHARPE RATIO**

Sharpe ratio measures a manager's return per unit of risk, or standard deviation. It is the ratio of a manager's excess return above the risk-free rate divided by a manager's standard deviation. A higher Sharpe ratio implies greater manager efficiency.

**STANDARD DEVIATION**

Standard Deviation is a measure of the extent to which observations in a series vary from the arithmetic mean of the series. This measure of volatility or risk allows the estimation of a range of values for a manager's returns. The wider the range, the more uncertainty, and, therefore, the riskier a manager is assumed to be.

**TRACKING ERROR**

Tracking Error is the standard deviation of the portfolio's residual (i.e. excess) returns. The lower the tracking error, the closer the portfolio returns have been to its risk index. Aggressively managed portfolios would be expected to have higher tracking errors than portfolios with a more conservative investment style.

**TREYNOR RATIO**

The Treynor Ratio is a measure of reward per unit of risk. With Treynor, the numerator (i.e. reward) is defined as the annualized excess return of the portfolio versus the risk-free rate. The denominator (i.e. risk) is defined as the portfolio beta. The result is a measure of excess return per unit of portfolio systematic risk. As with Sharpe and Sortino, the Treynor Ratio only has value when it is used as the basis of comparison between portfolios. The higher the Treynor Ratio, the better.

	QUANTITATIVE EVALUATION ITEMS	QUALITATIVE EVALUATION ITEMS
<p>  <b>MARKED FOR REVIEW</b> </p> <p> <b>The following categories of the Investment Policy Monitor appear “Marked For Review” when:</b> </p> <p> <b>CAPTRUST’s Investment Policy Monitoring Methodology</b> </p> <p>                     The Investment Policy Monitoring Methodology document describes the systems and procedures CAPTRUST uses to monitor and evaluate the investment vehicles in your plan/account on a quarterly basis.                 </p> <p>                     Our current Investment Policy Monitoring Methodology document can be accessed through the following link:                 </p> <p> <a href="https://captrust.com/investmentmonitoring">captrust.com/investmentmonitoring</a> </p>	<p> <b>3/5 Year Risk- adjusted Performance</b> </p> <p>                     The investment option’s 3 or 5 Year Annualized Risk Adjusted Performance falls below the 50th percentile of the peer group.                 </p> <p> <b>3/5 Year Performance vs. Peers</b> </p> <p>                     The investment option’s 3 or 5 Year Annualized Peer Relative Performance falls below the 50th percentile of the peer group.                 </p> <p> <b>3/5 Year Style</b> </p> <p>                     The investment option’s 3 or 5 Year R-Squared measure falls below the absolute threshold set per asset class.                 </p> <p> <b>3/5 Year Confidence</b> </p> <p>                     The investment option’s 3 or 5 Year Confidence Rating falls below the 50<sup>th</sup> percentile of the peer group.                 </p> <p> <b>Glidepath Assessment</b> </p> <p>                     % of Equity Exposure: The combined percentage of an investment option’s equity exposure ranks in the top 20th percentile or bottom 20th percentile of the peer group.                 </p> <p>                     Regression to the Benchmark: The investment option’s sensitivity to market risk - as measured by beta relative to a Global Equity Index - is above 0.89.                 </p>	<p> <b>Fund Management</b> </p> <p>                     A significant disruption to the investment option’s management team has been discovered.                 </p> <p> <b>Fund Family</b> </p> <p>                     A significant disruption to the investment option’s parent company has been discovered.                 </p> <p> <b>Portfolio Construction</b> </p> <p>                     The investment option’s combined Portfolio Construction score is 6 or below out of a possible 15 points.                 </p> <p> <b>Underlying Investment Vehicles</b> </p> <p>                     The investment option’s combined Underlying Investment Vehicles score is 6 or below out of a possible 15 points.                 </p>

2022

Defined Contribution Plan

Industry Report

Education: Higher Education

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Please refer to the Plan Document for specific design features of your plan.

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# Summary of Findings

## Overview

The *PLANSPONSOR* 2021 Defined Contribution (DC) Survey results incorporate the responses of 2,401 plan sponsors from a broad variety of U.S. industries. Of the 2,401:

- 824 (34.3%) are 'Micro' plans (<\$5 million in DC assets)
- 909 (37.8%) are 'Small' plans (\$5 million - \$50 million)
- 314 (13.1%) are 'Mid' plans (>\$50 million - \$200 million)
- 201 (8.4%) are 'Large' plans (>\$200 million - \$1 billion)
- 153 (6.4%) are 'Mega' plans (>\$1 billion)

Within the survey, 28 respondents are from the Education: Higher Education industry. Of these Higher Education industry respondents, 5 (17.9%) are 'Micro' plans, 8 (28.6%) are 'Small' plans, 7 (25.0%) are 'Mid' plans, 2 (7.1%) are 'Large' plans, and 6 (21.4%) are 'Mega' plans.

***Note: Due to small sample size, the Large category is shown as “n/a” in this report.***

This report compares the survey responses of plan sponsors from the Higher Education industry with those of all survey respondents, which includes Higher Education industry respondents.

## Overall Rankings: Top 50% industries in key plan areas

	Participation Rate	Average Account Balance	Average Deferral Rate	Immediate Eligibility	Immediate Vesting
1	Utilities [87.9%]	Law Firms [\$230,029]	Fortune 1000 [10.0%]	Labor Unions [89.5%]	Govt: County/State/Federal [62.5%]
2	Architecture [87.3%]	Utilities [\$168,100]	Aerospace/Defense [9.3%]	Education: Higher Ed [77.8%]	Accounting [55.9%]
3	Education: K-12, Preschool [87.3%]	Fortune 1000 [\$157,246]	Technology [9.1%]	Govt: City/Municipal [77.4%]	Education: Higher Ed [55.6%]
4	Financial Services [86.6%]	Financial Services [\$155,730]	Accounting [8.9%]	Govt: County/State/Federal [76.2%]	Fortune 1000 [55.6%]
5	Banking: Commercial [86.3%]	Accounting [\$154,521]	Financial Services [8.8%]	Fortune 1000 [75.0%]	Aerospace/Defense [55.6%]
6	Holding Co's/Inv Banking [86.2%]	Insurance/Reinsurance [\$149,639]	Research/Development [8.7%]	Healthcare (not for profit) [68.8%]	Automotive: Manufacturing [50.0%]
7	Insurance/Reinsurance [86.1%]	Engineering [\$138,722]	Architecture [8.6%]	Chemicals/Mining [65.2%]	Manufacturing: Industrial [49.7%]
8	Law Firms [86.0%]	Architecture [\$137,955]	Education: K-12, Preschool [8.6%]	Aerospace/Defense [63.2%]	Restaurants/Food Service [48.0%]
9	Credit Unions [85.1%]	Education: K-12, Preschool [\$137,955]	Engineering [8.5%]	Research/Development [61.9%]	Advertising/Marketing [48.0%]
10	Engineering [85.1%]	Telecommunications [\$134,566]	Law Firms [8.3%]	Oil & Gas/Energy [61.5%]	Oil & Gas/Energy [47.1%]
11	Accounting [84.6%]	Membership [\$134,235]	Consulting [8.3%]	Technology [60.0%]	Law Firms [46.5%]
12	Media/Communications [84.2%]	Consulting [\$132,467]	Pharmaceuticals [8.3%]	Religious/Social Svcs [59.1%]	Labor Unions [44.4%]
13	Chemicals/Mining [84.1%]	Pharmaceuticals [\$131,960]	Utilities [8.1%]	Utilities [57.6%]	Utilities [41.7%]
14	Equipment [83.1%]	Research/Development [\$130,899]	Insurance/Reinsurance [8.1%]	Pharmaceuticals [55.6%]	Manufacturing: Consumer [41.7%]
15	Consulting [82.6%]	Chemicals/Mining [\$130,784]	Chemicals/Mining [8.1%]	Consulting [47.7%]	Chemicals/Mining [40.9%]
16	Wholesale [82.1%]	Labor Unions [\$126,736]	Membership [7.7%]	Insurance/Reinsurance [46.6%]	Financial Services [40.9%]
17	Telecommunications [81.9%]	Technology [\$125,978]	Real Estate [7.7%]	Engineering [45.3%]	Research/Development [40.0%]
18	Pharmaceuticals [81.0%]	Healthcare (for profit) [\$123,769]	Holding Co's/Inv Banking [7.7%]	Non-Profit Orgs [43.9%]	Holding Co's/Inv Banking [40.0%]
19	Advertising/Marketing [80.9%]	Distribution [\$121,699]	Media/Communications [7.7%]	Automotive: Manufacturing [41.2%]	Govt: City/Municipal [38.5%]
20	Automotive: Manufacturing [80.9%]	Aerospace/Defense [\$120,300]	Wholesale [7.7%]	Financial Services [41.0%]	Business Services [38.2%]
21	Healthcare (for profit) [80.6%]	Business Services [\$119,909]	Automotive: Manufacturing [7.6%]	Membership [40.9%]	Real Estate [37.8%]
22	Manufacturing: Industrial [78.6%]	Real Estate [\$119,447]	Govt: City/Municipal [7.6%]	Architecture [39.3%]	Environmental [37.5%]
23	Membership [78.6%]	Holding Co's/Inv Banking [\$118,982]	Education: Higher Ed [7.6%]	Education: K-12, Preschool [39.3%]	Architecture [36.8%]
24	Technology [78.5%]	Oil & Gas/Energy [\$117,866]	Healthcare (for profit) [7.4%]	Restaurants/Food Service [39.2%]	Education: K-12, Preschool [36.8%]

## Overall Rankings: Bottom 50% industries in key plan areas

	Participation Rate	Average Account Balance	Average Deferral Rate	Immediate Eligibility	Immediate Vesting
25	Labor Unions [78.4%]	Environmental [\$117,815]	Govt: County/State/Federal [7.4%]	Environmental [38.9%]	Media/Communications [36.8%]
26	Oil & Gas/Energy [78.3%]	Manufacturing: Industrial [\$113,842]	Equipment [7.3%]	Holding Co's/Inv Banking [37.5%]	Membership [35.0%]
27	Manufacturing: Consumer [78.1%]	Media/Communications [\$110,667]	Oil & Gas/Energy [7.2%]	Media/Communications [37.5%]	Insurance/Reinsurance [34.8%]
28	Research/Development [78.0%]	Automotive: Manufacturing [\$108,302]	Business Services [7.1%]	Advertising/Marketing [37.5%]	Hotels/Gaming [34.5%]
29	Distribution [77.4%]	Equipment [\$108,015]	Environmental [7.1%]	Accounting [35.1%]	Technology [33.3%]
30	Environmental [77.4%]	Govt: City/Municipal [\$107,090]	Manufacturing: Industrial [7.1%]	Manufacturing: Consumer [32.5%]	Transportation/Airlines [33.3%]
31	Aerospace/Defense [76.3%]	Banking: Commercial [\$106,964]	Transportation/Airlines [7.1%]	Telecommunications [30.0%]	Consulting [32.1%]
32	Building/Construction [76.3%]	Building/Construction [\$104,979]	Banking: Commercial [6.9%]	Banking: Commercial [29.2%]	Retail [31.8%]
33	Non-Profit Orgs [75.3%]	Wholesale [\$104,800]	Building/Construction [6.9%]	Healthcare (for profit) [28.0%]	Religious/Social Svcs [29.4%]
34	Fortune 1000 [74.0%]	Manufacturing: Consumer [\$98,476]	Hotels/Gaming [6.9%]	Law Firms [27.7%]	Pharmaceuticals [29.4%]
35	Govt: City/Municipal [74.0%]	Advertising/Marketing [\$97,516]	Manufacturing: Consumer [6.8%]	Transportation/Airlines [27.0%]	Engineering [29.4%]
36	Real Estate [73.5%]	Credit Unions [\$95,957]	Telecommunications [6.7%]	Business Services [26.2%]	Consumer Services [28.6%]
37	Healthcare (not for profit) [71.9%]	Govt: County/State/Federal [\$94,420]	Distribution [6.7%]	Real Estate [26.1%]	Banking: Commercial [28.1%]
38	Transportation/Airlines [69.9%]	Transportation/Airlines [\$94,182]	Credit Unions [6.3%]	Consumer Services [25.0%]	Healthcare (for profit) [27.5%]
39	Govt: County/State/Federal [68.8%]	Education: Higher Ed [\$93,110]	Non-Profit Orgs [6.3%]	Manufacturing: Industrial [24.7%]	Non-Profit Orgs [27.4%]
40	Retail [68.4%]	Non-Profit Orgs [\$92,090]	Retail [6.3%]	Equipment [23.5%]	Equipment [27.3%]
41	Auto: Dealerships & Service [67.6%]	Restaurants/Food Service [\$83,919]	Advertising/Marketing [6.2%]	Agriculture [21.4%]	Agriculture [27.3%]
42	Religious/Social Svcs [67.4%]	Auto: Dealerships & Service [\$73,433]	Healthcare (not for profit) [6.0%]	Distribution [20.5%]	Wholesale [26.1%]
43	Restaurants/Food Service [65.6%]	Retail [\$70,702]	Religious/Social Svcs [6.0%]	Wholesale [18.3%]	Building/Construction [25.2%]
44	Agriculture [65.3%]	Agriculture [\$66,260]	Labor Unions [5.7%]	Building/Construction [16.8%]	Credit Unions [21.6%]
45	Business Services [65.3%]	Healthcare (not for profit) [\$63,683]	Restaurants/Food Service [5.6%]	Retail [16.7%]	Healthcare (not for profit) [21.5%]
46	Education: Higher Ed [64.8%]	Hotels/Gaming [\$60,305]	Agriculture [5.6%]	Credit Unions [14.8%]	Distribution [20.0%]
47	Hotels/Gaming [60.6%]	Consumer Services [\$58,946]	Auto: Dealerships & Service [5.4%]	Hotels/Gaming [10.3%]	Telecommunications [16.0%]
48	Consumer Services [55.0%]	Religious/Social Svcs [\$45,702]	Consumer Services [5.3%]	Auto: Dealerships & Service [3.1%]	Auto: Dealerships & Service [6.3%]

# Plan Types and Design Features

## What type of DC plan does your organization offer?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
401(k)	91.1%	93.8%	91.9%	88.4%	83.1%	87.6%	35.7%	60.0%	37.5%	57.1%	NA	0.0%
403(b)	6.0%	4.4%	5.1%	8.0%	8.0%	13.7%	60.7%	20.0%	62.5%	42.9%	NA	66.7%
457	7.9%	3.0%	7.2%	10.6%	15.4%	22.2%	42.9%	0.0%	25.0%	28.6%	NA	50.0%
Money Purchase	1.3%	0.7%	1.1%	1.6%	2.5%	2.6%	3.6%	0.0%	0.0%	0.0%	NA	16.7%
Profit Sharing	16.8%	12.0%	16.6%	23.2%	25.9%	16.3%	7.1%	0.0%	0.0%	14.3%	NA	0.0%
ESOP / KSOP*	2.9%	1.1%	2.1%	5.5%	5.0%	7.8%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Nonqualified Deferred Compensation (NQDC)	7.8%	1.0%	3.1%	11.9%	23.4%	39.9%	7.1%	0.0%	0.0%	0.0%	NA	0.0%
SEP	0.4%	0.6%	0.3%	0.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
SIMPLE IRA	0.5%	1.0%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Other plan types	2.8%	2.4%	1.8%	3.2%	4.5%	6.5%	3.6%	0.0%	0.0%	0.0%	NA	0.0%

\*Includes both Employee Stock Ownership Plans (ESOP) and plans that combine an ESOP with a 401(k) plan (KSOP)

## Does your organization offer any of these additional workplace retirement/savings plans?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Defined Benefit Plan - Traditional	20.1%	14.1%	17.6%	19.9%	27.6%	58.3%	29.4%	0.0%	16.7%	0.0%	NA	75.0%
Defined Benefit Plan - Cash Balance	3.7%	2.2%	1.7%	2.6%	9.9%	17.6%	11.8%	0.0%	16.7%	0.0%	NA	0.0%
Defined Benefit Plan - Hybrid/Other formula	1.4%	0.0%	1.5%	2.2%	2.6%	4.6%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Equity Compensation (e.g., Stock) Plan	7.1%	1.0%	5.7%	15.6%	14.5%	21.3%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Health Savings Accounts (HSA)	47.1%	29.3%	48.8%	67.5%	67.1%	62.0%	64.7%	50.0%	66.7%	100.0%	NA	25.0%
Retiree Health Benefits	9.3%	1.2%	4.7%	15.6%	27.6%	43.5%	35.3%	0.0%	0.0%	50.0%	NA	75.0%
NONE - do not offer any of these benefit plans	38.7%	57.4%	38.6%	19.0%	17.8%	7.4%	17.6%	50.0%	33.3%	0.0%	NA	0.0%

## Which of the following do you offer employees to assist with the cost of higher/continuing education?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
529 college savings plan (via employee payroll deductions)	6.2%	1.5%	4.6%	12.7%	13.6%	14.4%	19.2%	25.0%	25.0%	0.0%	NA	16.7%
Employer contribution to sponsored 529 plan	3.0%	0.9%	2.7%	4.5%	5.0%	9.7%	11.5%	0.0%	12.5%	16.7%	NA	0.0%
Tuition reimbursement program	39.4%	15.7%	37.2%	64.2%	68.5%	74.7%	38.5%	25.0%	25.0%	50.0%	NA	50.0%
Student Loan 401(k) Match Program (i.e., based on student loans payments)	0.8%	0.6%	0.9%	1.1%	0.6%	1.4%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Other Student Loan Programs (i.e., direct contributions toward loans for recent graduates, etc.)	3.0%	0.9%	2.8%	3.5%	6.4%	9.7%	3.8%	0.0%	0.0%	16.7%	NA	0.0%
None - does not offer any of education benefits	57.1%	81.5%	59.7%	31.9%	26.1%	19.9%	46.2%	50.0%	50.0%	50.0%	NA	33.3%

## Does your plan allow for Roth contributions?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	75.9%	65.4%	77.4%	84.2%	83.8%	93.4%	85.7%	60.0%	100.0%	100.0%	NA	66.7%
No	20.9%	27.5%	20.6%	15.5%	16.2%	6.6%	10.7%	20.0%	0.0%	0.0%	NA	33.3%
Unsure / Don't Know	3.2%	7.1%	2.1%	0.3%	0.0%	0.0%	3.6%	20.0%	0.0%	0.0%	NA	0.0%

## Does your DC plan allow for in-plan Roth conversions?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	36.5%	29.7%	31.9%	41.8%	56.0%	53.5%	20.8%	0.0%	12.5%	33.3%	NA	25.0%
No	41.3%	34.5%	46.6%	41.8%	38.4%	43.7%	70.8%	100.0%	75.0%	50.0%	NA	75.0%
Unsure / Don't Know	22.2%	35.8%	21.5%	16.5%	5.7%	2.8%	8.3%	0.0%	12.5%	16.7%	NA	0.0%

## Is your DC plan a “Safe Harbor” plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	51.1%	60.7%	49.3%	45.2%	38.1%	38.4%	51.9%	60.0%	37.5%	71.4%	NA	60.0%
No	39.1%	26.9%	42.3%	44.3%	55.3%	55.0%	37.0%	40.0%	50.0%	28.6%	NA	0.0%
Unsure / Don't Know	9.8%	12.4%	8.4%	10.5%	6.6%	6.6%	11.1%	0.0%	12.5%	0.0%	NA	40.0%

# Plan Loans & Withdrawals

## Does the plan include a loan provision?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	79.7%	73.6%	79.8%	80.6%	91.0%	92.7%	75.0%	80.0%	62.5%	85.7%	NA	66.7%
No	18.7%	22.5%	19.5%	19.4%	9.0%	7.3%	21.4%	20.0%	25.0%	14.3%	NA	33.3%
Unsure / Don't know	1.6%	3.9%	0.7%	0.0%	0.0%	0.0%	3.6%	0.0%	12.5%	0.0%	NA	0.0%

## Do you charge an initiation or origination fee for new loans?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes - fee is \$100 or more	31.6%	40.2%	38.5%	20.1%	12.3%	4.5%	10.5%	25.0%	0.0%	16.7%	NA	0.0%
Yes - fee is between \$50 - \$100	28.0%	20.6%	28.0%	35.6%	40.5%	30.3%	31.6%	25.0%	40.0%	33.3%	NA	50.0%
Yes - fee is \$50	12.8%	2.8%	8.1%	18.7%	31.9%	43.2%	26.3%	25.0%	40.0%	0.0%	NA	50.0%
Yes - fee is <\$50	3.3%	1.1%	2.6%	5.9%	5.5%	9.1%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
No	14.1%	19.6%	13.7%	10.5%	5.5%	9.8%	15.8%	25.0%	20.0%	16.7%	NA	0.0%
Unsure / Don't know	10.3%	15.7%	9.2%	9.1%	4.3%	3.0%	15.8%	0.0%	0.0%	33.3%	NA	0.0%

## How many loans can a participant have open at one time?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
1	53.2%	55.7%	54.8%	52.7%	51.8%	38.8%	60.0%	100.0%	20.0%	66.7%	NA	50.0%
2	38.0%	34.4%	36.5%	40.3%	40.0%	53.2%	25.0%	0.0%	60.0%	16.7%	NA	25.0%
3	4.2%	4.6%	3.2%	4.9%	4.7%	6.5%	10.0%	0.0%	20.0%	16.7%	NA	0.0%
4 or more	4.5%	5.4%	5.6%	2.2%	3.5%	1.4%	5.0%	0.0%	0.0%	0.0%	NA	25.0%

## If loans are offered, what % of plan participants have outstanding loans?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Average	11.6%	9.1%	10.8%	13.3%	15.1%	17.7%	3.6%	3.3%	2.3%	5.5%	NA	4.1%
Median	9.3%	5.0%	8.8%	11.4%	12.6%	16.8%	2.4%	2.5%	1.0%	3.0%	NA	2.4%

## What is the average loan balance for participants with open/outstanding loans?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Average	\$10,368	\$9,739	\$10,756	\$9,964	\$10,604	\$10,654	\$9,700	\$4,294	\$14,786	\$8,948	NA	\$9,547
Median	\$9,126	\$6,482	\$9,453	\$9,749	\$10,152	\$9,937	\$9,889	\$4,294	\$10,750	\$11,354	NA	\$9,140

## What is the average account balance for participants with open/outstanding loans?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Average	\$105,298	\$75,533	\$111,213	\$116,787	\$129,571	\$136,228	\$98,155	\$19,709	\$134,662	\$108,679	NA	\$86,552
Median	\$76,890	\$46,262	\$79,826	\$90,000	\$103,570	\$108,680	\$102,026	\$19,709	\$120,509	\$118,772	NA	\$86,552

## Does your plan allow separated employees to continue to make loan payments after termination?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes - feature has been or will soon be implemented in our plan	26.9%	13.1%	18.6%	25.6%	47.1%	79.1%	70.0%	0.0%	100.0%	50.0%	NA	100.0%
No - but feature may be added in the future	4.1%	6.3%	2.9%	6.2%	1.8%	2.9%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
No - feature is not available and we have not discussed adding it	56.6%	54.0%	69.7%	59.9%	46.5%	15.1%	20.0%	66.7%	0.0%	33.3%	NA	0.0%
Unsure / Don't know	12.4%	26.5%	8.9%	8.4%	4.7%	2.9%	10.0%	33.3%	0.0%	16.7%	NA	0.0%

## Which of the following restrictions (if any) does your plan place on a participant's ability to take out a loan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Loans may NOT be taken against Roth contributions	7.1%	6.2%	8.6%	5.1%	5.1%	8.5%	12.5%	33.3%	0.0%	0.0%	NA	50.0%
Loans may NOT be taken against employer contributions	9.2%	6.0%	6.8%	11.7%	14.6%	19.2%	31.3%	33.3%	25.0%	20.0%	NA	50.0%
Plan limits maximum loan amount to an amount lower than IRS limits	27.4%	24.2%	30.9%	30.4%	22.9%	22.3%	12.5%	0.0%	0.0%	20.0%	NA	0.0%
Plan restricts access to loans to a limited number of qualifying reasons	11.1%	16.2%	10.1%	11.7%	4.5%	6.2%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
NONE - excluding federal limits/restrictions, plan does not place any restrictions on loans	51.3%	49.9%	49.9%	52.3%	59.9%	50.0%	37.5%	0.0%	75.0%	60.0%	NA	0.0%

## Which of the following in-service distribution options are allowed by your plan document?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Hardship withdrawals	82.5%	75.3%	83.9%	84.7%	87.7%	94.0%	84.0%	75.0%	100.0%	100.0%	NA	66.7%
Distributions connected to attainment of a specific age	66.9%	52.3%	68.9%	71.0%	82.7%	89.3%	84.0%	75.0%	100.0%	80.0%	NA	66.7%
Distributions to active duty military personnel (as defined in the HEART Act)	27.1%	17.2%	23.1%	31.0%	45.1%	57.3%	44.0%	25.0%	37.5%	60.0%	NA	66.7%
Distribution of rollover assets previously received from the employee	32.5%	17.6%	28.4%	41.5%	56.8%	68.0%	48.0%	25.0%	62.5%	20.0%	NA	50.0%
Distribution of after-tax dollars	12.3%	6.4%	7.4%	11.7%	25.3%	44.0%	16.0%	0.0%	37.5%	0.0%	NA	0.0%
NONE - we do not allow in-service distributions of any type	8.0%	14.6%	6.3%	5.2%	1.2%	2.7%	4.0%	0.0%	0.0%	0.0%	NA	16.7%

## If allowed, what percentage of plan participants have made hardship withdrawals in the year?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Average (as of 12/31/2020)	1.5%	1.3%	1.1%	1.6%	2.2%	2.9%	1.1%	0.0%	2.0%	0.4%	NA	2.0%
Median (as of 12/31/2020)	0.0%	0.0%	0.0%	0.4%	1.0%	1.3%	0.1%	0.0%	0.8%	0.3%	NA	2.0%

# 'Auto' Features

## Does your plan offer automatic enrollment?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	43.2%	21.6%	42.4%	64.9%	72.5%	77.0%	53.8%	20.0%	62.5%	85.7%	NA	0.0%
No	54.1%	72.9%	55.9%	35.1%	26.5%	22.3%	38.5%	60.0%	37.5%	14.3%	NA	75.0%
Unsure / Don't know	2.7%	5.5%	1.8%	0.0%	1.1%	0.7%	7.7%	20.0%	0.0%	0.0%	NA	25.0%

## Which (if any) of the following types of "re-enrollment" has your plan used/tried in the past 3 years (since 2018)?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Re-enrolled employees not participating in the plan (requiring them to opt out again else be enrolled)	9.0%	3.9%	6.9%	17.6%	20.0%	10.3%	7.7%	0.0%	0.0%	14.3%	NA	0.0%
Re-enrolled participants saving below the default deferral rate (thus "boosting" their deferral rate)	4.8%	1.0%	3.0%	11.0%	13.9%	6.9%	3.8%	0.0%	0.0%	14.3%	NA	0.0%
Re-enrolled participants not invested in the default investment (current/future contributions are invested in the plan default)	2.2%	1.8%	1.9%	2.6%	3.3%	2.8%	3.8%	0.0%	0.0%	0.0%	NA	20.0%
NONE - Plan has NOT "re-enrolled" any employees/participants	88.5%	93.3%	91.6%	78.8%	75.6%	87.6%	88.5%	100.0%	100.0%	85.7%	NA	80.0%

## What is the default investment for automatic enrollment?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Target-date Fund (all types)	75.6%	56.8%	71.5%	79.7%	83.0%	93.0%	78.6%	0.0%	80.0%	100.0%	NA	NA
Risk-based lifestyle fund	2.3%	0.0%	2.3%	3.0%	2.7%	3.5%	0.0%	0.0%	0.0%	0.0%	NA	NA
Balanced fund	5.1%	7.6%	4.6%	5.4%	6.8%	0.9%	7.1%	100.0%	0.0%	0.0%	NA	NA
Professionally Managed Account (participant-level allocation model)	3.4%	4.5%	3.7%	2.5%	4.1%	1.7%	7.1%	0.0%	0.0%	0.0%	NA	NA
Stable Value Fund / GIC	1.0%	0.8%	1.4%	0.5%	0.7%	0.9%	0.0%	0.0%	0.0%	0.0%	NA	NA
Money market fund	2.3%	6.1%	2.8%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	NA
Other	4.9%	6.8%	7.7%	4.0%	1.4%	0.0%	7.1%	0.0%	20.0%	0.0%	NA	NA
Unsure / Don't know	5.5%	17.4%	6.0%	3.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	NA

## Which of the following best describes the type of target-date fund used as a default investment for your plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Retail / Single Manager Fund (Active Management)	27.0%	24.7%	26.3%	30.3%	30.6%	21.4%	9.1%	NA	25.0%	0.0%	NA	NA
Retail / Single Manager Fund (Indexed)	22.5%	17.8%	23.3%	24.3%	22.3%	21.4%	36.4%	NA	25.0%	60.0%	NA	NA
Pre-packaged Institutional Investment (i.e., single or multi-manager CIT, etc.)	22.9%	19.2%	21.8%	19.7%	24.8%	31.1%	27.3%	NA	0.0%	40.0%	NA	NA
Custom Target-Date Fund (using investments from plan lineup)	23.6%	30.1%	24.8%	23.0%	19.0%	22.3%	27.3%	NA	50.0%	0.0%	NA	NA
Other fund structure	3.9%	8.2%	3.8%	2.6%	3.3%	3.9%	0.0%	NA	0.0%	0.0%	NA	NA

## What is the default deferral rate as a percentage of the employee's salary?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
1%	2.9%	6.8%	2.8%	0.5%	2.2%	2.6%	0.0%	0.0%	0.0%	0.0%	NA	NA
2%	6.6%	10.3%	5.8%	6.9%	3.7%	7.0%	14.3%	0.0%	0.0%	16.7%	NA	NA
3%	37.5%	39.0%	44.3%	31.9%	30.9%	31.3%	42.9%	0.0%	80.0%	33.3%	NA	NA
4%	11.5%	8.2%	12.5%	12.8%	11.8%	10.4%	14.3%	0.0%	0.0%	33.3%	NA	NA
5%	14.2%	11.0%	13.6%	17.0%	16.2%	13.0%	7.1%	0.0%	0.0%	0.0%	NA	NA
6%	21.7%	15.1%	17.3%	26.1%	27.2%	30.4%	7.1%	0.0%	20.0%	0.0%	NA	NA
More than 6%	3.5%	3.4%	1.9%	4.3%	6.6%	3.5%	14.3%	100.0%	0.0%	16.7%	NA	NA
Other amount	2.1%	6.2%	1.7%	0.5%	1.5%	1.7%	0.0%	0.0%	0.0%	0.0%	NA	NA

## Does your plan offer “auto escalation” (i.e., automatic deferral increases)?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes - participants are defaulted into auto escalation at time of enrollment	21.7%	6.5%	19.1%	38.8%	46.3%	45.3%	21.4%	0.0%	25.0%	42.9%	NA	0.0%
Yes - but participation is voluntary and participants must opt in to auto escalation	17.7%	12.0%	15.9%	19.9%	28.2%	37.3%	14.3%	0.0%	25.0%	14.3%	NA	16.7%
No - plan does not offer auto escalation to participants	54.5%	68.6%	60.9%	40.2%	24.5%	16.7%	57.1%	80.0%	37.5%	42.9%	NA	83.3%
Unsure / Don't know	6.1%	12.9%	4.2%	1.0%	1.1%	0.7%	7.1%	20.0%	12.5%	0.0%	NA	0.0%

## Which of the following amounts best describe your organization's default/ recommended automatic escalation rate?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Less than 1%	2.8%	4.5%	1.0%	1.8%	2.1%	8.5%	0.0%	NA	0.0%	0.0%	NA	0.0%
Exactly 1%	80.6%	55.2%	75.1%	88.6%	94.7%	87.3%	100.0%	NA	100.0%	100.0%	NA	100.0%
More than 1%	3.9%	1.5%	5.7%	5.3%	1.1%	2.8%	0.0%	NA	0.0%	0.0%	NA	0.0%
Not applicable - do not have a default/ recommended auto escalation rate	9.6%	29.9%	14.5%	1.8%	1.1%	1.4%	0.0%	NA	0.0%	0.0%	NA	0.0%
Unsure / Don't know	3.1%	9.0%	3.6%	2.6%	1.1%	0.0%	0.0%	NA	0.0%	0.0%	NA	0.0%

## Excluding IRS limits, does your automatic escalation policy have a cap (i.e., increase 1% per year up to 10% of salary)?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	62.2%	40.9%	58.0%	74.5%	70.0%	70.5%	77.8%	NA	50.0%	100.0%	NA	NA
No	23.7%	31.1%	25.3%	16.6%	23.6%	21.3%	22.2%	NA	50.0%	0.0%	NA	NA
Unsure / Don't know	14.1%	28.0%	16.7%	8.9%	6.4%	8.2%	0.0%	NA	0.0%	0.0%	NA	NA

# Participation and Eligibility

## What is the participation rate in your DC plan among eligible employees?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Average (as of 12/31/2020)	77.9%	73.2%	78.2%	82.0%	83.7%	84.2%	64.8%	69.2%	58.1%	81.4%	NA	58.4%
Median (as of 12/31/2020)	86.0%	80.0%	85.0%	91.0%	91.2%	92.0%	55.4%	53.1%	52.0%	92.0%	NA	45.0%

## What is the average participant account balance?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Average	\$116,541	\$87,006	\$119,770	\$132,010	\$150,598	\$158,414	\$93,110	\$79,101	\$67,180	\$99,833	NA	\$139,630
Median	\$89,421	\$61,993	\$91,328	\$113,599	\$114,607	\$146,586	\$99,400	\$67,702	\$65,162	\$101,971	NA	\$141,500

## What is the average contribution/deferral rate among active participants?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Average (as of 12/31/2020)	7.3%	6.5%	7.2%	8.3%	8.3%	8.4%	7.6%	7.5%	7.4%	6.5%	NA	8.0%
Median (as of 12/31/2020)	7.0%	5.7%	7.0%	8.0%	8.0%	8.6%	8.0%	6.6%	8.1%	6.0%	NA	8.0%

## When are full-time employees eligible to participate in the plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Immediately upon hire	35.2%	17.9%	28.8%	44.9%	65.4%	83.2%	77.8%	50.0%	75.0%	85.7%	NA	100.0%
Within 3 months of employment	29.7%	24.0%	33.0%	41.5%	27.7%	16.1%	18.5%	25.0%	25.0%	14.3%	NA	0.0%
After 4 to 11 months of employment	12.0%	15.7%	15.1%	8.0%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
After 1 year of employment	21.4%	39.1%	21.6%	5.2%	3.7%	0.0%	3.7%	25.0%	0.0%	0.0%	NA	0.0%
After more than 1 year of employment	1.0%	1.9%	1.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Unsure / Don't know	0.6%	1.3%	0.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

# Employer Contributions

## Does your organization offer a non-elective or profit-sharing contributions to participant accounts?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	50.0%	45.0%	49.8%	56.6%	50.8%	58.2%	60.0%	25.0%	62.5%	85.7%	NA	50.0%
No	46.5%	48.4%	47.1%	43.0%	47.1%	41.1%	36.0%	50.0%	37.5%	14.3%	NA	50.0%
Unsure / Don't know	3.5%	6.5%	3.1%	0.4%	2.1%	0.7%	4.0%	25.0%	0.0%	0.0%	NA	0.0%

**NOTE:** These contributions generally DO NOT require participant contributions/deferrals.

## Which of the following profit sharing / non-matching plan types are associated with your designated defined contribution plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
"Pro-Rata" Profit Sharing Plan (i.e. same percentage for all employees)	37.3%	31.3%	38.9%	44.4%	39.2%	34.9%	13.3%	0.0%	20.0%	16.7%	NA	0.0%
"New Comparability" Plan (i.e., groups receive different rates)	14.6%	14.4%	15.7%	12.4%	21.6%	7.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
"Age weighted" Profit Sharing Plan (i.e., older employees receive a greater % of profit sharing)	1.8%	1.1%	1.6%	0.7%	2.1%	7.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
"Fixed Dollar" Profit Sharing Plan (i.e., same fixed amount for all)	2.9%	2.9%	2.4%	1.3%	6.2%	4.7%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Non-elective Safe Harbor Contribution (i.e., 3% or more of pay to all eligible employees)	25.5%	32.7%	24.3%	20.9%	18.6%	23.3%	73.3%	100.0%	60.0%	66.7%	NA	100.0%
Other plan type	11.7%	7.9%	11.6%	14.4%	8.2%	23.3%	13.3%	0.0%	20.0%	16.7%	NA	0.0%
Unsure / Don't know	6.1%	9.7%	5.4%	5.9%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## Which range best reflects your organization's profit sharing/non-matching contribution (as a percentage of pay) for the most recent plan year?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Less than 3%	21.1%	22.3%	19.8%	22.3%	22.8%	18.6%	13.3%	0.0%	20.0%	16.7%	NA	0.0%
Exactly 3%	19.0%	25.7%	19.5%	14.9%	6.5%	16.3%	20.0%	0.0%	40.0%	16.7%	NA	0.0%
3% - 5%	22.5%	26.4%	20.6%	22.3%	17.4%	24.4%	20.0%	0.0%	40.0%	16.7%	NA	0.0%
5% - 7%	9.5%	7.1%	10.2%	11.5%	12.0%	8.1%	6.7%	0.0%	0.0%	16.7%	NA	0.0%
7% - 10%	8.8%	5.6%	7.4%	12.2%	18.5%	8.1%	26.7%	100.0%	0.0%	16.7%	NA	50.0%
More than 10%	4.8%	3.3%	5.5%	6.8%	5.4%	2.3%	6.7%	0.0%	0.0%	16.7%	NA	0.0%
Other amount	14.4%	9.7%	17.0%	10.1%	17.4%	22.1%	6.7%	0.0%	0.0%	0.0%	NA	50.0%

## How frequently are profit sharing/non-matching contributions made to plan participant accounts?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Per pay period	28.9%	28.8%	27.5%	24.8%	25.9%	46.7%	87.5%	NA	100.0%	50.0%	NA	100.0%
Non-pay period - Biweekly (26 times per year)	1.2%	2.1%	0.3%	0.0%	3.4%	1.7%	0.0%	NA	0.0%	0.0%	NA	0.0%
Non-pay period - Monthly	1.2%	0.0%	1.6%	2.8%	1.7%	0.0%	0.0%	NA	0.0%	0.0%	NA	0.0%
Non-pay period - Quarterly	2.1%	2.1%	2.2%	2.8%	1.7%	0.0%	0.0%	NA	0.0%	0.0%	NA	0.0%
Non-pay period - Annually	56.7%	58.4%	56.0%	61.5%	55.2%	46.7%	12.5%	NA	0.0%	50.0%	NA	0.0%
Other frequency	10.1%	8.6%	12.3%	8.3%	12.1%	5.0%	0.0%	NA	0.0%	0.0%	NA	0.0%

## Does your organization offer a matching contribution to participant accounts?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	74.6%	70.5%	75.4%	78.7%	73.0%	84.0%	64.3%	40.0%	75.0%	85.7%	NA	50.0%
No	24.4%	27.3%	24.0%	21.3%	25.9%	16.0%	32.1%	40.0%	25.0%	14.3%	NA	50.0%
Unsure / Don't know	1.0%	2.2%	0.6%	0.0%	1.1%	0.0%	3.6%	20.0%	0.0%	0.0%	NA	0.0%

## If you provide a match, which of the following descriptions best describes your match formula:

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
"Traditional" Match (i.e. 100% of first 3% of employee contribution)	38.3%	44.2%	36.4%	35.0%	28.1%	44.4%	31.3%	100.0%	50.0%	0.0%	NA	50.0%
"Stretch" Match (i.e., 50% of first 6% of employee contributions, etc.)	23.1%	14.3%	26.1%	28.6%	30.9%	19.4%	50.0%	0.0%	50.0%	66.7%	NA	0.0%
Tiered Match (i.e., 100% of the first 4% of employee contributions and 50% of the next 2%, etc.)	19.2%	19.3%	18.5%	20.5%	20.9%	18.5%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Fixed Dollar -- \$0.50 per dollar regardless of % employee contribution	3.3%	2.2%	3.5%	4.1%	2.9%	4.8%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Multiple Formulas -- plan has multiple match formulas covering different segments of participants	3.0%	1.5%	2.5%	3.2%	5.0%	7.3%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Other Strategy	11.1%	13.3%	11.8%	8.6%	10.8%	5.6%	18.8%	0.0%	0.0%	33.3%	NA	50.0%
Unsure / Don't Know	2.1%	5.2%	1.2%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

*"Traditional" Match: Offers a full, flat-rate match (100% or greater) of the employee's contributions*

*"Stretch" Match: Employee contributions are partially matched at a fixed/flat rate*

*Tiered Match: Match varies for different levels of employee contributions*

*Multiple Formulas: Employer matches employee contributions on a "per dollar" basis up to a fixed amount*



# What is the maximum employer-matching contribution available to participants in your plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Less than 3%	9.1%	7.9%	11.1%	10.1%	5.3%	5.7%	18.8%	0.0%	0.0%	33.3%	NA	0.0%
3%	19.5%	20.0%	19.1%	19.7%	22.0%	17.1%	12.5%	0.0%	16.7%	16.7%	NA	0.0%
4%	31.3%	35.4%	31.1%	28.0%	29.5%	26.8%	31.3%	100.0%	33.3%	16.7%	NA	50.0%
5%	13.2%	11.0%	11.6%	14.2%	18.2%	20.3%	12.5%	0.0%	16.7%	16.7%	NA	0.0%
6%	10.6%	7.4%	9.6%	11.9%	12.9%	20.3%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
More than 6%	6.5%	6.4%	6.5%	8.3%	4.5%	5.7%	25.0%	0.0%	33.3%	16.7%	NA	50.0%
Other (i.e., not % of salary)	4.7%	3.6%	5.1%	5.5%	6.1%	4.1%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Unsure / Don't know	5.0%	8.2%	5.8%	2.3%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## Excluding IRS limits, is your match subject to a limit or cap on employer matching contributions (i.e., 100% of first 3% up to \$2500)?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	21.6%	13.6%	22.1%	31.0%	31.3%	17.7%	23.5%	0.0%	33.3%	33.3%	NA	0.0%
No	67.7%	63.6%	69.5%	64.4%	66.4%	79.8%	70.6%	100.0%	66.7%	66.7%	NA	66.7%
Unsure / Don't know	10.8%	22.9%	8.4%	4.6%	2.2%	2.4%	5.9%	0.0%	0.0%	0.0%	NA	33.3%

## Does your plan match catch-up contributions?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	51.0%	34.1%	56.8%	61.7%	57.7%	54.4%	41.2%	100.0%	33.3%	33.3%	NA	33.3%
No	27.9%	28.6%	23.1%	27.6%	33.6%	41.6%	47.1%	0.0%	66.7%	66.7%	NA	0.0%
Not applicable - plan does not allow for catch-up contributions	12.3%	19.3%	12.1%	7.9%	7.3%	3.2%	11.8%	0.0%	0.0%	0.0%	NA	66.7%
Unsure / Don't know	8.8%	18.0%	8.0%	2.8%	1.5%	0.8%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## Does your plan include a provision to “true up” matching contributions?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	36.3%	19.3%	30.4%	53.4%	57.4%	63.2%	17.6%	0.0%	0.0%	33.3%	NA	33.3%
No	43.6%	40.8%	49.9%	39.5%	39.7%	36.0%	82.4%	100.0%	100.0%	66.7%	NA	66.7%
Unsure / Don't know	20.1%	39.9%	19.7%	7.2%	2.8%	0.8%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

**NOTE:** A true-up match can be used to restore matching contributions "lost" when an employee reaches the annual contribution limit prior to year-end and thus foregoes the opportunity to make additional contributions that would have otherwise been matched. In such situations, a plan may elect to "true-up" the employer matching contribution.

## If you provide a match, how frequently are matching contributions made to plan participants?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Per pay period	79.7%	77.9%	78.0%	82.2%	80.0%	88.0%	100.0%	100.0%	100.0%	100.0%	NA	100.0%
Non-pay period - Biweekly (26 times per year)	1.2%	1.0%	0.7%	0.5%	4.4%	1.6%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Non-pay period - Twice monthly (24 times per year)	0.7%	0.7%	0.9%	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Non-pay period - Monthly	1.2%	1.2%	1.4%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Non-pay period - Quarterly	2.5%	2.0%	2.1%	1.8%	5.2%	4.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Non-pay period - Annually	14.1%	15.7%	16.5%	12.8%	9.6%	5.6%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Other	0.7%	1.5%	0.4%	0.5%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## Once eligible for the plan, when are participants eligible to receive matching contributions?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes - participants immediately qualify to receive matching contributions once eligible	81.2%	84.5%	79.1%	81.9%	83.2%	76.8%	58.8%	100.0%	50.0%	50.0%	NA	66.7%
No - eligible participants must wait up to 1 year before qualifying to receive matching contributions	10.4%	6.6%	12.9%	11.3%	10.9%	8.8%	11.8%	0.0%	33.3%	0.0%	NA	0.0%
No - eligible participants must wait 1 year or more before qualifying to receive matching contributions	7.8%	7.4%	7.6%	6.3%	5.8%	14.4%	29.4%	0.0%	16.7%	50.0%	NA	33.3%
Unsure / Don't Know	0.6%	1.5%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

**NOTE:** Matching contributions may be subject to a separate vesting schedule (see next page); this question is focused on when they qualify for matching contributions.

## How long before participants are 100% vested in the match?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Immediately upon enrollment	34.6%	28.8%	31.4%	44.0%	46.4%	46.0%	55.6%	50.0%	50.0%	66.7%	NA	33.3%
1 year or less	4.0%	5.0%	3.7%	4.4%	1.4%	4.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
2 years	5.0%	1.7%	4.3%	8.4%	11.6%	8.7%	11.1%	50.0%	0.0%	16.7%	NA	0.0%
3 years	11.0%	7.1%	10.8%	12.0%	12.3%	25.4%	11.1%	0.0%	0.0%	16.7%	NA	33.3%
4 years	3.5%	1.5%	4.6%	4.4%	3.6%	4.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
5 years	18.1%	19.5%	19.3%	17.8%	18.1%	6.3%	16.7%	0.0%	33.3%	0.0%	NA	33.3%
More than 5 years	20.6%	30.7%	23.3%	8.0%	4.3%	4.8%	5.6%	0.0%	16.7%	0.0%	NA	0.0%
Unsure / Don't Know	3.1%	5.7%	2.5%	0.9%	2.2%	0.8%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## Are matching contributions vested on a “cliff” or graded basis/schedule (for vesting schedules of 2 years or more)?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Cliff vesting -- employees becomes fully (100%) vested at a designated time of service	24.6%	15.3%	22.0%	33.9%	39.2%	57.6%	55.6%	100.0%	0.0%	66.7%	NA	100.0%
Graded vesting -- employee becomes partially vested in increasing amounts over time, until fully vested	66.9%	69.0%	71.6%	64.5%	55.7%	40.9%	33.3%	0.0%	100.0%	0.0%	NA	0.0%
Unsure / Don't know	8.6%	15.6%	6.4%	1.6%	5.1%	1.5%	11.1%	0.0%	0.0%	33.3%	NA	0.0%

**NOTE:** Question only asked of respondents that have plans with vesting schedules of 2 years or longer.

## What percentage of active participants are deferring enough salary to take full advantage of the maximum employer match?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
All or nearly all participants (90% or more)	25.5%	29.7%	20.9%	25.0%	24.8%	34.2%	17.6%	50.0%	0.0%	16.7%	NA	0.0%
Vast majority (75% or more)	23.3%	18.4%	23.8%	27.8%	25.6%	30.8%	23.5%	0.0%	50.0%	16.7%	NA	0.0%
More than average (more than 50% but less than 75%)	24.5%	18.4%	27.4%	26.9%	30.2%	25.0%	47.1%	0.0%	50.0%	66.7%	NA	50.0%
Less than average (more than 25% but less than 50%)	10.8%	11.1%	10.9%	11.6%	13.2%	5.0%	5.9%	50.0%	0.0%	0.0%	NA	0.0%
A minority (between 10% and 25%)	4.6%	6.9%	4.5%	4.2%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Very few (<10%)	2.9%	5.0%	2.7%	0.9%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Unsure/Don't Know	8.3%	10.5%	9.8%	3.7%	5.4%	3.3%	5.9%	0.0%	0.0%	0.0%	NA	50.0%

# Plan Investments

## Which investment vehicles is your organization currently using in its DC plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Mutual Funds	76.7%	61.4%	77.8%	93.5%	91.4%	89.1%	89.3%	60.0%	87.5%	100.0%	NA	100.0%
Separate Accounts	29.3%	39.9%	27.0%	16.9%	11.4%	38.8%	14.3%	40.0%	25.0%	0.0%	NA	0.0%
Collective Investment Trust	18.1%	5.4%	12.1%	27.3%	38.9%	62.6%	3.6%	0.0%	0.0%	0.0%	NA	16.7%
Exchange-Traded Funds (ETFs)	13.0%	10.7%	11.2%	18.5%	17.1%	18.4%	3.6%	0.0%	0.0%	14.3%	NA	0.0%
Self-directed Brokerage Window	13.3%	5.6%	8.7%	19.2%	30.9%	39.5%	17.9%	20.0%	12.5%	14.3%	NA	33.3%
Mutual fund window	4.7%	3.7%	4.2%	6.9%	5.1%	6.8%	7.1%	20.0%	0.0%	0.0%	NA	16.7%
NONE - do not use any of these investment vehicles	7.7%	12.3%	7.6%	3.1%	4.6%	0.7%	7.1%	20.0%	12.5%	0.0%	NA	0.0%

## Which of the following investment types are available to your plan participants?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Domestic equity fund (i.e., S&P 500, Russell 2000, etc.)	82.0%	70.8%	85.2%	85.7%	90.0%	90.0%	84.2%	66.7%	100.0%	100.0%	NA	50.0%
Domestic bond funds	78.6%	65.4%	82.4%	87.4%	85.0%	83.3%	84.2%	66.7%	100.0%	100.0%	NA	50.0%
International equity fund (i.e., Europe/Asia, Global Market, etc.)	77.7%	63.6%	81.6%	85.3%	85.6%	85.8%	84.2%	66.7%	100.0%	100.0%	NA	50.0%
International bond funds	44.1%	41.4%	45.3%	48.1%	46.9%	36.7%	21.1%	66.7%	16.7%	16.7%	NA	0.0%
Target-date funds	80.2%	69.1%	83.6%	86.1%	81.3%	91.7%	100.0%	100.0%	100.0%	100.0%	NA	100.0%
Target-risk Funds (i.e., growth, conservative, etc.)	28.0%	32.2%	31.4%	21.6%	22.5%	13.3%	10.5%	0.0%	0.0%	16.7%	NA	25.0%
Balanced funds	47.9%	46.3%	53.8%	45.5%	45.6%	30.8%	36.8%	66.7%	33.3%	33.3%	NA	25.0%
Professionally Managed Account Service (for participants)	24.6%	18.9%	24.2%	27.3%	27.5%	39.2%	21.1%	0.0%	33.3%	16.7%	NA	25.0%
Money Market Fund(s)	58.5%	57.9%	62.3%	57.1%	51.9%	52.5%	52.6%	66.7%	66.7%	33.3%	NA	50.0%

LIST CONTINUES ON THE PAGE THAT FOLLOWS

## Which of the following investment types are available to your plan participants?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Employer stock	5.4%	0.7%	3.8%	6.5%	10.6%	23.3%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Stable value fund	56.4%	37.5%	54.2%	67.5%	80.6%	85.8%	68.4%	33.3%	33.3%	100.0%	NA	100.0%
Real Estate / REITS	30.9%	22.1%	34.9%	34.6%	33.8%	31.7%	68.4%	33.3%	66.7%	66.7%	NA	100.0%
Alternative Investments (i.e., hedge funds, private equity, etc.)	4.1%	3.3%	5.3%	4.3%	1.9%	3.3%	5.3%	33.3%	0.0%	0.0%	NA	0.0%
Sector Funds	21.6%	20.8%	24.4%	26.4%	16.9%	7.5%	15.8%	33.3%	16.7%	16.7%	NA	0.0%
Commodity Funds (i.e., gold, metals, oil, etc.)	14.6%	15.6%	18.2%	13.0%	5.0%	7.5%	10.5%	33.3%	16.7%	0.0%	NA	0.0%
Environmental, Social, and Governance (ESG) fund(s)	13.7%	12.9%	15.4%	13.9%	10.0%	11.7%	36.8%	0.0%	83.3%	0.0%	NA	50.0%
NONE - do not offer any of the investment types offered above	4.4%	11.4%	2.2%	0.9%	0.6%	1.7%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

LIST CONTINUED FROM THE PRECEDING PAGE

## Does your investment lineup include multiple target-date fund (TDF) families?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	27.1%	33.9%	28.2%	23.7%	17.2%	14.4%	20.8%	25.0%	14.3%	14.3%	NA	40.0%
No	58.7%	47.9%	54.4%	67.1%	76.6%	83.3%	70.8%	50.0%	71.4%	85.7%	NA	60.0%
Unsure / Don't know	14.2%	18.1%	17.4%	9.2%	6.2%	2.3%	8.3%	25.0%	14.3%	0.0%	NA	0.0%

## Do you offer any indexed / passive investments in your plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	57.9%	39.7%	57.0%	67.9%	75.0%	85.6%	81.8%	50.0%	83.3%	85.7%	NA	100.0%
No	11.8%	16.5%	12.5%	10.7%	5.1%	3.0%	4.5%	0.0%	0.0%	14.3%	NA	0.0%
Unsure / Don't know	30.2%	43.8%	30.5%	21.4%	19.9%	11.4%	13.6%	50.0%	16.7%	0.0%	NA	0.0%

## Which of the following (if any) index fund(s) are offered in your plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Target-date index fund	53.6%	63.9%	56.0%	41.0%	49.6%	50.0%	70.0%	100.0%	66.7%	83.3%	NA	60.0%
Domestic equity index fund (i.e., S&P 500, Russell 2000, etc.)	80.8%	66.8%	77.5%	88.2%	92.1%	93.4%	85.0%	50.0%	100.0%	66.7%	NA	100.0%
Domestic bond index funds	53.3%	42.8%	48.3%	55.6%	64.6%	73.0%	70.0%	50.0%	66.7%	50.0%	NA	100.0%
International equity index fund (i.e., Europe/Asia, Global Market, etc.)	52.7%	42.3%	45.9%	60.1%	63.8%	71.3%	55.0%	50.0%	66.7%	33.3%	NA	60.0%
International bond index funds	19.8%	19.7%	17.9%	20.8%	25.2%	19.7%	20.0%	50.0%	16.7%	0.0%	NA	40.0%
Other categories of index funds	18.1%	24.0%	16.7%	18.5%	10.2%	20.5%	20.0%	50.0%	16.7%	0.0%	NA	40.0%

**NOTE:** Question only asked of respondents that reported offering index funds as an investment option in their organization's plan.

## How many investment options are offered in your defined contribution plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Average	22.3	22.6	23.6	22.0	20.4	17.9	26.6	30.3	27.9	19.3	NA	37.5
Median	21.0	21.0	23.0	20.0	18.0	16.0	23.0	32.0	29.0	20.0	NA	25.0

## What is the average number of investment options held by your DC plan participants?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Average	5.0	5.6	5.2	4.3	4.4	3.7	4.3	5.9	4.2	4.2	NA	3.1
Median	4.0	5.0	4.0	3.4	3.2	3.2	3.8	5.0	3.0	3.5	NA	2.5

## How often do you formally review the investment options?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Quarterly	39.2%	15.1%	33.3%	59.3%	70.8%	76.4%	46.2%	0.0%	50.0%	83.3%	NA	33.3%
Twice a year	13.9%	10.4%	18.0%	16.7%	9.4%	6.9%	26.9%	25.0%	50.0%	16.7%	NA	16.7%
Annually	33.2%	46.3%	39.0%	17.8%	12.9%	13.2%	23.1%	50.0%	0.0%	0.0%	NA	50.0%
Less than once per year	5.5%	12.0%	3.8%	2.3%	2.3%	0.7%	3.8%	25.0%	0.0%	0.0%	NA	0.0%
Unsure / Don't know	8.1%	16.1%	6.0%	3.9%	4.7%	2.8%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## Which of the following options does your plan offer to help participants with creating/managing retirement income?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Systematic Withdrawal Plan (SWP) option	39.3%	22.3%	34.3%	41.4%	58.9%	76.3%	71.4%	33.3%	83.3%	50.0%	NA	100.0%
IN-PLAN insurance-based products that guarantee income (i.e., annuities, GMIBs, GMWBs, etc.)	7.0%	4.1%	7.9%	7.6%	9.3%	7.2%	38.1%	0.0%	33.3%	25.0%	NA	83.3%
IN-PLAN managed account service (i.e., Financial Engines Income+, Morningstar w/ Income Secure, etc.)	26.9%	16.5%	26.7%	28.0%	33.5%	44.2%	21.1%	0.0%	80.0%	0.0%	NA	0.0%
IN-PLAN managed payout fund(s) designed to generate steady cash flow but lacks a guarantee	10.2%	7.6%	11.5%	11.1%	11.4%	9.1%	11.1%	0.0%	0.0%	0.0%	NA	40.0%
OUT-OF-PLAN annuity purchase/bidding service (i.e., Hueler, etc.)	4.2%	2.2%	4.9%	4.3%	3.3%	7.5%	15.8%	0.0%	16.7%	0.0%	NA	20.0%
NONE - do not offer any income-oriented products	35.4%	39.2%	37.6%	36.1%	25.9%	15.2%	15.4%	25.0%	0.0%	33.3%	NA	0.0%

**NOTE:** All options refer to income in retirement



# Fees / Expenses

## What is the approximate average asset-weighted expense ratio of all investment options in your plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Less than 0.25% (25 bps)	25.1%	16.5%	21.9%	28.6%	28.0%	58.6%	31.6%	0.0%	28.6%	40.0%	NA	50.0%
0.25-.50% (25-50 bps)	35.1%	22.3%	34.0%	48.2%	54.5%	36.2%	52.6%	33.3%	57.1%	60.0%	NA	50.0%
0.50-.75% (51-75 bps)	19.6%	17.3%	25.5%	20.1%	16.1%	2.6%	10.5%	33.3%	14.3%	0.0%	NA	0.0%
0.75%-1% (76-100 bps)	8.6%	12.3%	11.5%	3.0%	0.7%	1.7%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
1%-1.5% (101-150 bps)	8.7%	21.7%	6.8%	0.0%	0.7%	0.0%	5.3%	33.3%	0.0%	0.0%	NA	0.0%
More than 1.5% (more than 150 bps)	2.9%	9.9%	0.2%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## Does your plan include mutual funds that pay 12b-1 or sub-TA fees to recordkeepers / TPAs?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	28.7%	16.7%	26.9%	34.7%	53.4%	37.3%	33.3%	0.0%	37.5%	33.3%	NA	60.0%
No	26.9%	20.5%	25.8%	32.8%	25.3%	45.8%	29.2%	0.0%	25.0%	33.3%	NA	40.0%
Unsure / Don't know	44.4%	62.8%	47.3%	32.4%	21.3%	16.9%	37.5%	100.0%	37.5%	33.3%	NA	0.0%

**NOTE:** Certain mutual fund share classes pay 12b-1 fee and/or sub-TA fee to recordkeepers/TPAs to assist with distribution and administration services -- a practice that is commonly called "revenue sharing." The following question are related to your plan's handling of "revenue sharing" payments.

## Does your organization/plan have a policy to address fee equalization?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes – a policy is in place	47.0%	29.5%	37.9%	56.3%	67.4%	56.1%	75.0%	NA	66.7%	100.0%	NA	66.7%
No – but we plan to implement one in the next 12 months	2.0%	0.0%	2.5%	1.9%	2.2%	3.5%	12.5%	NA	33.3%	0.0%	NA	0.0%
No – but we are currently trying to understand the impact and may develop one in the future	6.3%	6.8%	4.9%	8.7%	6.5%	5.3%	0.0%	NA	0.0%	0.0%	NA	0.0%
No – and we have no plans to research this in the short-term	25.0%	23.9%	28.6%	24.3%	19.6%	24.6%	12.5%	NA	0.0%	0.0%	NA	33.3%
Unsure / Don't Know	19.7%	39.8%	26.1%	8.7%	4.3%	10.5%	0.0%	NA	0.0%	0.0%	NA	0.0%

**NOTE:** Fee equalization, also called fund revenue equalization, credits participants for revenue sharing paid by their investments that exceeds their share of the recordkeeping fee. Or, conversely, should a fund not pay sufficient revenue sharing to cover the required revenue by the recordkeeper, a participant will have to pay the difference directly from his account assets.

## Do you use an “ERISA account” or “plan expense reimbursement account” to track revenue sharing credits?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	50.6%	38.2%	43.7%	52.8%	65.0%	66.1%	75.0%	NA	66.7%	50.0%	NA	100.0%
No	35.9%	32.6%	40.8%	37.0%	32.0%	26.8%	25.0%	NA	33.3%	50.0%	NA	0.0%
Unsure / Don't Know	13.5%	29.2%	15.5%	10.2%	2.9%	7.1%	0.0%	NA	0.0%	0.0%	NA	0.0%

**NOTE:** Question only asked of respondents who sponsor plans that receive revenue sharing payments.

## How are the following plan expenses/fees paid?

### Recordkeeping Fees

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Plan (via participants)	51.5%	27.5%	49.7%	56.9%	62.3%	71.2%	75.0%	50.0%	87.5%	60.0%	NA	100.0%
Employer	35.3%	43.6%	32.5%	25.7%	21.6%	17.3%	20.8%	50.0%	12.5%	40.0%	NA	0.0%
Both (shared)	13.3%	13.7%	12.1%	11.5%	10.5%	10.8%	4.2%	0.0%	0.0%	0.0%	NA	0.0%

### Trustee Fees

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Plan (via participants)	44.4%	22.7%	34.1%	42.6%	44.0%	48.2%	52.9%	66.7%	100.0%	25.0%	NA	25.0%
Employer	47.7%	39.2%	36.5%	35.2%	34.6%	35.0%	47.1%	33.3%	0.0%	75.0%	NA	75.0%
Both (shared)	7.9%	6.7%	5.2%	6.1%	5.7%	8.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## How are the following plan expenses/fees paid?

### Participant Communications & Education Expenses

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Plan (via participants)	33.0%	18.5%	26.3%	29.0%	35.8%	41.8%	31.6%	33.3%	80.0%	25.0%	NA	0.0%
Employer	57.3%	42.1%	47.6%	51.9%	46.5%	44.0%	57.9%	66.7%	20.0%	75.0%	NA	66.7%
Both (shared)	9.8%	6.3%	7.2%	9.5%	8.8%	12.7%	10.5%	0.0%	0.0%	0.0%	NA	33.3%

### Audit / Legal / Compliance Fees

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Plan (via participants)	19.5%	10.9%	16.2%	18.2%	23.8%	29.3%	10.0%	25.0%	20.0%	0.0%	NA	0.0%
Employer	70.8%	57.9%	63.3%	66.4%	58.5%	55.7%	80.0%	75.0%	40.0%	100.0%	NA	100.0%
Both (shared)	9.8%	8.0%	7.5%	6.9%	11.0%	14.3%	10.0%	0.0%	40.0%	0.0%	NA	0.0%

## How are the following plan expenses/fees paid?

### Investment Management Fees

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Plan (via participants)	64.1%	40.3%	55.0%	61.9%	69.1%	80.9%	77.3%	25.0%	100.0%	60.0%	NA	100.0%
Employer	23.6%	23.3%	21.6%	21.9%	15.8%	7.8%	18.2%	50.0%	0.0%	40.0%	NA	0.0%
Both (shared)	12.3%	13.4%	10.8%	8.1%	7.3%	8.5%	4.5%	25.0%	0.0%	0.0%	NA	0.0%

### Investment Consulting Fees

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Plan (via participants)	43.8%	30.1%	39.5%	40.0%	38.7%	39.3%	42.9%	50.0%	75.0%	0.0%	NA	50.0%
Employer	50.1%	35.9%	38.8%	47.5%	48.4%	48.8%	42.9%	50.0%	25.0%	100.0%	NA	0.0%
Both (shared)	6.1%	4.9%	3.9%	6.3%	6.5%	6.0%	14.3%	0.0%	0.0%	0.0%	NA	50.0%

## For the prior plan year, did you calculate the total fees (all sources) paid to your DC provider/recordkeeper?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes – and we externally benchmarked our plan's cost/fees at the same time	38.6%	19.1%	37.3%	58.1%	60.8%	51.5%	32.0%	0.0%	62.5%	33.3%	NA	0.0%
Yes – and we plan to benchmark our plan's cost/fees in the near future	6.6%	2.9%	7.3%	6.6%	8.8%	13.6%	16.0%	0.0%	12.5%	0.0%	NA	60.0%
Yes – but we did NOT externally benchmark our plan's cost/fees	17.1%	19.3%	17.9%	13.5%	10.8%	19.7%	8.0%	25.0%	12.5%	0.0%	NA	0.0%
No – but we intend to calculate total fees in the next 6 months	4.3%	6.3%	3.9%	2.2%	3.4%	3.8%	4.0%	0.0%	0.0%	16.7%	NA	0.0%
No – but we may do it at some point in the future	17.3%	30.5%	16.0%	9.6%	6.8%	4.5%	20.0%	75.0%	0.0%	16.7%	NA	20.0%
Unsure / Don't Know	16.1%	22.0%	17.6%	10.0%	9.5%	6.8%	20.0%	0.0%	12.5%	33.3%	NA	20.0%

## How often do you formally review actual administrative costs/fees?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Annually	67.7%	63.1%	69.3%	68.2%	71.7%	70.5%	69.2%	75.0%	62.5%	66.7%	NA	66.7%
Every 1-2 years	12.8%	12.4%	14.2%	15.3%	8.7%	8.2%	11.5%	0.0%	12.5%	33.3%	NA	0.0%
Every 2-3 years	9.1%	6.2%	9.1%	9.6%	12.7%	14.4%	11.5%	0.0%	25.0%	0.0%	NA	16.7%
Every 4-5 years	1.6%	1.9%	0.8%	1.5%	3.5%	2.1%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Every 5+ years	0.9%	0.8%	1.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Unsure / Don't Know	7.9%	15.5%	5.2%	4.6%	3.5%	4.8%	7.7%	25.0%	0.0%	0.0%	NA	16.7%

# Defined Contribution Providers

## How often do you formally evaluate your DC provider?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Annually	53.5%	54.6%	59.3%	43.4%	44.4%	47.6%	42.3%	75.0%	12.5%	33.3%	NA	83.3%
Every 1 to 2 years	10.9%	10.3%	11.7%	12.9%	8.6%	8.3%	11.5%	0.0%	0.0%	50.0%	NA	0.0%
Every 2+ to 3 years	9.5%	7.1%	9.6%	13.6%	12.3%	7.6%	15.4%	0.0%	37.5%	16.7%	NA	0.0%
Every 3+ to 5 years	9.9%	4.2%	8.1%	14.2%	20.3%	24.8%	11.5%	0.0%	12.5%	0.0%	NA	0.0%
Every 5+ years	4.2%	2.2%	3.2%	7.3%	9.1%	6.2%	7.7%	0.0%	25.0%	0.0%	NA	0.0%
Unsure / Don't know	12.1%	21.5%	8.1%	8.6%	5.3%	5.5%	11.5%	25.0%	12.5%	0.0%	NA	16.7%

## For how long has your organization used your DC provider?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Less than 1 year	2.5%	2.3%	1.7%	3.0%	4.2%	4.1%	3.8%	0.0%	0.0%	16.7%	NA	0.0%
More than 1 year but less than 3 years	10.9%	14.3%	10.5%	6.0%	10.0%	8.1%	7.7%	0.0%	12.5%	0.0%	NA	16.7%
More than 3 years but less than 5 years	14.5%	15.9%	14.9%	14.6%	10.5%	10.1%	7.7%	0.0%	25.0%	0.0%	NA	0.0%
More than 5 years but less than 7 years	12.9%	14.9%	14.1%	9.6%	7.9%	10.1%	15.4%	25.0%	12.5%	16.7%	NA	0.0%
More than 7 years	59.2%	52.5%	58.8%	66.8%	67.4%	67.6%	65.4%	75.0%	50.0%	66.7%	NA	83.3%

# Advice and Advisers

## Do you employ the services of a retirement plan adviser or institutional investment consultant?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	71.3%	64.4%	70.7%	79.6%	82.1%	69.9%	73.1%	75.0%	62.5%	83.3%	NA	83.3%
No	19.5%	20.8%	21.1%	15.3%	11.0%	25.9%	19.2%	25.0%	25.0%	0.0%	NA	16.7%
Unsure/Don't know	9.1%	14.8%	8.2%	5.1%	6.9%	4.2%	7.7%	0.0%	12.5%	16.7%	NA	0.0%

## How long have you been working with your current retirement plan adviser?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Less than 1 year	3.1%	2.9%	2.9%	1.4%	5.1%	5.8%	5.3%	0.0%	20.0%	0.0%	NA	0.0%
1-2 years	6.4%	8.6%	5.8%	5.2%	4.4%	6.8%	5.3%	0.0%	0.0%	0.0%	NA	20.0%
3-4 years	15.0%	18.5%	14.2%	14.6%	11.0%	14.6%	21.1%	0.0%	20.0%	0.0%	NA	60.0%
5-7 years	18.5%	19.1%	19.6%	20.3%	15.4%	11.7%	47.4%	33.3%	60.0%	80.0%	NA	0.0%
7 or more years	53.7%	47.1%	55.7%	55.2%	59.6%	53.4%	15.8%	66.7%	0.0%	20.0%	NA	0.0%
Unsure / Don't know	3.3%	3.8%	1.7%	3.3%	4.4%	7.8%	5.3%	0.0%	0.0%	0.0%	NA	20.0%

## Is your plan adviser a fiduciary to the plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes – our adviser is a 3(38) fiduciary	19.1%	16.7%	22.1%	20.0%	19.4%	10.7%	15.8%	0.0%	60.0%	0.0%	NA	0.0%
Yes – our adviser is a 3(21) fiduciary	35.8%	21.7%	32.2%	43.3%	54.7%	56.3%	31.6%	66.7%	20.0%	40.0%	NA	20.0%
Yes - but use separate advisers for 3(38) and 3(21) fiduciary services	1.2%	0.9%	1.7%	0.5%	0.7%	1.9%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
No	9.8%	11.1%	9.3%	7.6%	7.2%	15.5%	15.8%	33.3%	0.0%	20.0%	NA	20.0%
Unsure / Don't Know	34.1%	49.5%	34.7%	28.6%	18.0%	15.5%	36.8%	0.0%	20.0%	40.0%	NA	60.0%

**NOTE:** A 3(21) fiduciary role under section 321(A) (ii) relates to minimal fiduciary status, where advisers have no discretion over investment decisions -- 3(21) fiduciaries monitor and recommend changes as a co-fiduciaries but the plan sponsor ultimately selects investments. Conversely, the 3(38) fiduciary role under section 3(21)(A)(i) affords the adviser full discretion over investment decisions while acting as a co-fiduciary.

## What is the adviser's fee arrangement?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
% of plan assets (bps)	50.8%	61.7%	66.6%	36.7%	25.4%	10.0%	22.2%	66.7%	40.0%	0.0%	NA	0.0%
Per participant	7.0%	9.3%	8.9%	4.5%	1.5%	4.0%	5.6%	33.3%	0.0%	0.0%	NA	0.0%
Project based	4.1%	3.0%	2.7%	2.5%	5.2%	16.0%	16.7%	33.3%	0.0%	0.0%	NA	40.0%
Monthly/annual retainer	31.4%	11.0%	18.5%	50.3%	63.4%	70.0%	61.1%	0.0%	40.0%	80.0%	NA	100.0%
Performance: investments	2.0%	4.0%	2.2%	0.5%	0.7%	0.0%	5.6%	33.3%	0.0%	0.0%	NA	0.0%
Performance: participation	0.8%	0.7%	1.1%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
Other payment method	12.0%	17.7%	8.9%	10.1%	10.4%	15.0%	11.1%	0.0%	20.0%	20.0%	NA	0.0%

## For the prior plan year, did you calculate the actual fees your plan paid to your adviser?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	50.7%	29.2%	47.5%	66.5%	71.7%	74.0%	47.4%	33.3%	60.0%	40.0%	NA	60.0%
No	29.1%	48.1%	29.6%	17.2%	13.0%	11.0%	36.8%	66.7%	20.0%	40.0%	NA	20.0%
Unsure / Don't know	20.3%	22.7%	22.9%	16.3%	15.2%	15.0%	15.8%	0.0%	20.0%	20.0%	NA	20.0%

## What type(s) of services does the financial adviser or consultant provide?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Fund performance review & monitoring	94.8%	85.0%	97.7%	98.0%	100.0%	96.9%	94.7%	100.0%	80.0%	100.0%	NA	100.0%
Investment menu design / fund selection	84.2%	70.6%	86.6%	92.2%	90.6%	89.7%	84.2%	33.3%	80.0%	100.0%	NA	100.0%
Plan provider selection and due diligence	62.3%	52.9%	62.0%	74.1%	68.1%	59.8%	57.9%	66.7%	80.0%	40.0%	NA	60.0%
Investment Policy Statement (IPS) creation/monitoring	66.0%	47.4%	64.7%	81.5%	79.7%	79.4%	84.2%	100.0%	80.0%	80.0%	NA	80.0%
Fee evaluation & benchmarking	79.6%	62.1%	81.6%	89.3%	92.8%	85.6%	84.2%	33.3%	80.0%	100.0%	NA	100.0%
Plan design benchmarking (vs. similar plans)	64.7%	47.1%	68.0%	77.6%	70.3%	69.1%	57.9%	0.0%	80.0%	60.0%	NA	60.0%
Education program(s) design/assessment (i.e., ensuring it is in line with objectives/goals)	53.9%	49.0%	66.7%	55.6%	37.0%	25.8%	31.6%	33.3%	60.0%	20.0%	NA	20.0%

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## What type(s) of services does the financial adviser or consultant provide?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
One-on-One meetings with participants (to provide education/advice)	61.1%	76.5%	74.4%	54.1%	29.0%	6.2%	36.8%	100.0%	60.0%	20.0%	NA	0.0%
Group meeting(s) with participants (to provide education/advice)	60.2%	72.2%	74.6%	54.1%	29.7%	7.2%	42.1%	66.7%	80.0%	20.0%	NA	0.0%
Presenting to plan committees on performance (i.e., fund review, etc.)	73.7%	48.7%	77.1%	86.8%	87.7%	87.6%	68.4%	33.3%	60.0%	80.0%	NA	80.0%
Developing/Delivering fiduciary training to plan committees	38.9%	27.1%	37.0%	52.7%	49.3%	41.2%	47.4%	0.0%	60.0%	40.0%	NA	60.0%
Legal/Regulatory/Compliance tracking (i.e., does plan comply with applicable laws, regulations, etc.)	48.0%	39.2%	53.1%	56.6%	46.4%	35.1%	47.4%	0.0%	60.0%	80.0%	NA	20.0%
Technical help with corporate transactions impacting the plan	33.3%	32.7%	36.2%	34.6%	30.4%	22.7%	10.5%	0.0%	20.0%	0.0%	NA	20.0%

## Is financial/investment advice offered to participants in your DC plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes - through one-on-one onsite meetings with a financial planner/adviser outside of the plan	51.0%	50.9%	56.6%	51.1%	41.7%	34.8%	50.0%	25.0%	87.5%	40.0%	NA	20.0%
Yes - using a 3rd party (i.e., Financial Engines, Morningstar, etc.) independent of our recordkeeper	27.0%	22.1%	24.1%	28.9%	37.1%	45.4%	20.8%	25.0%	0.0%	20.0%	NA	20.0%
Yes - using proprietary services/tools offered through our DC provider's website/call center/etc.	41.4%	28.4%	43.3%	46.4%	57.0%	57.4%	54.2%	25.0%	62.5%	40.0%	NA	80.0%
Yes - but advice is offered through a program not described above	2.4%	2.4%	1.5%	3.4%	3.3%	3.5%	4.2%	25.0%	0.0%	0.0%	NA	0.0%
No - advice is not currently offered to participants	15.6%	19.5%	13.5%	13.2%	15.2%	14.9%	12.5%	25.0%	0.0%	20.0%	NA	20.0%

## Does your organization provide formal financial education/ guidance to participants on these topics?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Saving strategies/ prioritization	52.5%	30.6%	54.6%	64.9%	70.8%	80.1%	56.0%	25.0%	75.0%	50.0%	NA	60.0%
Budgeting tools	43.4%	21.5%	43.2%	53.7%	66.7%	81.6%	56.0%	0.0%	75.0%	66.7%	NA	60.0%
Financial markets and investing basics	45.6%	26.6%	44.5%	57.5%	66.1%	78.0%	52.0%	25.0%	62.5%	50.0%	NA	80.0%
Credit/Debt management (excluding student loans/debt)	26.1%	11.6%	23.4%	30.6%	46.2%	63.1%	36.0%	0.0%	37.5%	33.3%	NA	60.0%
Student loan/debt	19.3%	6.4%	15.4%	24.6%	38.6%	55.3%	32.0%	0.0%	25.0%	16.7%	NA	60.0%
Home buying	15.2%	8.1%	12.7%	20.5%	20.5%	38.3%	24.0%	0.0%	25.0%	16.7%	NA	40.0%
College saving	25.4%	10.5%	24.4%	30.6%	45.0%	55.3%	32.0%	0.0%	37.5%	16.7%	NA	60.0%
Tax/Estate planning	25.6%	12.1%	23.4%	32.8%	38.0%	60.3%	40.0%	0.0%	50.0%	33.3%	NA	60.0%

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## Does your organization provide formal financial education/ guidance to participants on these topics?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Retirement health care costs/savings options	32.2%	14.5%	30.2%	47.8%	46.2%	63.8%	36.0%	0.0%	37.5%	50.0%	NA	60.0%
Social Security withdrawal options/strategies	24.9%	11.7%	22.0%	30.2%	43.9%	56.7%	40.0%	0.0%	50.0%	50.0%	NA	60.0%
Rolling over past balances into the plan (for newly hired employees)	37.1%	24.4%	37.4%	41.0%	54.4%	56.7%	48.0%	25.0%	50.0%	50.0%	NA	60.0%
Rollover options for terminated/separating employees	35.4%	23.9%	33.7%	41.0%	52.6%	56.7%	44.0%	25.0%	37.5%	50.0%	NA	60.0%
NONE - plan does not currently offer any education targeted on these topics	34.5%	58.5%	31.7%	19.4%	15.8%	7.8%	24.0%	50.0%	25.0%	16.7%	NA	20.0%

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## In the past 12 months, which of the following channels has your organization used to support formal education and communication campaigns?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Email	70.2%	48.7%	72.1%	84.8%	89.2%	93.1%	88.5%	75.0%	100.0%	83.3%	NA	100.0%
Postal mail	29.5%	14.0%	23.8%	40.2%	54.5%	67.4%	38.5%	0.0%	25.0%	50.0%	NA	66.7%
Recordkeeper's website	60.2%	34.4%	60.7%	77.5%	86.9%	91.7%	73.1%	50.0%	75.0%	50.0%	NA	100.0%
Corporate intranet / employee website	32.0%	8.1%	26.4%	53.6%	64.2%	72.9%	57.7%	25.0%	37.5%	83.3%	NA	83.3%
Mobile apps	19.3%	8.4%	18.9%	24.3%	29.5%	41.0%	19.2%	0.0%	37.5%	0.0%	NA	33.3%
Onsite group meetings	30.3%	24.6%	35.4%	27.5%	29.5%	32.6%	38.5%	50.0%	75.0%	16.7%	NA	0.0%
Webinars (i.e., interactive virtual meetings)	41.1%	15.4%	37.4%	60.1%	70.5%	86.8%	65.4%	25.0%	62.5%	50.0%	NA	100.0%
Videos (i.e., static, pre-produced content)	22.7%	7.3%	19.6%	32.2%	43.2%	54.9%	46.2%	25.0%	50.0%	16.7%	NA	66.7%
Digital media (i.e., social media, podcasts, etc.)	4.5%	2.2%	3.5%	4.3%	10.2%	11.8%	7.7%	0.0%	12.5%	0.0%	NA	16.7%
Indirect channels (i.e., in-office posters, etc.)	12.2%	7.3%	9.7%	14.9%	19.3%	29.9%	7.7%	25.0%	0.0%	0.0%	NA	16.7%
NONE - no formal C&E campaigns in 2020	15.9%	34.8%	12.5%	3.3%	1.7%	1.4%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

# Plan Oversight and Administration

## Does your organization have an investment committee for the DC plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes - committee includes only INTERNAL employees	40.8%	19.2%	41.8%	50.0%	59.6%	69.7%	42.3%	0.0%	37.5%	33.3%	NA	83.3%
Yes - committee includes only people EXTERNAL to our company	2.6%	3.5%	2.1%	2.4%	0.6%	4.1%	7.7%	0.0%	12.5%	16.7%	NA	0.0%
Yes - committee includes a MIX OF INTERNAL AND EXTERNAL people	28.9%	15.7%	33.1%	43.7%	33.1%	22.8%	38.5%	25.0%	50.0%	50.0%	NA	16.7%
Yes - but unsure of composition of investment committee	1.0%	0.4%	1.4%	0.8%	1.2%	1.4%	0.0%	0.0%	0.0%	0.0%	NA	0.0%
No - plan does not have an investment committee	20.6%	47.6%	16.8%	2.4%	1.8%	1.4%	11.5%	75.0%	0.0%	0.0%	NA	0.0%
Unsure / Don't Know	6.2%	13.6%	4.8%	0.8%	3.6%	0.7%	0.0%	0.0%	0.0%	0.0%	NA	0.0%

## Have you or your retirement plan committee members received or participated in any formal fiduciary training within the past 2 years (since 2019)?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	43.8%	24.4%	36.1%	58.3%	72.5%	79.2%	57.7%	0.0%	50.0%	66.7%	NA	83.3%
No	39.6%	56.7%	44.9%	28.4%	16.8%	9.0%	23.1%	25.0%	37.5%	16.7%	NA	16.7%
Unsure / Don't know	16.6%	18.8%	19.0%	13.3%	10.8%	11.8%	19.2%	75.0%	12.5%	16.7%	NA	0.0%

## Do you have a written investment policy statement (IPS) for the DC plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	63.6%	44.0%	59.6%	78.3%	87.6%	94.5%	80.8%	50.0%	87.5%	83.3%	NA	100.0%
No	13.9%	23.2%	14.5%	6.6%	5.3%	2.8%	7.7%	25.0%	12.5%	0.0%	NA	0.0%
Unsure / Don't know	22.5%	32.8%	25.9%	15.1%	7.1%	2.8%	11.5%	25.0%	0.0%	16.7%	NA	0.0%

**NOTE:** An IPS is a separate document from the Summary Plan Description and outlines procedures for evaluating investment options.

## If you have an IPS, does it specifically cover target-date funds and their underlying funds?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes	64.9%	57.5%	65.2%	68.5%	71.4%	63.6%	75.0%	100.0%	100.0%	60.0%	NA	60.0%
No	15.5%	15.9%	14.3%	16.0%	14.3%	18.9%	15.0%	0.0%	0.0%	0.0%	NA	40.0%
Unsure / Don't know	19.6%	26.6%	20.6%	15.5%	14.3%	17.4%	10.0%	0.0%	0.0%	40.0%	NA	0.0%

## Does your plan employ a 3rd party (TPA, adviser, recordkeeper, etc.) as a 3(16) fiduciary?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Yes – and the 3rd party has broad scope acceptance of the administrator role, to include being named as the plan administrator in the plan document	24.1%	28.2%	26.4%	21.8%	19.2%	8.6%	12.0%	25.0%	0.0%	16.7%	NA	0.0%
Yes – but the 3rd party has only has limited scope acceptance of some of the administrative functions; actions outside of scope is retained by plan officials	28.8%	26.2%	25.7%	38.1%	34.7%	29.3%	28.0%	25.0%	37.5%	33.3%	NA	20.0%
No	33.9%	28.6%	34.1%	31.5%	35.9%	54.3%	48.0%	50.0%	50.0%	16.7%	NA	80.0%
Unsure / Don't Know	13.1%	17.0%	13.7%	8.6%	10.2%	7.9%	12.0%	0.0%	12.5%	33.3%	NA	0.0%

**NOTE:** An ERISA Section 3(16) plan administrator is the fiduciary responsible for overall governance of the plan with the exception of the trustee functions. Examples of plan 3(16) plan governance actions include: (1) the authorization of distributions or loans, (2) actions to enforce or interpret the terms of the plan, or (3) decisions on claims for benefits or other plan-related decisions.

Please indicate your level of agreement with each of the following statements:

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM-\$200MM	>\$200MM-\$1B	>\$1B
Most of our employees will achieve their retirement goals by age 65	36.2%	29.1%	33.4%	48.3%	45.2%	43.0%	33.3%	0.0%	50.0%	25.0%	NA	50.0%
Our company has a responsibility to improve the "financial wellness" of our employees	59.4%	49.0%	60.0%	68.0%	62.6%	74.3%	77.8%	66.7%	66.7%	75.0%	NA	100.0%
When offered, financial wellness programs are very useful to employees/participants	63.7%	55.5%	66.6%	65.9%	64.6%	73.3%	61.1%	33.3%	50.0%	50.0%	NA	100.0%
The value of financial wellness programs to our organization is clear and easy to measure.	33.5%	27.3%	37.9%	36.0%	30.4%	33.7%	22.2%	33.3%	33.3%	25.0%	NA	0.0%

*Note: Values reflect the percent that "strongly agree" or "moderately agree" with each statement; 6-point Likert scale, no middle value.*

## Which of the following measures, if any, do you use to gauge the success of your plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
Participation Rate(s)	77.3%	60.4%	80.8%	88.3%	87.8%	86.4%	73.9%	33.3%	71.4%	100.0%	NA	83.3%
Average Deferral Rate(s)	59.6%	36.3%	60.6%	76.9%	79.1%	80.7%	65.2%	33.3%	57.1%	100.0%	NA	50.0%
Average Account Balance	40.7%	27.5%	41.8%	49.4%	55.8%	47.1%	30.4%	33.3%	14.3%	40.0%	NA	33.3%
% of Participants meeting Projected Monthly Retirement Income Goals (i.e., \$X per month in retirement)	21.5%	17.5%	21.2%	25.5%	26.2%	23.6%	30.4%	0.0%	14.3%	20.0%	NA	50.0%
% of Participants meeting Retirement Income Replacement Ratio Goals (i.e., will replace Y% of income in retirement)	18.0%	9.4%	15.9%	23.9%	28.5%	34.3%	43.5%	33.3%	42.9%	20.0%	NA	50.0%
% of Participants Saving to Match	40.4%	27.9%	41.1%	47.8%	50.6%	54.3%	39.1%	33.3%	42.9%	60.0%	NA	33.3%
% of Participants with "Appropriate" Asset Allocations (i.e., close to target-date glide path, etc.)	17.8%	7.5%	15.6%	23.9%	30.8%	37.1%	30.4%	0.0%	28.6%	0.0%	NA	66.7%

LIST CONTINUES ON THE PAGE THAT FOLLOWS

## Which of the following measures, if any, do you use to gauge the success of your plan?

	All Industries						Education: Higher Education					
	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B	Overall	<\$5MM	\$5MM - \$50MM	>\$50MM- \$200MM	>\$200MM- \$1B	>\$1B
% of Participants Accessing Account Online within past year (or other period)	17.4%	8.1%	20.0%	21.5%	24.4%	20.7%	13.0%	0.0%	28.6%	20.0%	NA	0.0%
External/Competitive Benchmarking of Plan	30.8%	11.5%	28.6%	51.4%	50.6%	46.4%	60.9%	66.7%	57.1%	60.0%	NA	50.0%
% of Participants who Increased Deferral Rates in the prior 12 months (or other period)	22.3%	14.6%	23.0%	23.5%	29.7%	34.3%	8.7%	33.3%	14.3%	0.0%	NA	0.0%
% of Participants who Re-balanced Account in prior year (or other period)	6.5%	4.2%	7.6%	4.9%	8.1%	10.7%	8.7%	0.0%	14.3%	0.0%	NA	16.7%
% of Participants using Advice Tools/Seminars Offered through the Plan	20.5%	7.3%	19.1%	30.8%	32.0%	40.0%	47.8%	0.0%	57.1%	20.0%	NA	83.3%
Employee Satisfaction with Plan (through survey)	25.7%	25.2%	26.2%	29.1%	17.4%	29.3%	26.1%	33.3%	14.3%	40.0%	NA	16.7%
NONE - plan has no formal plan success measures	13.4%	29.4%	10.3%	4.9%	3.5%	0.7%	4.3%	0.0%	14.3%	0.0%	NA	0.0%

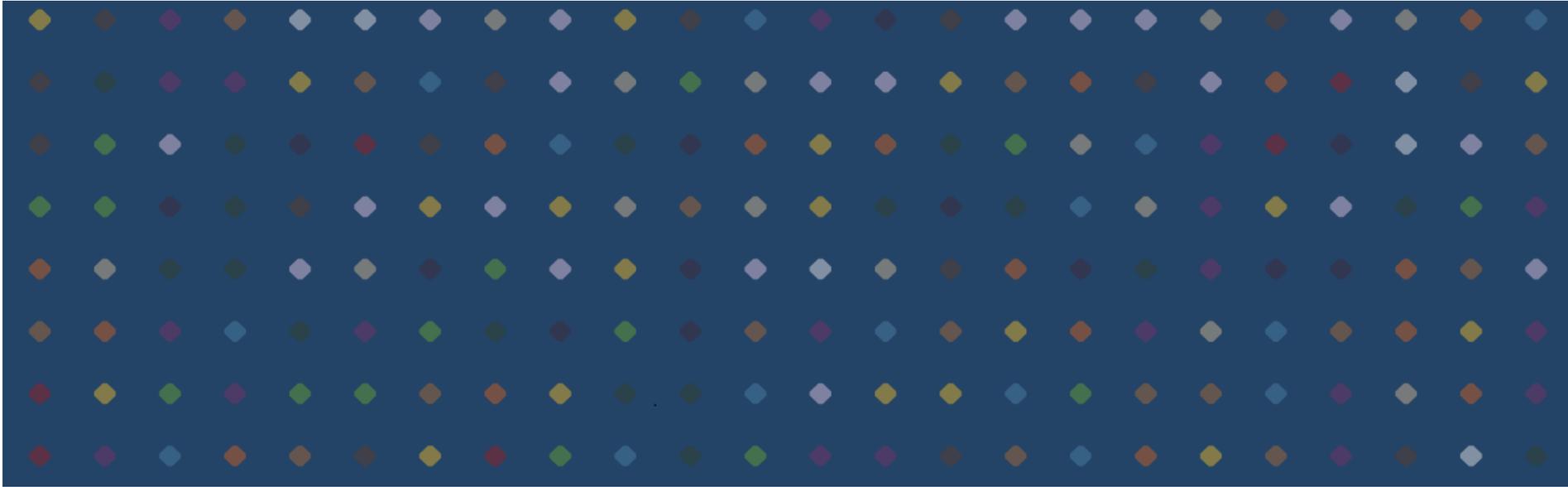
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- *Manufacturing: Consumer Products*
- *Manufacturing: Industrial Products*
- *Media/Communications/Publishing*
- *Membership Organizations / Industry Associations*
- *Nonprofit Organizations / Endowments / Foundations*
- *Oil & Gas/Energy*
- *Pharmaceuticals / BioTech*
- *Real Estate Management, Investment and Development*
- *Religious Organizations/Social Services*
- *Research & Development*
- *Restaurants and Food Service*
- *Retail*
- *Technology, Computers, and Software*
- *Telecommunications*
- *Transportation and Airlines*
- *Utilities*
- *Wholesale*



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## TARGET DATE FUND COMPARISON

**CAPTRUST**  
4208 Six Forks Road, Suite 1700  
Raleigh, NC 27609

Our mission is to enrich the lives of our clients, colleagues and communities through sound financial advice, integrity, and commitment to service beyond expectation.



## CAPTRUST CHECKLIST FOR DOL TARGET DATE TIPS RELEASE

A checklist for plan sponsors offering target date funds based on the Department of Labor's Employee Benefits Security Administration *Tips for ERISA Plan Fiduciaries* release

### SECTION 1: TARGET FUND SELECTION

#### 1. Review Investment Performance

- Review investment risk and return for each target date year in question over one-, three, and five-year trailing periods and since inception against appropriate target date peer groups and indices

#### 2. Review Glidepath and Series' Underlying Funds

- Against appropriate peer groups
- Against assumptions (in connection with glidepath construction)
- Understand the mix of stocks, bonds, cash, and other assets within the target date series, and how this mix changes over time
- Understand the manager's rebalancing methodology and approach to tactical asset allocation (if applicable)
- Identify when the series' glidepath will reach its most conservative point – at retirement or sometime after retirement
- Understand the underlying investments of the target date series
  - Asset classes utilized
  - Active versus passive management

#### 3. Review Management Team and Process

- Team tenure
- Approach to asset allocation as well as manager and/or security selection
- Roles and ownership of responsibilities
- Fund firm

#### 4. Review Plan Demographic Data and Additional Externalities

- Employee ages and average retirement age
- Deferral/contribution rates
- Savings amounts
- Employee turnover rate
- Withdrawal patterns
- Consider the existence of supplemental retirement plans

#### 5. Review the Availability and Applicability of Custom or Non-Proprietary Solutions

- Inquire with providers as to whether custom and non-proprietary TDFs are available
  - a. Weigh the costs and the benefits of custom or non-proprietary target date funds (to include non-financial costs such as administrative burden and complexity for participants and benefits such as the ability to use the plan's core line up as building blocks for the target date series)

#### 6. Review the Series' Fees

- Document the series' total cost, including any underlying fund's investment management fees
- Document any non-investment management fees and their purpose

#### 7. Review Employee Communications

- Provide information that describes what a target date fund is and its purpose in the plan
- Distribute information to participants regarding the specific target date series offered in the plan

### SECTION 2: ONGOING MONITORING PROCESS

#### 1. Periodically Review the Selected Target Date Fund Series

- Periodically review, at a minimum, whether there have been any significant changes to the selected target date fund series such as changes to:
  - a. Management
  - b. Asset allocation/glidepath
  - c. Investment philosophy
  - d. Fees
  - e. Underlying funds
- Periodically review investment risk and return



# SERIES DEMOGRAPHIC AND DESIGN REVIEW

Period Ending 9.30.22 | Q3 22

Target Date Series	TIAA-CREF Lifecycle - MF	T. Rowe Price Retirement - MF	JPMorgan SmartRetirement Blend - MF	Vanguard Target Retirement - MF
<b>Glidepath Management</b>	30 years after retirement (assumed at age 65)	30 years after retirement (assumed at age 67)	To retirement (assumed at age 65)	Through retirement (assumed at age 65) ending 7 years after retirement
<b>Assumed Investor Savings Rate:</b>	0.1	15%, including company match	The average investor contributes less than 8% of their salary up until age 50 and do not reach 10% before retirement.	Contributions start at 5% at age 25 and increase to 10% at age 65. Also includes a 50% employer match up to 3% of salary.
<b>Assumed Investor Income Growth Rate</b>	Equal to inflation	This is not a factor in the glidepath design.	Proprietary studies have shown varied results, but on average, wages increase about 5% every 2-3 years.	1.1% annual salary growth
<b>Income Replacement</b>	A range of percentages was used to design the glidepath	0.55	An estimated cost of an annuity to fund an annual payment of roughly 40% of pre-retirement income	The portfolios are designed to provide withdrawals in retirement based on multiples of an investor's age 65 salary.
<b>Assumed Accumulated Savings at Retirement</b>	No such assumption was made	10X salary at retirement.	An estimate of \$500,000 is used	N/A
<b>Life Expectancy</b>	Determined according to RP-2000 mortality tables	Consistent with current mortality tables	90 years	Through age 95
<b>Asset Allocation Flexibility</b>	Modest tactical allocation capability	Strict targets with narrow ranges	Tactical flexibility by prospectus	Strict targets with narrow ranges.
<b>Active vs. Passive</b>	Active	Active	Hybrid	Passive
<b>Other Assumptions</b>	Made conservative capital market assumption that equity risk premiums will be lower going forward	None	Considers anomalies in investor behavior like loans and large withdrawals shortly after retirement	Glidepath was tested against 10,000 potential lifetime return outcomes



# TDF COMPARISON – EXECUTIVE SUMMARY/EXPENSES

Period Ending 9.30.22 | Q3 22

Series	Expense Ratio		Revenue Share	
TIAA CREF Lifecycle Institutional	0.37% - 0.45%		0.00%	
T. Rowe Price Retirement I	0.34% - 0.46%		0.00%	
JPMorgan SmartRetirement® Blend R6	0.19% - 0.19%		0.00%	
Vanguard Target Retire Fund	0.08% - 0.08%		0.00%	
<i>CAPTRUST Active TDF Universe Median</i>	<i>0.34%-0.45%</i>			
<i>CAPTRUST Passive TDF Universe Median</i>	<i>0.08%-0.13%</i>			
Dedicated Asset Class Granularity/Diversification	TIAA-CREF Lifecycle - MF	T. Rowe Price Retirement - MF	JPMorgan SmartRetirement Blend - MF	Vanguard Target Retirement - MF
Emerging Markets	Yes	Yes	Yes	No
Intl/Global Debt	Yes	Yes	Yes	Yes
Inflation-Protected Secs	Yes	Yes	Yes	Yes
High Yield Fixed Income	Yes	Yes	Yes	No
Real Estate	Yes	No	Yes	No
Commodities	No	No	No	No
Glidepath (To vs. Through)				
TIAA CREF Lifecycle Institutional			Through Retirement (30 Years)	
T. Rowe Price Retirement I			Through Retirement (30 Years)	
JPMorgan SmartRetirement® Blend R6			To Retirement	
Vanguard Target Retire Fund			Through Retirement (7 Years)	

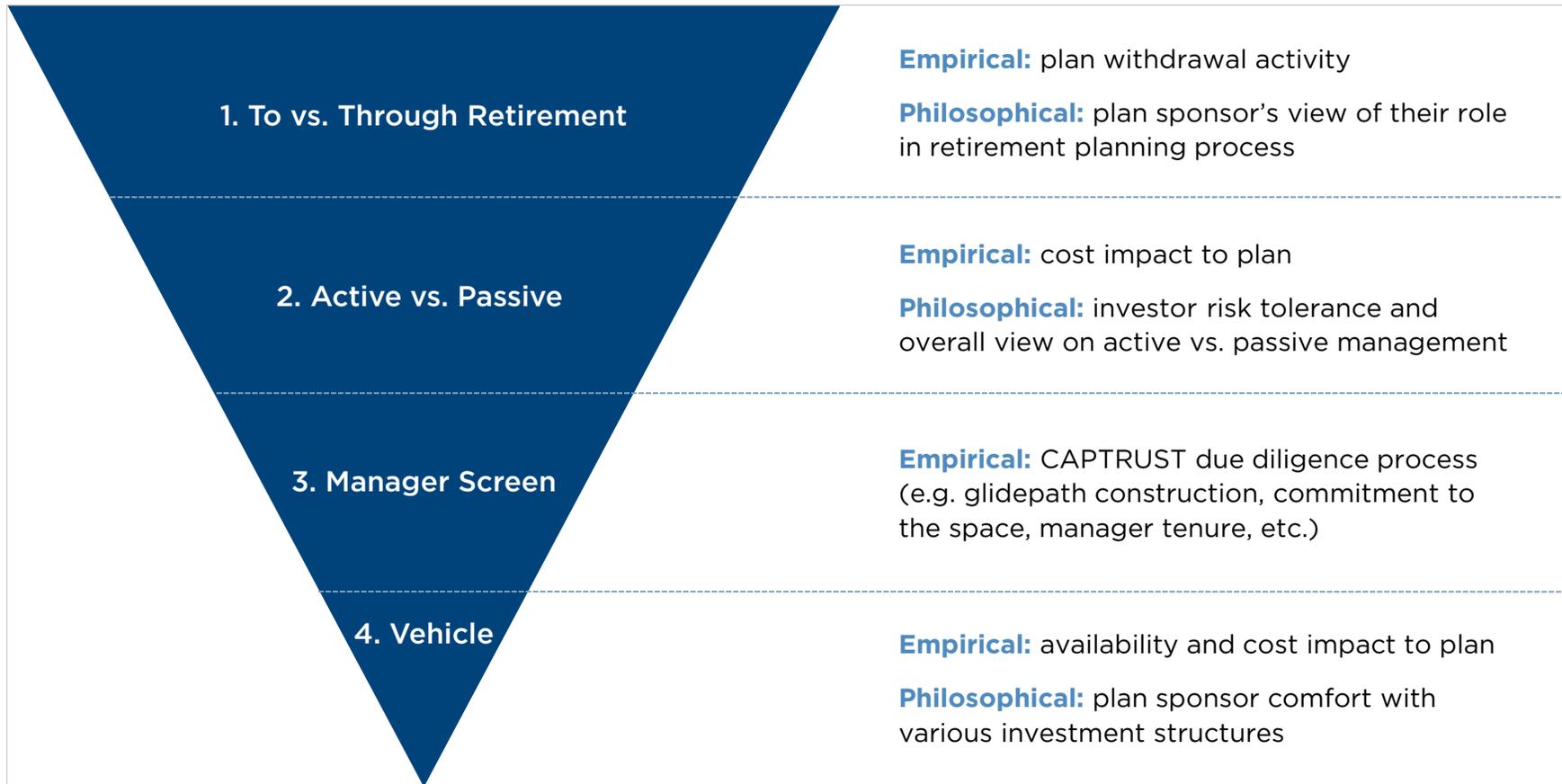
Active Option

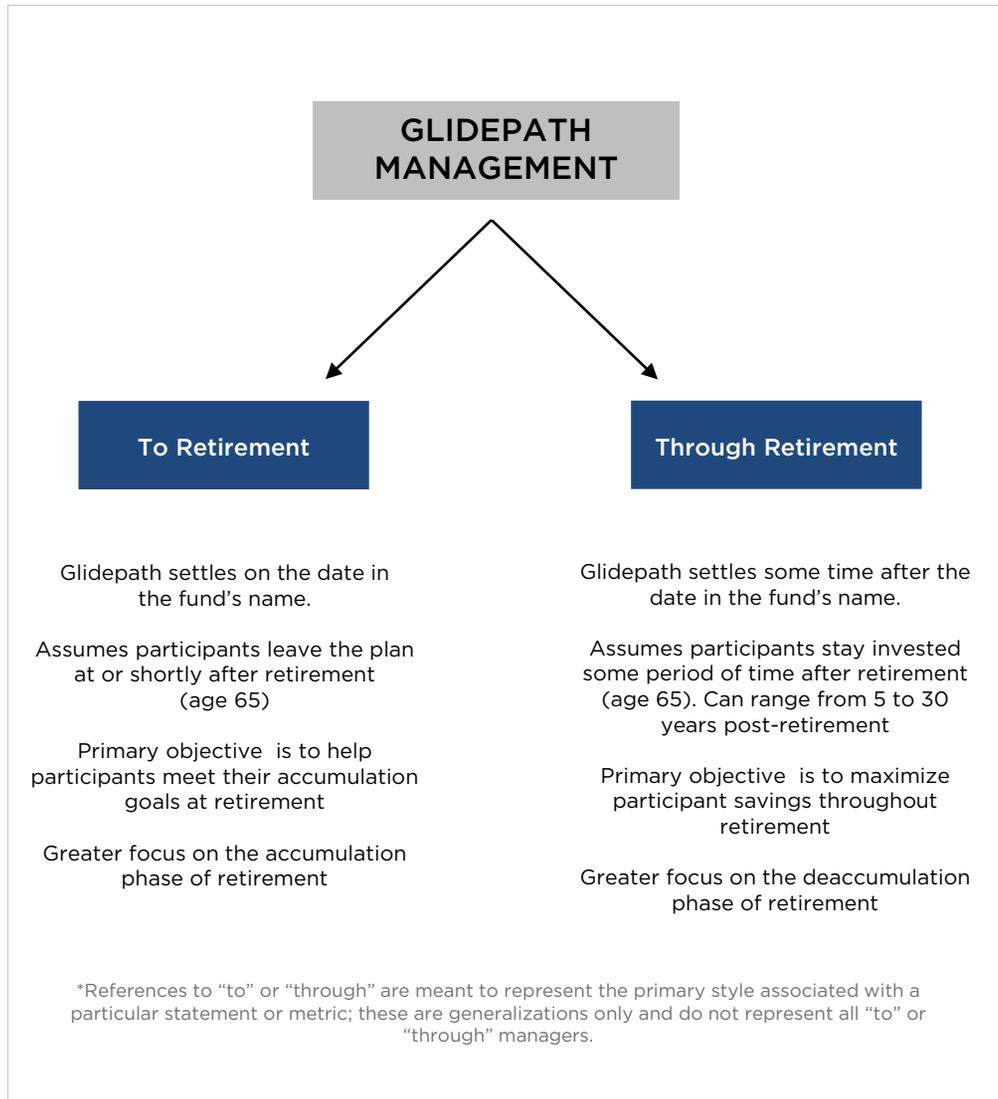
Passive Option

Hybrid Option

Information shown is based on data collected from third party sources, including investment manager databases and/or investment manager requests for information and is not warranted to be accurate or complete. The fees shown for the peer groups are comprised of the institutional mutual fund share classes for each respective asset class, as determined by CAPTRUST, and divided between active and passive investment managers. Not all mutual funds have an institutional share class. This material has been prepared solely for the Plan illustrated here and has been provided for informational purposes only. This material is for institutional investor use only and is not intended to be shared with individual investors.







**PHILOSOPHICAL**

**Which better describes the committee's primary objective for plan participant's asset allocation at retirement?**

An asset allocation designed to support withdrawals over a participant's lifetime, but with higher potential market risk

An asset allocation designed to support immediate withdrawals at retirement age, but with lower potential for asset growth

**Is the committee's goal for participants to stay in the plan past retirement age (assumed to be 65)?**

Yes  
No

**Does the committee have a preference towards one of the following glidepath types?**

To retirement  
Through retirement  
No preference

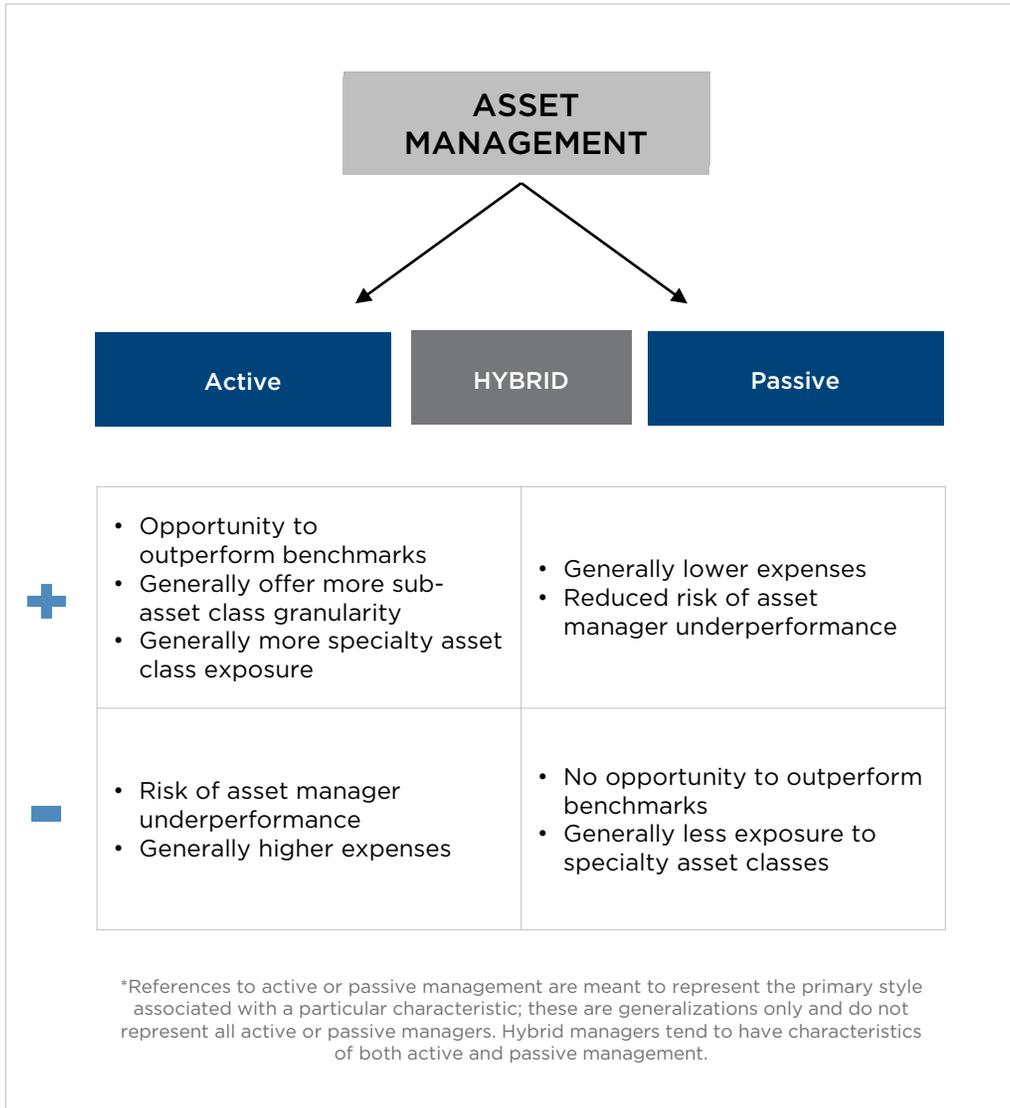
**EMPIRICAL**

**What percentage of defaulted participants stay invested in the plan past age 65?**

**How long, on average, do defaulted participants stay invested in the plan past age 65?**

Less than five years  
Between five and ten years  
Longer than ten years





**PHILOSOPHICAL**

Please rank the following in order of importance regarding target date funds (1=most important to 8=least important):

1. Fees
2. Tactical management (over or underweights to add value)
3. Investment manager diversification (open arch)
4. Ability to outperform a benchmark
5. Ability to outperform peers
6. Brand Recognition
7. Downside Protection
8. Upside participation

Does the committee have a preference towards one of the following Target Date management styles?

- Active
- Passive
- Hybrid (combination of active and passive)
- No preference

**EMPIRICAL**

What percentage of plan assets are invested in the QDIA option?

Is the plan currently paid for, in whole or in part, through revenue sharing?

- Yes
- No





**PHILOSOPHICAL**

Target Date managers focus on different types of risk when creating portfolios. Often, one of these risks must be weighted more heavily than the others. With this in mind, please rank the following risks in order of importance (1=most important to 4=least important):

1. Market Risk
2. Longevity Risk
3. Inflation Risk
4. Active Manager Risk

**What is the general risk-tolerance of plan participants?**

Conservative  
Moderate  
Aggressive



Mutual Fund Target Date Series

There are 30 distinct target date series available in mutual fund form that meet CAPTRUST minimum asset guidelines (below).

	To	Through
<b>Active</b>	American Century One Choice (100% Active) JPMorgan SmartRetirement (97% Active) MFS Lifetime (100% Active) MassMutual Retiresmart by JPM (87% Active) BlackRock Lifepath Dynamic (84% Active)	<b>Fidelity Freedom (86% Active)</b> Fidelity Advisor Freedom (89% Active) John Hancock Multi-Manager Lifetime (98% Active) Manning & Napier Target (100% Active) <b>T. Rowe Price Retirement (88% Active)</b> T. Rowe Price Target (89% Active) <b>TIAA-CREF Lifecycle (100% Active)</b> American Funds Target (100% Active) Principal Lifetime (94% Active) MassMutual Select TRP Retirement (89% Active)
<b>Hybrid</b>	<b>JPMorgan SmartRetirement Blend (37% Active)</b> Voya Solution (72% Active) Voya Target Retirement (31% Active)	Empower Lifetime (57% Active) Principal LifeTime Hybrid (35% Active) Fidelity Freedom Blend (64% Active) Fidelity Advisor Freedom Blend (65% Active) Schwab Target (61% Active)
<b>Passive</b>	<b>Blackrock Lifepath Index (0% Active)</b> Voya Index Solution (2% Active) John Hancock Multi-Index Preservation (0% Active)	Fidelity Freedom Index (0% Active) TIAA-CREF Lifecycle Index (3% Active) Allspring Target (0% Active) Schwab Target Index (2% Active) SSgA Target Retirement (0% Active) <b>Vanguard Target Retirement (0% Active)</b>

AUM: Target date providers must have at least \$1 billion in strategy assets under management. This restriction allows for assets to be allocated to the series without an investor becoming too large a percentage of the total AUM. Additionally, at \$1 billion in AUM, target date providers tend to be more established and successful, thus reducing the risk that a provider decides to exit the space.

\*The number beside each series denotes the % of active management provided by each TDF manager in their annual RFI to CAPTRUST.



**CIT Target Date Series**

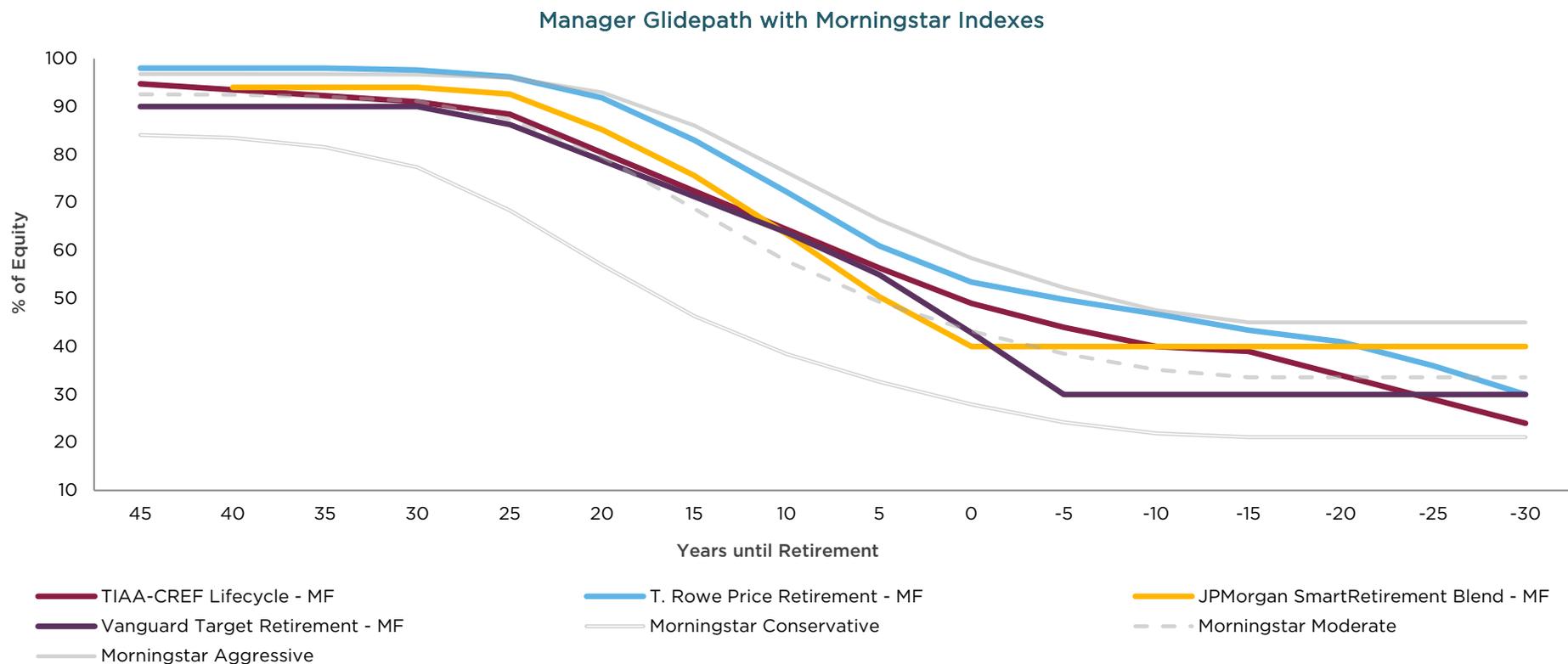
There are 21 distinct target date series available in collective trust form that meet CAPTRUST minimum asset guidelines (below). The majority of these series mirror their mutual fund counterparts in terms of asset allocation and glidepath.

	To	Through
<b>Active</b>	JPMCB SmartRetirement (97% Active) JPMCB SmartRetirement DRE (97% Active) Putnam Retirement Advantage (100% Active)	T. Rowe Price Retirement (88% Active)
<b>Hybrid</b>	JPMCB SmartRetirement Passive Blend (38% Active)	Great West Lifetime Trust (56% Active) Principal Lifetime Hybrid CIT (37% Active) Schwab Managed Retirement Trust (63% Active) T. Rowe Price Retirement Hybrid (60% Active) T. Rowe Price Retirement Blend (44% Active) Fidelity Freedom Blend CIT (64% Active) Prudential Day One (73% Active)
<b>Passive</b>	Blackrock Lifepath Index (0% Active)	Fidelity Freedom Index CIT (0% Active) Schwab Indexed Retirement Trust (2% Active) SSgA Target Retirement CIT (0% Active) Vanguard Target Retirement Trust (0% Active) Northern Trust (0% Active)

AUM: Target date providers must have at least \$1 billion in strategy assets under management. This restriction allows for assets to be allocated to the series without an investor becoming too large a percentage of the total AUM. Additionally, at \$1 billion in AUM, target date providers tend to be more established and successful, thus reducing the risk that a provider decides to exit the space.

\*The number beside each series denotes the % of active management provided by each TDF manager in their annual RFI to CAPTRUST.



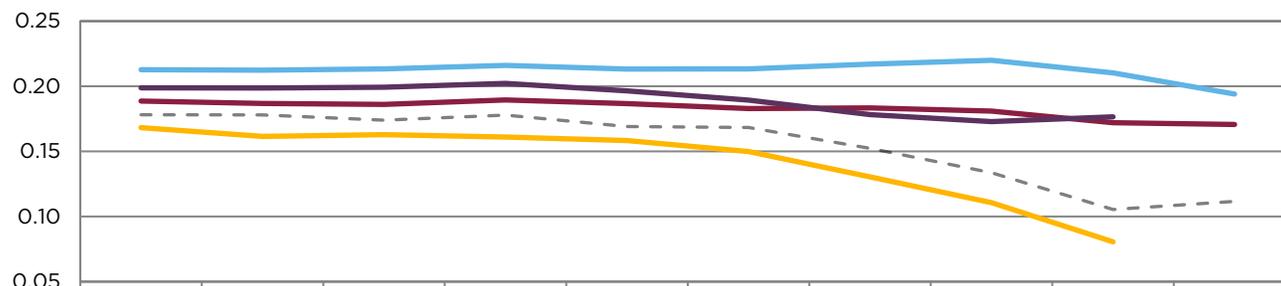


Series	Years Until Retirement											Years Past Retirement				
	45	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30
TIAA-CREF Lifecycle - MF	95	94	92	91	88	80	72	64	56	49	44	40	39	34	29	24
T. Rowe Price Retirement - MF	98	98	98	98	96	92	83	72	61	53	50	47	43	41	36	30
JPMorgan SmartRetirement Blend - MF		94	94	94	93	85	76	63	50	40	40	40	40	40	40	40
Vanguard Target Retirement - MF	90	90	90	90	86	79	71	64	55	43	30	30	30	30	30	30
Universe Median	90	89	90	89	86	80	69	58	47	42	38	32	32	32	32	32

\*The different shades of blue indicate how aggressive the glide-path is compared to the other TDF series in the chart. The darker the blue, the more aggressive the series is and vice versa. These are strategic allocations as of 12.31.21, not tactical allocations.

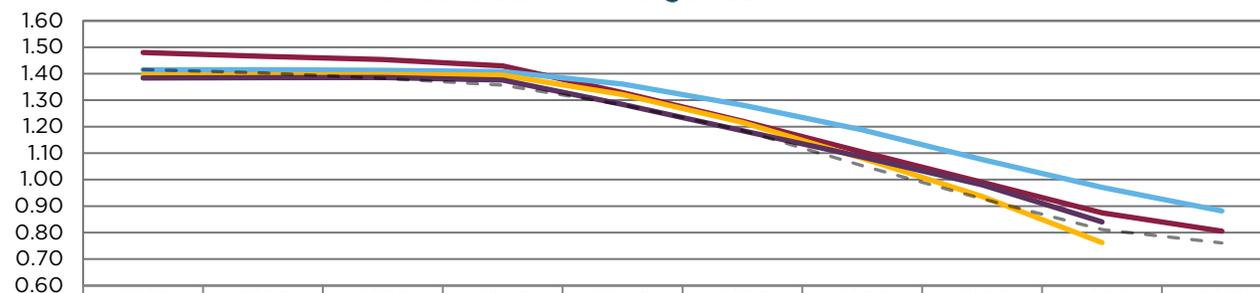


### 5 Year Sharpe Ratio Per Vintage Year



	2060	2055	2050	2045	2040	2035	2030	2025	2020	2015
TIAA-CREF Lifecycle - MF	0.19	0.19	0.19	0.19	0.19	0.18	0.18	0.18	0.17	0.17
T. Rowe Price Retirement - MF	0.21	0.21	0.21	0.22	0.21	0.21	0.22	0.22	0.21	0.19
JPMorgan SmartRetirement Blend - MF	0.17	0.16	0.16	0.16	0.16	0.15	0.13	0.11	0.08	
Vanguard Target Retirement - MF	0.20	0.20	0.20	0.20	0.20	0.19	0.18	0.17	0.18	
Peer Group Median	0.18	0.18	0.17	0.18	0.17	0.17	0.15	0.13	0.11	0.11

### 5 Year Beta Per Vintage Year

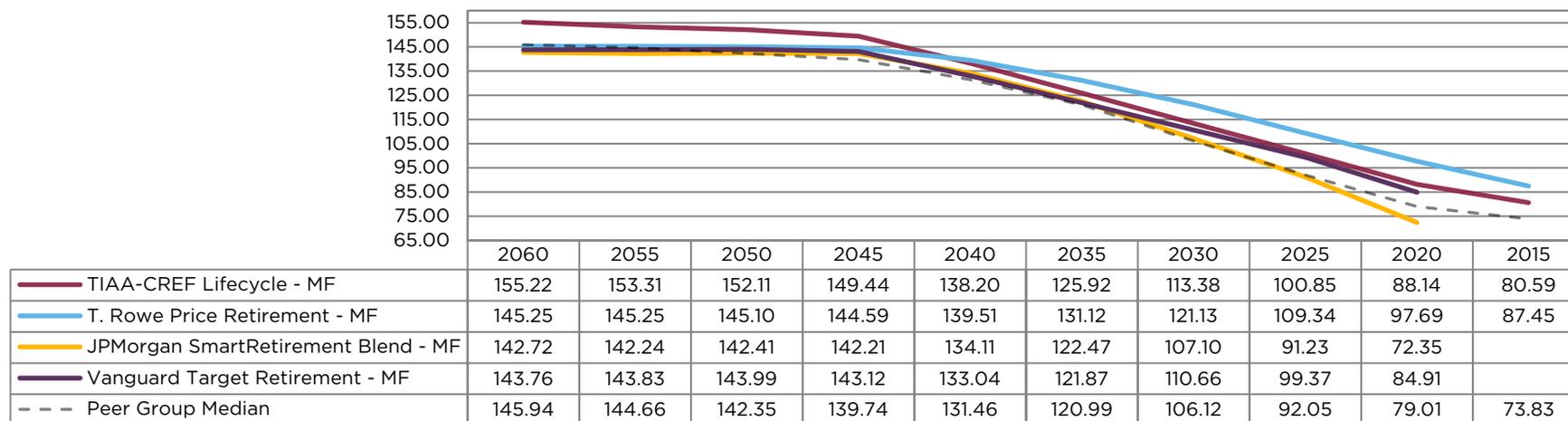


	2060	2055	2050	2045	2040	2035	2030	2025	2020	2015
TIAA-CREF Lifecycle - MF	1.48	1.47	1.45	1.43	1.33	1.22	1.10	0.99	0.87	0.81
T. Rowe Price Retirement - MF	1.41	1.41	1.41	1.41	1.36	1.28	1.19	1.08	0.97	0.88
JPMorgan SmartRetirement Blend - MF	1.40	1.40	1.40	1.39	1.32	1.22	1.08	0.94	0.76	
Vanguard Target Retirement - MF	1.38	1.39	1.39	1.38	1.28	1.18	1.09	0.98	0.84	
Peer Group Median	1.42	1.40	1.38	1.36	1.28	1.19	1.05	0.93	0.81	0.76

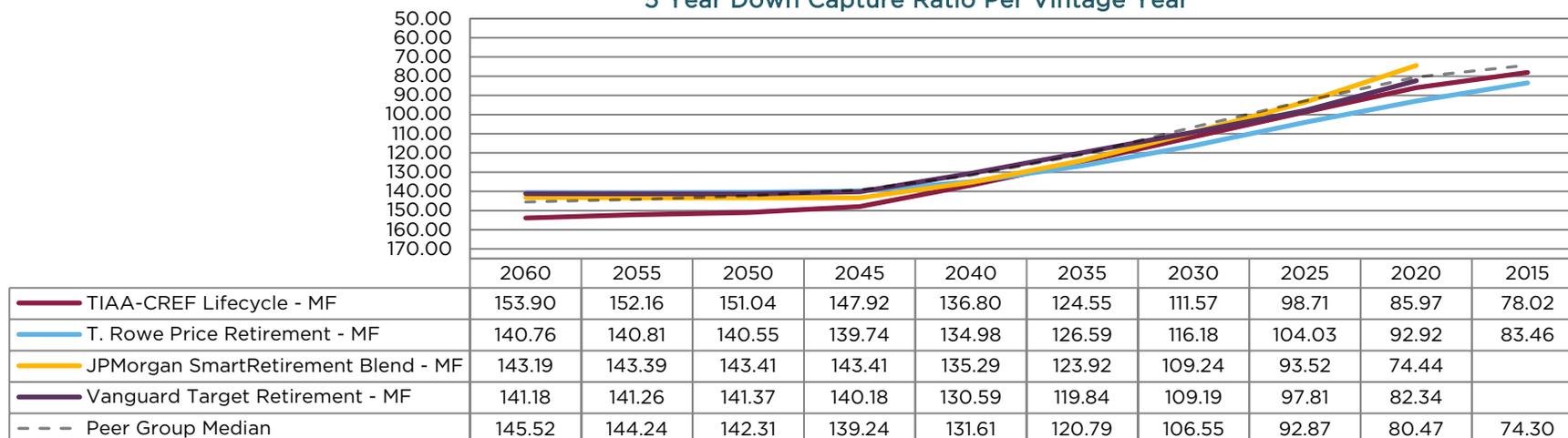
Beta calculations are derived using the Morningstar Moderate Target Risk Index. Source: Morningstar Direct. All metrics are calculated using the lowest cost mutual fund share class for each series.



## 5 Year Up Capture Ratio Per Vintage Year



## 5 Year Down Capture Ratio Per Vintage Year



Capture ratios are derived using the Morningstar Moderate Target Risk Index. Source: Morningstar Direct. All metrics are calculated using the lowest cost mutual fund share class for each series.



# SELECT MANAGER PERFORMANCE

Period Ending 9.30.22 | Q3 22

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle Retire Income Instl	-4.02%	-16.37%	-14.53%	1.01%	2.50%	4.37%
JPMorgan SmartRetirement® Blend IncomeR6	-4.26%	-17.51%	-15.48%	-0.37%	1.59%	3.40%
Vanguard Target Retirement Income Fund	-4.64%	-15.89%	-14.19%	-0.02%	1.96%	3.31%
Morningstar Target Date Income	-4.28%	-15.19%	-13.68%	-0.49%	1.41%	2.77%
S&P Target Date Retirement Income TR USD	-3.97%	-15.00%	-13.31%	0.06%	1.88%	3.23%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
T. Rowe Price Retirement I 2005 I	-4.69%	-17.42%	-15.56%	1.09%	2.57%	-
TIAA-CREF Lifecycle 2010 Institutional	-3.86%	-16.21%	-14.45%	1.07%	2.56%	4.70%
T. Rowe Price Retirement I 2010 I	-4.74%	-17.97%	-15.93%	1.42%	2.85%	-
Morningstar Target Date 2000-2010	-4.91%	-16.31%	-14.40%	0.30%	2.05%	4.07%
S&P Target Date 2010 TR USD	-4.07%	-15.66%	-13.60%	0.71%	2.33%	3.99%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2015 Institutional	-4.00%	-16.91%	-14.93%	1.38%	2.79%	5.13%
T. Rowe Price Retirement I 2015 I	-4.79%	-18.41%	-16.26%	1.84%	3.18%	-
Morningstar Target Date 2015	-5.22%	-17.57%	-15.12%	0.71%	2.33%	4.63%
S&P Target Date 2015 TR USD	-4.23%	-16.50%	-13.95%	1.05%	2.61%	4.65%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2020 Institutional	-4.22%	-17.81%	-15.66%	1.54%	2.94%	5.62%
T. Rowe Price Retirement I 2020 I	-4.98%	-18.99%	-16.66%	2.23%	3.56%	-
JPMorgan SmartRetirement® Blend 2020 R6	-4.31%	-17.56%	-15.58%	-0.08%	1.91%	4.63%
Vanguard Target Retirement 2020 Fund	-5.12%	-18.21%	-15.83%	1.17%	2.91%	5.46%
Morningstar Target Date 2020	-5.35%	-18.02%	-15.58%	0.73%	2.37%	4.53%
S&P Target Date 2020 TR USD	-4.59%	-17.57%	-14.75%	0.98%	2.64%	5.11%

DISCLAIMER: Fund performance depicts historical performance and is not meant to predict future results. Peer group averages are derived from Morningstar and are provided for comparison purposes only. The information and statistics in this report are from sources believed to be reliable but are not warranted by CAPTRUST Financial Advisors to be accurate or complete. The opinions expressed in this report are subject to change without notice. This material has been prepared or is distributed solely for informational purposes and is not a solicitation or an offer to buy any security or instrument or to participate in any trading strategy. We believe this information to fully satisfy the disclosure requirements of ERISA section 408(b)(2).



# SELECT MANAGER PERFORMANCE

Period Ending 9.30.22 | Q3 22

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2025 Institutional	-4.40%	-19.09%	-16.62%	1.98%	3.27%	6.20%
T. Rowe Price Retirement I 2025 I	-5.20%	-20.25%	-17.65%	2.74%	3.94%	-
JPMorgan SmartRetirement® Blend 2025 R6	-4.98%	-19.83%	-17.02%	0.55%	2.39%	5.37%
Vanguard Target Retirement 2025 Fund	-5.59%	-20.35%	-17.53%	1.40%	3.15%	5.96%
Morningstar Target Date 2025	-5.77%	-20.50%	-17.20%	1.74%	3.12%	5.91%
S&P Target Date 2025 TR USD	-4.57%	-18.31%	-15.16%	1.81%	3.24%	5.80%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2030 Institutional	-4.70%	-20.50%	-17.66%	2.40%	3.54%	6.73%
T. Rowe Price Retirement I 2030 I	-5.58%	-22.12%	-19.10%	2.99%	4.19%	-
JPMorgan SmartRetirement® Blend 2030 R6	-5.43%	-21.43%	-18.05%	1.14%	2.82%	6.02%
Vanguard Target Retirement 2030 Fund	-5.93%	-21.60%	-18.42%	1.82%	3.43%	6.46%
Morningstar Target Date 2030	-5.70%	-20.50%	-17.11%	2.09%	3.39%	5.78%
S&P Target Date 2030 TR USD	-4.98%	-19.79%	-16.23%	2.26%	3.58%	6.34%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2035 Institutional	-4.97%	-21.91%	-18.81%	2.74%	3.79%	7.23%
T. Rowe Price Retirement I 2035 I	-5.91%	-23.69%	-20.46%	3.22%	4.37%	-
JPMorgan SmartRetirement® Blend 2035 R6	-5.77%	-22.71%	-18.65%	1.85%	3.30%	6.59%
Vanguard Target Retirement 2035 Fund	-6.09%	-22.40%	-18.87%	2.39%	3.79%	6.99%
Morningstar Target Date 2035	-5.92%	-22.94%	-18.61%	3.02%	4.00%	6.99%
S&P Target Date 2035 TR USD	-5.50%	-21.51%	-17.42%	2.75%	3.92%	6.83%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2040 Institutional	-5.22%	-23.08%	-19.57%	3.25%	4.09%	7.64%
T. Rowe Price Retirement I 2040 I	-6.17%	-24.94%	-21.49%	3.51%	4.57%	-
JPMorgan SmartRetirement® Blend 2040 R6	-6.13%	-23.75%	-19.29%	2.29%	3.62%	6.97%
Vanguard Target Retirement 2040 Fund	-6.33%	-23.27%	-19.42%	2.91%	4.12%	7.40%
Morningstar Target Date 2040	-5.99%	-22.27%	-18.22%	2.91%	3.94%	6.45%
S&P Target Date 2040 TR USD	-5.83%	-22.65%	-18.21%	3.08%	4.16%	7.18%

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# SELECT MANAGER PERFORMANCE

Period Ending 9.30.22 | Q3 22

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2045 Institutional	-5.42%	-24.10%	-20.32%	3.76%	4.36%	7.84%
T. Rowe Price Retirement I 2045 I	-6.31%	-25.43%	-21.88%	3.77%	4.73%	-
JPMorgan SmartRetirement® Blend 2045 R6	-6.40%	-24.58%	-19.69%	2.63%	3.80%	7.07%
Vanguard Target Retirement 2045 Fund	-6.51%	-24.10%	-19.93%	3.46%	4.42%	7.62%
Morningstar Target Date 2045	-6.22%	-24.11%	-19.26%	3.59%	4.36%	7.48%
S&P Target Date 2045 TR USD	-6.01%	-23.33%	-18.70%	3.25%	4.27%	7.41%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2050 Institutional	-5.57%	-24.60%	-20.67%	3.79%	4.35%	7.88%
T. Rowe Price Retirement I 2050 I	-6.34%	-25.65%	-22.06%	3.73%	4.70%	-
JPMorgan SmartRetirement® Blend 2050 R6	-6.46%	-24.68%	-19.80%	2.66%	3.83%	7.09%
Vanguard Target Retirement 2050 Fund	-6.64%	-24.43%	-20.18%	3.41%	4.39%	7.60%
Morningstar Target Date 2050	-6.02%	-22.96%	-18.47%	3.52%	4.39%	6.98%
S&P Target Date 2050 TR USD	-6.07%	-23.62%	-18.88%	3.37%	4.35%	7.61%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2055 Institutional	-5.60%	-24.71%	-20.79%	3.85%	4.39%	7.93%
T. Rowe Price Retirement I 2055 I	-6.40%	-25.72%	-22.15%	3.68%	4.69%	-
JPMorgan SmartRetirement® Blend 2055 R6	-6.47%	-24.64%	-19.75%	2.63%	3.81%	7.04%
Vanguard Target Retirement 2055 Fund	-6.63%	-24.44%	-20.17%	3.40%	4.38%	7.58%
Morningstar Target Date 2055	-6.25%	-24.54%	-19.56%	3.88%	4.63%	-
S&P Target Date 2055 TR USD	-6.07%	-23.69%	-18.94%	3.42%	4.39%	7.74%

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# SELECT MANAGER PERFORMANCE

Period Ending 9.30.22 | Q3 22

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2060 Institutional	-5.55%	-24.78%	-20.79%	3.96%	4.46%	-
T. Rowe Price Retirement I 2060 I	-6.35%	-25.69%	-22.08%	3.71%	4.69%	-
JPMorgan SmartRetirement® Blend 2060 R6	-6.40%	-24.52%	-19.62%	2.62%	3.92%	-
Vanguard Target Retirement 2060 Fund	-6.64%	-24.44%	-20.16%	3.40%	4.38%	7.58%
Morningstar Target Date 2060	-6.30%	-24.93%	-20.22%	4.08%	4.74%	-
S&P Target Date 2060 TR USD	-6.09%	-23.73%	-18.99%	3.43%	4.44%	7.78%

Name	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
TIAA-CREF Lifecycle 2065 Institutional	-5.58%	-24.70%	-20.65%	-	-	-
T. Rowe Price Retirement I 2065 I	-6.30%	-25.63%	-21.92%	-	-	-
Vanguard Target Retirement 2065 Fund	-6.60%	-24.38%	-20.10%	3.38%	4.36%	-
Morningstar Target Date 2065+	-7.40%	-26.23%	-21.71%	4.00%	-	-
S&P Target Date 2065+ TR USD	-6.04%	-23.61%	-18.84%	3.52%	4.50%	-

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**APPENDIX**

Target Date Factsheets.....

Investment Vehicle Considerations.....

Target Date Fund Type Considerations.....

Custom Target Date Considerations.....

Glossary of Terms.....



## Investor Assumptions/Glidepath Methodology

Glidepath Management	• 30 years after retirement (assumed at age 65)
Assumed Investor Savings Rate:	• 10%
Assumed Investor Income Growth Rate	• Equal to inflation
Income Replacement	• A range of percentages was used to design the glidepath
Assumed Accumulated Savings at Retirement	• No such assumption was made
Life Expectancy	• Determined according to RP-2000 mortality tables
Asset Allocation Flexibility	• Up to 10% from targets
Other Assumptions	• Made conservative capital market assumption that equity risk premiums will be lower going forward

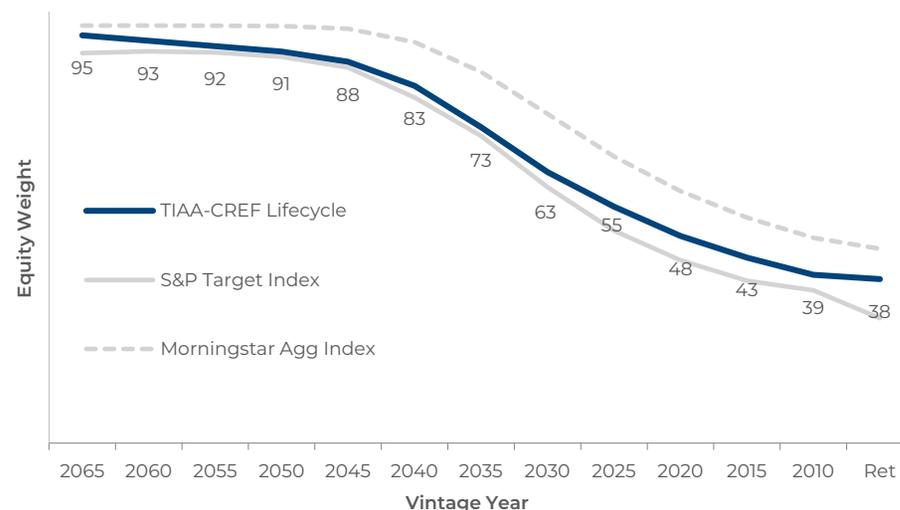
The TIAA CREF Lifecycle portfolios are constructed to achieve favorable retirement outcomes over time horizons and circumstances that broadly represent the investors of the funds. Reflecting this goal, TIAA models their portfolios to consider a large range of assumptions and focus not just on average or expected investment returns, but on the distribution of anticipated results at different points in time over the course of one's investment time horizon. This is why the Lifecycle Fund's glidepath is constructed with the objective of maximizing risk-adjusted outcomes at and in retirement for investors, based on their target retirement date.

## Investment Profile

% Open Architecture:	0%	Active/Passive:	Active
Inception Date:	10-15-2004	% Active:	100%
Net Assets \$MM:	\$32,265	Manager Tenure:	16.58 Yrs (longest)
Manager Name:	Erickson, Cunniff, Sedmak	Expense Range:	0.37%-0.70%
Avg # of Holdings:	20	Investment Structure:	Mutual Fund

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## Target Asset Allocation Glidepath per Vintage Year



## Dedicated Asset Class Granularity/Diversification

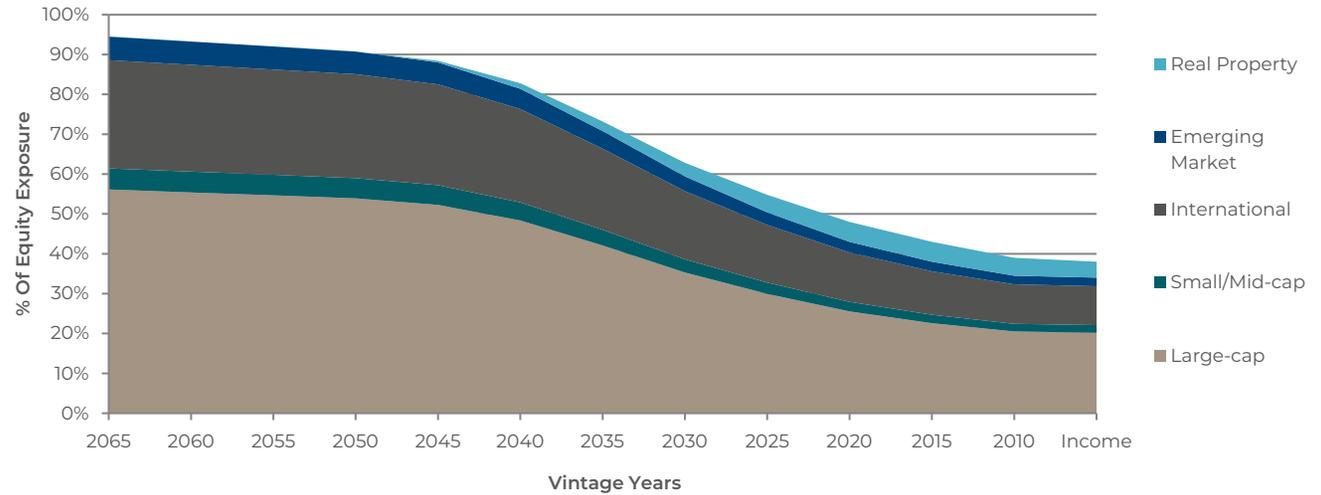
Emerging Market Equities	Yes
International/Global Debt	Yes
Inflation-Protected Securities	Yes
High Yield Fixed Income	Yes
Real Estate	Yes
Commodities	No

The equity exposure within TIAA CREF Lifecycle target date funds is well diversified between domestic and international equities. TIAA maintains a 70/30 split between domestic and international, with the 30% in international also encompassing an exposure to emerging market equities. As a participant gets closer to retirement, the mix of fixed income securities gradually transitions from more aggressive funds to a more conservative mix.

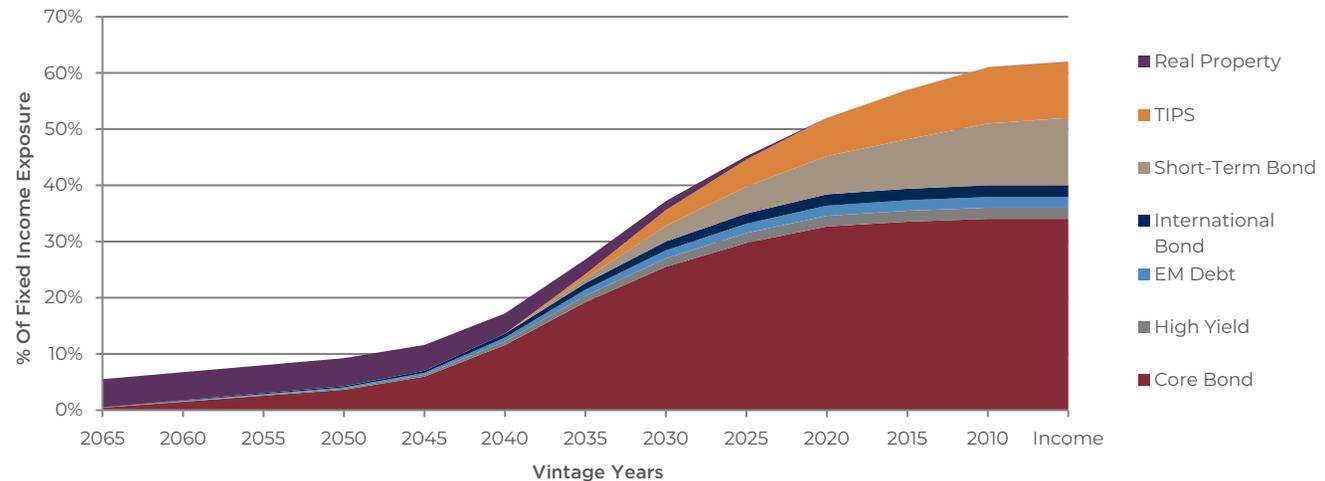
## Material Changes to the Series

- 2012:
- Introduced the tactical management program
- 2013:
- Increased allocation to international equity from 25% to 30%
- 2015:
- Added emerging markets debt
- 2016:
- Increased equity from 90% to 95% in longer dated vintage years
- 2016:
- Added a Direct Real Estate Fund
- 2017:
- Addition of International Bond, Small/Mid Cap Equity and International Small Cap Equity to strategic glidepath
- 2019:
- End of glidepath extended to 30 years with an allocation of 80% fixed income, 20% equity. The Nuveen Dividend Value fund was also added
- 2021:
- Moved the U.S./non-U.S. equity split within the series from 70% U.S./30% non-U.S. to 65% U.S./35% non-U.S.
- 2022:
- Increased equity allocation in the glidepath section that is 20 – 15 years away from retirement. The equity allocation was increased by 1.8% in the 2045 vintage, by 4% in the 2040 vintage, and by 2.2% in the 2035 vintage. To fund these increases, the vintages' fixed income allocations were reduced.

## Equity Exposure



## Fixed Income Exposure



\*All information provided by the asset manager, as of 12/31/21. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

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# TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
TIAA-CREF Lifecycle 2010 Institutional	1.11	0.10	112.70	109.93	1.10	0.21	110.05	109.62
S&P Target Date 2010 Index	1.00	0.06	100.00	100.00	1.00	0.19	100.00	100.00
Target-Date 2000-2010 Median	1.00	0.02	102.51	101.97	1.00	0.16	99.75	101.62
TIAA-CREF Lifecycle 2015 Institutional	1.08	0.13	109.78	107.60	1.08	0.22	107.24	106.93
S&P Target Date 2015 Index	1.00	0.09	100.00	100.00	1.00	0.21	100.00	100.00
Target-Date 2015 Median	1.03	0.09	103.39	106.12	1.02	0.19	100.88	103.59
TIAA-CREF Lifecycle 2020 Institutional	1.07	0.14	109.52	105.88	1.07	0.23	106.96	105.62
S&P Target Date 2020 Index	1.00	0.09	100.00	100.00	1.00	0.20	100.00	100.00
Target-Date 2020 Median	1.03	0.11	104.91	103.78	1.03	0.21	102.98	102.17
TIAA-CREF Lifecycle 2025 Institutional	1.06	0.17	106.49	105.85	1.06	0.24	104.75	105.33
S&P Target Date 2025 Index	1.00	0.16	100.00	100.00	1.00	0.24	100.00	100.00
Target-Date 2025 Median	1.02	0.13	100.86	103.67	1.01	0.21	99.05	102.39
TIAA-CREF Lifecycle 2030 Institutional	1.03	0.20	103.72	103.28	1.03	0.25	102.27	102.84
S&P Target Date 2030 Index	1.00	0.19	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2030 Median	1.01	0.17	100.53	102.73	1.01	0.24	99.96	101.57
TIAA-CREF Lifecycle 2035 Institutional	1.00	0.21	100.56	100.66	1.00	0.25	100.07	100.76
S&P Target Date 2035 Index	1.00	0.21	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2035 Median	0.99	0.20	99.67	101.12	1.00	0.25	98.45	100.14
TIAA-CREF Lifecycle 2040 Institutional	1.00	0.24	101.67	101.14	1.02	0.26	101.60	102.24
S&P Target Date 2040 Index	1.00	0.23	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2040 Median	1.01	0.22	100.92	101.83	1.01	0.26	99.51	100.83
TIAA-CREF Lifecycle 2045 Institutional	1.03	0.26	105.98	104.47	1.05	0.27	105.54	106.00
S&P Target Date 2045 Index	1.00	0.24	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2045 Median	1.02	0.23	102.21	102.75	1.02	0.27	101.22	101.82
TIAA-CREF Lifecycle 2050 Institutional	1.03	0.26	105.73	104.71	1.05	0.27	105.06	105.87
S&P Target Date 2050 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2050 Median	1.01	0.24	101.64	102.08	1.01	0.27	100.24	100.66

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# TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
TIAA-CREF Lifecycle 2055 Institutional	1.03	0.26	105.78	104.73	1.05	0.27	105.07	105.89
S&P Target Date 2055 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2055 Median	1.01	0.24	101.93	102.09	1.01	0.27	100.92	101.28
TIAA-CREF Lifecycle 2060 Institutional	1.04	0.27	106.81	105.47	1.05	0.27	105.78	106.64
S&P Target Date 2060+ Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2060 Median	1.01	0.24	101.22	101.60	1.00	0.27	100.13	100.42
TIAA-CREF Lifecycle 2065 Institutional	-	-	-	-	-	-	-	-
S&P Target Date 2065+ Index	1.00	0.25	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2065+ Median	1.00	0.25	101.57	102.04	1.02	0.28	101.39	101.85
TIAA-CREF Lifecycle Retire Income Instl	1.23	0.09	129.80	120.09	1.22	0.20	123.78	120.91
S&P Target Date Retirement Income Index	1.00	-0.03	100.00	100.00	1.00	0.14	100.00	100.00
Target-Date Retirement Median	0.82	-0.11	79.49	84.42	0.80	0.08	78.95	79.88

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TIAA-CREF LIFECYCLE

MEETING DATE: OCTOBER 19, 2022

FOCUS AREA

Organizational Update

COMMENTARY

There were no changes to the target date portfolio management team during the quarter.

Investments Update

COMMENTARY

Nuveen recently changed its glidepath for the target date suite. Nuveen has increased the equity allocation in the glidepath section that is 20 – 15 years away from retirement. This change is a result of Nuveen’s human capital model research. Previously, the glidepath began rolling down 8% every 5 years starting at age 40 until age 65. However, Nuveen finds that human capital does not change that significantly when a participant turns 40. The glidepath has been adjusted to better align with the gradual decline of participants’ human capital from age 40 to 50. To reflect this, the glidepath has been smoothed out to decrease equity by 4% every 5 years at 40 and 45. There were no changes to the near retirement vintages or the beginning of the glidepath.

The change was implemented on October 1, 2022, and impacts three vintages, the 2045, 2040, and 2035 funds. The equity allocation was increased by 1.8% in the 2045 vintage, by 4% in the 2040 vintage, and by 2.2% in the 2035 vintage. To fund these increases, the vintages’ fixed income allocations were reduced. There have been no changes to the sub-asset class allocations.

TIAA-CREF Emerging Markets Equity remains on the watch list since being added in the fourth quarter 2021. The strategy had previously been a strong performer; however, it had its worst quarter ever in the third quarter of 2021 resulting from China’s crackdown on large technology companies. The portfolio manager added to the strategy’s overweight to China, and this raised a red flag for the target date team. The portfolio has since re-allocated its China overweight and continues to work through stages of correction. Emerging Markets Equity has seen improved performance more recently, but the team continues to monitor the fund before taking it off watch.

Nuveen International Growth also remains on watch. The strategy was added to the list in the second quarter of 2021. It has underperformed its peers due to poor security selection. As a result, Nuveen is merging International Growth into TIAA-CREF International Opportunities. TIAA-CREF International Opportunities is already being used in the Lifecycle series, so we expect Nuveen to add another manager to the international equity line-up in the coming months.



TIAA-CREF LIFECYCLE

MEETING DATE: OCTOBER 19, 2022

FOCUS AREA

Performance and Positioning Update

COMMENTARY

**TIAA-CREF Lifecycle Performance Update:**

TIAA-CREF Lifecycle outperformed its peers and the benchmark in the third quarter.

- Lifecycle’s asset allocation and manager selection were positive contributors to performance during the quarter.
- The series’ allocation to TIAA Real Property was the largest contributor to the portfolio during the quarter with a return of 1.4%, outpacing both equities and fixed income.
- Within equities, the portfolio’s overweight to U.S. large-cap and underweight to non-U.S. equities added to performance relative to the benchmark and peers as international markets underperformed U.S. markets during the quarter.
- The series’ underweight to short-term fixed income and cash was the largest asset allocation detractor for the quarter. An underweight to core fixed income in further-dated vintages also weighed on relative performance.
- Lifecycle’s active managers positively impacted performance across equity and fixed income.
- TIAA-CREF International Opportunities, Nuveen Dividend Value, and TIAA-CREF Core Bond each outperformed their benchmarks and were the leading contributors for Lifecycle in the third quarter.
- The leading detractors for Lifecycle were Nuveen Growth Opportunities, TIAA-CREF Large Cap Growth, and TIAA-CREF Quant International Small Cap Equity, which struggled in the third quarter as a result of poor security selection.

**Positioning Update:**

- TIAA-CREF continued to maintain its overweight position to emerging markets debt relative to core fixed income during the third quarter.
- The portfolio management team continued to maintain the 0.50% overweight to large-cap value at the expense of large-cap growth that they initiated in June.
- The team initiated a 0.50% overweight to high yield at the expense of large-cap core in July given the sub-asset class’s attractive yields and valuations.
- In July, the team also initiated a 0.50% overweight to U.S. small/mid-cap equities from the large-cap core allocation. The team views the small-cap space as oversold in comparison to large-cap stocks.

*Note: Benchmark relative performance refers to fund performance compared to the S&P Target Date Indexes. This quarter, we have observed consistent underperformance by target date managers compared to the S&P Target Date Indexes. This appears to be due to a change in the Indexes’ methodology, which has resulted in the Indexes being under allocated to equities across the glidepath compared to the universe.*



## TIAA-CREF LIFECYCLE

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>TIAA-CREF Lifecycle 2010 Fund</b>	<b>-3.86</b>	<b>-16.21</b>	<b>-14.45</b>	<b>1.07</b>	<b>2.54</b>	<b>4.70</b>
S&P Target Date 2010 Index	-4.07	-15.66	-13.60	0.71	2.30	3.99
TIAA-CREF Lifecycle 2010 Custom Benchmark	-4.78	-12.82	-14.87	1.17	2.85	4.63
<b>TIAA-CREF Lifecycle 2015 Fund</b>	<b>-4.00</b>	<b>-16.91</b>	<b>-14.93</b>	<b>1.38</b>	<b>2.75</b>	<b>5.13</b>
S&P Target Date 2015 Index	-4.23	-16.50	-13.95	1.05	2.57	4.65
TIAA-CREF Lifecycle 2015 Custom Benchmark	-4.98	-13.67	-15.55	1.41	3.08	5.07
<b>TIAA-CREF Lifecycle 2020 Fund</b>	<b>-4.22</b>	<b>-17.81</b>	<b>-15.66</b>	<b>1.54</b>	<b>2.90</b>	<b>5.62</b>
S&P Target Date 2020 Index	-4.59	-17.57	-14.75	0.98	2.64	5.11
TIAA-CREF Lifecycle 2020 Custom Benchmark	-5.13	-14.44	-16.16	1.65	3.32	5.61
<b>TIAA-CREF Lifecycle 2025 Fund</b>	<b>-4.40</b>	<b>-19.09</b>	<b>-16.62</b>	<b>1.98</b>	<b>3.24</b>	<b>6.20</b>
S&P Target Date 2025 Index	-4.57	-18.31	-15.16	1.82	3.24	5.80
TIAA-CREF Lifecycle 2025 Custom Benchmark	-5.32	-15.43	-16.87	2.14	3.72	6.25
<b>TIAA-CREF Lifecycle 2030 Fund</b>	<b>-4.70</b>	<b>-20.50</b>	<b>-17.66</b>	<b>2.40</b>	<b>3.52</b>	<b>6.73</b>
S&P Target Date 2030 Index	-4.98	-19.79	-16.23	2.26	3.58	6.34
TIAA-CREF Lifecycle 2030 Custom Benchmark	-5.53	-16.56	-17.67	2.60	4.10	6.87
<b>TIAA-CREF Lifecycle 2035 Fund</b>	<b>-4.97</b>	<b>-21.91</b>	<b>-18.81</b>	<b>2.74</b>	<b>3.79</b>	<b>7.23</b>
S&P Target Date 2035 Index	-5.50	-21.51	-17.42	2.75	3.92	6.83
TIAA-CREF Lifecycle 2035 Custom Benchmark	-5.74	-17.67	-18.48	3.04	4.46	7.45
<b>TIAA-CREF Lifecycle 2040 Fund</b>	<b>-5.22</b>	<b>-23.08</b>	<b>-19.57</b>	<b>3.25</b>	<b>4.10</b>	<b>7.64</b>
S&P Target Date 2040 Index	-5.83	-22.65	-18.21	3.08	4.16	7.18
TIAA-CREF Lifecycle 2040 Custom Benchmark	-5.91	-18.68	-19.09	3.58	4.85	7.93
<b>TIAA-CREF Lifecycle 2045 Fund</b>	<b>-5.42</b>	<b>-24.10</b>	<b>-20.32</b>	<b>3.76</b>	<b>4.37</b>	<b>7.84</b>
S&P Target Date 2045 Index	-6.01	-23.33	-18.70	3.25	4.27	7.40
TIAA-CREF Lifecycle 2045 Custom Benchmark	-6.05	-19.62	-19.59	4.16	5.21	8.20
<b>TIAA-CREF Lifecycle 2050 Fund</b>	<b>-5.57</b>	<b>-24.60</b>	<b>-20.67</b>	<b>3.79</b>	<b>4.40</b>	<b>7.88</b>
S&P Target Date 2050 Index	-6.07	-23.62	-18.88	3.37	4.35	7.61
TIAA-CREF Lifecycle 2050 Custom Benchmark	-6.13	-20.07	-19.88	4.22	5.26	8.26
<b>TIAA-CREF Lifecycle 2055 Fund</b>	<b>-5.60</b>	<b>-24.71</b>	<b>-20.79</b>	<b>3.85</b>	<b>4.44</b>	<b>7.93</b>
S&P Target Date 2055 Index	-6.07	-23.69	-18.94	3.42	4.39	7.74
TIAA-CREF Lifecycle 2055 Custom Benchmark	-6.15	-20.22	-19.96	4.31	5.32	8.33
<b>TIAA-CREF Lifecycle 2060 Fund</b>	<b>-5.55</b>	<b>-24.78</b>	<b>-20.79</b>	<b>3.96</b>	<b>4.48</b>	<b>-</b>
S&P Target Date 2060 Index	-6.09	-23.73	-18.99	3.43	4.44	7.78
TIAA-CREF Lifecycle 2060 Custom Benchmark	-6.17	-20.37	-20.04	4.39	5.38	-
<b>TIAA-CREF Lifecycle 2065 Fund</b>	<b>-5.58</b>	<b>-24.70</b>	<b>-20.65</b>	<b>-</b>	<b>-</b>	<b>-</b>
S&P Target Date 2065+ Index	-6.04	-23.61	-18.84	3.52	4.50	-
TIAA-CREF Lifecycle 2065 Custom Benchmark	-6.20	-20.51	-20.12	-	-	-



## Investor Assumptions/Glidepath Methodology

Glidepath Management	• 30 years after retirement (assumed at age 67)
Assumed Investor Savings Rate	• 15%, including company match
Assumed Investor Income Growth Rate	• This is not a factor in the glidepath design.
Income Replacement	• 55%
Assumed Accumulated Savings at Retirement	• 10X salary at retirement.
Life Expectancy	• Consistent with current mortality tables.
Asset Allocation Flexibility	• Strict targets with narrow ranges.
Other Assumptions	• None

All assumptions for salary, contributions, employer match, and investor balances have been derived from information collected from T. Rowe Price's own participant database from 2006-2009, consisting of 1.2 million records. Assumptions listed above are "base case" assumptions. The glide path was designed based upon proprietary Monte Carlo modeling that helped determine appropriate asset allocations for each stage of saving for retirement and for retirement itself. The objective is to create a glide path that achieves a high success rate of providing lifetime income and remaining purchasing power over a long time horizon in retirement.

## Investment Profile

% Open Architecture:	0%	Active/Passive:	Active
Inception Date:	9-30-2002	% Active:	88%
Net Assets \$MM:	\$82,367	Manager Tenure:	7.17 Years (longest)
Manager Name:	Lee, DeDominicis, Merlen	Expense Range:	0.34% - 1.14%
Avg # of Holdings:	22	Investment Structure:	Mutual Fund

Important Disclosures: This slide is intended solely for institutional use. The opinions expressed in this report are subject to change without notice. The statistics and data have been compiled from sources believed to be reliable but are not guaranteed to be accurate or complete. Any performance quoted represents past performance and does not guarantee future results. Index averages are derived from Morningstar. This material is not a solicitation or an offer to buy any security or to participate in any investment strategy. Any such solicitation must be made by prospectus only. For more information or to obtain a prospectus, please contact your financial advisor at 800.216.0645. CAPTRUST Financial Advisors.

## Target Asset Allocation Glidepath per Vintage Year



## Dedicated Asset Class Granularity/Diversification

Emerging Market Equities	Yes
International/Global Debt	Yes
Inflation-Protected Securities	Yes
High Yield Fixed Income	Yes
Real Estate	No
Commodities	No

The equity exposure within the T. Rowe Price target date strategies is a broadly diversified allocation to a wide range of equity investments including U.S, international and real asset equities. Within the U.S. equity allocation, an allocation of 77% large-cap/ 12% mid-cap/ 11% small-cap is maintained. This allocation replicates the market capitalization breakdown of the broad U.S. equity market. Additionally, all capitalization segments have equal growth and value allocations. The international equity allocation is broken out to 85% developed markets and 15% emerging markets.

The fixed-income allocation is split into two primary categories – core fixed income and inflation-focused fixed income - where each sector contained has been chosen based on its historical performance, characteristics, and correlations with the other components of the strategies.

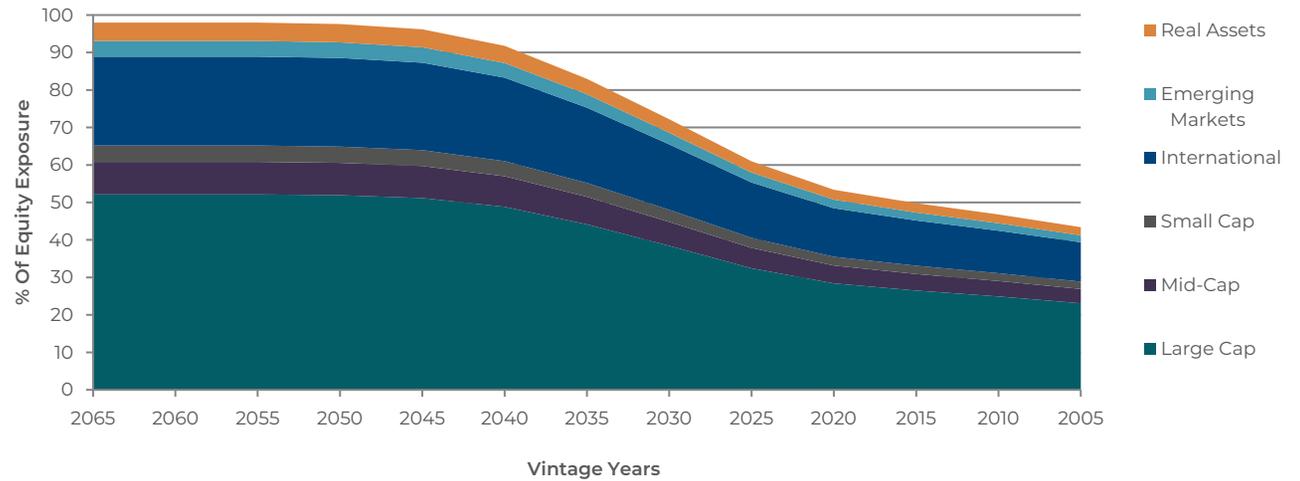
# T. ROWE PRICE RETIREMENT

Period Ending 9.30.22 | Q3 22

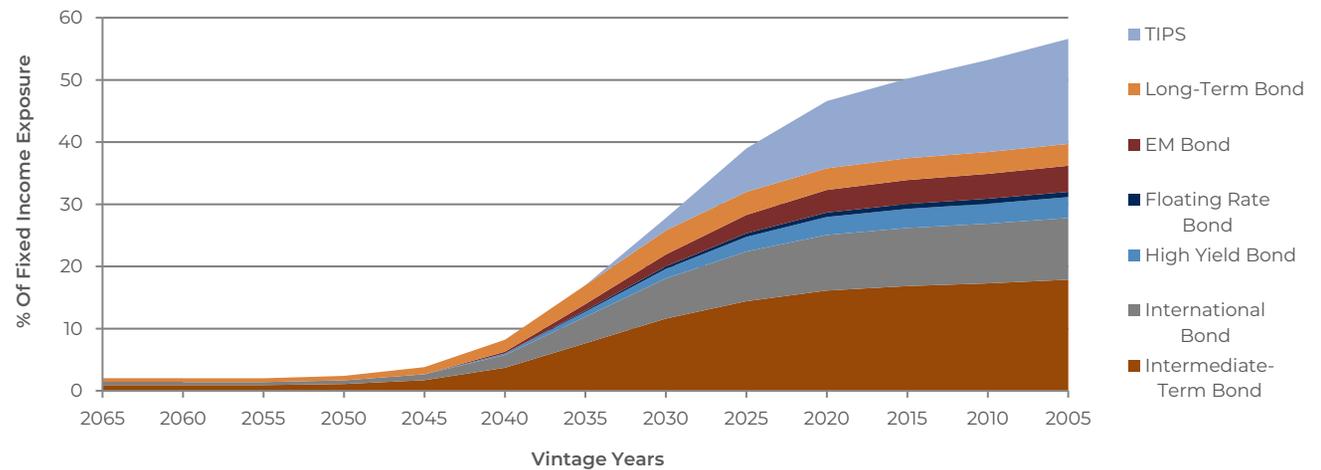
## Material Changes to the Series

- 2008:
- Added Emerging Markets Bonds & Non-US dollar bonds
- 2010:
- Added TIPs & Real Asset strategies
- 2011:
- Increased Non-US equity allocation from 20% to 30%
- 2017:
- Added hedged nondollar bonds, long duration U.S. treasuries, bank loans, and dynamic global bonds
- 2019
- Adding the Emerging Markets Discovery Stock fund and US Large Cap Core, as well as increasing equity allocation at the start of the glidepath from 90% to 98%, and on the back end from 20% to 30%.
- 2020:
- Enhanced glidepath implementation begins Q2 2020 with a gradual transition to occur over a two-year time period.

## Equity Exposure



## Fixed Income Exposure



\*All information provided by the asset manager, as of 12/31/21. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

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# TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
T. Rowe Price Retirement I 2005 I	1.17	0.10	117.32	114.23	1.13	0.20	109.25	108.26
S&P Target Date 2010 Index	1.00	0.06	100.00	100.00	1.00	0.19	100.00	100.00
Target-Date 2000-2010 Median	1.00	0.02	102.60	102.25	1.00	0.16	99.96	101.77
T. Rowe Price Retirement I 2010 I	1.24	0.13	126.45	120.81	1.21	0.23	118.59	116.58
S&P Target Date 2010 Index	1.00	0.06	100.00	100.00	1.00	0.19	100.00	100.00
Target-Date 2000-2010 Median	1.00	0.02	102.60	102.25	1.00	0.16	99.96	101.77
T. Rowe Price Retirement I 2015 I	1.20	0.16	121.35	115.89	1.17	0.25	115.05	112.36
S&P Target Date 2015 Index	1.00	0.09	100.00	100.00	1.00	0.21	100.00	100.00
Target-Date 2015 Median	1.03	0.09	103.39	105.73	1.01	0.19	100.82	103.38
T. Rowe Price Retirement I 2020 I	1.19	0.19	122.30	113.83	1.18	0.27	117.83	112.86
S&P Target Date 2020 Index	1.00	0.09	100.00	100.00	1.00	0.20	100.00	100.00
Target-Date 2020 Median	1.02	0.11	104.29	103.41	1.02	0.21	102.61	101.95
T. Rowe Price Retirement I 2025 I	1.16	0.22	117.87	113.03	1.15	0.28	113.69	110.77
S&P Target Date 2025 Index	1.00	0.16	100.00	100.00	1.00	0.24	100.00	100.00
Target-Date 2025 Median	1.01	0.13	100.85	103.56	1.01	0.21	98.93	102.28
T. Rowe Price Retirement I 2030 I	1.12	0.23	113.31	110.09	1.10	0.29	109.39	106.85
S&P Target Date 2030 Index	1.00	0.19	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2030 Median	1.01	0.17	100.50	102.71	1.01	0.24	99.89	101.47
T. Rowe Price Retirement I 2035 I	1.07	0.24	107.05	105.17	1.05	0.29	104.30	102.20
S&P Target Date 2035 Index	1.00	0.21	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2035 Median	0.99	0.20	99.64	101.11	0.99	0.25	98.40	100.12
T. Rowe Price Retirement I 2040 I	1.05	0.25	105.49	103.89	1.04	0.29	102.61	100.61
S&P Target Date 2040 Index	1.00	0.23	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2040 Median	1.01	0.22	100.85	101.77	1.01	0.26	99.49	100.76
T. Rowe Price Retirement I 2045 I	1.04	0.26	104.47	102.50	1.03	0.30	102.12	99.86
S&P Target Date 2045 Index	1.00	0.24	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2045 Median	1.02	0.23	102.17	102.72	1.02	0.26	101.20	101.80

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# TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
T. Rowe Price Retirement I 2050 I	1.02	0.26	102.93	101.62	1.01	0.29	100.26	98.33
S&P Target Date 2050 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2050 Median	1.01	0.24	101.62	102.06	1.01	0.27	100.21	100.66
T. Rowe Price Retirement I 2055 I	1.01	0.26	101.80	100.79	1.00	0.29	99.51	97.71
S&P Target Date 2055 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2055 Median	1.01	0.24	101.95	102.09	1.01	0.27	100.94	101.32
T. Rowe Price Retirement I 2060 I	1.01	0.26	101.80	100.72	1.00	0.29	98.96	97.29
S&P Target Date 2060+ Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2060 Median	1.01	0.24	101.24	101.62	1.00	0.27	100.13	100.42
T. Rowe Price Retirement I 2065 I	-	-	-	-	-	-	-	-
S&P Target Date Retirement Income Index	1.00	-0.03	100.00	100.00	1.00	0.14	100.00	100.00
Target-Date 2060 Median	2.24	0.24	252.94	213.14	2.28	0.27	238.71	230.15

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T. ROWE PRICE RETIREMENT

MEETING DATE: OCTOBER 20, 2022

FOCUS AREA

Organizational Update

COMMENTARY

There were no changes to the target date portfolio management team during the quarter.

Investments Update

COMMENTARY

T. Rowe Price's target date team has been conducting a review of Retirement's fixed income portfolio. The focus of the work is to re-underwrite the portfolio's existing strategies and the current sub-asset class weights while also analyzing potential new strategies and changes to the allocation weights in consideration with the Multi-Asset Division's macroeconomic outlook and long-term capital market assumptions. This work has taken most of 2022 and the team is in the process of completing it. Based on our conversations with them, we expect some tweaks to the underlying manager weights, but no major changes to the portfolio.

A key initiative for T. Rowe Price's Multi-Asset Division is continuously evaluating ways to extend the use of its target date suite and a main focus of this initiative is retirement income. The group's first foray into the retirement income market was the Retirement 2020 Trust Income fund, which is a managed payout version of the Retirement 2020 vintage fund. The firm has seen some adoption of this fund, and we would expect it to launch a managed payout version of the 2025 vintage when that fund reaches its retirement date (in 2025). T. Rowe Price is also exploring more personalized solutions for individual plan participants, such as a managed account that could be linked to the target date series.

Most of the work on these projects is still in the early stages, so specific details are not yet available. We are expecting more information from T. Rowe Price in the coming year.



T. ROWE PRICE RETIREMENT

MEETING DATE: OCTOBER 20, 2022

FOCUS AREA

Performance and Positioning Update

COMMENTARY

**T. Rowe Price Retirement Performance Update:**

The T. Rowe Price Retirement series posted solid results and outperformed peers in the third quarter but underperformed the benchmark\*. However, this has been a common occurrence.

- Broad stock and bond markets finished the third quarter with similar returns, which created a favorable environment for T. Rowe Price.
- The Retirement glidepath has a smaller fixed income allocation than most peers, so the series benefitted from the continued down trend in the bond market.
- The composition of Retirement's fixed income portfolio and the series' tactical positions were the main drivers of its outperformance relative to peers.
- T. Rowe Price Dynamic Global Bond, which is part of the series' core bond portfolio has been a leading contributor year-to-date as it had returned +6.81 through the end of the third quarter.
- The series also benefitted from its inclusion of high yield debt and floating rate loans, which outperformed during the quarter.
- Retirement's tactical positioning also helped performance as the series is broadly underweight equities and is overweight fixed income and cash.
- Within fixed income, tactical overweights to high yield and floating rate loans were the main contributors.

**Positioning Update:**

T. Rowe Price did not change the direction of its tactical positions in the third quarter and the portfolios continue to have a risk-off stance. The Asset Allocation Committee, which governs the firm's tactical views, continues to have a cautious outlook for risk assets broadly. While valuations have improved, the firm is concerned about the Fed making a policy mistake in response to inflation, geopolitical risks, and supply constraints.

- The team held its overweight to fixed income but reduced it slightly from 1.75% to 1.50% during the third quarter as the continued sell-off in equities has made those valuations more attractive.
- Within equity, the team maintained its positioning with an underweight to the U.S. and overweights to Japan and emerging markets.
- The U.S. underweight is driven by more favorable valuations abroad; however, we wouldn't be surprised to see T. Rowe Price bring this back to neutral if recession risks grow given the less cyclical nature of U.S. stocks.
- T. Rowe Price views Japan as attractive given cheap valuations, lower inflation, improving outlook for the yen, and accommodative monetary and fiscal policy.
- In T. Rowe Price's view, emerging market currencies and valuations are attractive and the prospect of significant policy support and less strict COVID lockdowns in China make the medium-term outlook positive.
- Within fixed income, the team increased its underweight to U.S. core bonds and added an overweight to long-term U.S. Treasuries to add some downside protection in the event of a recession.
- The team maintained its overweights to floating rate bonds and high yield debt, which are less sensitive to rising rates.
- T. Rowe Price is overweight high yield despite its cautious economic outlook because the sector's valuations are attractive, it has a shorter duration than core bonds, and is a safer position in the capital structure compared to equity.
- The series is also overweight cash given attractive money market yields and downside mitigation.

*\*Note: Benchmark relative performance refers to fund performance compared to the S&P Target Date Indexes. This quarter, we have observed consistent underperformance by target date managers compared to the S&P Target Date Indexes. This appears to be due to a change in the Indexes' methodology, which has resulted in the Indexes being under allocated to equities across the glidepath compared to the universe.*



T. ROWE PRICE RETIREMENT

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>T. Rowe Price Retirement 2005 Fund</b>	<b>-4.72</b>	<b>-17.52</b>	<b>-15.68</b>	<b>0.94</b>	<b>2.43</b>	<b>4.18</b>
S&P Target Date Retirement Income Index	-3.97	-15.00	-13.31	0.06	1.88	3.23
T. Rowe Price Retirement 2005 Custom Benchmark	-4.99	-17.70	-15.09	1.02	2.69	4.25
<b>T. Rowe Price Retirement 2010 Fund</b>	<b>-4.83</b>	<b>-18.07</b>	<b>-16.07</b>	<b>1.26</b>	<b>2.70</b>	<b>4.67</b>
S&P Target Date 2010 Index	-4.07	-15.66	-13.60	0.71	2.30	3.99
T. Rowe Price Retirement 2010 Custom Benchmark	-5.07	-18.26	-15.44	1.38	2.97	4.74
<b>T. Rowe Price Retirement 2015 Fund</b>	<b>-4.84</b>	<b>-18.44</b>	<b>-16.31</b>	<b>1.68</b>	<b>3.05</b>	<b>5.37</b>
S&P Target Date 2015 Index	-4.23	-16.50	-13.95	1.05	2.57	4.65
T. Rowe Price Retirement 2015 Custom Benchmark	-5.14	-18.75	-15.78	1.72	3.29	5.39
<b>T. Rowe Price Retirement 2020 Fund</b>	<b>-5.02</b>	<b>-19.09</b>	<b>-16.77</b>	<b>2.11</b>	<b>3.43</b>	<b>6.09</b>
S&P Target Date 2020 Index	-4.59	-17.57	-14.75	0.98	2.64	5.11
T. Rowe Price Retirement 2020 Custom Benchmark	-5.22	-19.33	-16.17	2.14	3.70	6.08
<b>T. Rowe Price Retirement 2025 Fund</b>	<b>-5.25</b>	<b>-20.44</b>	<b>-17.82</b>	<b>2.60</b>	<b>3.81</b>	<b>6.74</b>
S&P Target Date 2025 Index	-4.57	-18.31	-15.16	1.82	3.24	5.80
T. Rowe Price Retirement 2025 Custom Benchmark	-5.37	-20.49	-16.95	2.74	4.17	6.74
<b>T. Rowe Price Retirement 2030 Fund</b>	<b>-5.64</b>	<b>-22.25</b>	<b>-19.29</b>	<b>2.85</b>	<b>4.05</b>	<b>7.25</b>
S&P Target Date 2030 Index	-4.98	-19.79	-16.23	2.26	3.58	6.34
T. Rowe Price Retirement 2030 Custom Benchmark	-5.61	-22.09	-18.05	3.16	4.51	7.27
<b>T. Rowe Price Retirement 2035 Fund</b>	<b>-6.00</b>	<b>-23.86</b>	<b>-20.67</b>	<b>3.09</b>	<b>4.22</b>	<b>7.62</b>
S&P Target Date 2035 Index	-5.50	-21.51	-17.42	2.75	3.92	6.83
T. Rowe Price Retirement 2035 Custom Benchmark	-5.81	-23.34	-18.87	3.60	4.85	7.71
<b>T. Rowe Price Retirement 2040 Fund</b>	<b>-6.26</b>	<b>-25.09</b>	<b>-21.72</b>	<b>3.32</b>	<b>4.41</b>	<b>7.90</b>
S&P Target Date 2040 Index	-5.83	-22.65	-18.21	3.08	4.16	7.18
T. Rowe Price Retirement 2040 Custom Benchmark	-5.95	-24.27	-19.42	4.04	5.16	8.05
<b>T. Rowe Price Retirement 2045 Fund</b>	<b>-6.29</b>	<b>-25.55</b>	<b>-22.06</b>	<b>3.64</b>	<b>4.60</b>	<b>8.04</b>
S&P Target Date 2045 Index	-6.01	-23.33	-18.70	3.25	4.27	7.40
T. Rowe Price Retirement 2045 Custom Benchmark	-6.03	-24.74	-19.69	4.35	5.36	8.18
<b>T. Rowe Price Retirement 2050 Fund</b>	<b>-6.34</b>	<b>-25.71</b>	<b>-22.14</b>	<b>3.61</b>	<b>4.59</b>	<b>8.03</b>
S&P Target Date 2050 Index	-6.07	-23.62	-18.88	3.37	4.35	7.61
T. Rowe Price Retirement 2050 Custom Benchmark	-6.06	-24.89	-19.80	4.34	5.35	8.18
<b>T. Rowe Price Retirement 2055 Fund</b>	<b>-6.44</b>	<b>-25.78</b>	<b>-22.25</b>	<b>3.53</b>	<b>4.53</b>	<b>7.99</b>
S&P Target Date 2055 Index	-6.07	-23.69	-18.94	3.42	4.39	7.74
T. Rowe Price Retirement 2055 Custom Benchmark	-6.07	-24.92	-19.83	4.32	5.34	8.17
<b>T. Rowe Price Retirement 2060 Fund</b>	<b>-6.41</b>	<b>-25.82</b>	<b>-22.27</b>	<b>3.54</b>	<b>4.53</b>	<b>-</b>
S&P Target Date 2060 Index	-6.09	-23.73	-18.99	3.43	4.44	7.78
T. Rowe Price Retirement 2060 Custom Benchmark	-6.07	-24.92	-19.83	4.32	5.34	-
<b>T. Rowe Price Retirement 2065 Fund</b>	<b>-6.43</b>	<b>-25.76</b>	<b>-22.06</b>	<b>-</b>	<b>-</b>	<b>-</b>
S&P Target Date 2065+ Index	-6.04	-23.61	-18.84	3.52	4.50	-
T. Rowe Price Retirement 2065 Custom Benchmark	-6.07	-24.93	-19.77	-	-	-



## Investor Assumptions/Glidepath Methodology

<b>Glidepath Management</b>	• To retirement (assumed at age 65)
<b>Assumed Investor Savings Rate:</b>	• The average investor contributes less than 8% of their salary up until age 50 and do not reach 10% before retirement.
<b>Assumed Investor Income Growth Rate</b>	• Proprietary studies have shown varied results, but on average, wages increase about 5% every 2-3 years.
<b>Income Replacement</b>	• An estimated cost of an annuity to fund an annual payment of roughly 40% of pre-retirement income.
<b>Assumed Accumulated Savings at Retirement</b>	• An estimate of \$500,000 is used.
<b>Life Expectancy</b>	• 90 years.
<b>Asset Allocation Flexibility</b>	• Tactical flexibility by prospectus.
<b>Other Assumptions</b>	• Considers anomalies in investor behavior like loans and large withdrawals shortly after retirement

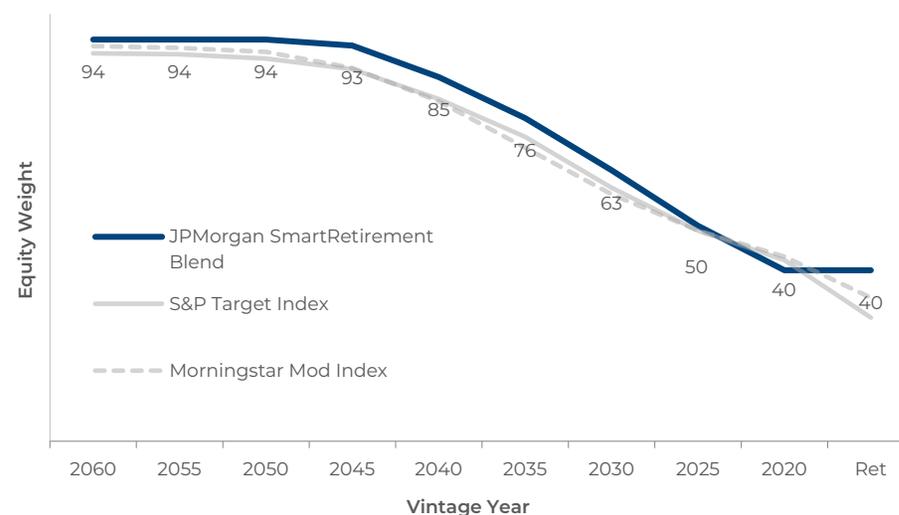
The series is able to develop its' strategic asset allocation by utilizing two primary inputs: JPMorgan participant behavior research and JPMorgan's annual long term capital markets assumptions. These assumptions are 10 to 15 year forward looking views on risk, return and correlations for various asset classes. Using these two metrics, appropriate asset classes are selected and weighting constraints are put into place based on risk/return characteristics from the long term capital markets assumptions. In order to test the robustness of these allocations, JPMorgan uses a proprietary Monte Carlo simulator which simulates expected portfolio values over a 40 year time horizon.

## Investment Profile

<b>% Open Architecture:</b>	3%	<b>Active/Passive:</b>	Hybrid
<b>Inception Date:</b>	7-2-2012	<b>% Active:</b>	37%
<b>Net Assets \$MM:</b>	\$11,931	<b>Manager Tenure:</b>	10.25 Yrs (longest)
<b>Manager Name:</b>	Team	<b>Expense Range:</b>	0.19%-0.94%
<b>Avg # of Holdings:</b>	25	<b>Investment Structure:</b>	Mutual Fund

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## Target Asset Allocation Glidepath per Vintage Year



## Dedicated Asset Class Granularity/Diversification

<b>Emerging Market Equities</b>	Yes
<b>International/Global Debt</b>	Yes
<b>Inflation-Protected Securities</b>	Yes
<b>High Yield Fixed Income</b>	Yes
<b>Real Estate</b>	Yes
<b>Commodities</b>	No

The equity exposure within the JPMorgan target date strategies is a broadly diversified allocation to a wide range of equity and equity like investments including U.S, international, real asset and U.S REIT equities. JPMorgan believes that exposure to diversifying sectors will allow the target date strategies to benefit from increased diversification and potential return enhancement.

JPMorgan also has a well diversified fixed income portfolio which includes dedicated exposure to High Yield, Floating Rate Debt, Emerging Market Debt and Inflation protected securities.

## Material Changes to the Series

2018:

- Removed commodities from the glidepath- the change was a result of turnover on the commodities portfolio management team
- Glidepath Changes- increased total equity exposure by 5% at beginning of glidepath and reduced total equity exposure by 3.5% at retirement

2019:

- Increased total equity by 5% in the beginning of the glide path and decreased total equity by 3.5% at retirement, resulting in a glide path with a steeper slope.
- Removed commodities as an asset class and reallocated pro-rata across total equities

2020:

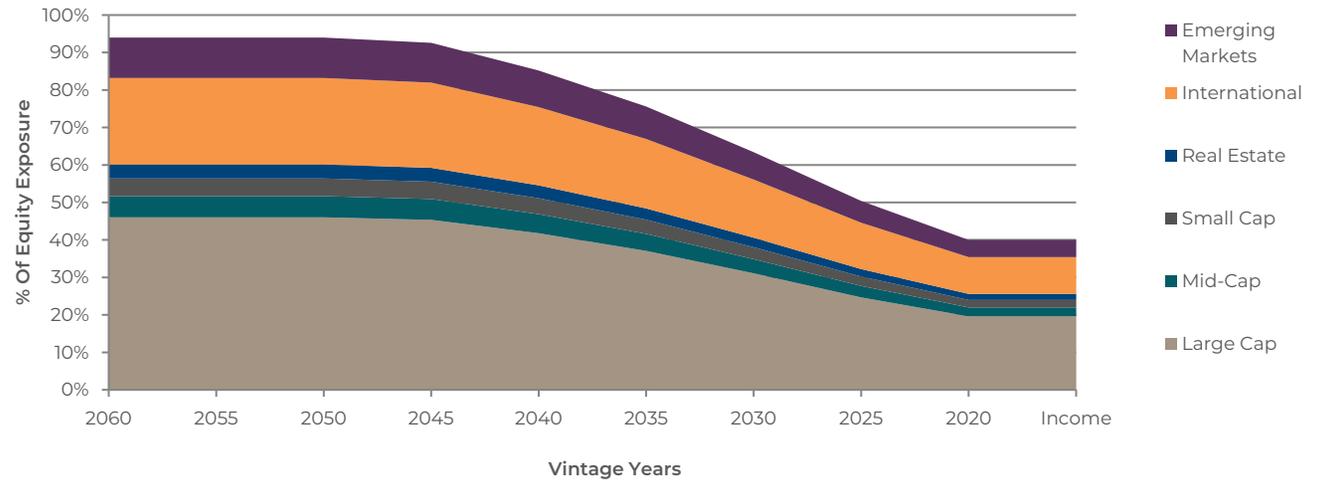
- Transitioned to a custom benchmark that reflects the broad asset classes that are used to model and select the glide path
- Added JPM BetaBuilders International Equity ETF and JPM BetaBuilders US Mid Cap Equity ETF. Removed iShares Barclays TIPS (TIPS), iShares Core MSCI EAFE ETF, and iShares Russell Midcap ETF (IWR)

2021:

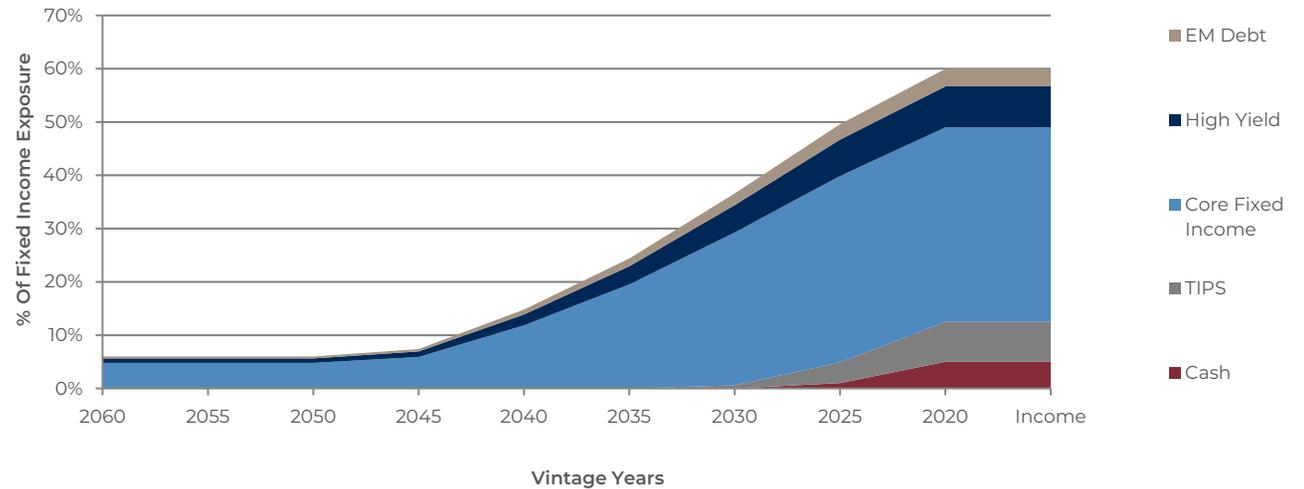
- The firm will be integrating the SmartSpending decumulation strategy into the end of the glidepath. Equity allocation at the beginning of the glidepath will be increased from 91% to 94%. At retirement, it will be increased from 32.5% to 40%. The increased exposure will be allocated to U.S. and emerging markets equity. Conversely, reduced exposure to international developed equity and REITs. These changes will be implemented effective March 18, 2022.

\*All information provided by the asset manager, as of 12/31/21. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

## Equity Exposure



## Fixed Income Exposure



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	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
JPMorgan SmartRetirement® Blend 2020 R6	0.94	-0.02	89.55	96.57	0.93	0.13	89.20	93.20
S&P Target Date 2020 Index	1.00	0.09	100.00	100.00	1.00	0.20	100.00	100.00
Target-Date 2020 Median	1.02	0.11	104.29	103.41	1.02	0.21	102.61	101.95
JPMorgan SmartRetirement® Blend 2025 R6	1.01	0.06	95.38	102.76	1.00	0.17	94.71	99.69
S&P Target Date 2025 Index	1.00	0.16	100.00	100.00	1.00	0.24	100.00	100.00
Target-Date 2025 Median	1.01	0.13	100.85	103.56	1.01	0.21	98.93	102.28
JPMorgan SmartRetirement® Blend 2030 R6	1.02	0.11	97.88	103.70	1.00	0.20	96.57	100.60
S&P Target Date 2030 Index	1.00	0.19	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2030 Median	1.01	0.17	100.50	102.71	1.01	0.24	99.89	101.47
JPMorgan SmartRetirement® Blend 2035 R6	1.01	0.16	98.70	102.77	1.00	0.22	97.28	100.14
S&P Target Date 2035 Index	1.00	0.21	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2035 Median	0.99	0.20	99.64	101.11	0.99	0.25	98.40	100.12
JPMorgan SmartRetirement® Blend 2040 R6	1.02	0.18	99.86	103.21	1.01	0.24	98.63	101.10
S&P Target Date 2040 Index	1.00	0.23	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2040 Median	1.01	0.22	100.85	101.77	1.01	0.26	99.49	100.76
JPMorgan SmartRetirement® Blend 2045 R6	1.03	0.20	102.45	105.21	1.02	0.24	100.44	102.72
S&P Target Date 2045 Index	1.00	0.24	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2045 Median	1.02	0.23	102.17	102.72	1.02	0.26	101.20	101.80
JPMorgan SmartRetirement® Blend 2050 R6	1.01	0.20	100.35	103.29	1.00	0.24	98.40	100.55
S&P Target Date 2050 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2050 Median	1.01	0.24	101.62	102.06	1.01	0.27	100.21	100.66
JPMorgan SmartRetirement® Blend 2055 R6	1.00	0.20	99.31	102.46	0.99	0.24	97.50	99.79
S&P Target Date 2055 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2055 Median	1.01	0.24	101.95	102.09	1.01	0.27	100.94	101.32
JPMorgan SmartRetirement® Blend 2060 R6	1.00	0.20	98.95	102.15	0.99	0.25	97.32	99.32
S&P Target Date 2060+ Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2060 Median	1.01	0.24	101.24	101.62	1.00	0.27	100.13	100.42

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# TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
JPMorgan SmartRetirement® Blend IncomeR6	1.22	-0.05	120.04	123.32	1.20	0.09	115.50	121.87
S&P Target Date Retirement Income Index	1.00	-0.03	100.00	100.00	1.00	0.14	100.00	100.00
Target-Date Retirement Median	1.09	-0.05	112.65	108.55	1.07	0.09	105.38	107.41

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J.P. MORGAN SMARTRETIREMENT BLEND

MEETING DATE: OCTOBER 24, 2022

FOCUS AREA

Organizational Update

COMMENTARY

There were no changes to the target date portfolio management team during the quarter.

Investments Update

COMMENTARY

As we wrote last quarter, J.P. Morgan adjusted the series' underlying manager line-up. A key theme of the changes was J.P. Morgan's objective to simplify the series' exposures.

J.P. Morgan Income, a multi-sector bond strategy, was removed from the portfolio. As a multi-sector bond strategy, J.P. Morgan Income has a flexible investment mandate and will invest in both high yield and investment grade debt. Removing this strategy makes SmartRetirement Blend's sub-asset class exposures more predictable, especially the series' high yield exposure. In addition, with the size of the fixed income portfolio being reduced, the SmartRetirement Blend team felt it was overdiversification to have the Income fund in addition to the two other dedicated high yield strategies.

The J.P. Morgan Emerging Markets Strategic Debt fund was liquidated in April 2022, and thus was removed from the series. Its position was reallocated to the other emerging markets debt strategy in the portfolio, J.P. Morgan Emerging Markets Debt.

J.P. Morgan Short Duration Core Plus was also removed from the portfolio. With the fixed income portfolio getting smaller, the SmartRetirement Blend team felt that this position was over diversification.

Within the equity portfolio, iShares Core MSCI Emerging Markets ETF was removed. This was a small position with the bulk of the emerging markets equity portfolio allocated to J.P. Morgan Emerging Markets Research Enhanced Equity. The SmartRetirement Blend team decided to remove the ETF position to take more active risk within emerging markets.



J.P. MORGAN SMARTRETIREMENT BLEND

MEETING DATE: OCTOBER 24, 2022

FOCUS AREA

Performance and Positioning Update

COMMENTARY

**J.P. Morgan SmartRetirement Blend Performance Update:**  
 The SmartRetirement Blend series produced solid results in the third quarter, with each vintage outperforming peers. The series underperformed the benchmark during the quarter; however, this was a common occurrence for the period.

- SmartRetirement Blend’s tactical positioning was the main driver of its outperformance during the quarter, continuing a positive trend over the past 12 months.
- J.P. Morgan has been underweight equities and overweight cash given the presence of multiple crosscurrents driving the market that stem from inflation, central bank policy, supply chain constraints, and geopolitical risks.
- The overweight cash position benefitted performance given the broad sell-off within equity and fixed income markets.
- The series’ fixed income managers, led by J.P. Morgan Core Bond and J.P. Morgan Core Plus Bond were also good contributors driven by strong security selection in the securitized credit space.
- Their gains offset underperformance by SmartRetirement Blend’s international equity managers.
- The series uses an index fund for the developed market exposure, and it experienced slight losses relative to the benchmark from fair value pricing.
- JPMorgan Emerging Markets Research Enhanced Equity underperformed due to its growth bias, which was out of favor during the quarter.
- The series underperformed the benchmark due to the benchmark’s smaller equity allocation across the glidepath.

**Positioning Update:**  
 J.P. Morgan maintained its risk-off positioning through the third quarter and continues to have a cautious outlook on markets. This outlook is driven by three themes the firm has identified: persistent inflation, moderating economic growth, and tighter monetary policy. These themes have given J.P. Morgan significant uncertainty about the path forward for markets and the time horizon for when they may rebound. As such, the team believes it is best to be defensive.

- J.P. Morgan maintained SmartRetirement Blend’s underweight to equities broadly with a concurrent overweight to cash and fixed income.
- At the equity sub-asset class level, SmartRetirement Blend is underweight its strategic targets for U.S. large-caps, REITs, international developed, and emerging markets.
- The only equity sectors SmartRetirement Blend is not underweight are U.S. small-caps and mid-caps, in which the series has neutral positions.
- The team added an overweight to core fixed income during the quarter in order to maintain a neutral duration position as the overweight to cash had brought down the portfolios’ duration.
- The series continues to underweight high yield and emerging markets debt given the firm’s cautious outlook on economic growth and market volatility.

*Note: Benchmark relative performance refers to fund performance compared to the S&P Target Date Indexes. This quarter, we have observed consistent underperformance by target date managers compared to the S&P Target Date Indexes. This appears to be due to a change in the Indexes’ methodology, which has resulted in the Indexes being under allocated to equities across the glidepath compared to the universe.*



J.P. MORGAN SMARTRETIREMENT BLEND

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>JPMorgan SmartRetirement Blend Income Fund</b>	<b>-4.26</b>	<b>-17.51</b>	<b>-15.48</b>	<b>-0.37</b>	<b>1.59</b>	<b>3.40</b>
S&P Target Date Retirement Income Index	-3.97	-15.00	-13.31	0.06	1.88	3.23
JPMorgan SmartRetirement Blend Income Custom Benchmark	-4.84	-17.94	-15.95	-0.39	1.76	3.41
<b>JPMorgan SmartRetirement Blend 2015 Fund</b>	<b>-4.19</b>	<b>-17.50</b>	<b>-15.38</b>	<b>-2.09</b>	<b>0.51</b>	<b>-</b>
S&P Target Date 2015 Index	-4.23	-16.50	-13.95	1.05	2.57	4.65
JPMorgan SmartRetirement Blend 2015 Custom Benchmark	-4.84	-17.94	-15.95	-0.55	1.70	-
<b>JPMorgan SmartRetirement Blend 2020 Fund</b>	<b>-4.31</b>	<b>-17.56</b>	<b>-15.58</b>	<b>-0.08</b>	<b>1.91</b>	<b>4.63</b>
S&P Target Date 2020 Index	-4.59	-17.57	-14.75	0.98	2.64	5.11
JPMorgan SmartRetirement Blend 2020 Custom Benchmark	-4.84	-17.94	-15.95	-0.18	2.01	4.66
<b>JPMorgan SmartRetirement Blend 2025 Fund</b>	<b>-4.98</b>	<b>-19.83</b>	<b>-17.02</b>	<b>0.55</b>	<b>2.39</b>	<b>5.37</b>
S&P Target Date 2025 Index	-4.57	-18.31	-15.16	1.82	3.24	5.80
JPMorgan SmartRetirement Blend 2025 Custom Benchmark	-5.32	-19.95	-17.19	0.59	2.6	5.48
<b>JPMorgan SmartRetirement Blend 2030 Fund</b>	<b>-5.43</b>	<b>-21.43</b>	<b>-18.05</b>	<b>1.14</b>	<b>2.82</b>	<b>6.02</b>
S&P Target Date 2030 Index	-4.98	-19.79	-16.23	2.26	3.58	6.34
JPMorgan SmartRetirement Blend 2030 Custom Benchmark	-5.73	-21.51	-18.17	1.16	3.02	6.10
<b>JPMorgan SmartRetirement Blend 2035 Fund</b>	<b>-5.78</b>	<b>-22.71</b>	<b>-18.65</b>	<b>1.85</b>	<b>3.30</b>	<b>6.59</b>
S&P Target Date 2035 Index	-5.50	-21.51	-17.42	2.75	3.92	6.83
JPMorgan SmartRetirement Blend 2035 Custom Benchmark	-6.05	-22.72	-18.81	1.87	3.49	6.68
<b>JPMorgan SmartRetirement Blend 2040 Fund</b>	<b>-6.13</b>	<b>-23.75</b>	<b>-19.29</b>	<b>2.29</b>	<b>3.62</b>	<b>6.97</b>
S&P Target Date 2040 Index	-5.83	-22.65	-18.21	3.08	4.16	7.18
JPMorgan SmartRetirement Blend 2040 Custom Benchmark	-6.31	-23.66	-19.32	2.38	3.83	7.06
<b>JPMorgan SmartRetirement Blend 2045 Fund</b>	<b>-6.40</b>	<b>-24.58</b>	<b>-19.69</b>	<b>2.63</b>	<b>3.80</b>	<b>7.07</b>
S&P Target Date 2045 Index	-6.01	-23.33	-18.70	3.25	4.27	7.40
JPMorgan SmartRetirement Blend 2045 Custom Benchmark	-6.51	-24.42	-19.66	2.86	4.12	7.22
<b>JPMorgan SmartRetirement Blend 2050 Fund</b>	<b>-6.46</b>	<b>-24.68</b>	<b>-19.80</b>	<b>2.66</b>	<b>3.83</b>	<b>7.09</b>
S&P Target Date 2050 Index	-6.07	-23.62	-18.88	3.37	4.35	7.61
JPMorgan SmartRetirement Blend 2050 Custom Benchmark	-6.55	-24.54	-19.78	2.80	4.09	7.21
<b>JPMorgan SmartRetirement Blend 2055 Fund</b>	<b>-6.47</b>	<b>-24.64</b>	<b>-19.75</b>	<b>2.63</b>	<b>3.81</b>	<b>7.04</b>
S&P Target Date 2055 Index	-6.07	-23.69	-18.94	3.42	4.39	7.74
JPMorgan SmartRetirement Blend 2055 Custom Benchmark	-6.55	-24.54	-19.78	2.80	4.09	7.21
<b>JPMorgan SmartRetirement Blend 2060 Fund</b>	<b>-6.40</b>	<b>-24.52</b>	<b>-19.62</b>	<b>2.62</b>	<b>3.92</b>	<b>-</b>
S&P Target Date 2060 Index	-6.09	-23.73	-18.99	3.43	4.44	7.78
JPMorgan SmartRetirement Blend 2060 Custom Benchmark	-6.55	-24.54	-19.78	2.80	4.09	-



## Investor Assumptions/Glidepath Methodology

<b>Glidepath Management</b>	• Through retirement (assumed at age 65) ending 7 years after retirement
<b>Assumed Investor Savings Rate:</b>	• Contributions start at 5% at age 25 and increase to 10% at age 65. Also includes a 50% employer match up to 3% of salary.
<b>Assumed Investor Income Growth Rate</b>	• 1.1% annual salary growth
<b>Income Replacement</b>	• The portfolios are designed to provide withdrawals in retirement based on multiples of an investor's age 65 salary.
<b>Assumed Accumulated Savings at Retirement</b>	• N/A
<b>Life Expectancy</b>	• Through age 95
<b>Asset Allocation Flexibility</b>	• Strict targets with narrow ranges.
<b>Other Assumptions</b>	• Glidepath was tested against 10,000 potential lifetime return outcomes

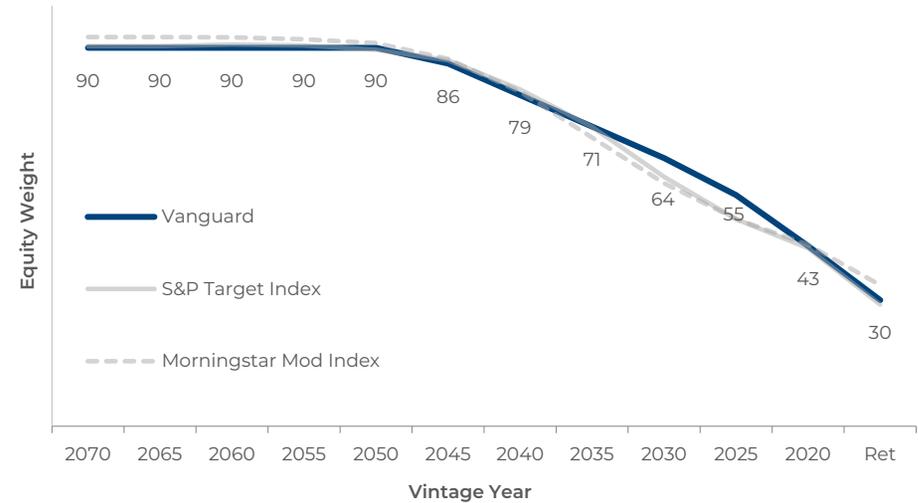
Vanguard uses a proprietary capital markets modeling tool to statistically analyze historical data, including interest rates, inflation, and other risk factors for global equities, fixed income, and commodity markets. This tool is used to generate forward-looking distributions of expected returns. Then, by combining these figures with their investor assumptions, Vanguard constructs target portfolios with asset allocations that seek to provide the highest probability of a successful outcome (not outliving retirement savings).

## Investment Profile

<b>% Open Architecture:</b>	0%	<b>Active/Passive:</b>	Passive
<b>Inception Date:</b>	10-27-2003	<b>% Active:</b>	0%
<b>Net Assets \$MM:</b>	\$493,540	<b>Manager Tenure:</b>	9.67 years (longest)
<b>Manager Name:</b>	Nejman, Coleman	<b>Expense Range:</b>	0.08%
<b>Avg # of Holdings:</b>	5	<b>Investment Structure:</b>	Mutual Fund

Important Disclosures: This slide is intended solely for institutional use. The opinions expressed in this report are subject to change without notice. The statistics and data have been compiled from sources believed to be reliable but are not guaranteed to be accurate or complete. Any performance quoted represents past performance and does not guarantee future results. Index averages are derived from Morningstar. This material is not a solicitation or an offer to buy any security or to participate in any investment strategy. Any such solicitation must be made by prospectus only. For more information or to obtain a prospectus, please contact your financial advisor at 800.216.0645. CAPTRUST Financial Advisors.

## Target Asset Allocation Glidepath per Vintage Year



## Dedicated Asset Class Granularity/Diversification

<b>Emerging Market Equities</b>	No
<b>International/Global Debt</b>	Yes
<b>Inflation-Protected Securities</b>	Yes
<b>High Yield Fixed Income</b>	No
<b>Real Estate</b>	No
<b>Commodities</b>	No

The Vanguard Target Retirement funds allocate to five broad index funds that provide comprehensive exposure to U.S. and non-U.S. equity and bond markets. Using index funds allows Vanguard to provide investment diversification at a low cost while also producing returns in line with equity and fixed income markets. Through its five index funds, the strategies gain exposure to over 25 sub-asset classes, capturing over 90% of the world's investable market.

# VANGUARD TARGET RETIREMENT

Period Ending 9.30.22 | Q3 22

## Material Changes to the Series

2006:

- Increased minimum equity allocation from 20% to 30%

2010:

- Collapsed three international equity index funds (Europe, Pacific, and Emerging Markets) with Vanguard Total International Stock Index

2013:

- Replaced the broad TIPs fund with a short-term TIPs allocation
- Eliminated the Prime Money Market fund
- Added a 20% International Bond Index Allocation

2015:

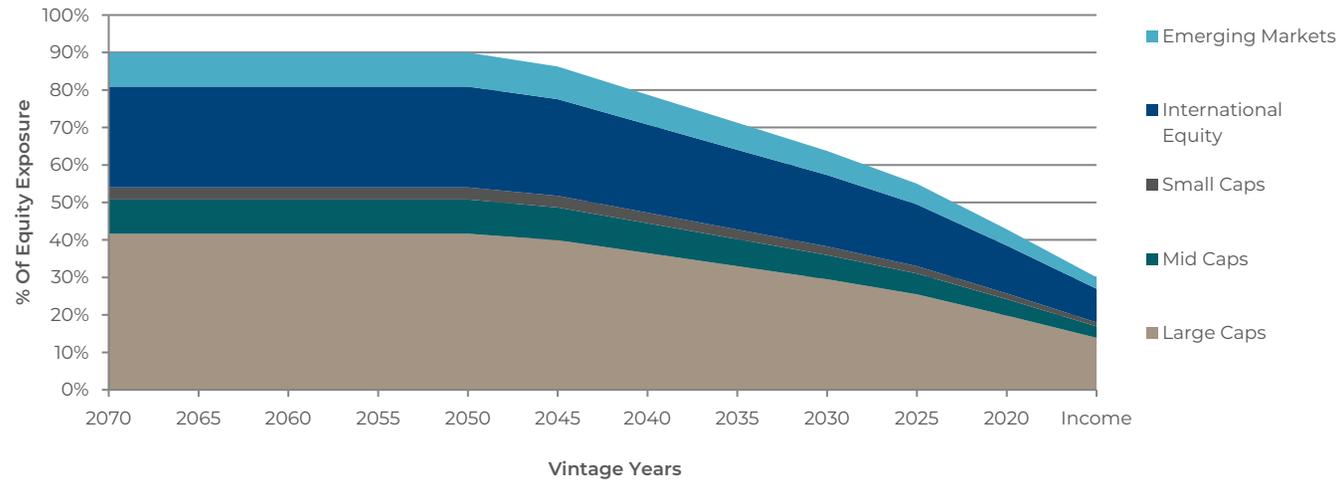
- Increased international stock allocation from 30% to 40%
- Increased International bond allocation from 20% to 30%

2021:

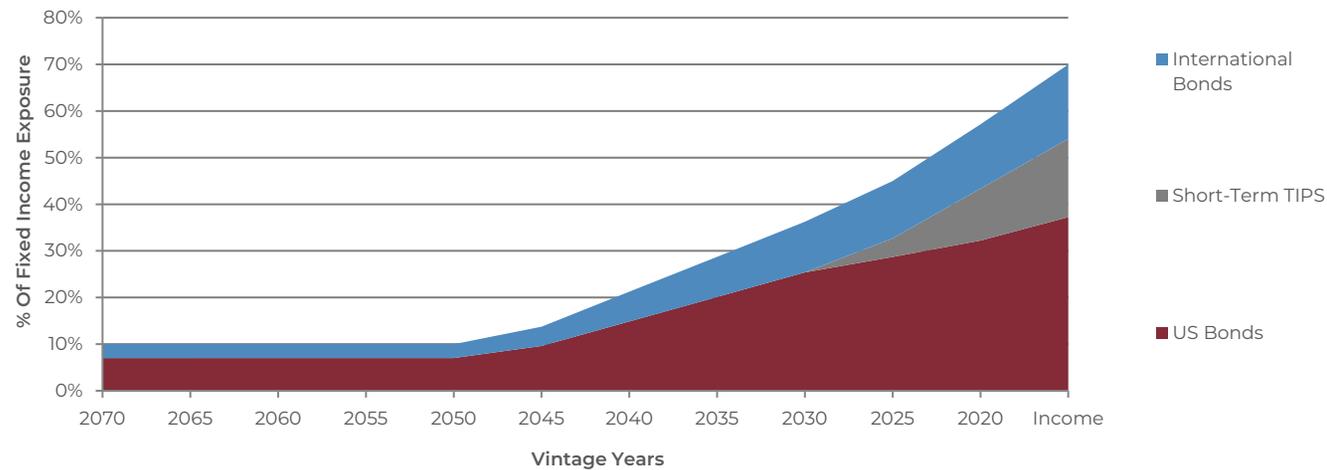
- The firm announced that in February 2022 the Institutional share class will merge into the Investor share class. Following this merger, expense ratio for the combined series will be 0.08%. The series will be available for all clients with no asset minimum.

\*All information provided by the asset manager, as of 12/31/21. Asset allocations shown are static in nature and do not incorporate any tactical views implemented by the manager.

## Equity Exposure



## Fixed Income Exposure



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# TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
Vanguard Target Retirement 2020 Fund	1.02	0.11	103.75	102.63	1.02	0.23	103.41	101.73
S&P Target Date 2020 Index	1.00	0.09	100.00	100.00	1.00	0.20	100.00	100.00
Target-Date 2020 Median	1.03	0.11	104.91	103.78	1.03	0.21	102.98	102.17
Vanguard Target Retirement 2025 Fund	1.05	0.13	103.56	106.39	1.04	0.23	103.19	104.39
S&P Target Date 2025 Index	1.00	0.16	100.00	100.00	1.00	0.24	100.00	100.00
Target-Date 2025 Median	1.02	0.13	100.86	103.67	1.01	0.21	99.05	102.39
Vanguard Target Retirement 2030 Fund	1.01	0.16	100.35	102.78	1.01	0.24	99.78	100.66
S&P Target Date 2030 Index	1.00	0.19	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2030 Median	1.01	0.17	100.53	102.73	1.01	0.24	99.96	101.57
Vanguard Target Retirement 2035 Fund	0.97	0.19	96.77	98.21	0.97	0.26	96.79	96.96
S&P Target Date 2035 Index	1.00	0.21	100.00	100.00	1.00	0.26	100.00	100.00
Target-Date 2035 Median	0.99	0.20	99.67	101.12	1.00	0.25	98.45	100.14
Vanguard Target Retirement 2040 Fund	0.97	0.22	97.54	98.12	0.98	0.27	98.00	97.94
S&P Target Date 2040 Index	1.00	0.23	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2040 Median	1.01	0.22	100.92	101.83	1.01	0.26	99.51	100.83
Vanguard Target Retirement 2045 Fund	1.00	0.25	101.33	100.64	1.01	0.28	101.22	100.71
S&P Target Date 2045 Index	1.00	0.24	100.00	100.00	1.00	0.27	100.00	100.00
Target-Date 2045 Median	1.02	0.23	102.21	102.75	1.02	0.27	101.22	101.82
Vanguard Target Retirement 2050 Fund	0.99	0.24	99.90	99.82	0.99	0.28	99.63	99.40
S&P Target Date 2050 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2050 Median	1.01	0.24	101.64	102.08	1.01	0.27	100.24	100.66
Vanguard Target Retirement 2055 Fund	0.98	0.24	98.95	99.04	0.98	0.28	98.72	98.58
S&P Target Date 2055 Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2055 Median	1.01	0.24	101.93	102.09	1.01	0.27	100.92	101.28

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## TARGET DATE ANALYSIS

Period Ending 9.30.22 | Q3 22

	3 Years Beta	3 Years Sharpe	3 Years Up Capture	3 Years Down Capture	5 Years Beta	5 Years Sharpe	5 Years Up Capture	5 Years Down Capture
Vanguard Target Retirement 2060 Fund	0.98	0.24	98.67	98.78	0.98	0.28	98.13	98.15
S&P Target Date 2060+ Index	1.00	0.24	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2060 Median	1.01	0.24	101.22	101.60	1.00	0.27	100.13	100.42
Vanguard Target Retirement 2065 Fund	0.98	0.24	98.53	99.06	0.98	0.28	98.03	98.38
S&P Target Date 2065+ Index	1.00	0.25	100.00	100.00	1.00	0.28	100.00	100.00
Target-Date 2065+ Median	1.00	0.25	101.57	102.04	1.02	0.28	101.39	101.85
Vanguard Target Retirement Income Fund	1.01	-0.04	101.65	102.41	0.99	0.15	99.14	97.90
S&P Target Date Retirement Income Index	1.00	-0.03	100.00	100.00	1.00	0.14	100.00	100.00
Target-Date Retirement Median	1.09	-0.05	112.67	108.59	1.07	0.09	105.53	107.45

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VANGUARD TARGET RETIREMENT

MEETING DATE: OCTOBER 21, 2022

FOCUS AREA

Organizational Update

COMMENTARY

There were no material changes to the target date investment team during the quarter.

Investments Update

COMMENTARY

There were no changes to the underlying investments of the Target Retirement series during the quarter.

Performance and Positioning Update

COMMENTARY

**Vanguard Target Retirement Performance Update:**

Vanguard Target Retirement had mixed performance in the third quarter as it underperformed the benchmark, but most vintages were in-line with the peer group median.

- Target Retirement's strategic asset allocation had a positive impact for the at- and in-retirement vintages but was negative for all other vintages.
- The at- and in-retirement vintages benefitted from Vanguard's inclusion of short-term TIPS and larger allocation to international bonds, which outperformed domestic bonds.
- In addition to having a larger non-U.S. fixed income allocation, Target Retirement also has a larger non-U.S. equity exposure compared to peers and the benchmark.
- This weighed on performance for the vintages leading up to retirement as U.S. equities continued to outperform the rest of the world in the third quarter.
- Excluding high yield debt from the portfolio was also a detractor for the quarter.

There were no changes made to the series' strategic asset allocation during the quarter.

*Note: Benchmark relative performance refers to fund performance compared to the S&P Target Date Indexes. This quarter, we have observed consistent underperformance by target date managers compared to the S&P Target Date Indexes. This appears to be due to a change in the Indexes' methodology, which has resulted in the Indexes being under allocated to equities across the glidepath compared to the universe.*



VANGUARD TARGET RETIREMENT

	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Vanguard Target Retirement Income Fund</b>	<b>-4.64</b>	<b>-15.89</b>	<b>-14.19</b>	<b>-0.02</b>	<b>1.96</b>	<b>3.31</b>
S&P Target Date Retirement Income Index	-3.97	-15.00	-13.31	0.06	1.88	3.23
Vanguard Target Retirement Income Custom Bench	-4.56	-15.77	-14.03	0.33	2.23	3.54
<b>Vanguard Target Retirement 2020 Fund</b>	<b>-5.12</b>	<b>-18.21</b>	<b>-15.83</b>	<b>1.17</b>	<b>2.91</b>	<b>5.46</b>
S&P Target Date 2020 Index	-4.59	-17.57	-14.75	0.98	2.64	5.11
Vanguard Target Retirement 2020 Custom	-4.93	-17.97	-15.53	1.62	3.26	5.74
<b>Vanguard Target Retirement 2025 Fund</b>	<b>-5.59</b>	<b>-20.35</b>	<b>-17.53</b>	<b>1.40</b>	<b>3.15</b>	<b>5.96</b>
S&P Target Date 2025 Index	-4.57	-18.31	-15.16	1.82	3.24	5.80
Vanguard Target Retirement 2025 Custom	-5.32	-19.95	-17.09	1.97	3.58	6.29
<b>Vanguard Target Retirement 2030 Fund</b>	<b>-5.93</b>	<b>-21.60</b>	<b>-18.42</b>	<b>1.82</b>	<b>3.43</b>	<b>6.46</b>
S&P Target Date 2030 Index	-4.98	-19.79	-16.23	2.26	3.58	6.34
Vanguard Target Retirement 2030 Custom	-5.58	-21.16	-17.96	2.39	3.86	6.78
<b>Vanguard Target Retirement 2035 Fund</b>	<b>-6.09</b>	<b>-22.40</b>	<b>-18.87</b>	<b>2.39</b>	<b>3.78</b>	<b>6.99</b>
S&P Target Date 2035 Index	-5.50	-21.51	-17.42	2.75	3.92	6.83
Vanguard Target Retirement 2035 Custom	-5.75	-22.01	-18.48	2.94	4.21	7.31
<b>Vanguard Target Retirement 2040 Fund</b>	<b>-6.33</b>	<b>-23.27</b>	<b>-19.42</b>	<b>2.91</b>	<b>4.11</b>	<b>7.40</b>
S&P Target Date 2040 Index	-5.83	-22.65	-18.21	3.08	4.16	7.18
Vanguard Target Retirement 2040 Custom	-5.93	-22.86	-19.01	3.47	4.55	7.75
<b>Vanguard Target Retirement 2045 Fund</b>	<b>-6.51</b>	<b>-24.10</b>	<b>-19.93</b>	<b>3.46</b>	<b>4.42</b>	<b>7.61</b>
S&P Target Date 2045 Index	-6.01	-23.33	-18.70	3.25	4.27	7.40
Vanguard Target Retirement 2045 Custom	-6.11	-23.71	-19.55	3.99	4.85	7.96
<b>Vanguard Target Retirement 2050 Fund</b>	<b>-6.64</b>	<b>-24.43</b>	<b>-20.18</b>	<b>3.41</b>	<b>4.39</b>	<b>7.60</b>
S&P Target Date 2050 Index	-6.07	-23.62	-18.88	3.37	4.35	7.61
Vanguard Target Retirement 2050 Custom	-6.21	-24.04	-19.81	3.97	4.84	7.95
<b>Vanguard Target Retirement 2055 Fund</b>	<b>-6.63</b>	<b>-24.44</b>	<b>-20.17</b>	<b>3.40</b>	<b>4.38</b>	<b>7.58</b>
S&P Target Date 2055 Index	-6.07	-23.69	-18.94	3.42	4.39	7.74
Vanguard Target Retirement 2055 Custom	-6.21	-24.04	-19.81	3.97	4.84	7.95
<b>Vanguard Target Retirement 2060 Fund</b>	<b>-6.64</b>	<b>-24.44</b>	<b>-20.16</b>	<b>3.40</b>	<b>4.38</b>	<b>7.58</b>
S&P Target Date 2060 Index	-6.09	-23.73	-18.99	3.43	4.44	7.78
Vanguard Target Retirement 2060 Custom	-6.21	-24.04	-19.81	3.97	4.84	7.95
<b>Vanguard Target Retirement 2065 Fund</b>	<b>-6.60</b>	<b>-24.38</b>	<b>-20.10</b>	<b>3.38</b>	<b>4.36</b>	<b>-</b>
S&P Target Date 2065+ Index	-6.04	-23.61	-18.84	3.52	4.50	-
Vanguard Target Retirement 2065 Custom	-6.21	-24.04	-19.81	3.97	4.84	-
<b>Vanguard Target Retirement 2070 Fund</b>	<b>-6.57</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
S&P Target Date 2065+ Index	-6.04	-23.61	-18.84	3.52	4.50	-
Vanguard Target Retirement 2070 Custom	-6.21	-24.04	-19.81	3.97	4.84	-



Element	Collective Investment Trusts	Mutual Funds
<b>Regulating Body</b>	State banking agencies, IRS, DOL	SEC
<b>Controlling Document</b>	Declaration of Trust	Prospectus
<b>Fees</b>	Typically lower than mutual fund equivalents due to reduced operational expenses; are generally calculated on a tiered schedule but can be a flat asset-based fee; fee can be negotiable per client	Typically higher than CIT equivalents due to additional operational expenses; fees are outlined in a fund's prospectus and are a flat asset-based fee; cannot be negotiated per client, must follow prospectus
<b>Multiple Share Classes Available</b>	Sometimes	Usually
<b>Availability</b>	Qualified Plans as defined by IRS, only institutional clients	To investors as defined in the prospectus, can be retail or institutional clients
<b>Responsible Party</b>	Trustee	Fund Board
<b>Composition</b>	Pooled assets	Pooled assets
<b>Valuation</b>	Usually daily, required to be at least quarterly; NAV can be gross or net of management fees depending on trust	Daily, NAV is net of investment management fees
<b>Liquidity</b>	Follows valuation methodology	Follows valuation methodology
<b>Performance Information</b>	Available from trustee/investment manager; history is generally more limited than equivalent mutual fund	Available from third parties such as Morningstar
<b>Clearing</b>	Most are NSCC traded	NSCC traded
<b>Revenue Sharing Offered</b>	Sometimes	Usually

# CONSIDERATIONS FOR VARIOUS TARGET DATE FUND TYPES

	To	Through
<b>Active</b>	Typically lower equity and equity-like exposure at retirement versus "through" series May be more appropriate for plan populations with participants who do not stay invested past age 65 Primary objective is to help participants meet their accumulation goals at retirement	Typically higher equity and equity-like exposure at retirement versus "to" series May be more appropriate for plan populations with participants who stay invested past age 65 Primary objective is to help participants maximize their savings throughout retirement
	More expensive than passive Opportunity for out/(under) performance Greatest tracking error opportunity Typically the most revenue sharing available Typically most diverse vis-à-vis asset class inclusion	More expensive than passive Opportunity for out/(under) performance Greatest tracking error opportunity Typically the most revenue sharing available Typically most diverse vis-à-vis asset class inclusion
<b>Hybrid</b>	Typically lower equity and equity-like exposure at retirement versus "through" series May be more appropriate for plan populations with participants who do not stay invested past age 65 Primary objective is to help participants meet their accumulation goals at retirement	Typically higher equity and equity-like exposure at retirement versus "to" series May be more appropriate for plan populations with participants who stay invested past age 65 Primary objective is to help participants maximize their savings throughout retirement
	Cost savings as compared to active Tighter tracking error to benchmarks than active Does not forego opportunity for outperformance as does passive Revenue sharing may be an issue	Cost savings as compared to active Tighter tracking error to benchmarks than active Does not forego opportunity for outperformance as does passive Revenue sharing may be an issue
<b>Passive</b>	Typically lower equity and equity-like exposure at retirement versus "through" series May be more appropriate for plan populations with participants who do not stay invested past age 65 Primary objective is to help participants meet their accumulation goals at retirement	Typically higher equity and equity-like exposure at retirement versus "to" series May be more appropriate for plan populations with participants who stay invested past age 65 Primary objective is to help participants maximize their savings throughout retirement
	Lowest costs Revenue sharing may be an issue Largely removes the risk of underperformance versus prospectus benchmarks No opportunity for outperformance May limit asset class availability as compared to active	Lowest costs Revenue sharing may be an issue Largely removes the risk of underperformance versus prospectus benchmarks No opportunity for outperformance May limit asset class availability as compared to active



## Benefits

- Open architecture - removes proprietary fund restrictions common in “off the shelf” TDFs
- Allows plan fiduciaries to apply their core menu selection and monitoring efforts to the underlying components of the TDFs
- Opportunity for fee negotiation
- Glidepath can be designed for the specific needs of the plan participants
- Vehicle selection (mutual funds, CITs, ETFs, Separate Accounts)
- Asset class selection

## Considerations

- Burden of responsibility/risk is enhanced for fiduciaries to manage the glidepath and custom TDFs
  - Plan must have strong process and governance
- Additional costs include glidepath management (3(38)), unitization, fund administration, legal, reporting
  - Presence of additional costs (versus off the shelf) favors large plans
- Participant demographics or behavior should be different enough from other plans to benefit from custom
  - i.e., are you different enough to justify the additional costs and complexity?
- Operational risks (timing/orchestration of changes)
- Thresholds and minimum sizes
- Benchmarking difficulties

### Sharpe Ratio

A measure of manager's return per unit of risk. It is the ratio of a manager's excess return above the risk free rate over the standard deviation. A higher Sharpe Ratio implies greater manager efficiency.

### Beta

A manager's sensitivity to systematic, or market risk. Beta is a result of the analysis regressing a manager's returns against those of a benchmark index. A manager with a beta of 1 should move perfectly with the benchmark. A beta less than 1 implies that a manager's returns are less volatile than the market's. A beta of greater than 1 similarly implies that a manager exhibits greater volatility than the market.

### Up-Market Capture Ratio

Statistical measure of an investment manager's overall performance in up-markets. The up-market capture ratio is used to evaluate how well a manager performed relative to an index during periods when that index has risen. The ratio is calculated by dividing the manager's returns by the returns of the index during the up-market, and multiplying that factor by 100. For example, a manager with an up-market capture ratio of 120 indicates that the manager outperformed the market by 20% during the specified period.

### Down-Market Capture Ratio

Statistical measure of an investment manager's overall performance in down-markets. The down-market capture ratio is used to evaluate how well or poorly a manager performed relative to an index during periods when that index has dropped. The ratio is calculated by dividing the manager's returns by the returns of the index during the down-market and multiplying that factor by 100. For example, a manager with a down-market capture ratio of 80 indicates that the manager's portfolio declined only 80% as much as the index during the period in question.

### Maximum Drawdown

The maximum loss from a peak to trough of a portfolio, before a new peak is attained. Maximum Drawdown is an indicator of downside risk over a specified time period.

## Retirement Plan Limitations

### Limitations on qualified retirement plan benefits and contributions.

The IRS recently announced the 2023 cost-of-living adjustments for various retirement plan dollar limits. The indexed amounts, and other commonly used limits, are listed below:

	2020	2021	2022	2023
Maximum Pretax Contribution by Employees to §401(k) plans (§402(g)(1)) <sup>1</sup>	\$19,500	\$19,500	\$20,500	\$22,500
Maximum Pretax Contribution by Employees to a SIMPLE Plan (§408(p)(2)(E)) <sup>1</sup>	\$13,500	\$13,500	\$14,000	\$15,500
Maximum Pretax Contribution by Employees to §403(b) plans (§402(g)(1)) <sup>1,2</sup>	\$19,500	\$19,500	\$20,500	\$22,500
Maximum Exclusion from an eligible §457 plan <sup>1,2</sup>	\$19,500	\$19,500	\$20,500	\$22,500
Maximum After-Tax Contribution by employees to §402A Roth 401(k), 403(b), and governmental 457(b) plans	\$19,500	\$19,500	\$20,500	\$22,500
Defined Benefit Maximum (§415(b)(1)(A)) (\$90,000 in 1987) <sup>3</sup>	\$230,000	\$235,000	\$245,000	\$265,000
Defined Contribution Maximum (§415(c)(1)(A)) <sup>2,3</sup>	\$57,000	\$58,000	\$61,000	\$66,000
Highly Compensated Employees (§414(q)(1)(B)) <sup>4, 5</sup> (Compensation Exceeding \$80,000 in 1997)	\$130,000	\$130,000	\$135,000	\$150,000
Considered Compensation Cap (§401(a)(17), 404(l), 408(k)(3)(C), 408(k)(6)(D)(ii)) <sup>4</sup>	\$285,000	\$290,000	\$305,000	\$330,000
Simplified Employee Pension (SEP)				
Compensation Threshold for Participation (§408(k)(2)(C)) <sup>4</sup>	\$600	\$650	\$650	\$750
Key Employee (§416 officer)	\$185,000	\$185,000	\$200,000	\$215,000
Social Security Wage Base	\$137,700	\$142,800	\$147,000	\$160,200
Earnings Limit without losing Social Security benefits				
At least age 62, but under full retirement age <sup>6</sup>	\$18,240	\$18,960	\$19,560	\$21,240
The year an individual reaches full retirement age <sup>7</sup>	\$48,600	\$50,520	\$51,960	\$56,520
Catch-up Contribution (§414(v)(2)(B)(i)) for individual aged 50 or over in an employer plan other than a plan described in §401(k)(11) or §408(p) (SIMPLE) <sup>1</sup>	\$6,500	\$6,500	\$6,500	\$7,500
Catch-up Contribution (§414(v)(2)(B)(ii)) for individual aged 50 or over in a plan described in §401(k)(11) or §408(p) (SIMPLE) <sup>1</sup>	\$3,000	\$3,000	\$3,000	\$3,500

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- Participants' limitation for each calendar year.
- Other limitations apply; limits may be exceeded under certain circumstances.
- Thresholds are based on the plan (limitation) year which ends during the calendar year.
- Amounts are subject to the thresholds in effect at the beginning of the plan (determination) year.
- Post-1996 definition of Highly Compensated Employees is: (a) 5 percent owners

- during the year or the preceding, or (b) employees with compensation in excess of \$80,000 (as indexed above) for the preceding year, or (c) employees with compensation in excess of \$80,000 (as indexed above) for the preceding year, and in the top 20 percent of compensated employees for the preceding year as defined by the plan document.
- One dollar in benefits will be withheld for every \$2 in earnings above the limit.

- For retirees born in 1943-1954, full retirement age is 66. Full retirement age will gradually increase to age 67 for those born in 1955-1959. Retirement age is 67 for those born in 1960 and later.
- Applies only to earnings for months prior to attaining full retirement age. One dollar in benefits will be withheld for every \$3 in earnings above the limit. There is no limit on earnings beginning the month an individual attains full retirement age.