WA529 Committee Meeting
Thursday, November 12, 2020

Zoom Meeting
Registration Link:
https://us02web.zoom.us/meeting/register/tZcsfuihpjgoHtCRQI6vKGdtBGed2iX5WIHJ
2:00 p.m. – 4:00 p.m.

AGENDA

Call to Order: Welcome & Member Introductions

• Approval of the September 9, 2020 Minutes	ACTION
• Approval of the 2021 WA529 Committee Meeting Calendar	ACTION
• Program Updates *Luke Minor, WA529 Director* *Sally Riefenstahl, Sumday Administration*	INFORMATION
• WA529 Outlook – 2020 and beyond *Committee Discussion*	DISCUSSION
• 2020 GET Actuarial Valuation Report *Sarah Baker and Michael Harbor, Office of the State Actuary* *Marc Webster, WSAC Director of External Affairs*	INFORMATION
• Legislative Report Review *Luke Minor, WA529 Director*	INFORMATION
• Public Comment	
• Adjournment	

Next Regularly Scheduled Meeting
TBD
(Pending Committee Approval of 2021 Meeting Calendar)

WA529 Committee Meeting
Thursday, November 12, 2020

Committee Member Packet Contents – Index

Agenda Item & Presentation Location	Background Materials
Approval of the September 9, 2020 Minutes (Slide 2)	1 - 09.09.20 WA529 Committee Meeting Minutes
Approval of the 2021 WA529 Committee Meeting Calendar (Slide 3)	2 - 2021 Proposed WA529 Committee Meeting Calendar
Program Updates (Slides 4-25)	3 - GET 2020 Third Quarter Committee Report
	4 - GET Q3 2020 Investment Report (WSIB)
	5 - DreamAhead 2020 Third Quarter Committee Report (Sumday)
	6 - DreamAhead Investment Advisory Report Q3 2020 (Lockwood)
WA529 Outlook – 2020 and beyond (Slides 26-30)	See Main Meeting Deck Slides
2020 GET Actuarial Valuation Report (Slides 31-44)	7 - Draft.2020.GAVR
Legislative Report Review (Slides 45-48)	8 - DRAFT WA529 FY20 Rollover Report 9 - DRAFT DreamAhead FY20 Fee Report

WA529
WASHINGTON COLLEGE SAVINGS PLANS

Committee Meeting
November 12, 2020

1

Action

WA529
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Approval of the September 9, 2020
WA529 Committee Meeting Minutes

2

Action

Approval of the 2021 Committee Meeting Calendar

- January 20, 2021*
- May 6, 2021
- September 15, 2021
- November 17, 2021

**Expected to be virtual via video conference*

Notes: *All meetings scheduled for 2-4pm on the Capitol Campus in Olympia, WA unless noted. Special meetings may be added as necessary.*

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Program Updates

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Luke Minor
Director, WA529

Sally Riefenstahl
Account Executive, Sumday Administration

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Program Updates

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Agenda

WA529 Marketing Update

GET Update

- General update
- Investment update

DreamAhead Update

- General update
- Investment update

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Program Updates

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WA529 Marketing Update

- New WA529 website
  - Launched October 26
  - Consolidated three websites into one
  - 'One-stop-shop' for families to learn about and compare GET & DreamAhead, enroll, and access online accounts
- Paid Advertising Campaign update
  - DreamAhead media began mid-August
  - Added GET media Nov. 2; ramped up Nov. 4
  - Digital, social, radio, television
    - Targets: parents & grandparents of school age children
    - News programming, news seekers on web, & appointment viewing

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Program Updates

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WA529 Marketing Update

- Newborn Enrollment Promotion
  - All new accounts with beneficiaries under 18 months of age receive a WA529 baby onesie

GET Updates

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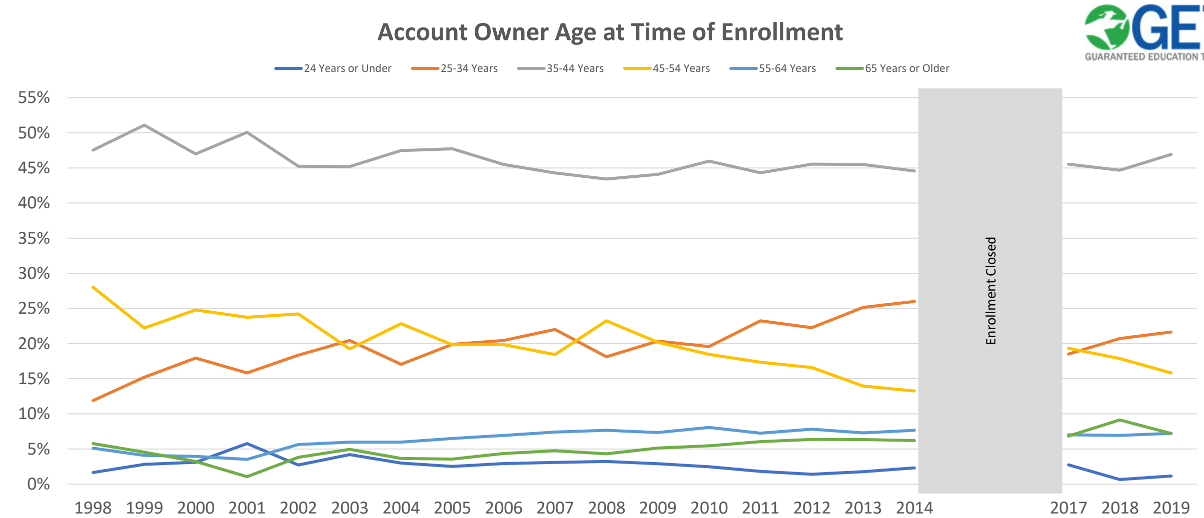
- Enrollment opened on November 1 with a unit price of $133
- Enrollment closes May 31; unit price expires June 30
- Up to the minute enrollment figures *(as of November 12, 2020):*
  - Applications
  - New Custom Monthly accounts
  - New Lump Sum accounts
  - Total units sold since November 1

GET
GUARANTEED EDUCATION TUITION

Account Owner Age Trends

WA529
WASHINGTON COLLEGE SAVINGS PLANS

GET
GUARANTEED EDUCATION TUITION



Notes: *Data-as-of 8.24.20*

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Average Age of Student Beneficiary

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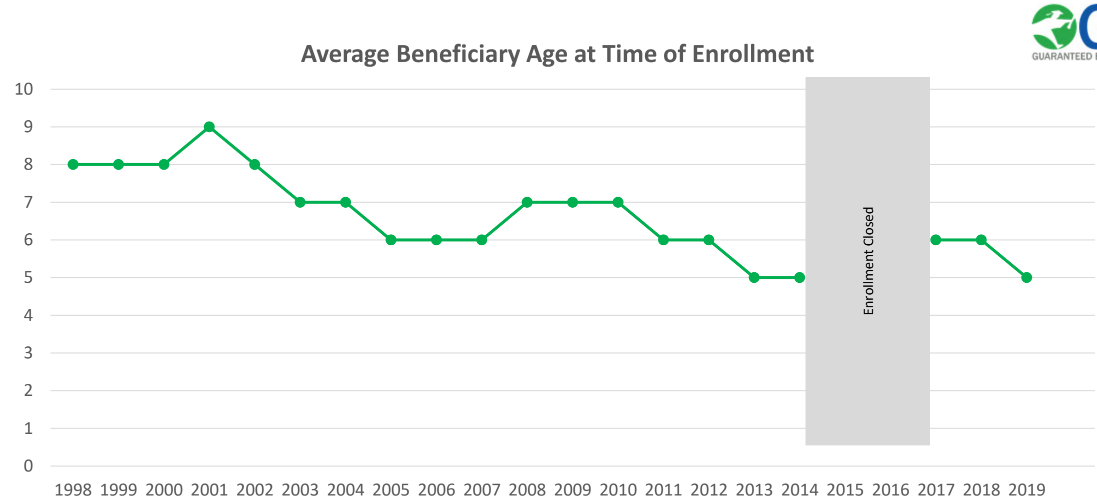
GET
GUARANTEED EDUCATION TUITION



Notes: *Data-as-of 10.19.20. Includes all active and inactive accounts.*

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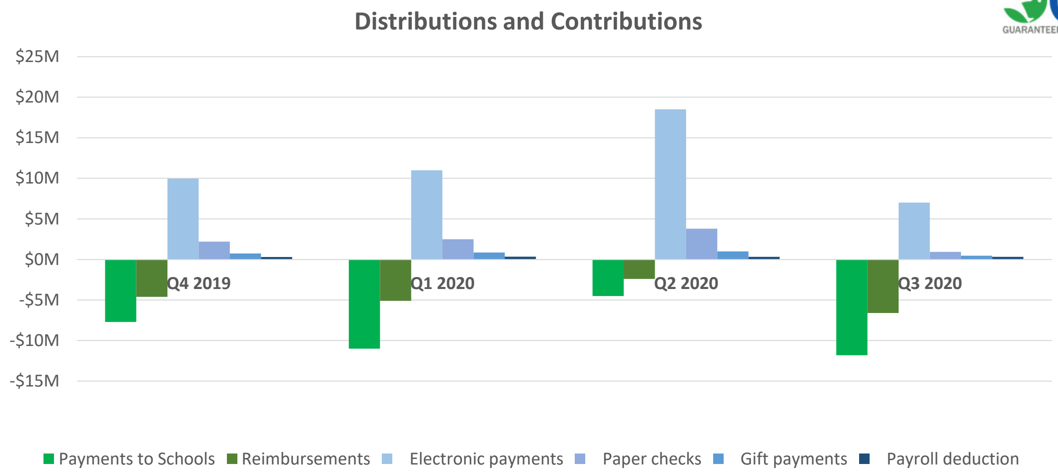
Distributions vs. Contributions by Quarter

WA529 WASHINGTON COLLEGE SAVINGS PLANS

GET GUARANTEED EDUCATION TUITION



Notes: *Data-as-of 10.12.20*

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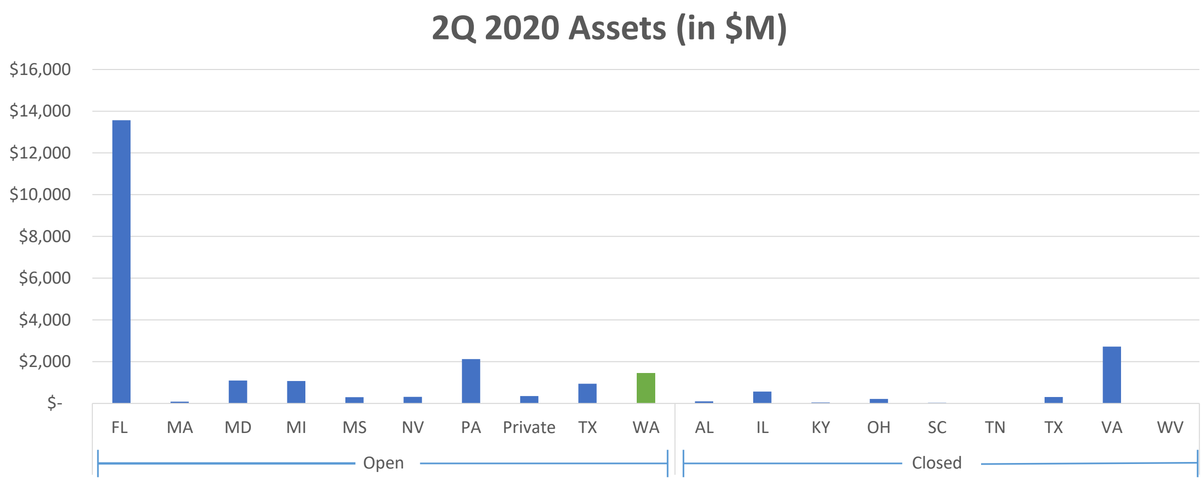
Prepaid 529 Plan Comparison

WA529 WASHINGTON COLLEGE SAVINGS PLANS



Notes: *Data-as-of 6.30.20. Source: Strategic Insight*

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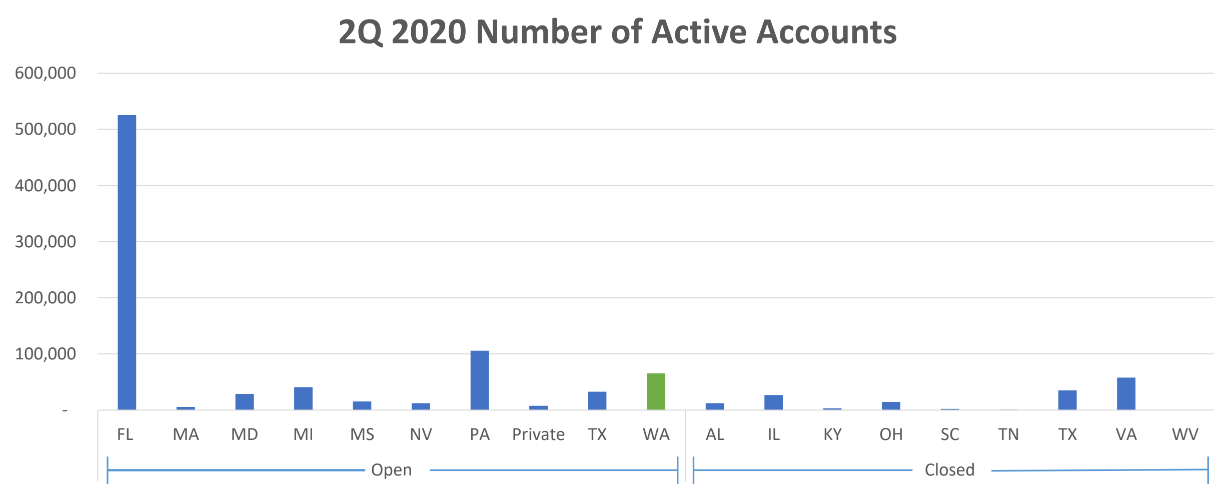
Prepaid 529 Plan Comparison

WA529 WASHINGTON COLLEGE SAVINGS PLANS



Notes: *Data-as-of 6.30.20. Source: Strategic Insight*

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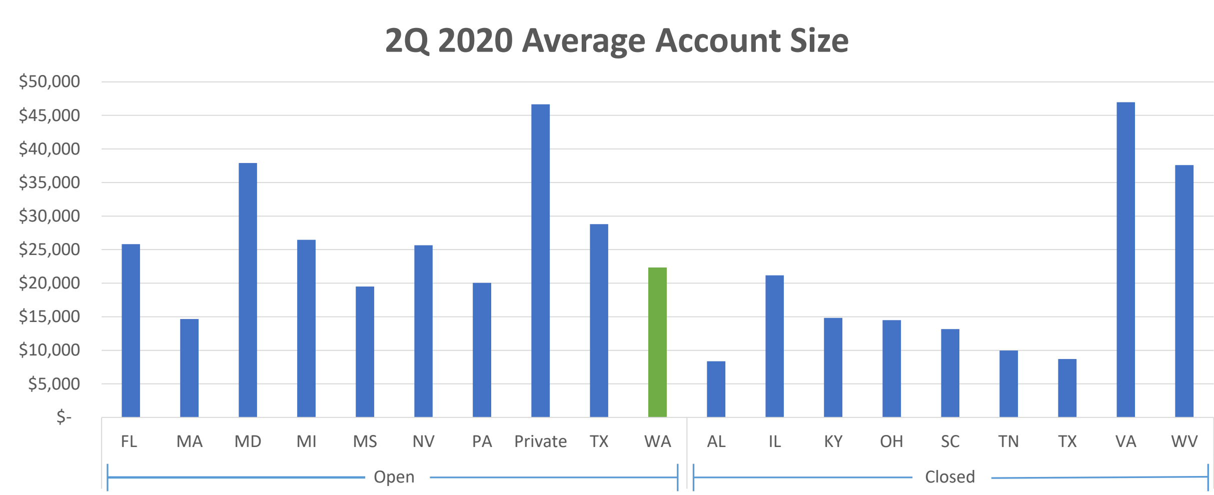
Prepaid 529 Plan Comparison

WA529 WASHINGTON COLLEGE SAVINGS PLANS



Notes: *Data-as-of 6.30.20. Source: Strategic Insight*

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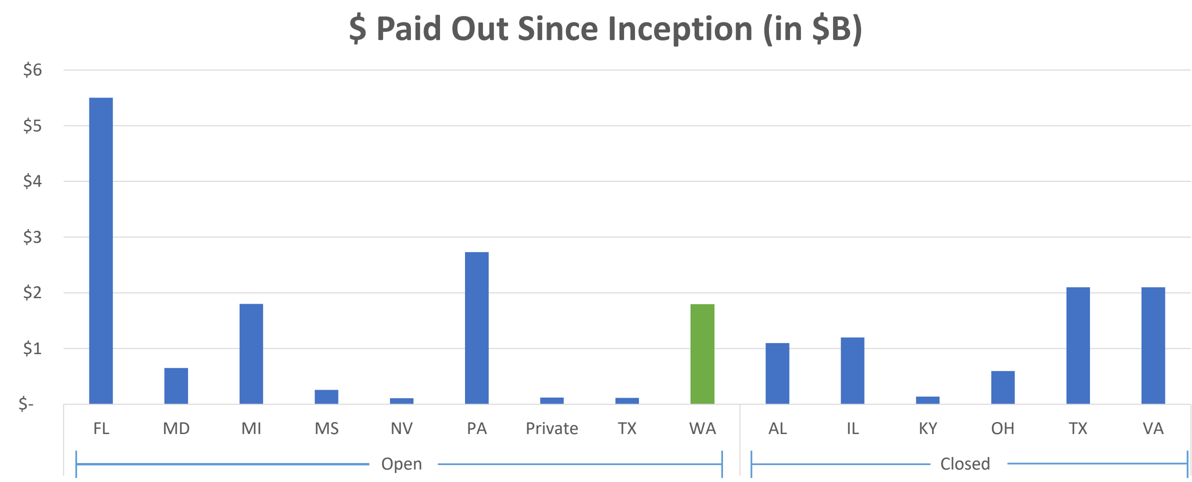
Prepaid 529 Plan Comparison

WA529 WASHINGTON COLLEGE SAVINGS PLANS



Notes: *Data-as-of 6.30.20. Payout data for current and legacy MS plans are combined. Payout data unavailable for MA, TN, WI, and WV.*

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GET Q3 Investment Update

WA529 WASHINGTON COLLEGE SAVINGS PLANS

GET GUARANTEED EDUCATION TUITION

GET Prepaid College Tuition Program

Portfolio Size

Total	**$1,502,149,381**
Cash	$4,843,607
Fixed Income	$888,822,668
Equity	$608,483,106

Source: *GET Prepaid College Tuition Program Quarterly Report – September 30, 2020, WSIB*

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GET Q3 Investment Update

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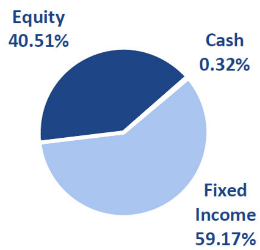
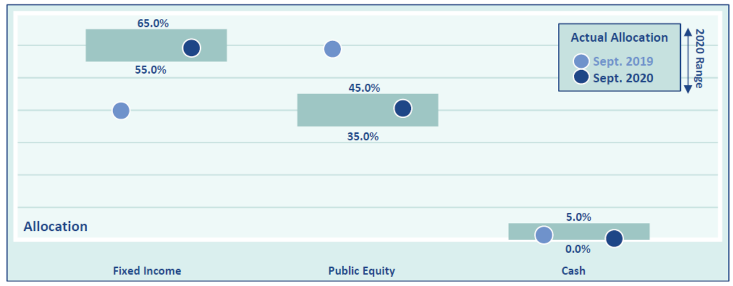
GET
GUARANTEED EDUCATION TUITION

Actual Asset Allocation





Note: Allocation changed in January 2020. It was previously 40% Fixed Income and 60% Equity and changed to 60% Fixed Income and 40% Equity

Source: *GET Prepaid College Tuition Program Quarterly Report – September 30, 2020, WSIB*

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GET Q3 Investment Update

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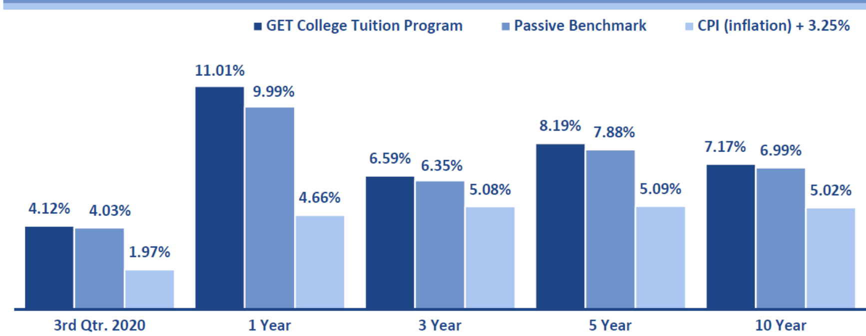
GET
GUARANTEED EDUCATION TUITION

GET Prepaid College Tuition Program Quarter Ended September 30, 2020

Total Return *



* The return numbers above are net of manager fees and other expenses that can be directly debited from the account for portfolio management but do not include the WSIB management fee.

Source: *GET Prepaid College Tuition Program Quarterly Report – September 30, 2020, WSIB*

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DreamAhead
COLLEGE INVESTMENT PLAN

2020 Third Quarter Committee Report

November 12, 2020

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Sumday COVID-19 update

Morningstar Bronze Ranking

Fund Event

- Fund swap scheduled to occur 12/1
- Account owner notification
- Program Details Booklet: Supplement
- Website

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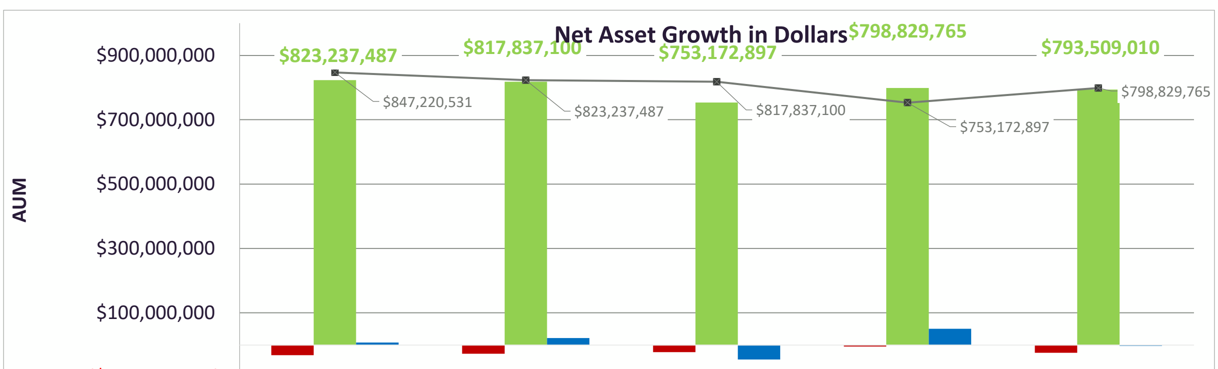
Overview for the Current Quarter

- $793,509,010 in AUM
- 25,886 Funded Accounts
- 488 New Accounts
- 5,054 Accounts with Zero Dollar Balance
- Market Performance of -$2,695,023
- Contributions of $7,548,289
- Distributions of $31,781,967

Net Asset Growth

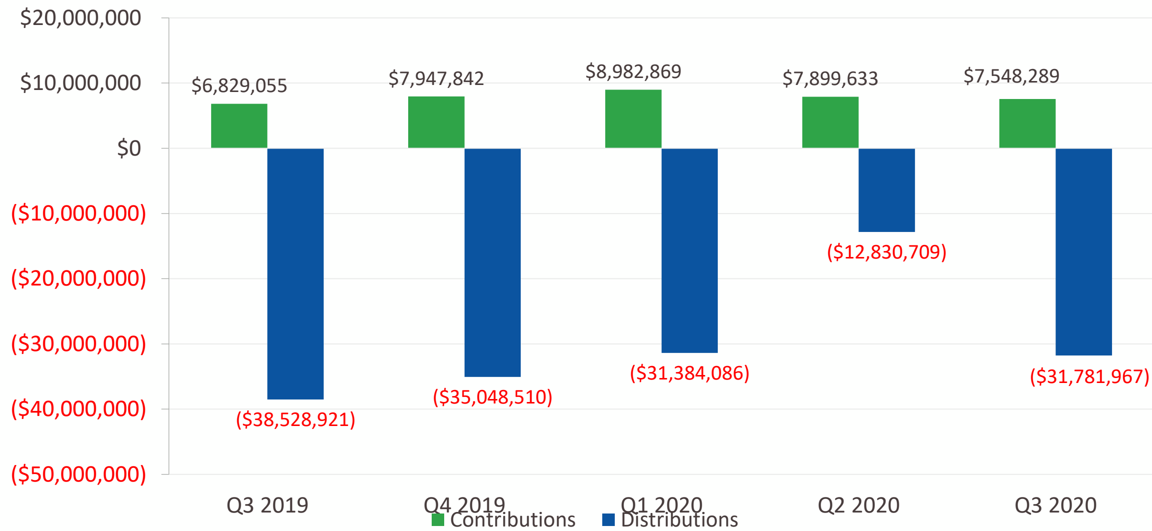
Asset growth shows strong return of market performance



	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020
Net Flow	($31,699,866)	($27,100,668)	($22,401,217)	($4,931,076)	($24,233,678)
Total AUM	$823,237,487	$817,837,100	$753,172,897	$798,829,765	$793,509,010
Market Performance	$7,716,822	$21,700,281	($45,262,724)	$50,587,944	($2,695,023)
Previous AUM	$847,220,531	$823,237,487	$817,837,100	$753,172,897	$798,829,765

Contributions & Distributions

Distributions are back near trend, but trailing same quarter in 2019, possibly affected by COVID-19.



23 Information Classification: Public

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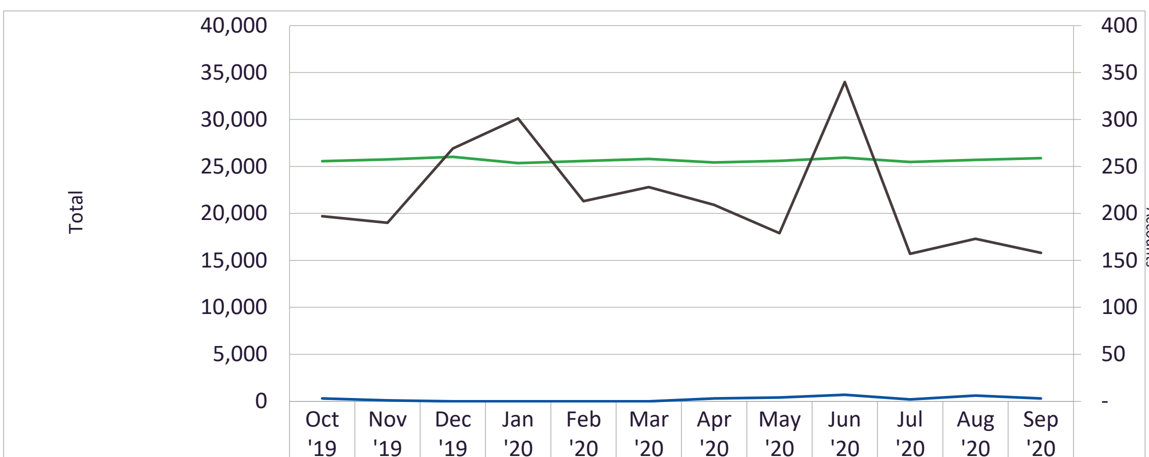
Cumulative Account Growth – Last Twelve Months



	Oct '19	Nov '19	Dec '19	Jan '20	Feb '20	Mar '20	Apr '20	May '20	Jun '20	Jul '20	Aug '20	Sep '20
Total Funded Accounts	25,560	25,750	26,019	25,356	25,569	25,797	25,41	25,59	25,93	25,47	25,68	25,88
GET Rollover	3	1	-	-	-	-	3	4	7	2	6	3
New Accounts	197	190	269	301	213	228	209	179	340	157	173	158

24 Information Classification: Public

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DreamAhead Investment Update

Q3 Investment Performance

- All Static and Year of Enrollment portfolios have met their respective benchmarks in Q3 2020, year-to-date, and trailing 12 month period.
- No remedial action is necessary.
- There are no funds on the Watch List. All funds have performed as expected.

*****Review "Investment Advisory Report – Second Quarter 2020" for more details*****

25 *Information Classification: Public*

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WA529 Outlook

2020 and Beyond

WA529
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Strategic Planning discussion

Building a roadmap to help more Washington families save more money for future education expenses

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WA529 Outlook
2020 and Beyond

WA529 WASHINGTON COLLEGE SAVINGS PLANS

Key Outcome for November and January:

- ➢ Determine WA529's mission/purpose

Considerations:

- Fully develop high-level strategy before diving into tactics
- Consider WA529's fit within and support of WSAC Strategic Framework
- This state sponsored program should be more than just passing along a federal tax benefit
- Explore new programs/initiatives/features to add value for Washingtonians and better serve underrepresented communities

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WA529 Outlook
2020 and Beyond

WA529 WASHINGTON COLLEGE SAVINGS PLANS

Key themes from September Committee Meeting

- State not just offering avenue to a federal tax benefit – greater public policy purpose
- Put 529 plans into framework of how to make college more affordable for more families and help boost college accessibility and attendance of disadvantaged groups
- Help WA residents save for various needs and take full advantage of plans flexibility
- Take a holistic approach/view, with a focus on equity and diversity
- Determine how to distinguish our plans from others, determine where we are competitive and where are we not, and better understand the market
- Look at case studies/best practices from other states, especially where it has led to better outcomes for students and families
- Consider a joint meeting with council and consider WA529's role in the WSAC strategic framework

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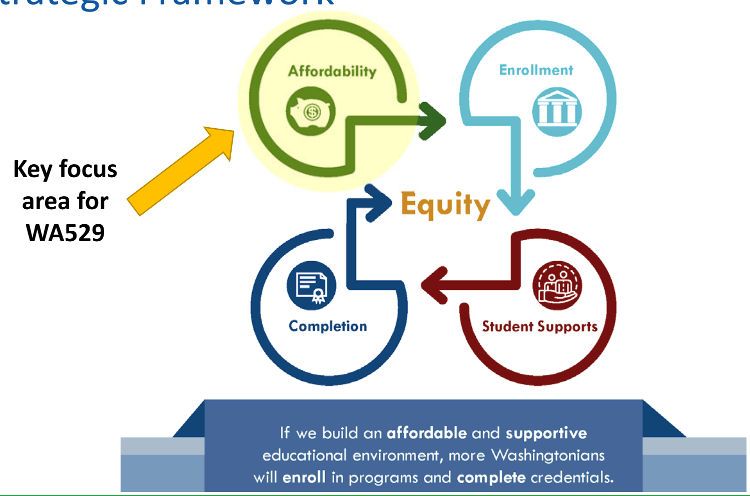
WA529 Outlook
2020 and Beyond

WA529 WASHINGTON COLLEGE SAVINGS PLANS

WSAC Strategic Framework



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WA529 Outlook
2020 and Beyond

WA529 WASHINGTON COLLEGE SAVINGS PLANS

Next steps

Begin developing strategic framework

- Continue discussion to define mission/purpose
- Develop preliminary goals and measures
- Begin developing a more detailed timeline for development and implementation
- Identify resource needs (e.g. should we create any workgroups or subcommittees?)

Review progress on WA529 data dashboard development

- Settle on key measurement areas and inputs

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2020 GET Actuarial Valuation Report Overview

Sarah Baker
Michael Harbour
Office of the State Actuary

Marc Webster
WSAC Director of External Affairs

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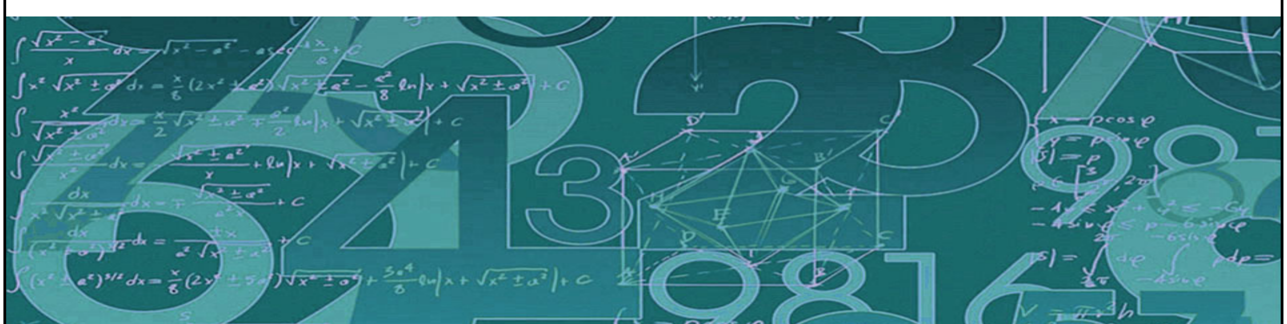
2020 GET Actuarial Valuation Report Overview

Presentation to: WA529 Committee

Michael Harbour, ASA, MAAA, Actuary
Sarah Baker, Actuarial Analyst



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November 12, 2020

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Today's Presentation

2020 GET Actuarial Valuation Results

- Summary of the updated actuarial analysis to help evaluate plan health
- Key assumptions used in the actuarial analysis
- Significant factors in this year's valuation

Interpretation of 2020 Results

- Risk inherent in actuarial measurements
- Historical funded status and tuition growth
- Sensitivity of results to assumptions and methods

Factors That May Influence 2021 Results

- GET Experience Study
- External factors that may impact actuarial analysis

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Summary of Contract Data and Key Assumptions

Contract Summary	2020	2019
Number of Current Contracts	67,153	67,215
Number of Units Outstanding	10,289,070	10,418,088

Key Assumptions	
Investment Return	
All Years	4.75%Notes:
Tuition GrowthNotes: Notes:	
2020-21	2.4%
2021-29	5.5%
2029-31+	5.0%

Notes: *Target asset allocation: 40% global equities; 60% fixed income.*

Notes: Notes: Academic school year

- Lowered assumed rate of investment return from 5.25% to 4.75% based on the new asset allocation, WSIB's 2019 CMAs, simulated returns over a 15-year period, and anticipated long-term market impacts from the current recession
- Tuition growth assumptions updated to reflect adopted tuition growth rates for 2020-21 academic school years; OSA best estimate, unchanged from last year, thereafter

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Funded Status Summary

Funded Status Summary		
(Dollars in Millions)	**2020**	**2019**
Present Value of Future Obligations	$1,190	$1,108
Present Value of Fund	$1,559	$1,456
Funded Status	131.0%	131.3%
Reserve/(Deficit)	$369	$347

- June 30, 2020, actuarial valuation results compare to roll-forward results of 132% and $375 million for the funded status and reserve respectively
- Please see the *June 30, 2020, GET Actuarial Valuation Report* for all supporting information

Summary Comments on 2020 Results

Significant factors for this year's valuation include the following

- Reduction to the prospective assumed rate of investment return from 5.25 percent to 4.75 percent (decrease to funded status)
- Investment returns of 7.40 percent exceeding the expected 5.25 percent for the plan year ending June 30, 2020 (increase to funded status)
- The addition of new units purchased after last year's actuarial valuation
- See gain/loss analysis in full report for further details

Risks Inherent in Actuarial Measurements

- Caution should be exercised when reaching conclusions or taking actions based on a single, point-in-time measurement
- Changes to assumptions, or experience that plays out differently than expected, can lead to significant changes in the measurements
- Higher likelihood short-term experience will deviate from our assumptions in 2021

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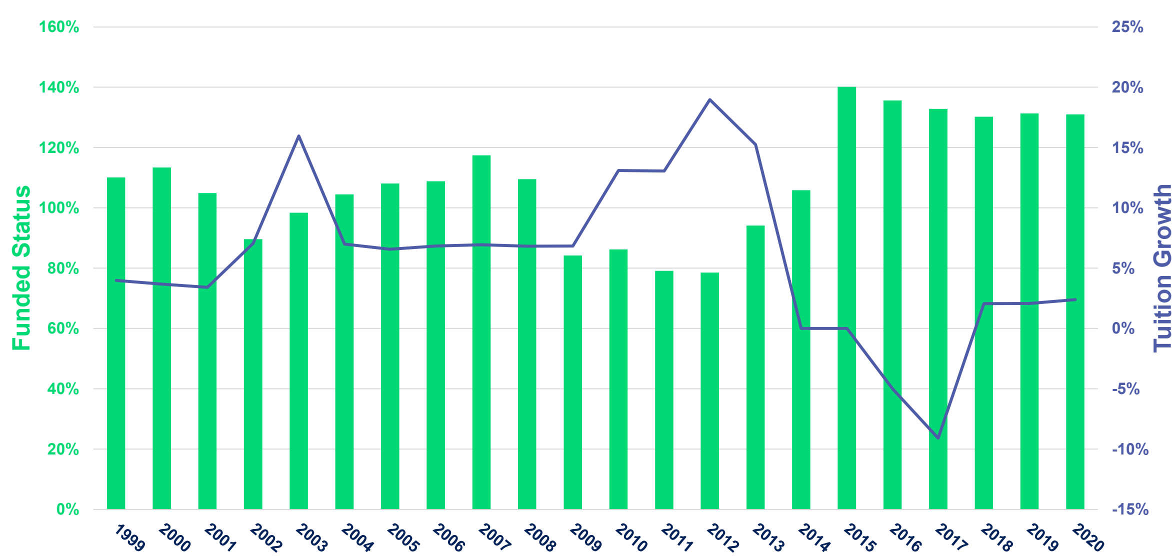
Funded Status and Tuition Growth History



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Sensitivity of Funded Status to Asset Valuation Method

- Funded status also sensitive to the asset valuation method
- Best estimate funded status based on the market value of assets
- We show the funded status under an actuarial (or smoothed) value for comparison

Sensitivity to Market Fund Value		
Closed ProgramNotes:		
(Dollars in Millions)	Best Estimate	Actuarial Fund Value
PV of Fund	$1,559	$1,538
PV of Obligations	$1,190	$1,190
Reserve/(Deficit)	$369	$348
Funded Status	131%	129%

Note: PV means Present Value.

Notes: Based on current contracts only, no future unit sales.

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Sensitivity of Results to Key Assumption Changes

Sensitivity of Results to Key Assumptions (Closed ProgramNotes:)							
	Tuition Growth			Investment Return			
(Dollars in Millions)	+1% Tuition	Best Estimate	-1% Tuition	-2% Return	-1% Return	Best Estimate	+1% Return
PV of Fund	$1,559	$1,559	$1,559	$1,568	$1,564	$1,559	$1,555
PV of Obligations	$1,263	$1,190	$1,124	$1,364	$1,272	$1,190	$1,117
Reserve/(Deficit)	$297	$369	$436	$205	$291	$369	$439
Funded Status (as of June 30)	123%	131%	139%	115%	123%	131%	139%

Notes: Based on current contracts only, no future unit sales.

- Results sensitive to changes in assumed rates of tuition growth and investment return (“return”)
- Table above illustrates how the results of our “best estimate” change when we vary the assumed rates of tuition growth and investment return

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Factors That May Influence 2021 Results

- A new GET Experience Study where we take a deep dive into key assumptions including
  - Tuition growth
  - Investment return
  - New entrant profile
- The results of the experience study, 2021 actuarial valuation, and price-setting analysis for the 2021-22 enrollment period may be influenced by
  - Updated Capital Market Assumptions
  - 2021-23 Biennium tuition policy

Questions?

Questions? Please Contact: The Office of the State Actuary
leg.wa.gov/OSA; state.actuary@leg.wa.gov
360-786-6140, PO Box 40914, Olympia, WA 98504
Michael Harbour and Sarah Baker

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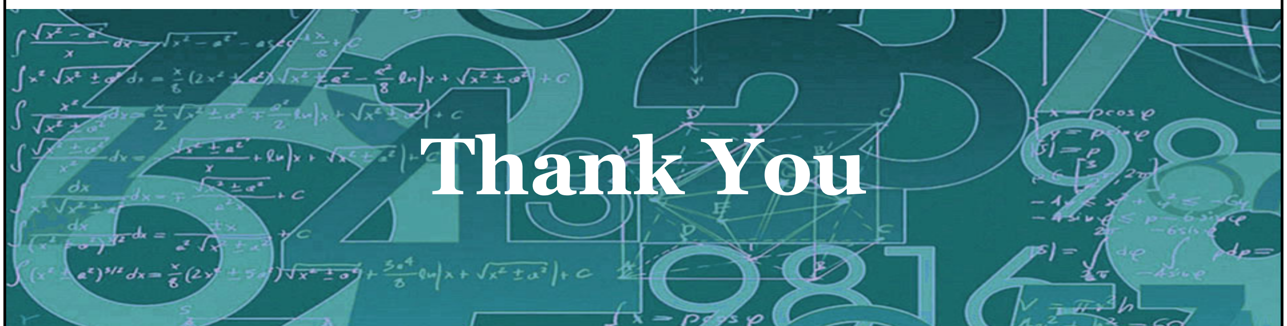

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November 12, 2020

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Funded Status Details

- Program Obligations include the present value of administrative expenses; administrative expenses provided by GET program staff
- Fund Value includes the present value of monthly contract receivables

2020 Funded Status	
(Dollars in Millions)	
Obligations	
a) Present Value of Unit Redemptions	$1,161
b) Present Value of Administrative Expenses	$30
c) Present Value of Obligations (a+b)	$1,190
Market Fund Value	
d) Assets	$1,458
e) Present Value of Monthly Contract Receivables	$102
f) Present Value of Fund (d+e)	$1,559
Calculation of Funded Status	
g) Present Value of Fund (f)	$1,559
h) Present Value of Obligations (c)	$1,190
i) Ratio of Market Fund Value to Obligations (g/h)	131.0%
j) Reserve / (Deficit) (g-h)	$369

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Legislative Report Review

Luke Minor

Director, WA529

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FY2020 Rollover Report

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- RCW 28B.95.045 requires the Committee to report out annually on rollover activity in and out of DreamAhead.
- 84% of the rollovers from DreamAhead to out-of-state plans were for accounts that originally rolled over from GET as part of the incentive program offered by Senate Bill 6087 (2018).

*****See "DRAFT Washington College Savings Plans Rollover Report" in meeting materials.*****

GET and DreamAhead Rollovers – State Fiscal Year 2020

Rollover Type	Number of Accounts
Incoming Rollovers From Out-of-State Plans	
Rollovers into GET	63
Rollovers into DreamAhead	61
Outgoing Rollovers to Out-of-State Plans	
Rollovers from GET	68
Rollovers from DreamAhead	558
Rollovers between GET and DreamAhead	
Rollovers from GET to DreamAhead	28
Rollovers from DreamAhead to GET	29

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DreamAhead Fee Report

WA529 WASHINGTON COLLEGE SAVINGS PLANS

- RCW 28B.95.087(3) limits annual fees to participants for any investment option to 50 bp (0.5%).
- Effective December 1, 2020, total annual asset-based fees vary from 0.254% to 0.333%, depending upon the Portfolio(s) a participant chooses.
- Since this report was last updated in December 2019, DreamAhead has again been able lower asset-based fees for participants. The most notable decreases occurred in the more conservative investment options, primarily due to a change in the underlying money market fund (e.g. Cash Preservation portfolio fees were lowered by 7 bps).

DreamAhead Fee Report

WA529 WASHINGTON COLLEGE SAVINGS PLANS

- DreamAhead received a “Bronze Medal” in Morningstar’s 2020 529 plan ratings. As part of this rating, Morningstar determined that DreamAhead’s fees were “Below Average,” which garnered a “Positive” rating in their “Price” pillar.
- DreamAhead continues to be rated highly by savingforcollege.com, based on their “5-cap” rating system. As of November 1, 2020, DreamAhead was rated 5 out of 5 caps for in-state residents and 4.5 out of 5 caps for out-of-state residents, with a “Fee Score” of 4.5 out of 5.

*****See “DRAFT DreamAhead College Investment Plan Program Fees Report” in meeting materials.*****

Public Comment

Share Your Thoughts

Process

- Submit written comment or request to provide verbal comment via Zoom comment window or ‘Raise Hand’ feature.
- You can submit written comments
  - Send to GETInfo@wsac.wa.gov and include the subject line: “GET Committee Statement.”

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Next Regular meeting

WA529
WASHINGTON COLLEGE SAVINGS PLANS

January 20, 2021

2:00 pm – 4:00 pm

Location TBD

(Expected to be virtual via Zoom)

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WA529
WASHINGTON COLLEGE SAVINGS PLANS

Adjournment

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WA529 Committee Meeting Minutes
September 9, 2020
GoTo Webinar
Virtual Meeting

WSAC/WA529 Staff in Attendance:
Luke Minor, Christina Crawford, Daniel Payne, Betsy Hagen, Rodger O'Connor, Don Bennett, Kari Clark, Diana Hurley, Melissa Huster, Jackie Ferrado, Jennifer Dyck, Wendell Jopson, Kim Porter.

Presenters in Attendance:
Sally Riefenstahl, Sumday/BNY Mellon
Matt Smith and Graham Dyer, Office of the State Actuary
Nick Procyk and Matt Forester, Lockwood Investments/BNY Mellon
Chris Phillips and Chris Hanak, Washington State Investment Board

Guests in Attendance:
Rick Brady, Attorney General Office
Sarah Baker and Katie Gross, Office of the State Actuary
Kate Henry, Michele Alishahi, Steven Ellis and Megan Mulvihill, Washington State Legislature
Breann Boggs, Office of Financial Management
Mike Bay, Nate Shaw, and Scott Chisa, TVW

WELCOME
Mike Meotti, Chair of the WA529 Committee, called the meeting to order at 2:04 p.m. The other WA529 Committee members in attendance were Brenda Snyder, proxy for Treasurer Duane Davidson, Director of the Office of Financial Management (OFM), David Schumacher, citizen member, Linden Rhoads and citizen member, Touk Sinantha.

APPROVAL OF THE SEPTEMBER 09, 2020 MINUTES
Rhoads moved to approve the minutes. Seconded by Snyder. Four ayes by Meotti, Snyder, Rhoads and Sinantha. Motion carries and minutes approved as presented.

PROGRAM UPDATES
Luke Minor, WA529 Director, and Sally Riefenstahl, Sumday Account Executive, provided GET and DreamAhead program updates.

In response to the COVID-19 crisis, the WA529 and Sumday teams have been working remotely since mid-March. Phone hours have been reduced for both programs, but full support remains for emails and support tickets. Customer feedback has been generally positive during this transition.

Since stay at home orders have gone into effect, GET program enrollments, contributions, and customer inquiries have generally been down. Minor noted that GET enrollments closed for the 2019-20 enrollment year 15 percent behind last year, with a total of 3,381, but unit sales did hit the statutory goal of 500,000, coming in at 502,902.

Minor noted GET projects in process including a partnership with the Tacoma Housing Authority (THA) on children's savings accounts (CSAs), an enhanced scholarship platform, EFT distributions to customers, and a tax reporting interface overhaul. Sinantha asked how many assets Tacoma Housing Authority (THA) has with the program. Minor replied that he would like to get permission from THA before sharing that information but that they have close to 200 participants. Meotti noted that the partnerships will tie in strategically with other work that the council does.

Minor gave a second quarter GET investment update noting that as of June 30, 2020, the GET fund was at $1.46 billion with asset allocations remaining within the new target ranges put into effect last December. There was a 12% return for the quarter and 7.4% for the one-year period. Rhoads asked what the assumptions were for the target annual return for the total portfolio and how often that is refreshed. Chris Phillips and Chris Hanak with the Washington State Investment Board (WSIB), replied that 5.55% was the midpoint average annual return for the modeled portfolio in the 2019 asset allocation study. This was based on long term capital market assumptions from 2019, which will be refreshed in 2021. Phillips offered to provide more detailed capital market assumption information to the committee.

Riefenstahl provided a DreamAhead update. She noted that the Sumday team received instruction from their CEO that they will remain working in a remote environment through the end of the calendar year 2020. DreamAhead enrollment and contribution activity and call center volume has been a bit slower but remained steady. Riefenstahl provided a second quarter DreamAhead investment update, noting that all portfolios met their respective benchmarks year-to-date and for the trailing 12-month period, that no remedial action is necessary. Riefenstahl also highlighted the work to submit an RFI to 529 plan ratings outlet, Morningstar, and recent program changes, including: year of enrollment fund exchanges and additions as directed by the committee in the May meeting; more flexible withdrawal options for customers; and security enhancements. In the face of the pandemic and market strains, people are still enrolling in DreamAhead.

Minor shared that staff continues to monitor market activity and any possible state and federal budget and policy changes that would impact the programs, including a bill at the federal level that would temporarily allow expanded, private K-12 expenses.

Minor provided an update on the development of customer surveys, strategic partnerships, and a WA529 data dashboard to help inform committee members and stakeholders how the program is tracking compared to its goals. The dashboard framework is currently being built and is targeting a phase one launch by January 2021.

Minor gave an overview of 529 marketing efforts. In response to COVID-19, funds have been directed to more digital, social and TV news programming. Community outreach efforts have adapted to the COVID-19 impacts and continue with a major shift to virtual learning sessions. WA529 is working to strengthen partnerships with other financial literacy and educational groups, including plans to launch a refreshed web presence that will bring DreamAhead and GET under one umbrella.

WA529 OUTLOOK-2020 AND BEYOND

Meotti led the kickoff to an extended strategic planning conversation among committee members about the future of WA529. Meotti started with a timeline for the next year and key questions for the committee to answer. Key questions before the committee in this discussion are: what are our goals; what is the plan to achieve those goals; how is progress measured; how often should the goals be revisited; and how do we keep equity at the center of our work?

Sinantha asked if the committee should be looking for a vision for GET and DreamAhead together or separately. Meotti noted this was a good question and that he recommended the committee look at what the market is for these programs and also what a good form of measure is. For example, is the ideal measure the amount of savers, the amount of assets under management, or something different?

The committee discussed their goal to spread awareness of the plans broadly, the tax benefits and the options available for use in education, not just for Universities, while increasing the competitiveness of the plans as far as fees and performance.

- Snyder emphasized the need to look at all the ways that 529 plans can be used, various family needs and opportunities, and take a holistic view that a family can save for child's future, no matter what it looks like.
- Sinantha said we should focus on what makes our plans competitive and best in class – customers can shop among different 529 plans. For DreamAhead, she noted, the Morningstar review will be a good first indicator of where we are competitive and where we can improve.
- Rhoads expressed interest in helping residents take full advantage of the plans' flexibility, looking for case studies and best practices from other states, and helping boost college access and attendance to disadvantaged groups.

Meotti concluded with sharing that the Committee will want to consider how 529 plans fit into the broader college affordability framework for the state and that a joint meeting with WSAC council members may be beneficial. He stated that during the November meeting, the committee will take a deeper dive and set up a road map to inform the Committee's work for 2021. Meotti invited Committee members to submit points of discussion they want to focus on in advance of the next meeting.

FISCAL YEAR 2021 BUDGETS

Minor highlighted the Fiscal Year 2020 (FY20) Budget vs. Actual spending. The approved FY20 budgets were $5.55 Million for the GET Program and $992,500 for DreamAhead. The actual expenditures were about 10% under budget with GET at $4.9 Million and DreamAhead at $889,900. The primary reasons for these variances were salary savings, lower than anticipated indirect and COVID-19 impacts. The proposed budget for Fiscal Year 2021 (FY21) is $5,427,485 for the GET Program and $990,895 for DreamAhead.

Rhoads moved to approve the Fiscal Year 2021 Budgets. The motion was seconded by Sinantha. Five ayes from Snyder, Rhoads, Meotti, Sinantha and Schumacher. Motion approved as presented.

2020-21 GET UNIT PRICE SETTING

State Actuary, Matt Smith and Graham Dyer with the Office of the State Actuary presented the 2020-21 GET unit price-setting and risk analysis to the committee. The Program is currently 132% funded with a $375 million reserve as of June 30, 2020. The best estimate unit price range for the next enrollment period is $129-$147. Reserve levels ranging from 10%-20% were analyzed and the current 15% reserve policy remains reasonable. The rate of assumed investment return was lowered from 5.25% to 4.75% . Tuition growth assumptions anticipate a 2.4% increase next year, 5.5% annual growth for the following eight years, and 5% annual growth in years thereafter. Smith reviewed components of the unit price and different scenarios detailing higher than expected tuition growth or lower than expected returns. The best estimate unit price for the 2020-21 enrollment period is $137.

Rhoads asked at a $137 unit price, how the premium would compare to past years. Smith answered that he remembers the premium being as high as 40% during the great recession and at 11.6% last year. Rhoads asked how sensitive the purchaser is to the premium when purchasing units. Smith deferred to Minor, but noted purchasers may not be as concerned with the premium as compared to the overall "break even" point and guarantee. Minor answered there is some price sensitivity and that this is more likely for existing, rather than new customers, but that customer behavior is also significantly influenced by tuition growth.

Rhoads voiced her concern about the premium of the proposed unit price of $137 during a rough environment. There is a struggle between schools raising tuition as a result of lost funds during the pandemic vs. parents feeling like a tuition increase is unwarranted, as the schools are offering less value to the students during remote education. Sinantha agreed, adding that she believes that a unit price of $137 is high given the assumptions and would feel more comfortable with the lower end of the best estimate range. Snyder added that while we need to keep in mind the customers responses, we also need to make sure that the price selected won't be detrimental to the program in the future. Smith reiterated that the biggest change in the price from last year to this year was the change in the rate of return, which was a result of the change to the asset allocation. Sinantha stated that the rate of return being lower than the expected tuition growth is a concern overall for the program that needs to be addressed. Meotti stated that the primary function of the fund is to protect the state tax payers from having to pay college expenses for account owners if the guarantee was ever triggered. Over the last few years the committee has made conservative choices that ended up with a higher reserve. Meotti stated that at this time he would be more inclined to go with the lower end of the best estimate range, possibly in the lower $130's. Schumacher reminded the committee that this is a price that gets changed every year and that if something significant changes, they have the ability to course correct . Rhoads agreed with this statement.

Schumacher moved to select a unit purchase price of $133. The motion was seconded by Sinantha. Five ayes from Snyder, Rhoads, Sinantha, Meotti and Schumacher.

GET PROGRAM DETAILS BOOKLET UPDATES

Minor stated that the updates include clarifying certain processes, incorporating all new federal provisions, adding new qualified higher education expenses, updating investment policy sections to reflect newly adopted standards and adding COVID-19 provisions to hours of operations.

Rhoads moved to approve the changes. The motion was seconded by Schumacher. Five Ayes from Snyder, Rhoads, Sinantha, Meotti and Schumacher.

DREAMAHEAD FUND CHANGE
Nick Procyk, Lockwood Advisors, gave an overview of a proposed underlying fund change. Lockwood proposes replacing the money market fund used in all DreamAhead portfolios to a lower cost option. Specifically, the JPMorgan U.S. Government Money Market Fund Capital Shares would be exchanged with the Vanguard Federal Money Market Fund Investor Shares. This fund change would reduce the money market fund expense ratio from 0.18% to 0.11%. Both are government money market funds appropriate for 529 plans.

Sinantha asked if the Vanguard fund had any gates or redemption fees. Procyk answered that it does not.

Sinantha asked if this change is made if other cash options can be pursued in the future. Procyk answered that yes, they can.

Rhoads moved that the fund be changed as proposed. The motion was seconded by Snyder. Five Ayes from Snyder, Rhoads, Sinantha, Meotti and Schumacher.

PUBLIC COMMENT
No public comment.

ADJOURNMENT
Rhoads motioned to adjourn meeting at 4:00 p.m. The motion was seconded by Snyder. Five ayes from Meotti, Snyder, Rhoads, Sinantha and Schumacher. Meeting adjourned.

WA529
WASHINGTON COLLEGE SAVINGS PLANS

P.O. Box 43450
Olympia, WA 98504-3450
1.800.955.2318 (GET)
1.844.529.5845 (DreamAhead)
www.wastate529.wa.gov

2021 Proposed Committee Meeting Schedule

Background

As outlined in RCW 28B.95.030, WAC 14-104-010, the GET Committee shall hold regular meetings as needed. Additional special meetings may be scheduled if needed. The following is the proposed meeting schedule for the 2021 calendar year.

DATE	TIME	PLACE
Wednesday, January 20, 2021	2:00 – 4:00 p.m.	Location/Format TBD
Thursday, May 6, 2021	2:00– 4:00 p.m.	Location/Format TBD
Wednesday, September 15, 2021	2:00 – 4:00 p.m.	Location/Format TBD
Wednesday, November 17, 2021	2:00 – 4:00 p.m.	Location/Format TBD

GUARANTEED EDUCATION TUITION

A program of:

WA529

WASHINGTON COLLEGE SAVINGS PLANS

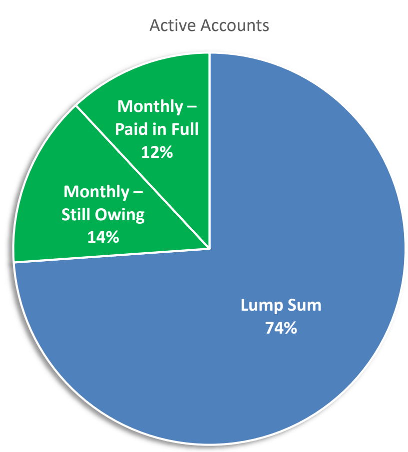
GET 2020 Third Quarter Committee Report

1

Total Accounts by Type

GET GUARANTEED EDUCATION TUITION

- Total number of active accounts: 66,101
  - Custom Monthly: 17,262
  - Lump Sum: 48,839



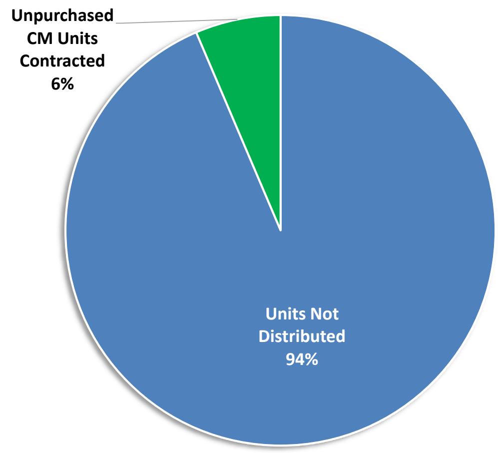
Notes: *Data-as-of 10.12.20*

2

Units by Account Type (Active Accounts)

GET GUARANTEED EDUCATION TUITION

- Total Remaining Purchased Units (Custom Monthly and Lump Sum): 9,467,210
- Total Remaining Unpurchased Custom Monthly Units Contracted: 648,912

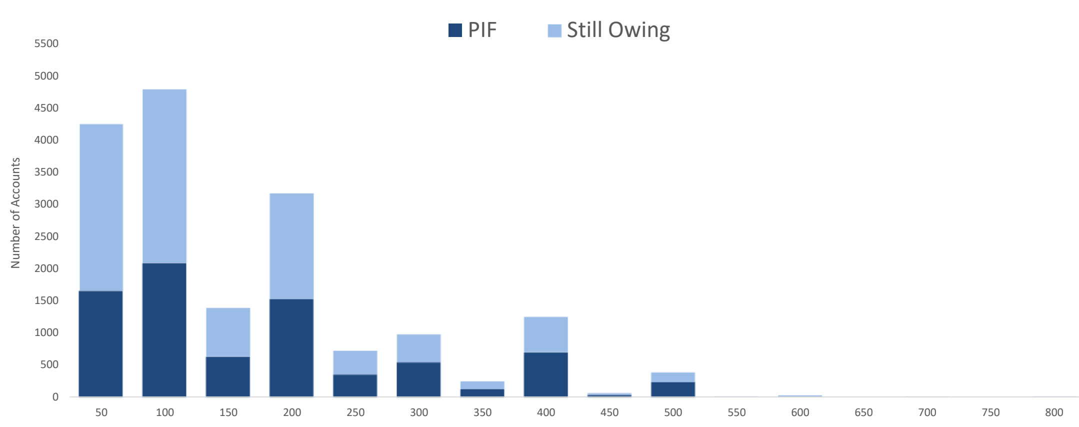


Notes: Data-as-of 10.12.20

3

Active Custom Monthly Plans

GET GUARANTEED EDUCATION TUITION

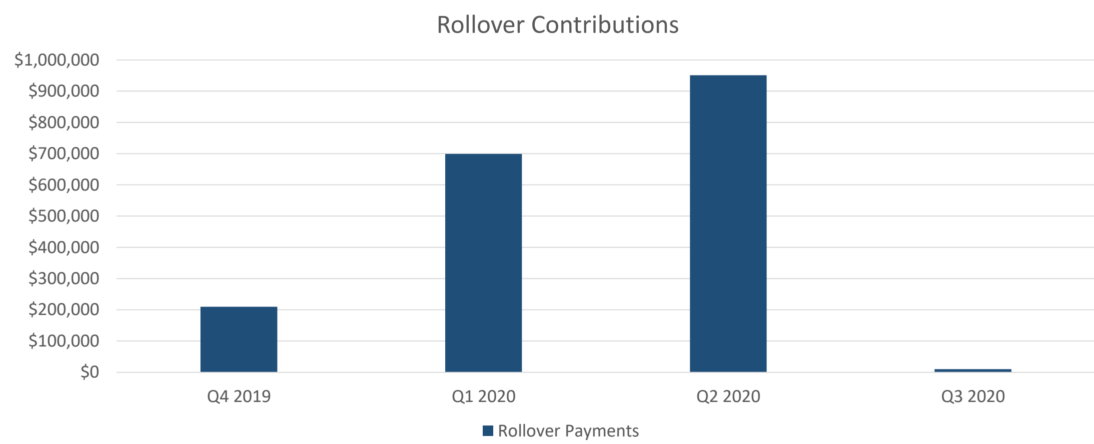


Notes: Data-as-of 10.12.20

4

Incoming Rollover Contributions by Quarter

GET
GUARANTEED EDUCATION TUITION

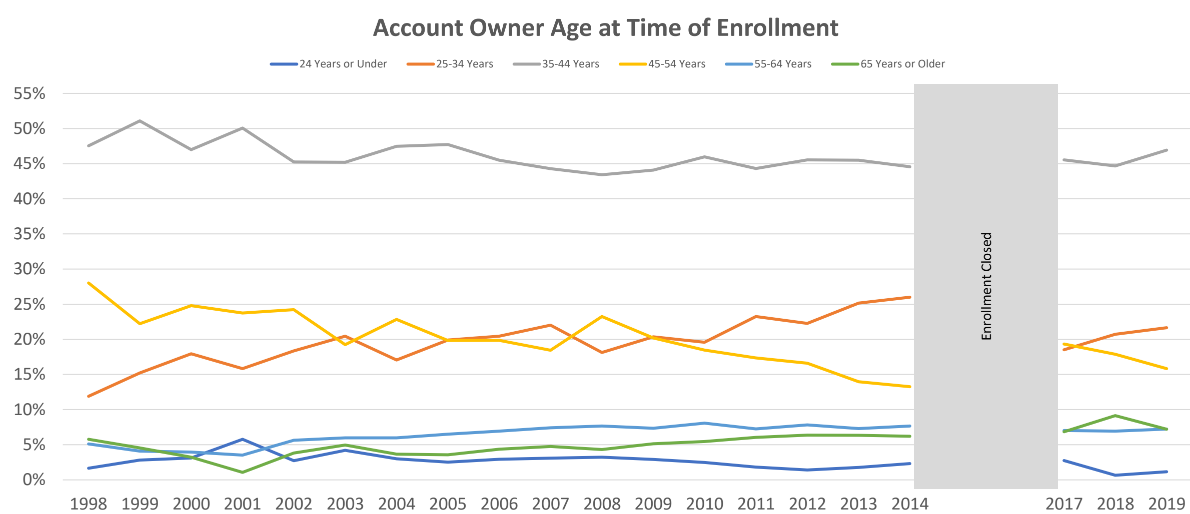


Notes: *Data-as-of 10.12.20*

5

Account Owner Age Trends

GET
GUARANTEED EDUCATION TUITION

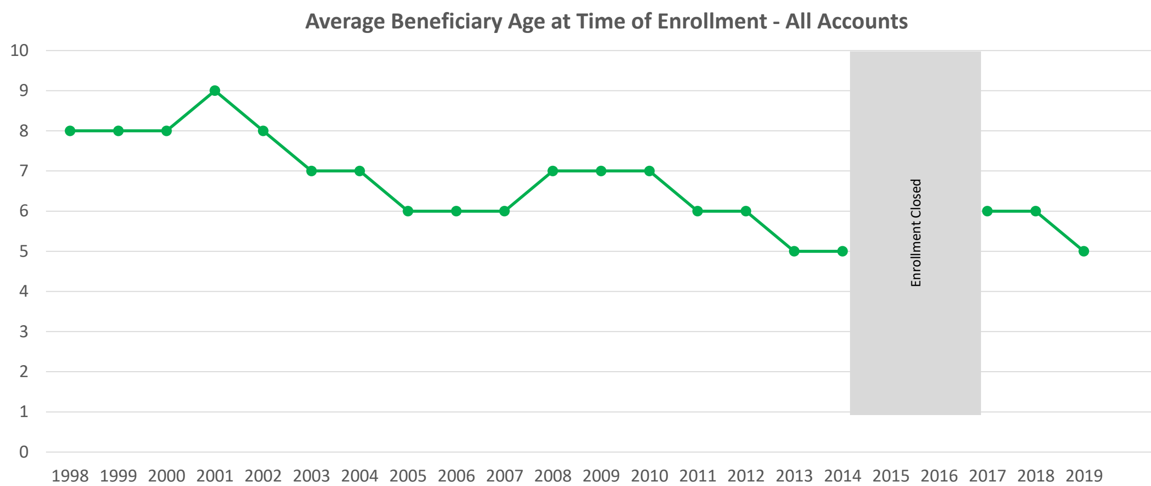


Notes: *Data-as-of 8.24.20*

6

Average Age of Student Beneficiary

GET GUARANTEED EDUCATION TUITION

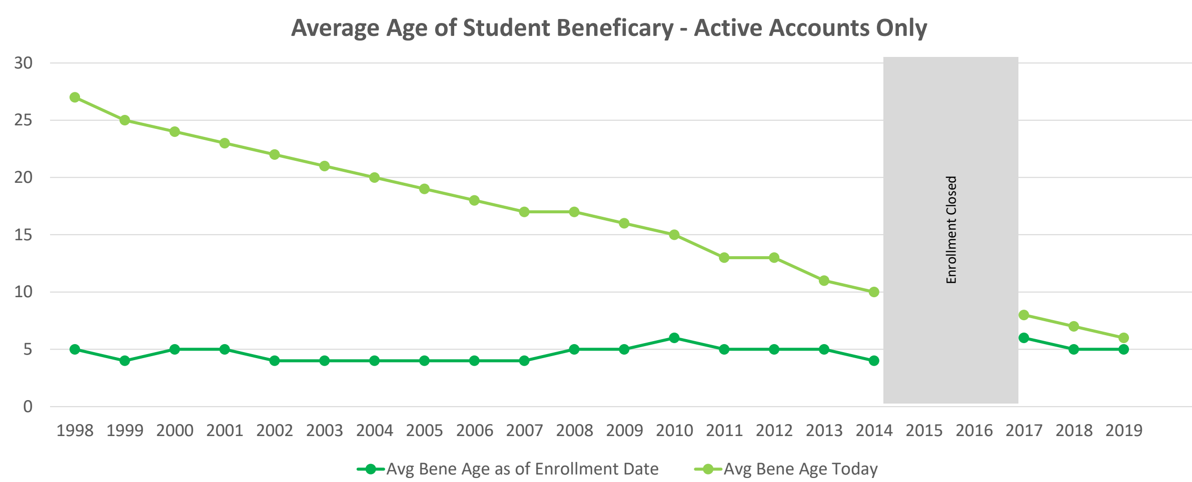


Notes: *Data-as-of 10.19.20. Includes all active and inactive accounts.*

7

Average Age of Student Beneficiary

GET GUARANTEED EDUCATION TUITION

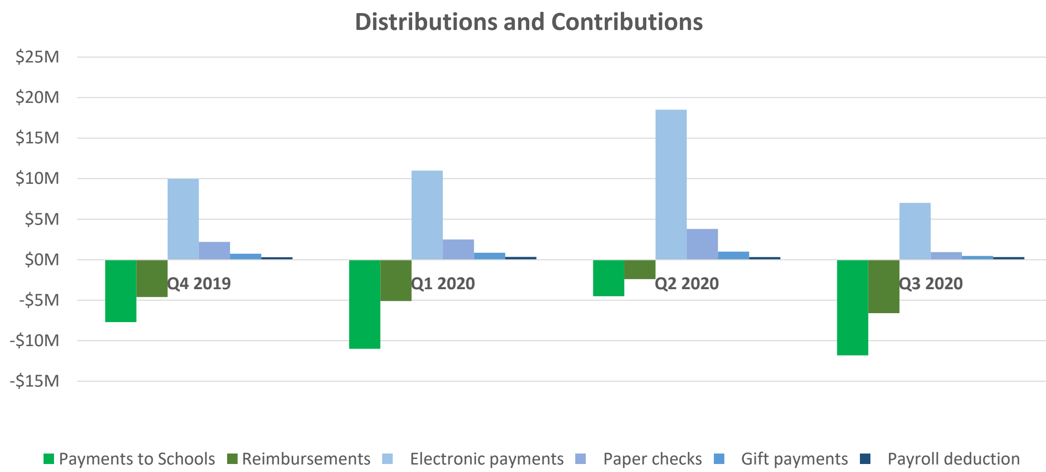


Notes: *Data-as-of 10.19.20. Based on student listed on account at time of enrollment and student's age at time of enrollment.*

8

Distributions vs. Contributions by Quarter

GET GUARANTEED EDUCATION TUITION



Notes: *Data-as-of 10.12.20*

9

GET Contact Center Statistics

GET GUARANTEED EDUCATION TUITION

Contact Center Statistics	Q1 2020	Q2 2020	Q3 2020
Incoming Calls:	2464	2008	2388
Calls Answered:	2398	1961	2220
Average Speed of Answer:	:46	1:54	2:43
Average Talk Time:	4:56	6:51	6:02
Outgoing Calls:	912	1203	1329
Secure Messages Sent:	1138	1358	1340
Emails Received in GETInfo:	376	558	529
Outgoing Emails:	251	124	141

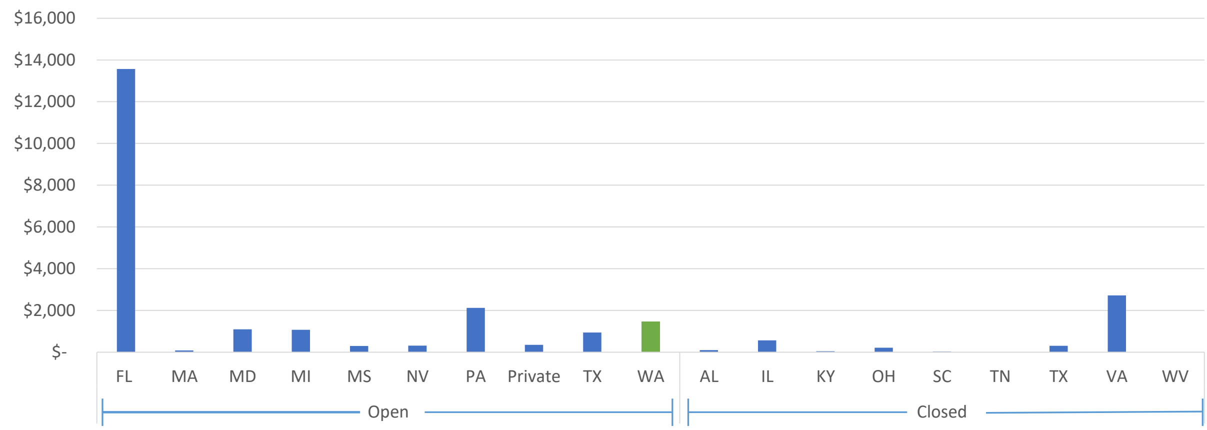
Notes: *Data-as-of 10.12.20.*

10

Prepaid 529 Plan Comparison

GET GUARANTEED EDUCATION TUITION

2Q 2020 Assets (in $M)



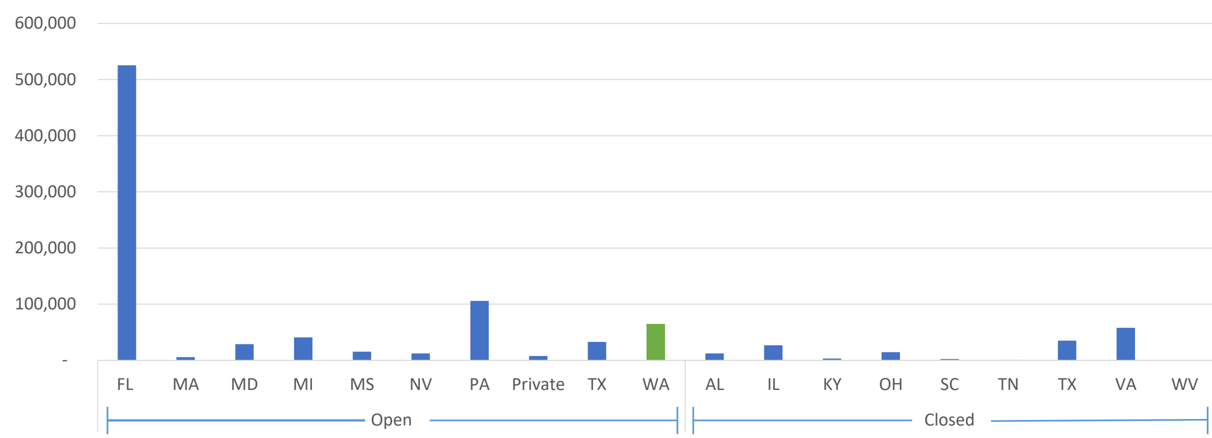
Notes: *Data-as-of 6.30.20. Source: Strategic Insight*

11

Prepaid 529 Plan Comparison

GET GUARANTEED EDUCATION TUITION

2Q 2020 Number of Active Accounts

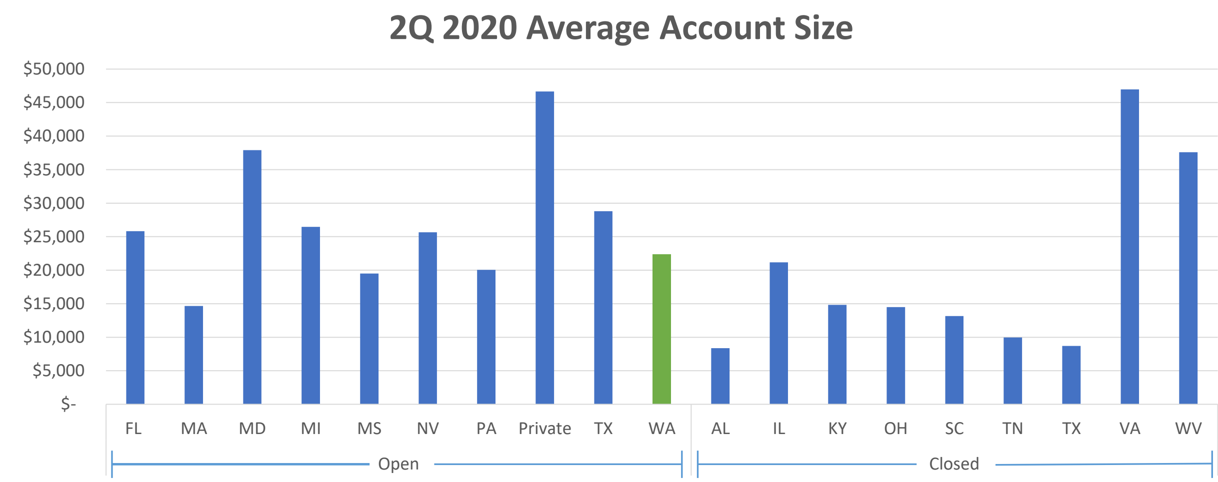


Notes: *Data-as-of 6.30.20. Source: Strategic Insight*

12

Prepaid 529 Plan Comparison

GET GUARANTEED EDUCATION TUITION

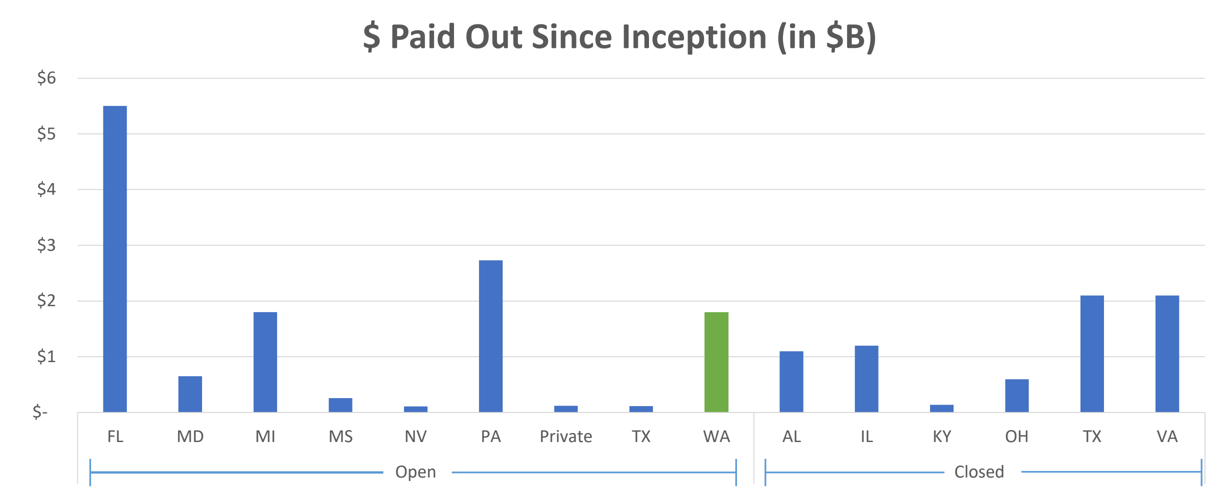


Notes: *Data-as-of 6.30.20. Source: Strategic Insight*

13

Prepaid 529 Plan Comparison

GET GUARANTEED EDUCATION TUITION



Notes: *Data-as-of 6.30.20. Payout data for current and legacy MS plans are combined. Payout data unavailable for MA, TN, WI, and WV.*

14

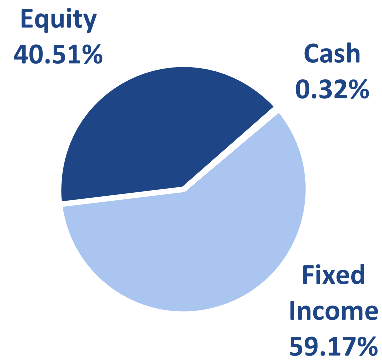
GET Prepaid College Tuition Program

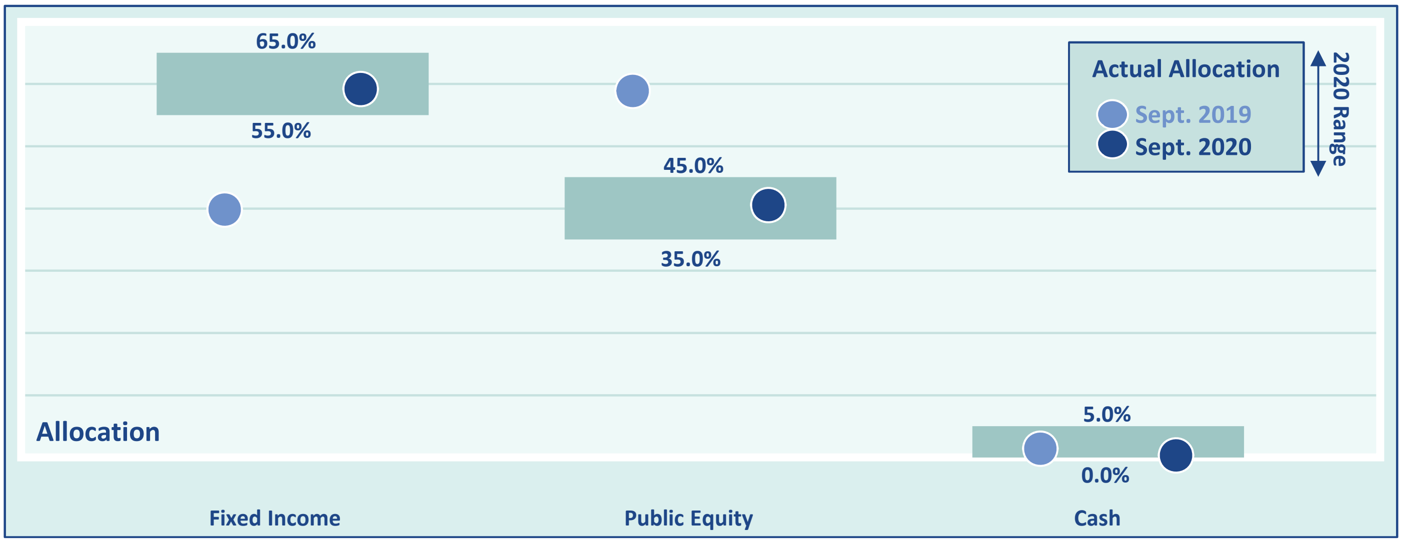
Quarterly Report – September 30, 2020

Portfolio Size

Total	**$1,502,149,381**
Cash	$4,843,607
Fixed Income	$888,822,668
Equity	$608,483,106

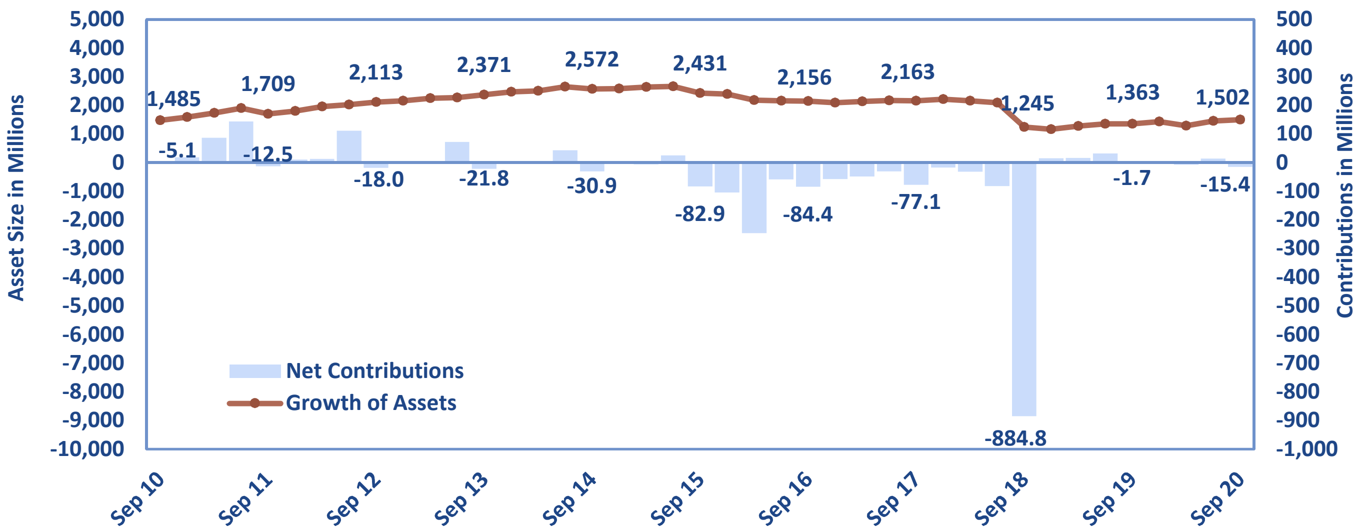
Actual Asset Allocation



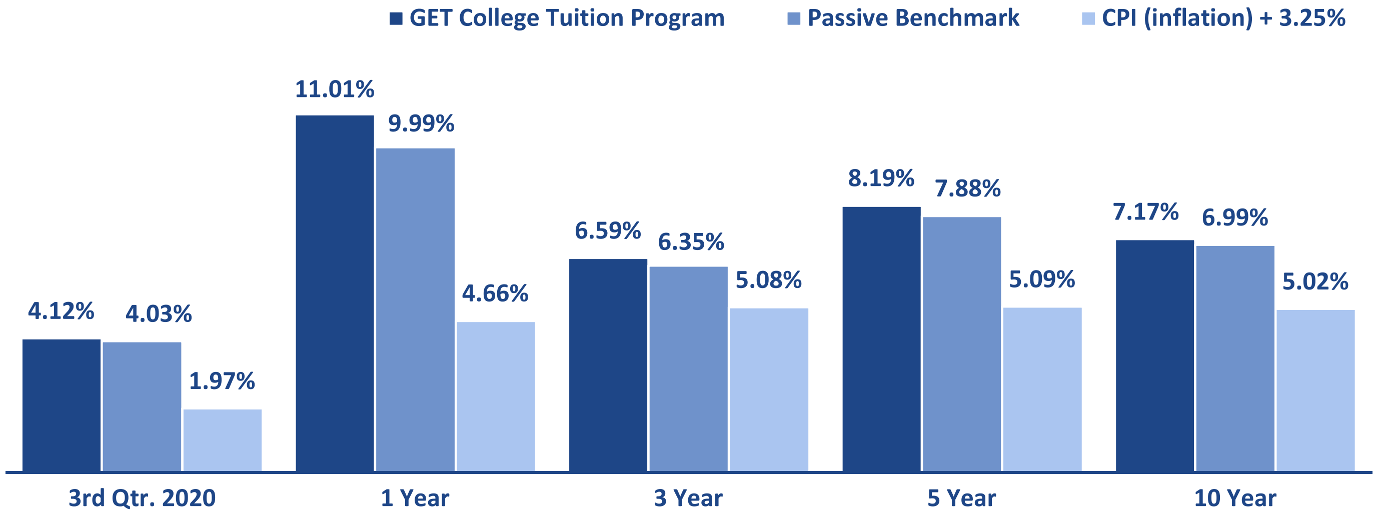


Note: Allocation changed in January 2020. It was previously 40% Fixed Income and 60% Equity and changed to 60% Fixed Income and 40% Equity

Assets Under Management



Total Return *

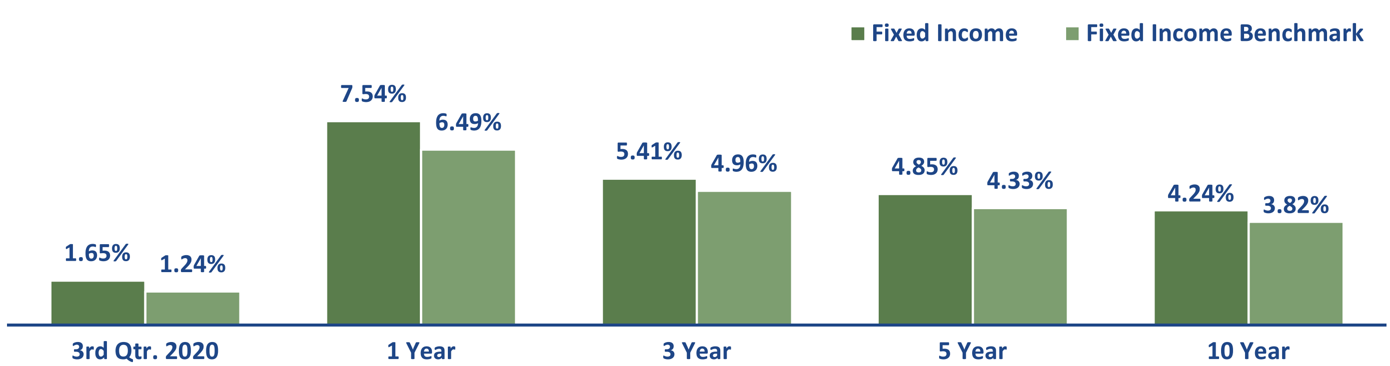


Equity Return *

Benchmark: MSCI ACWI IMI w/U.S. Gross and a historical blended return

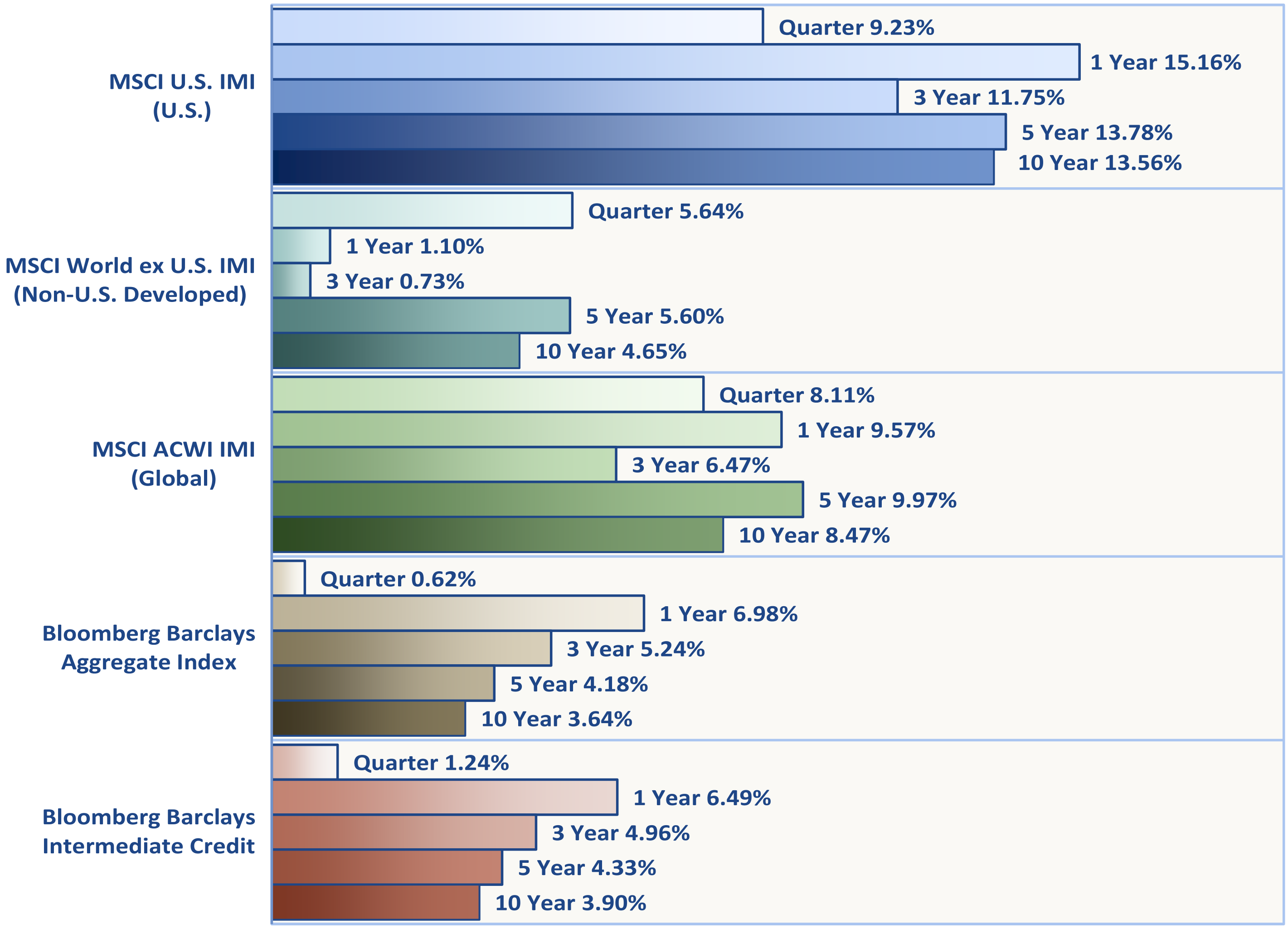
Fixed Income Return *

Benchmark: Bloomberg Barclays Intermediate Credit and a historical blended return



* The return numbers above are net of manager fees and other expenses that can be directly debited from the account for portfolio management but do not include the WSIB management fee.

Market Environment



- Despite growing worries surrounding a second wave of COVID-19, global equity markets enjoyed a strong third quarter, albeit with a wide range of returns.
- The MSCI World Developed IMI index returned 7.9% in the third quarter.
  - The U.S. equity market returned 9.1 %.
- Sector performance varied widely: Energy returned -12.4% and is down about 43% for the calendar year.
  - Consumer Discretionary returned 17.6%.
  - Information Technology returned 12.3% and for the calendar year, it's up nearly 25%.
- Interest rates are expected to remain low for an extended period.
  - The Fed announced its willingness to allow inflation to run above target in today's environment.
- U.S. 10 year Treasuries ended the quarter with a yield of 0.7%, broadly flat over the quarter but down from 1.9% at the start of the year.
- Fixed income returns were driven by narrowing of credit spreads, so credit-heavier indexes outperformed.
  - Bloomberg's Credit index was up 1.5% for the quarter compared to the High Yield index at 4.6%.
- Oil prices took a step back in September, dropping 9.6%, breaking a streak of five consecutive monthly gains.

DreamAhead
COLLEGE INVESTMENT PLAN

2020 Third Quarter Committee Report

November 12, 2020

Agenda

- Covid – 19 Update
- Morningstar Ranking
- Fund Event

Sumday COVID-19 update

Morningstar Bronze Ranking

Fund Event

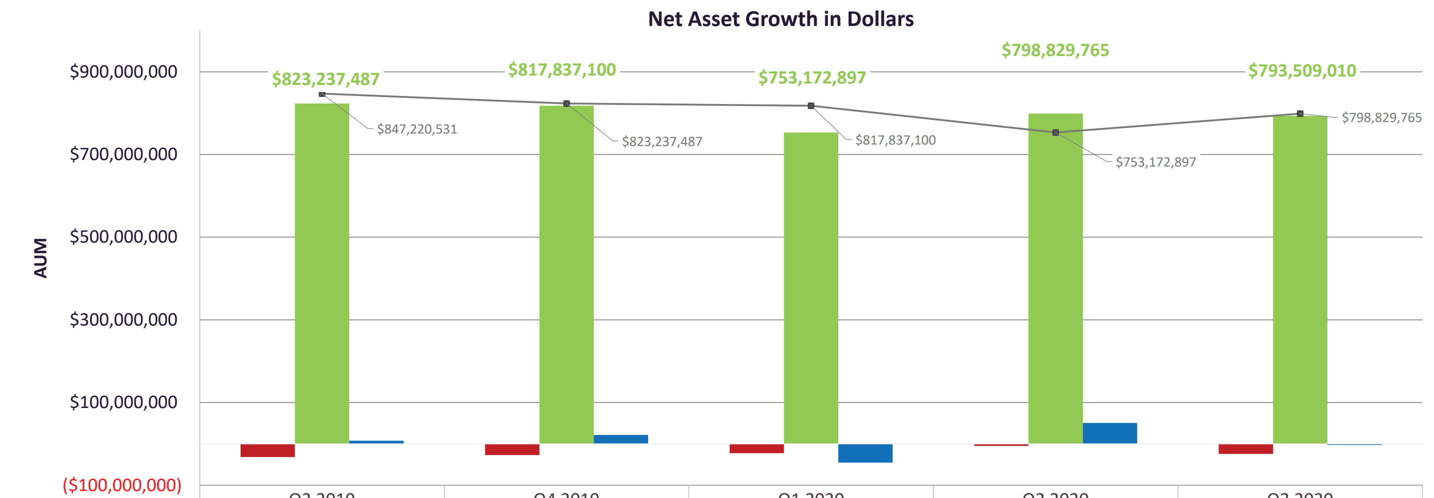
- Fund swap scheduled to occur 12/1
- Account owner notification
- Program Details Booklet: Supplement
- Website

Overview for the Current Quarter

- $793,509,010 in AUM
- 25,886 Funded Accounts
- 488 New Accounts
- 5,054 Accounts with Zero Dollar Balance
- Market Performance of -$2,695,023
- Contributions of $7,548,289
- Distributions of $31,781,967

Net Asset Growth

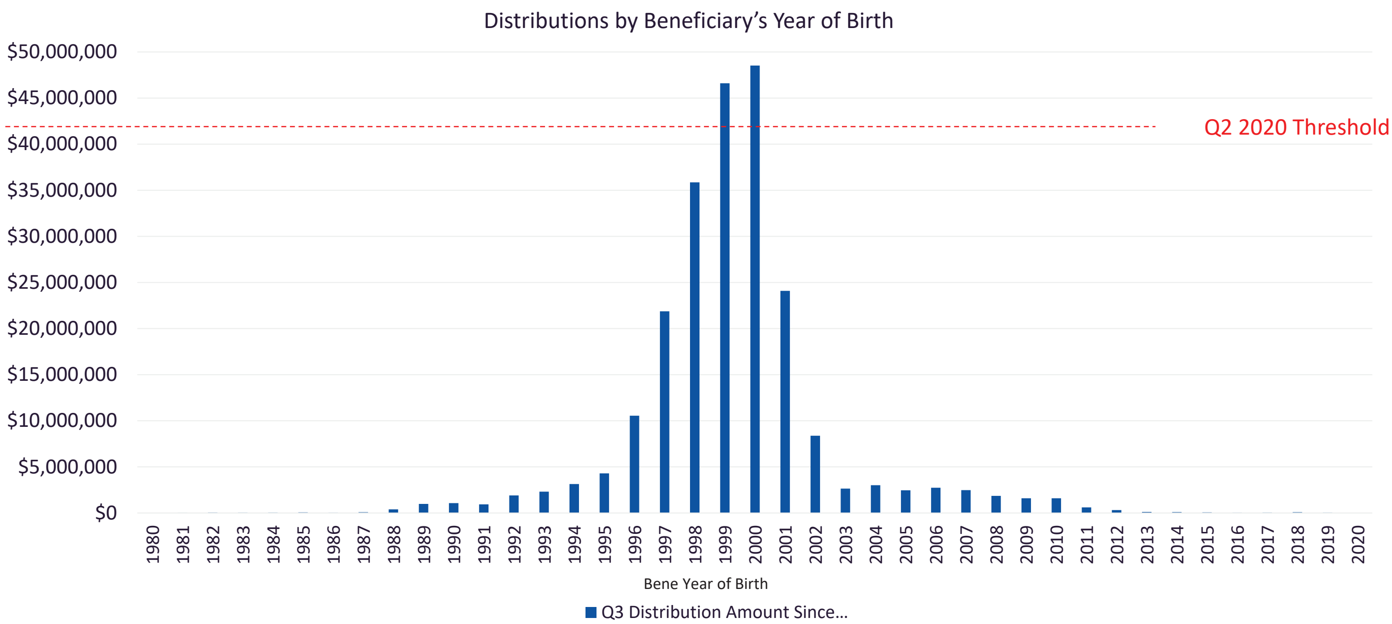
Asset growth shows strong return of market performance



	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020
Net Flow	($31,699,866)	($27,100,668)	($22,401,217)	($4,931,076)	($24,233,678)
Total AUM	$823,237,487	$817,837,100	$753,172,897	$798,829,765	$793,509,010
Market Performance	$7,716,822	$21,700,281	($45,262,724)	$50,587,944	($2,695,023)
Previous AUM	$847,220,531	$823,237,487	$817,837,100	$753,172,897	$798,829,765

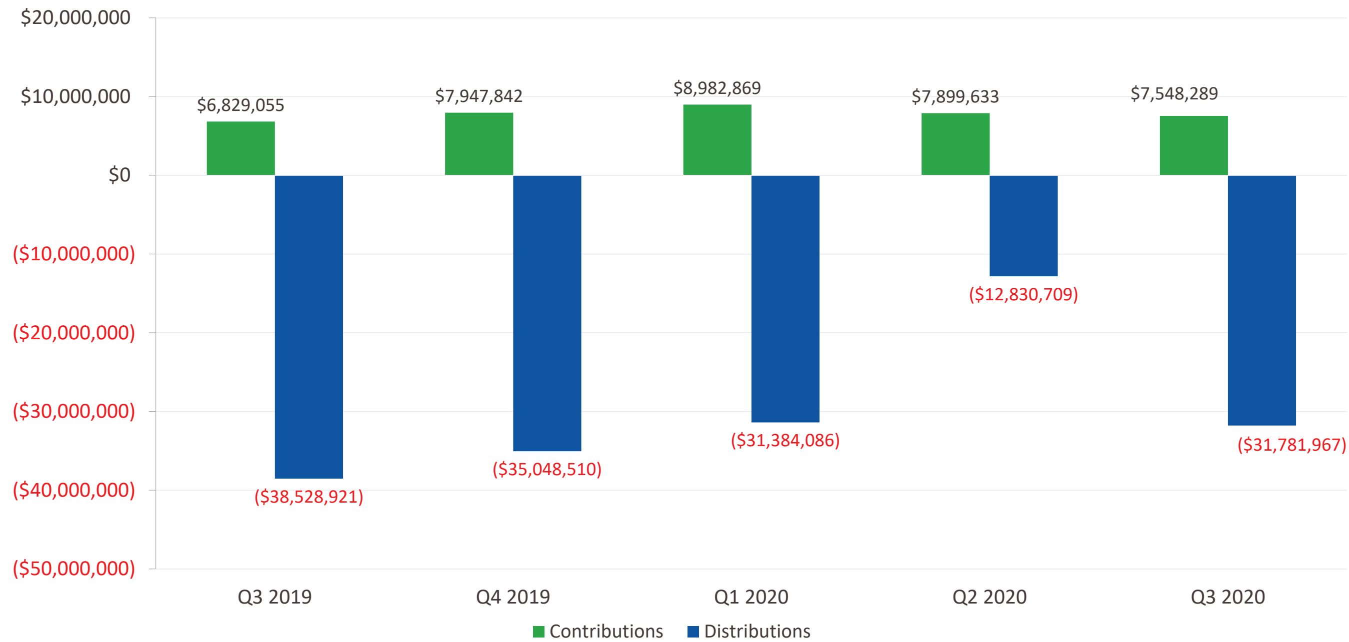
Distributions by Age Since Plan Inception

Total Plan Distributions Since Inception: $231,011,144 as of 9/30/2020

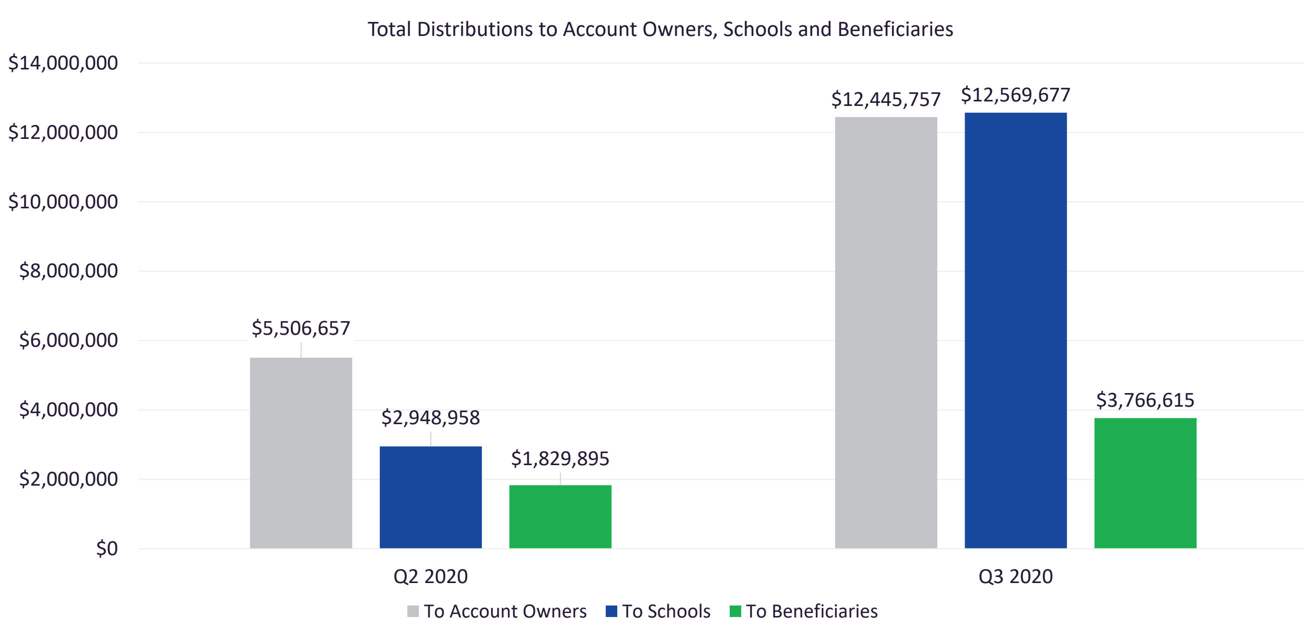


Contributions & Distributions

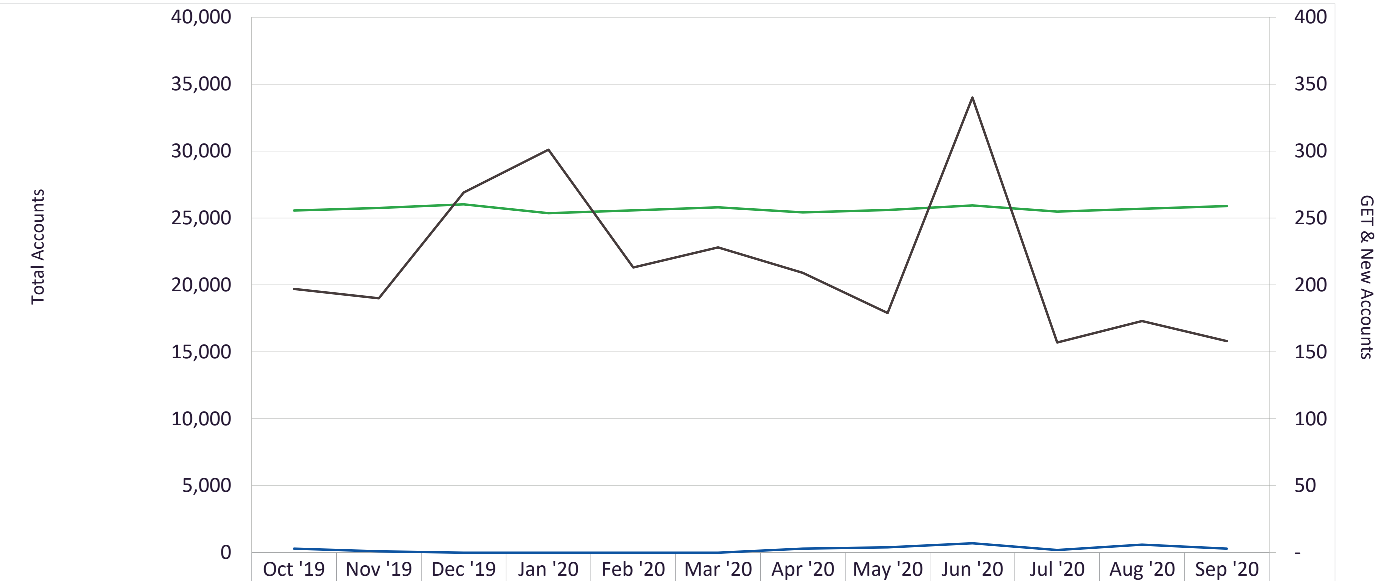
Distributions are back near trend, but trailing same quarter in 2019, possibly affected by COVID-19.



Distributions by Recipient



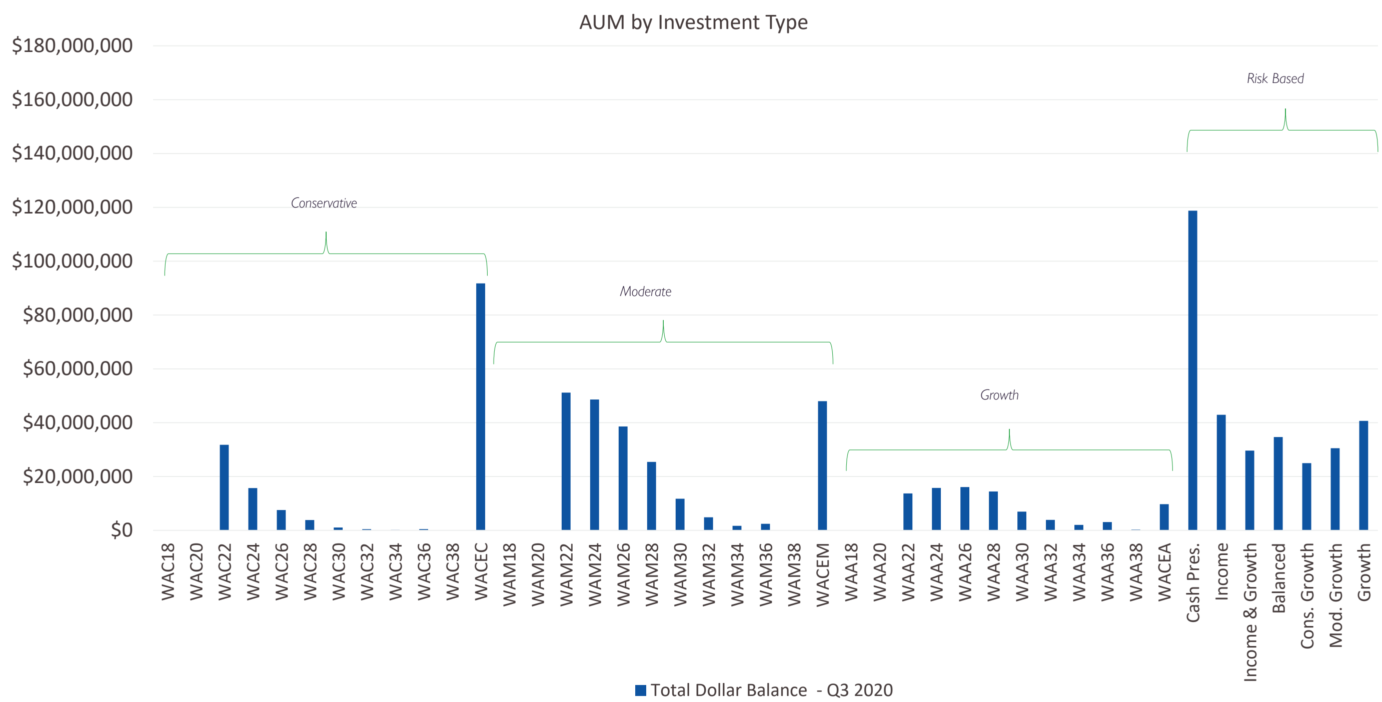
Cumulative Account Growth – Last Twelve Months



	Oct '19	Nov '19	Dec '19	Jan '20	Feb '20	Mar '20	Apr '20	May '20	Jun '20	Jul '20	Aug '20	Sep '20
Total Funded Accounts	25,560	25,750	26,019	25,356	25,569	25,797	25,419	25,598	25,938	25,475	25,689	25,886
GET Rollover	3	1	-	-	-	-	3	4	7	2	6	3
New Accounts	197	190	269	301	213	228	209	179	340	157	173	158

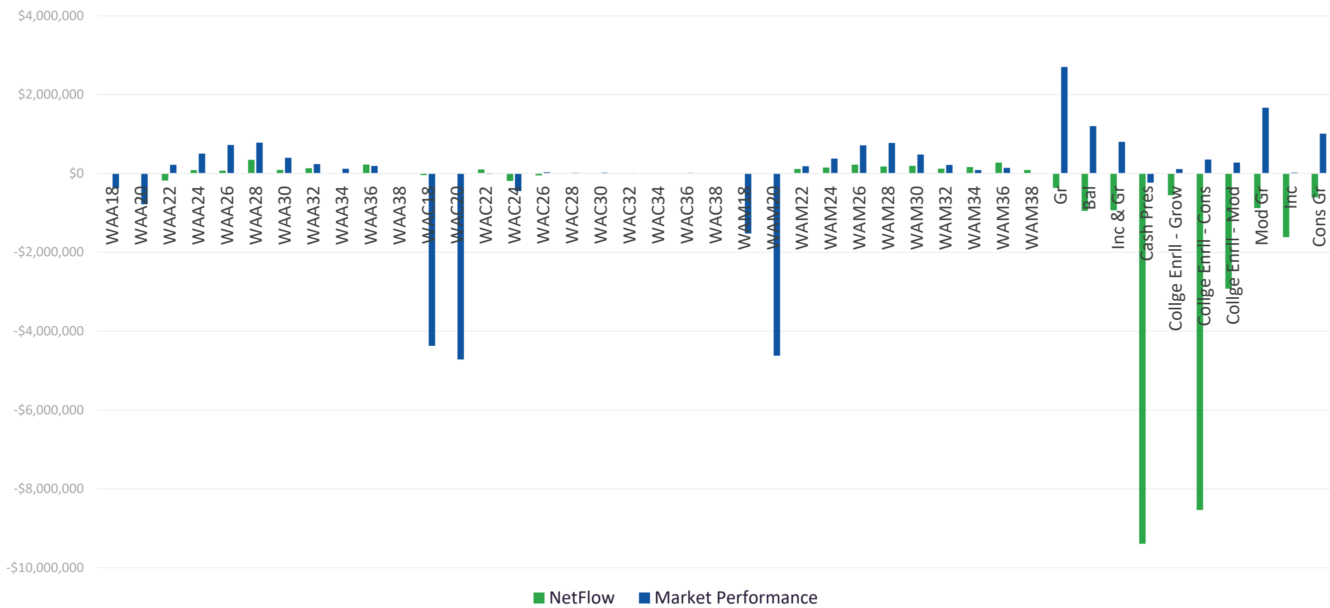
Information Classification: Public

Investment Distribution



Information Classification: Public

Cash Flow by Investment Portfolio Q3 2020

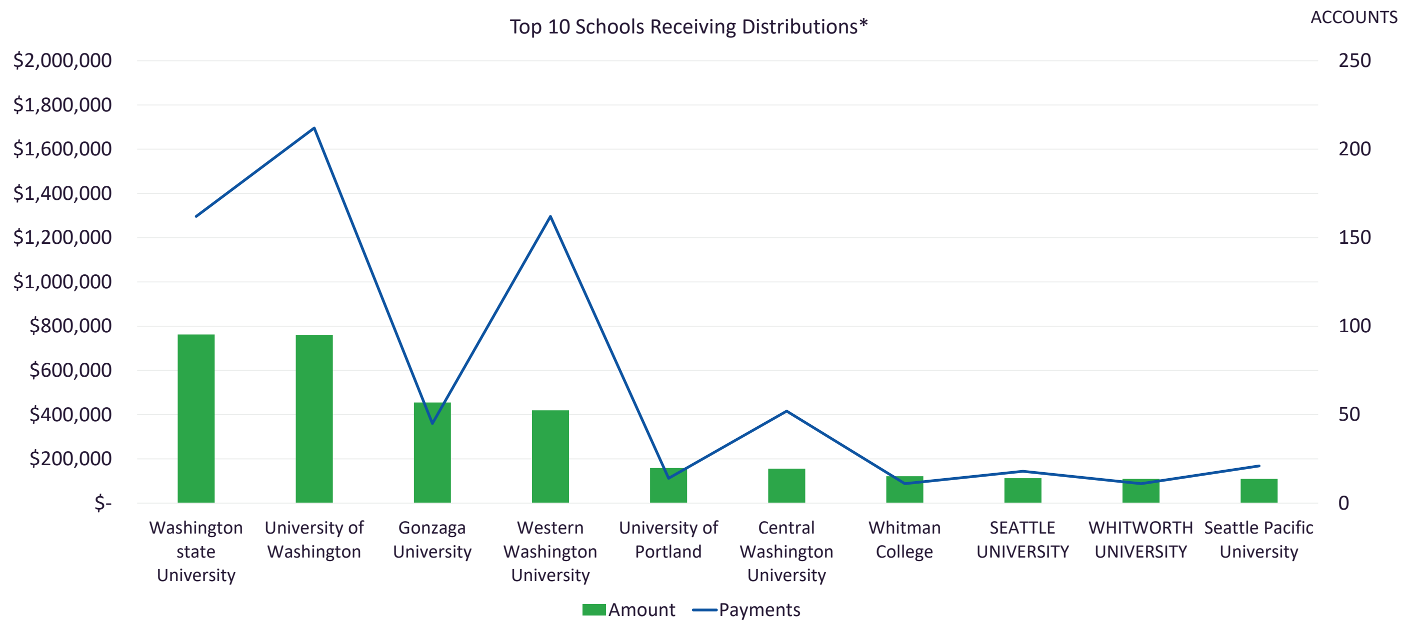


 Information Classification: Public

Fund Exchange Report Q3 2020

 Information Classification: Public

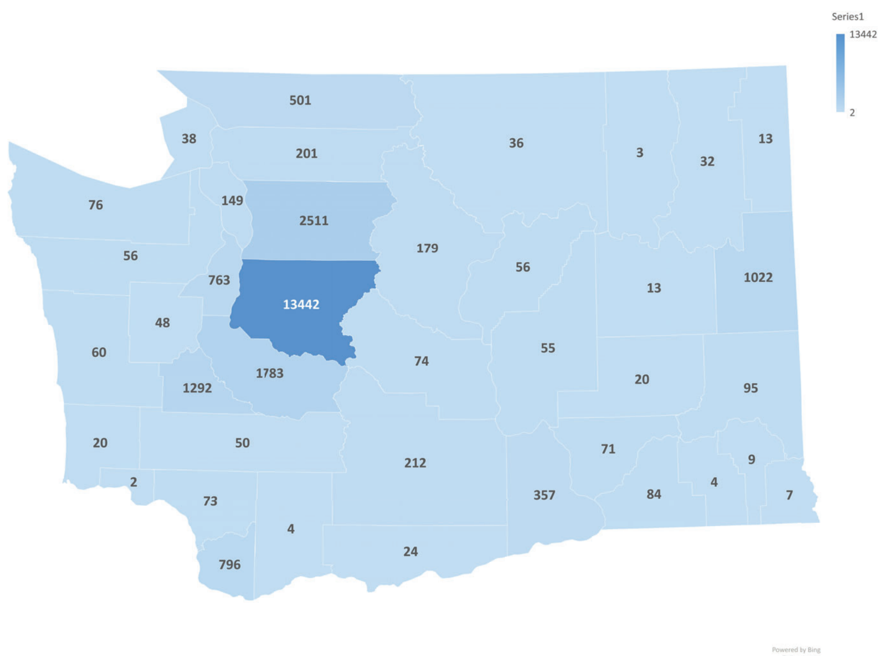
Tuition Distributions Q3 2020



 Information Classification: Public

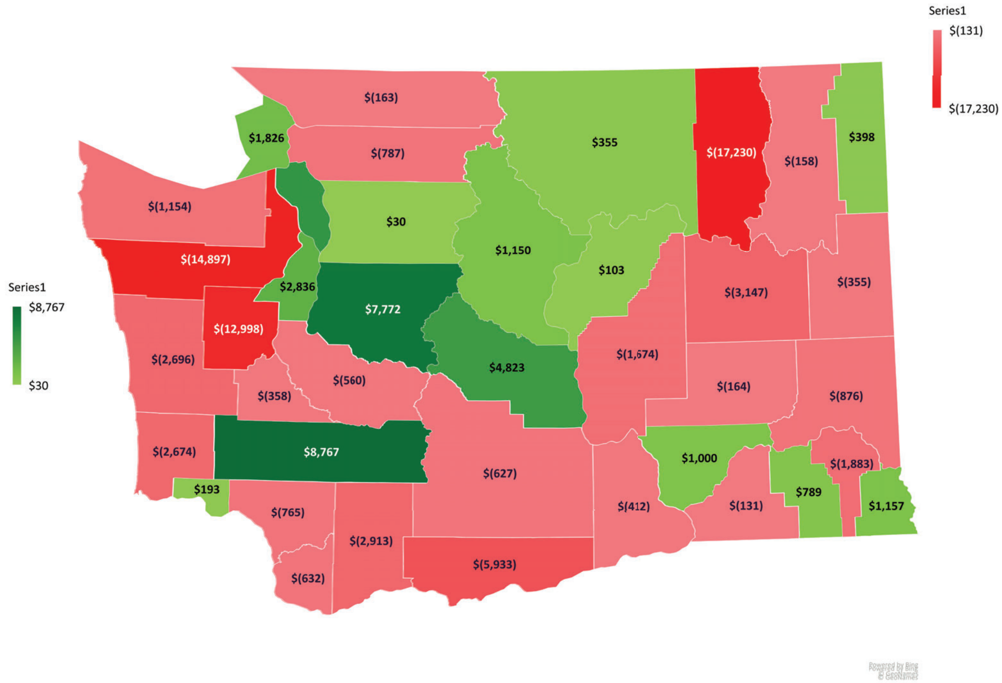
Number of Accounts by County Q2 2020

The one account in Ferry County closed in Q2



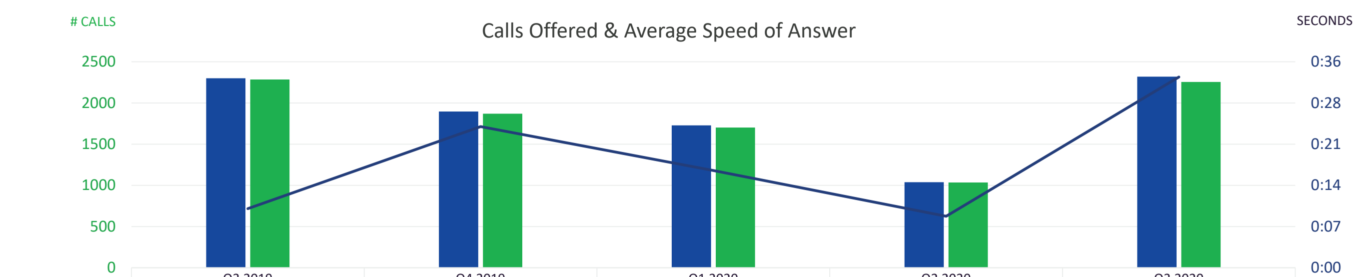
 Information Classification: Public

Net Change in Average AUM by County Q3 2020



Customer Service

Call Center Statistics



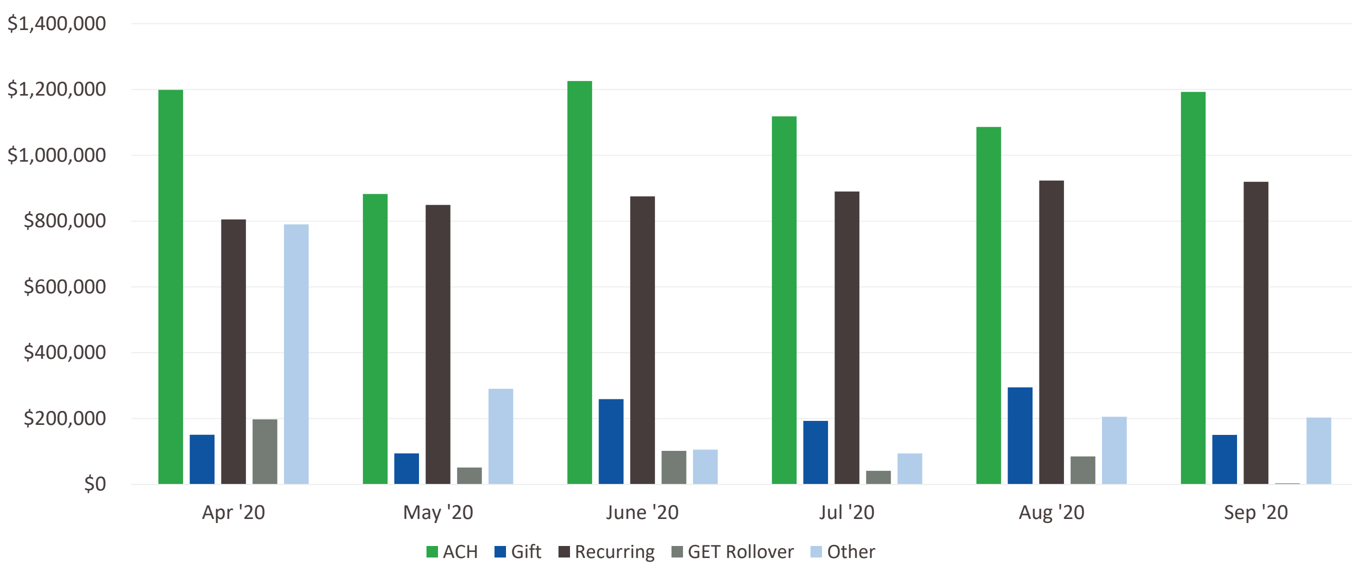
	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020
Calls Offered	2300	1896	1728	1039	2319
Calls Answered	2285	1870	1702	1035	2255
ASA	0:10	0:24	0:17	0:09	0:33

Q3 2020’s most common customer inquiries to the Call Center:

- Assistance with accessing account online
- Assistance with completing a financial transaction
- Assistance with opening accounts

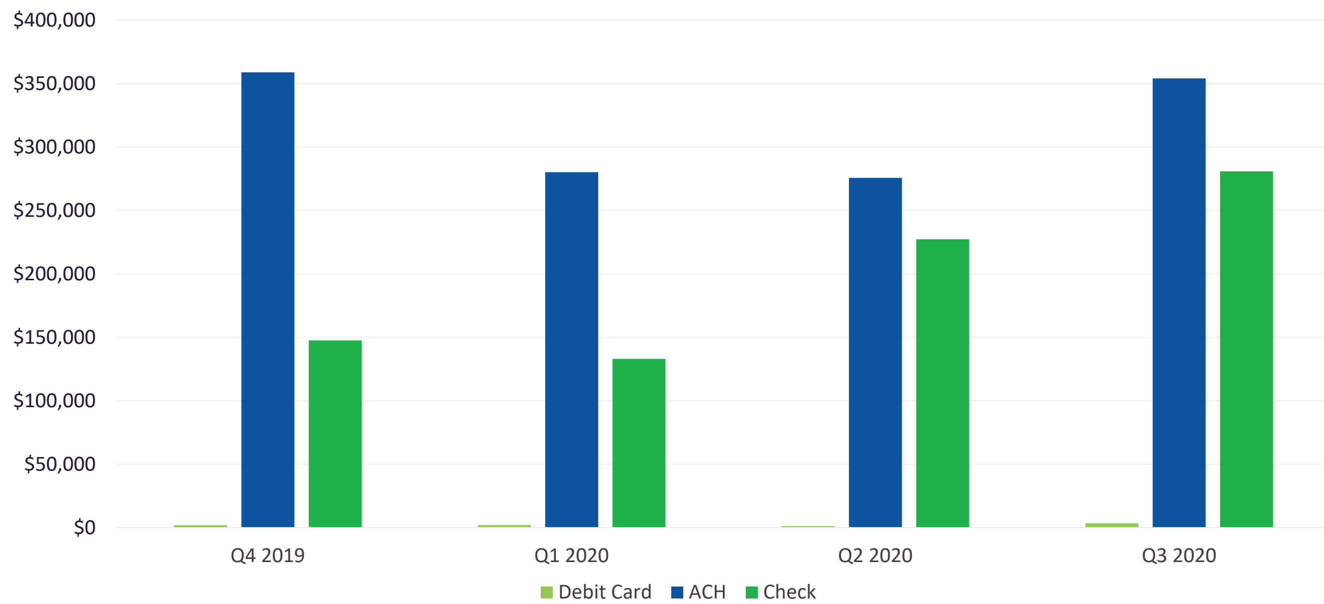
APPENDIX

Contributions by Source Q3 2020



* Contribution sources are mutually exclusive
* "Other" represents Checks, Non-GET Rollovers and Payroll Deductions

Gifting Activity – Contributions by Transaction Type Q3 2020



Information Classification: Public

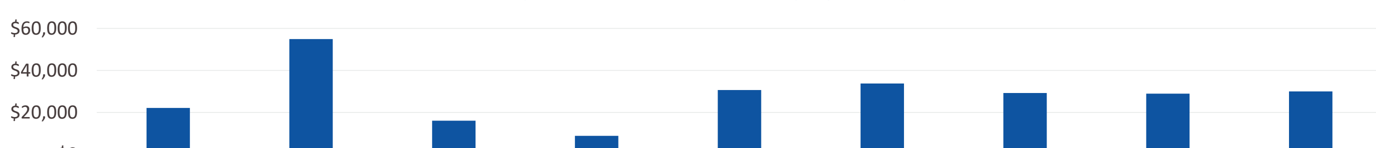
Account Owner Demographics Q3 2020

% of Account Owners by Age Group

	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-102
Q3 2020	0.05%	0.69%	2.12%	10.62%	32.22%	37.73%	11.50%	4.07%	1.01%

■ Q3 2020

Average Account Owner Assets by Age Group



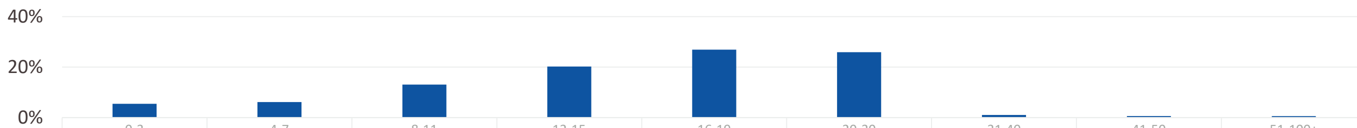
	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-100+
Q3 2020	$22,151.17	$54,898.55	$16,101.83	$8,874.50	$30,680.02	$33,787.02	$29,267.25	$28,948.89	$30,012.70

■ Q3 2020

Information Classification: Public

Beneficiary Demographics Q3 2020

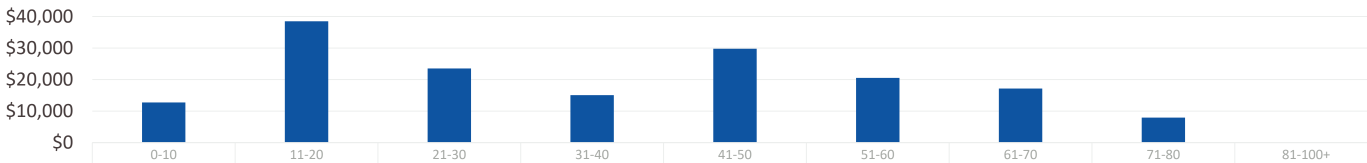
% of Beneficiaries by Age Group



	0-3	4-7	8-11	12-15	16-19	20-30	31-40	41-50	51-100+
Q3 2020	5.46%	6.15%	13.08%	20.23%	26.93%	25.92%	1.03%	0.62%	0.57%

■ Q3 2020

Average Beneficiary Assets by Age Group



	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-100+
Q3 2020	$12,753.98	$38,490.76	$23,535.74	$15,065.38	$29,787.30	$20,534.01	$17,168.09	$7,945.52	$0

■ Q3 2020

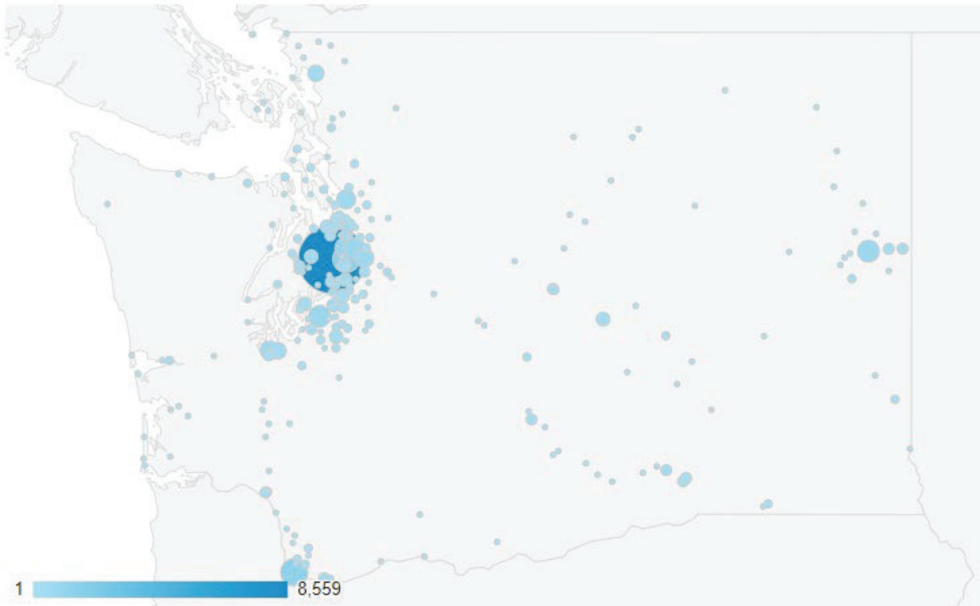
Google Analytics Q3 2020

User activity ranked by city

City	Acquisition			Behavior		
	Users	New Users	Sessions	Bounce Rate	Pages / Session	Avg. Session Duration
	25,352 % of Total: 14.92% (169,902)	21,061 % of Total: 13.69% (153,819)	54,039 % of Total: 16.83% (321,115)	17.50% Avg for View: 18.32% (-4.46%)	10.70 Avg for View: 8.72 (22.69%)	00:05:25 Avg for View: 00:03:59 (36.25%)
1. Seattle	8,559 (31.31%)	6,760 (32.10%)	16,826 (31.14%)	19.88%	9.83	00:04:54
2. Bellevue	1,309 (4.79%)	1,042 (4.95%)	2,771 (5.13%)	15.41%	11.51	00:05:30
3. Vancouver	1,290 (4.72%)	972 (4.62%)	2,548 (4.72%)	15.31%	10.28	00:05:36
4. Kirkland	830 (3.04%)	669 (3.18%)	1,697 (3.14%)	16.32%	11.39	00:05:35
5. Tacoma	794 (2.90%)	604 (2.87%)	1,574 (2.91%)	17.03%	10.87	00:05:28
6. Redmond	736 (2.69%)	580 (2.75%)	1,441 (2.67%)	14.30%	12.82	00:06:31
7. Spokane	733 (2.68%)	574 (2.73%)	1,575 (2.91%)	19.43%	10.75	00:05:53
8. Olympia	597 (2.18%)	464 (2.20%)	1,230 (2.28%)	17.40%	11.59	00:05:44
9. Everett	545 (1.99%)	418 (1.98%)	1,038 (1.92%)	16.57%	11.75	00:05:58
10. Sammamish	531 (1.94%)	407 (1.93%)	1,053 (1.95%)	14.62%	12.38	00:05:42

Google Analytics Q3 2020

Site data on users activity by top locations. Users more than doubled from Q2 2020.



Online Users

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Investment Advisory Report

Third Quarter 2020

Washington Student Achievement Council

Prepared by Lockwood Advisors, Inc.

Contents

Executive Summary

Plan-specific highlights, with brief discussion of broader market activity to provide context.

DreamAhead College Investment Plan Highlights

- All Static and Year of Enrollment portfolios have met their respective benchmarks in Q3 2020, year-to-date, and trailing 12 month period.
- No remedial action is necessary.
- There are no funds on the Watch List. All funds have performed as expected.

Broad Market Macroeconomic Highlights

Five Trends to Consider

1. **The Need for Inflation**
   Disinflation has ruled the roost for decades, but now we find ourselves in need of a little inflation to ease our sizable federal, corporate and personal loan burdens. A small dose of inflation might help reduce the real, inflation-adjusted burden of debt for current debt holders, at least for fixed (not adjustable) debt. It would also help wage earners add a little to their paychecks.

2. **The Candidates Have Spoken**
   Democratic nominee and former Vice President Joe Biden has issued a detailed plan that begins to cut the national debt, but only in the years beyond 2030 and only after significant tax hikes. These tax hikes would, if enacted, likely lower GDP (gross domestic product) growth in the intermediate time frame, bringing deficit reduction into question. On the other side, President Trump has offered a middle-class tax cut, hinted at a capital gains tax cut and proposed tax breaks for those companies returning manufacturing to the U.S. He also proposes a payroll tax break for the pandemic period.

3. **No Fiscal Discipline**
   Unfortunately, neither party seems remotely interested in anything akin to fiscal prudence during this election process. Granted, this may be understandable given that we still need to heal from the destruction of capital and labor that resulted from the coronavirus recession. Even if GDP recovers in several years, it may take much longer than that for employment and small business to regain pre-COVID-19 levels.

4. **Monetary Policy at Zero**
   The Federal Reserve has signaled that it intends to keep the federal funds policy rate extremely low, effectively at the zero bound, until 2024. This underscores the dramatic monetary policy support that has been underpinning the market recovery this summer, but also sends a sign of concern about the amount of damage COVID-19 and forced lockdowns have had on the U.S. economy.

5. **It Was a Rough September**
   Capital markets had a rough September, reversing many of the previous trends that we have seen since the troughs in risk assets in the spring. So far, the consensus view is that the markets just need a breather, a correction, a small, sharp pullback from the exhaustive and heady summer exuberance. There is an assemblage of near-term temporal concerns that markets must overcome. We face a wickedly contested election with a heightened prospect for violence and confusion. Volatility futures predict a marked possibility of market disruption after the election.

WIN

It was 1974 and inflation was a runaway train. WIN, short for "Whip Inflation Now," was a policy effort on the part of the Gerald Ford administration to attempt to rein in spiraling inflation by encouraging savings and curtail inflationary spending habits.

This photo is of a genuine red 1974 Whip Inflation Now- pin, one of a whole bag your author collected as an impulse purchase. If you can believe it, there were WIN sweaters, bags, balls, stickers and earrings.

The WIN policy appeared somewhat successful, at least at first. Inflation, measured by headline consumer prices, did decline from an annual pace of 12.3% in late 1974 to 4.9% by late 1976, but spiked again to reach an all-time peak of 14.8% by March 1980. Anti-inflationary policy didn't really begin to succeed until some months after the Federal Reserve, under Chairman Paul Volcker, jacked up interest rates dramatically to slow money supply growth and the economy in October 1979. This was the so-called "Volcker Slam."

Whip Up Some Inflation Now

We're almost at a polar opposite point today. Disinflation has ruled the roost for decades, but now we find ourselves in need of a little inflation to help ease our sizable federal, corporate and personal loan burdens. A small dose of inflation might help reduce the real, inflation-adjusted burden of debt for current debt holders, at least for fixed (not adjustable) debt. It would also help wage earners add a little to their paychecks. A little inflation would be good. A large dose of inflation might make things a lot worse by ratcheting up interest rates enough to slow an interest rate-sensitive economy too much.

Market Overview
Index Returns (%) as of September 30, 2020

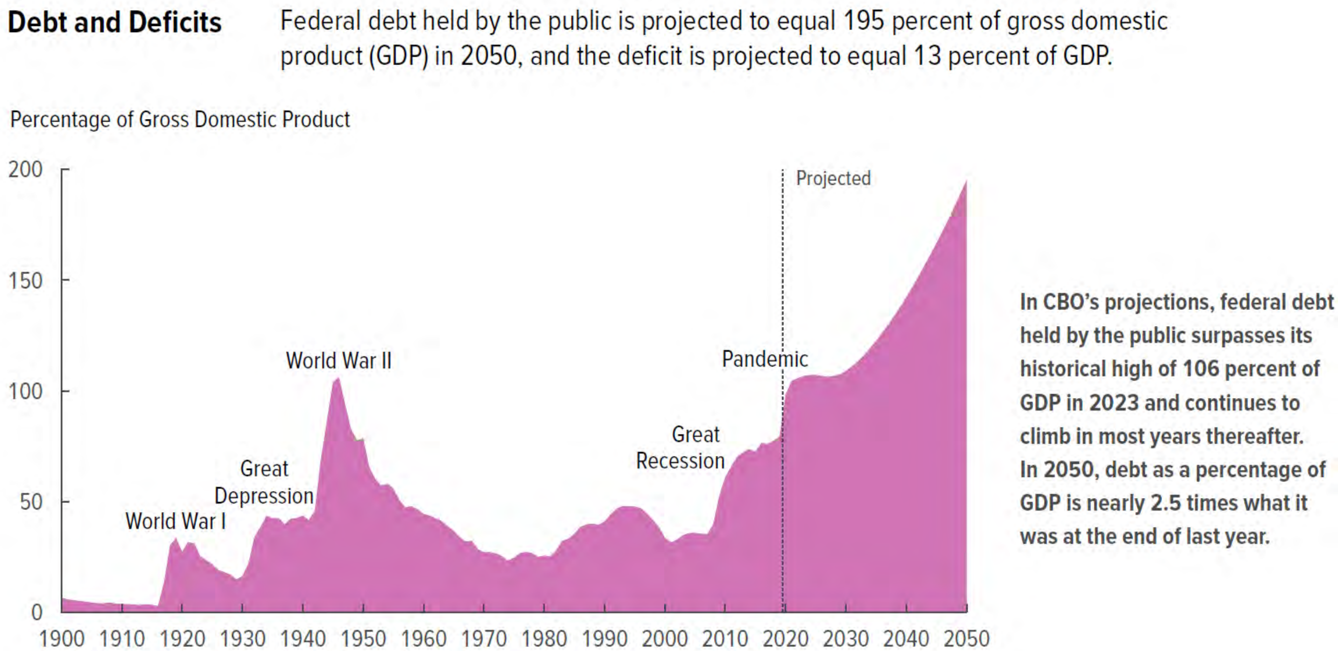
Index	3Q 2020	1 Yr.	3 Yr. ^	5 Yr. ^	2019	2018	2017	2016
S&P 500	8.9	15.1	12.3	14.1	31.5	(4.4)	21.8	12.0
MSCI USA Small Cap	5.6	0.2	3.5	8.9	27.4	(10.0)	17.3	19.8
MSCI EAFE (net of taxes)	4.8	0.5	0.6	5.3	22.0	(13.8)	25.0	1.0
MSCI Emerging Markets (net of taxes)	9.6	10.5	2.4	9.0	18.4	(14.6)	37.3	11.2
Bloomberg Barclays US Aggregate Bond	0.6	7.0	5.2	4.2	8.7	0.0	3.5	2.6
Bloomberg Barclays Global Aggregate ex-US	4.1	5.5	3.1	3.6	5.1	(2.1)	10.5	1.5
S&P GSCI Crude Oil	2.4	(25.6)	(8.0)	(2.3)	34.5	(24.8)	12.5	45.0
S&P GSCI Gold	3.6	25.4	12.4	10.0	18.0	(2.8)	12.8	7.7
Bloomberg Commodity	9.1	(8.2)	(4.2)	(3.1)	7.7	(11.2)	1.7	11.8
Bloomberg Barclays US Treasury Bill 6–9 Month	0.1	1.7	1.9	1.3	2.6	1.8	0.7	0.5
Inflation §	1.5	1.3	2.0	1.8	2.3	1.9	2.1	2.1

^3 year and 5 year returns are annualized
Sources: MSCI; Bloomberg Barclays; Standard and Poor's (©2020, S&P Dow Jones Indices LLC. All rights reserved); Bureau of Labor Statistics.
§ Inflation data through August 2020. Visual created by Lockwood Advisors, Inc. For additional information regarding the indices shown, please refer to the Important Disclosures at the end of this document. Indices are unmanaged and are not available for direct investment. **Past performance is not a guarantee of future results.**

Let's look at U.S. federal debt. Before we vote in the election on November 3, we will experience Halloween in whatever form the pandemic allows. You don't need to wait for your seasonal horror fix. Right now, you can read a hot-off-the-press September release of a 74-page graphic horror novel. It's called "The 2020 Long-Term Budget Outlook" by the Congressional Budget Office (CBO). This annual report, available free to the public at cbo.gov, offers proof that reality is as spooky as anything Hollywood can dream up. This document shows what happens when governments fail to take responsible measures to balance their checkbooks over multiple business cycles and several administrations.

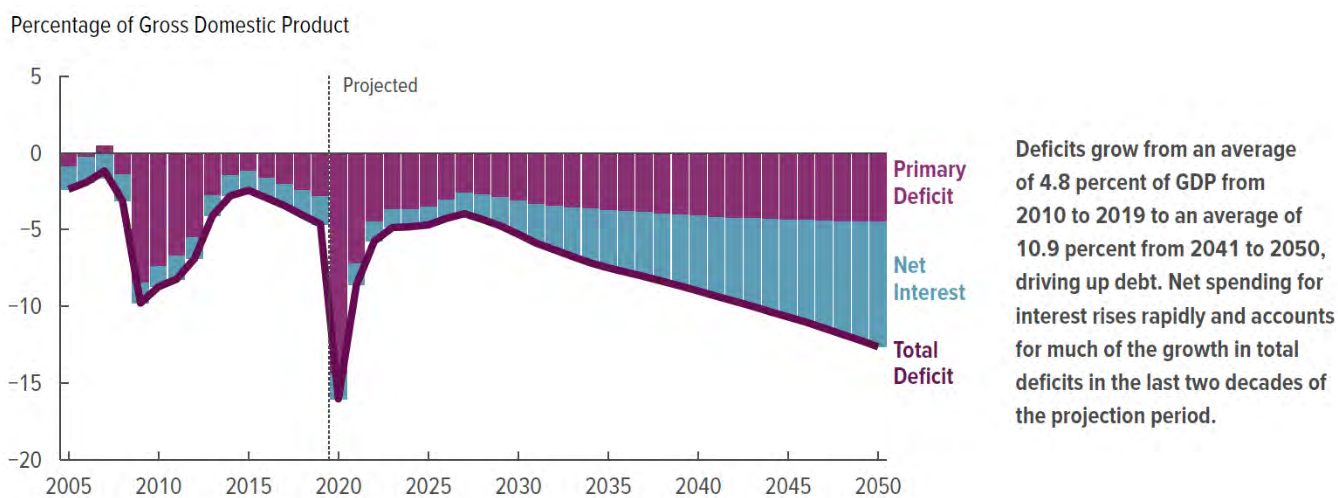
"The American Republic will endure until the day Congress discovers that it can bribe the public with the public's money."
– Alexis de Tocqueville (1835)

The CBO presents a bleak picture of national debt rising for the next 30 years, and projects federal debt to rise to 195% of GDP (gross domestic product) by 2050. That would dwarf the previous peak of 106% just after World War II when the country was on a wartime footing. For reference, our pre-virus federal debt to GDP ratio was 79% in 2019 and 31% in 1974, when they issued our WIN pin. The pandemic alone is forecast to raise our debt to GDP ratio to 108% by 2023. We may surpass the previous historical high by the end of 2020, depending perhaps on whether the raucous politicians will stop dithering and agree on additional pandemic stimulus. In the longer-term forecast, driving the debt acceleration are expenditures on net interest on the debt as well as major health care programs, attributable in part to an aging population and overall health care cost increases.



Source: Congressional Budget Office (CBO.gov). Data as of September 30, 2020

Pointedly, the U.S. is now at a debt to GDP ratio that has served as a threshold or tipping point where, historically, many nations' debt management has failed to recover. The U.S. may have additional fiscal space, or room to increase the ratio above 100%, but we're close or at a dangerous point that has led to trouble for many nations in the past.



Source: Congressional Budget Office (CBO.gov). Data as of September 30, 2020

> ***"If something cannot go on forever, it will stop."***
> – Herbert Stein, U.S. Economist (1976)

Granted, these estimates are based on current enacted law that will most likely change over the course of the 30-year time horizon envisioned in the report. They also rely on a set of assumptions about interest rates and health care expenditures that could prove unrealistic. Nonetheless, they present a picture of a republic whose spending has gone seriously awry. They also project a federal debt to GDP ratio that alarms many economists, as examined in well-known historical studies of financial crisis like Kenneth Rogoff and Carmen Reinhart's *This Time is Different: Eight Centuries of Financial Folly* (2011).

Both parties and COVID-19 have been complicit in getting us to these dire fiscal straits. Both major candidates for the U.S. presidency have presented policy proposals that do little to nothing to mitigate debt acceleration before the next presidential election in 2024.

The Biden Plan

Democratic nominee and former Vice President Joe Biden has issued a detailed plan that begins to cut the national debt, but only in the years beyond 2030 and only after significant tax hikes. These tax hikes would, if enacted, likely lower GDP growth in the intermediate time frame, bringing deficit reduction into question. According to Penn Wharton's Budget Model, the Biden platform would raise $3.375 trillion in new tax revenue while spending an additional $5.37 trillion over the 2021-2030 period. Wharton estimates the plan will begin to reduce national debt by 2050 and even then only by about 6%. Biden's tax plan would raise top rates on ordinary income from 37% to 39.6%, repeal tax cuts embedded in the Tax Cuts and Jobs Act (TCJA) for high-income filers, eliminate the stepped-up cost basis for estate tax calculation, limit itemized deductions, raise the corporate tax rate from 21% to 28%, impose a minimum corporate tax, raise tax on foreign subsidiary income (from 10.5% to 21%), eliminate fossil fuel and real estate subsidies and loopholes, and impose sanctions on foreign countries that facilitate corporate tax avoidance.

Wharton estimates that the Biden plan's largest impact on revenues would derive from the corporate rate hike ($1.23 trillion), foreign subsidiary profit tax hike ($310 billion), minimum corporate tax ($212 billion) and eliminating the stepped-up basis ($163 billion). For individual filers, Penn Wharton estimates that individual filers with incomes over $400,000 will see an average 17.7% decline in after-tax income, not least in part due to a 12.4% Social Security tax hike for taxpayers in that category. There are tax credits for electric vehicles, residential energy efficiency, seniors, informal caregivers, solar and child care facilities. No matter your political views, this is one of the largest tax plans and expansions of the federal government proposed in U.S. history. If enacted, Biden's proposal could spur some inflation because of the large injection of federal spending.

The Trump Plan

President Trump has issued few details about his proposals for a second term and has issued somewhat vague descriptions of policy goals. We have only about one page worth of policy prescriptions and they appear to focus on tax credits and outright tax cuts. For example, he has offered a middle-class tax cut, hinted at a capital gains tax cut (20% to 15%) and proposed tax breaks for those companies returning manufacturing to the U.S. He also proposes a payroll tax break for the pandemic period. There are few, if any, spending cuts that seem to be implied by his general policy goals.

"Politics…has always been the systematic organization of hatreds."
– Henry Adams, The Education of Henry Adams (1918)

These are very different visions of future fiscal policy priorities. Whether any of these prescriptions, in whole or in part, can materialize remains to be seen. Both visions are constrained by macroeconomics and tactical politics, such as who controls the United States Senate next January. The House may initiate money bills, but the party in control of the Senate will be the key to determining whether many of these policy proposals come to pass. They may also be constrained by geopolitical realities, as the U.S. will need to continue to fund an effective and expensive military deterrent regardless of political social spending wish lists.

Wartime Footing

The U.S. has passed 7 million COVID-19 infections and 200,000 deaths, as of September 25, 2020. The virus has put both the U.S. fiscal and monetary policies on something akin to a wartime footing. We mean that the emergency policy stances in play now are similar to the control over capital markets that were enacted during and after World War II. As mentioned above, that period marks the previous peak in federal debt to GDP of around 106%. In 2021, or sometime after we have begun to control the virus or adapted to it, the United States could begin to chip away at the enormous bill we've rung up from these emergency stimulus measures.

How to Cut Debt

Theoretically, there are three ways to reduce a debt overhang: 1) austerity – cut spending and/or raise taxes to reduce deficits and debt; 2) grow faster – grow your way out in real, inflation-adjusted terms; or 3) inflate it away – use the central bank to print money and monetize the debt and reduce the cost of debt in real, inflation-adjusted terms. Of course, there is a fourth option: default.

After World War II, the U.S. economy took option #2 and grew the economy out of a massively indebted position. Several tailwinds to the U.S. economy contributed to our ability to manage the debt at that time. Real growth (non-inflationary growth) was higher than real interest rates, and demographics contributed as birth rates rose dramatically. Very importantly, productivity growth rates stayed high. Sentiment also remained elevated, not surprising after the end of a major global conflict. Also, since the U.S. had not been in an excessively indebted position prior to the War, it was easier to adjust to a one-time spike in debt. Moreover, and somewhat akin to Japan today, we were able to finance most of our debts internally.

These beneficial conditions are not present now and this will make working our way out of this predicament more difficult. We rely extensively on foreign lenders to fund our spending; the demographic picture is alarming, while productivity growth has slowed dramatically from the post-WWII period. A little bit of inflation might make our debt predicament easier to bear.

No Fiscal Discipline

Unfortunately, neither party seems remotely interested in anything akin to fiscal prudence during this election process. Granted, this may be understandable given that we still need to heal from the destruction of capital and labor that resulted from the coronavirus recession. Even if GDP recovers in several years, it may take much longer than that for employment and small business to regain pre-COVID-19 levels. So, it may be too early to begin to fret about near-term increases in debt while we work our way out of this morass. Still, the worrying trend is that neither party seems very interested in the long-term budget dynamic at this time and has not seemed worried for several decades.

So, if politicians have disregarded the federal debt and deficits and their impacts, why should investors care?

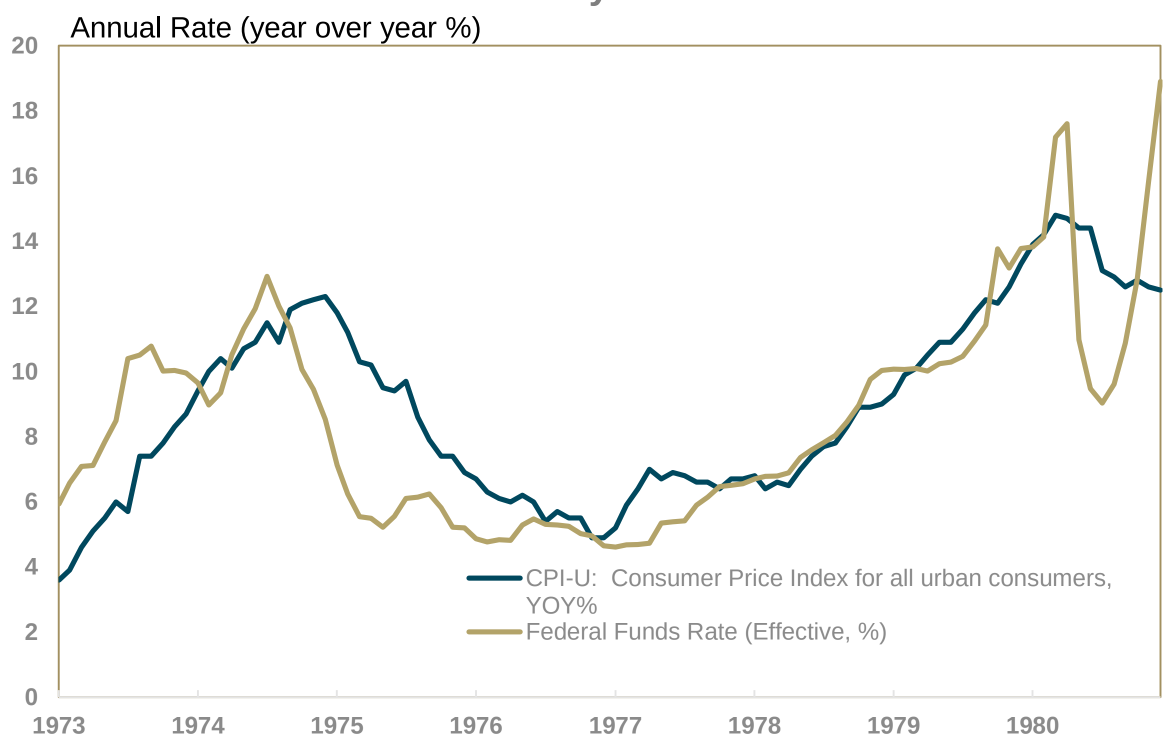
U.S. bond and foreign currency markets appear to be pricing in or poised to price in some of these longer-term effects. Markets are always long-term discounting mechanisms, but they could soon dramatically reevaluate U.S. interest rates, future inflation and the pricing of the dollar versus international currencies. Deficit hawks have been sounding the alarms for many decades. While many have downplayed the effects of sizable federal debt and deficits while they grew incrementally, markets will not be able to ignore very large changes in prescriptions from both monetary and fiscal policy. For example, markets responded to the Volcker Fed's abrupt policy shift by putting interest rates on a general path lower for four decades.

Monetary Policy: At Zero Until Next Presidential Election Cycle

The Federal Reserve has signaled it intends to keep the federal funds policy rate extremely low, effectively at the zero bound, until 2024. This underscores the dramatic monetary policy support that has been underpinning the market recovery this summer, but also sends a sign of concern about the amount of damage COVID-19 and forced lockdowns have had on the U.S. economy. So far, the Federal Reserve has resisted the lure of negative nominal interest rates. Even so, a large swath of the government curve, in the U.S. and the around the world, is already in a negative real rate posture.

The Federal Reserve has also disclosed it intends to change how it thinks of its inflation target. Previously, the Fed thought of meeting an inflation target point estimate. Now, it will think of the inflation target as an average over time. This means it will allow inflation to run hotter than the target of 2% on core personal consumption expenditure deflator (Core PCE), the Federal Reserve's preferred measure of inflation, for some indeterminate period of time and will not necessarily reflexively raise policy interest rates once inflation begins to rear its head. The Federal Reserve has faced criticism in the past for raising interest rates when wages begin to rise. As we've mentioned, some wage inflation now would help U.S. workers recover.

Inflation and Federal Funds Policy Rate: 1973–1981



Source: Bloomberg. Visual created by Lockwood Advisors, Inc. Data as of September 30, 2020.

The Federal Reserve has been playing a large role in the U.S. debt markets in order to provide liquidity to stressed markets. In combination with its inflation stance, this implies that real interest rates could not only remain low but also actually fall. Low real interest rates will likely support equity prices. The Fed will also likely boost precious metals prices that have a high correlation with lower real rates. It also means that investors, like the mythological Sisyphus who pushes his rock up the hill again and again, will remain on the never-ending quest for something resembling a positive real yield on their investments.

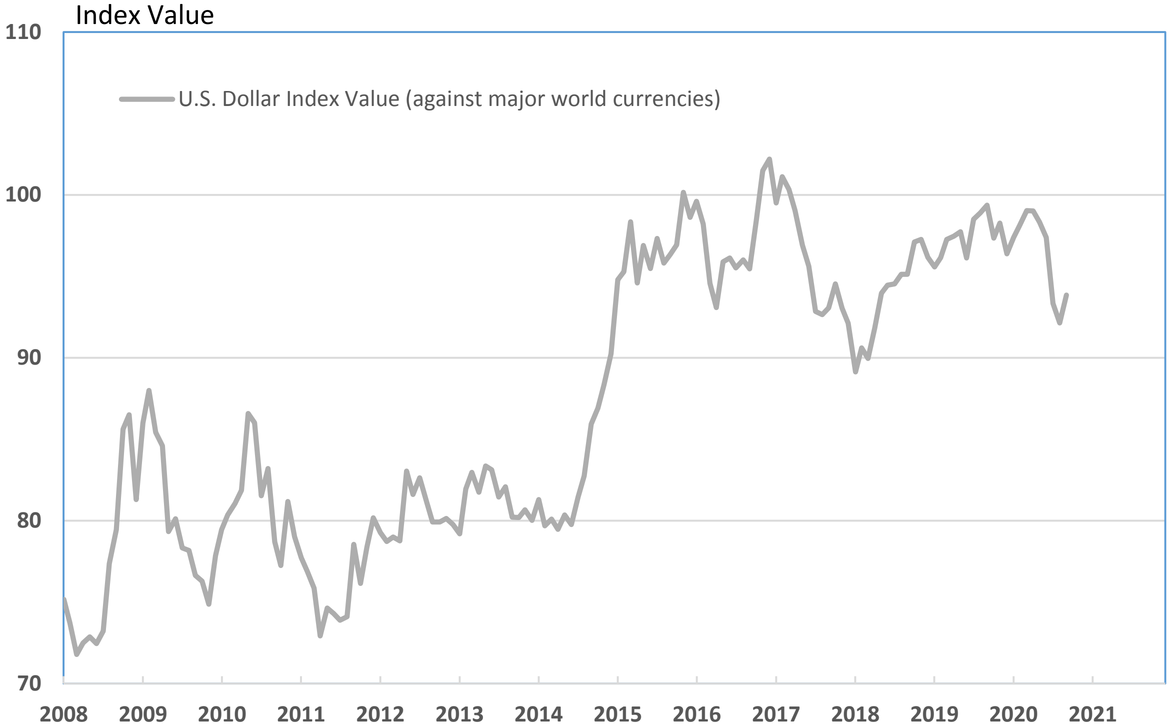
Interestingly, the Federal Reserve has been actively calling for additional fiscal stimulus to support the economy. In most circumstances, the Federal Reserve cajoles legislators for their profligate and spendthrift stance on fiscal policy, and has consistently labeled U.S. fiscal policy as unsustainable. This time, though, the Federal Reserve acknowledges that its arsenal to provide support to the economy is running thin. Central banks are all in and enormously stimulative. It's worth pointing out, however, that support for the corporate bond market has been sharply curtailed since August. Nonetheless, the Fed's policy stance underscores its concern in the near-term around additional damage from COVID-19 and weak domestic economic conditions.

Overall, the Federal Reserve would like to see inflation approach or even surpass its 2% target to help debt burdens and workers find their way out of current economic fragility. It doesn't mean the Federal Reserve will get additional inflation but, like in the late 1970s, it may take some time for changes in policy prescriptions to have the desired effect.

Currency Volatility

Many of these long-term concerns may be showing up in currencies. Some of the recent currency volatility can be traced to investors reassessing Federal Reserve policy changes and the lack of fiscal discipline. The Dollar Index, a measure of the value of the dollar compared to other major world currencies, peaked on March 20 at an index value of nearly 103. Since then, it slid to under 92 in early September, a value it had not seen since its ascendance in the 2014-2015 period when the U.S. economy was firmly entrenched in an economic recovery and benefiting from pronounced energy weakness. More recently, it has bounced off the marks from early September and ended the month at 93.886. This small backup in dollar values has roiled markets. It's still too early to determine whether the 12-year bullish run in the dollar is over, but expansive monetary and fiscal policy will put more dollars in circulation around the globe. Most valuation measures, such as PPP (purchasing power parity) have shown the dollar in an overvalued state for several years. The dollar has shown a strong degree of global investor caution, but it may be hard to sustain these values in the face of overwhelming stimulus from monetary and fiscal authorities. If the Federal Reserve wants more inflation and ultimately gets it, the U.S. dollar will react negatively.

U.S. Dollar Index: 2008–Present



Source: Bloomberg. Visual created by Lockwood Advisors, Inc. Data as of September 30, 2020.

Rough September

Capital markets had a rough September, reversing many of the previous trends that we have seen since the troughs in risk assets in the spring. So far, the consensus view is that the markets just need a breather, a correction, a small, sharp pullback from the exhaustive and heady summer exuberance. There is an assemblage of near-term temporal concerns that markets must overcome. We face a wickedly contested election with a heightened prospect for violence and confusion. Volatility futures predict a marked possibility of market disruption after the election. There has been no resolution about continued fiscal support for the economy as we enter the fourth quarter while heated partisanship over a Supreme Court nominee flares tempers and makes compromise more difficult. Lack of additional stimulus brings into open question the possibility of a fiscal cliff that could emerge for workers and businesses impacted by the virus. Lastly, as mentioned, recent dollar strength puts some recent market trends into reversal.

Unusual Technical and Volatility Market Setup

Technically, it's unusual for a market correction to begin from such high levels of volatility (measured by the VIX Index). Most major market reversals take place when volatility is low and markets are complacent when faced with a shock. Does it imply that more market volatility is ahead?

Volatility (VIX) at Previous Market Peaks

Date	S&P 500	VIX
3/24/2000	1527.46	23.31
10/11/2007	1554.41	18.88
5/2/2011	1361.22	15.99
5/21/2015	2130.82	12.11
9/21/2018	2929.67	11.68
2/19/2020	3386.15	14.38
9/30/2020	3363.00	26.37

VIX is the ticker symbol for the Chicago Board Options Exchange (CBOE) Volatility Index, which shows the market's expectation of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 index options. This volatility is meant to be forward looking, is calculated from both calls and puts, and is a widely used measure of market risk, often referred to as the "investor fear gauge."
Source: Bloomberg. Data as of September 30, 2020. Visual created by Lockwood Advisors, Inc.

We predicted last quarter that volatility would remain well above 2019 levels and that has remained true, never dipping below 20 on the VIX since the virus crisis began. The high levels of implied volatility show high levels of investor caution. However, that could set the stage for calmer markets once we get through the near-term concerns listed above. Lower implied volatility is usually the path when we have extraordinary monetary stimulus.

COVID-19 Is Global

Concerns about the long-term fiscal health of many nations are coming to the forefront as a result of COVID-19. It's exacerbating slow growth and demographic trends that were already in place, and taxing monetary authorities to their limits. Many countries might prefer more inflation now. The World Bank, in its June 2020 Global Economic Prospects, says that the global economy will shrink 5.2%, making this year the worst recession since World War II. It also expects a global rebound of 4.2% in 2021, but the damage wrought in 2020 will leave deep scars on the global outlook. Moreover, of the countries that the World Bank tracks, a higher percentage than ever are currently experiencing their worst decline in per capita output since 1870. For reference, the U.S. is projected to decline 7% and rebound 4% in 2021. COVID-19 has left particularly deep impressions on Europe and Latin America.

The virus itself will continue to play a large role in the shape of the recovery. In the United Kingdom, Spain, India, parts of Latin America and several U.S. states, we're seeing a dreaded second wave of infections. The question is whether it spreads to other parts of the U.S. and other nations around the world. Also, will authorities react differently when faced with opposition to widespread lockdowns? Has the virus mutated and, if so, how? There are four coronavirus vaccines in late-stage clinical studies. A breakthrough on that front will be sorely welcome, but will still need manufacturing prowess and widespread acceptance to succeed on a broad scale. Many asset managers appear to base their optimistic forecasts on a successful virus vaccine emerging over the next several quarters.

U.S.

There are multiple developments besides a vaccine that could prove to be positive catalysts for equity markets. Yes, we're getting a recovery and the U.S. GDP growth in the third quarter will be strong. However, we still won't get back to pre-COVID-19 levels of output for at least several years. The employment damage, while steadily improving, will progress at a slower pace than it has this summer. As we noted in last quarter's commentary, Americans have put substantial savings away since the virus started. That cash could get put back to work at some point. Corporations have amassed an impressive cash hoard as well and those funds could go to support stock buybacks, but that positive outcome seems conditional on politics that would block a sizable increase in the corporate tax rate.

U.S. equity markets look extremely expensive on very suppressed earnings, so we expect that markets will continue to be extraordinarily sensitive to the direction and pace of earnings estimates far into the future. There has been a shift in 2020 towards relying on much longer-run valuation measures. Disappointingly, S&P 500 Index earnings estimates for 2021 continue to come in. They have declined about $5 in the past month on top of a $30 decline in the estimate since the beginning of the year. That is a disconnect. Right now, markets are giving corporate results a pass and expecting much better results soon, but estimates continue to be under pressure. High valuations give fundamental buyers pause and makes equity markets vulnerable to disappointing news. Credit also looks like it has regained a very expensive posture relative to history.

Need Immediate Money

Last but not least, the equity markets continue to bask in extremely stimulative monetary policy. "Don't Fight the Fed" is a worn out cliché, but formed the basis for the markets' complete recovery over 2020. The extreme stimulus measures from monetary policy makers in the U.S. and around the world is one of the reasons asset allocators have not gotten too worked up over recent market gyrations. It's been made clear, again, that enough Federal Reserve stimulus can bolster markets. The question for markets in the years ahead is whether the Fed can also whip up some inflation.

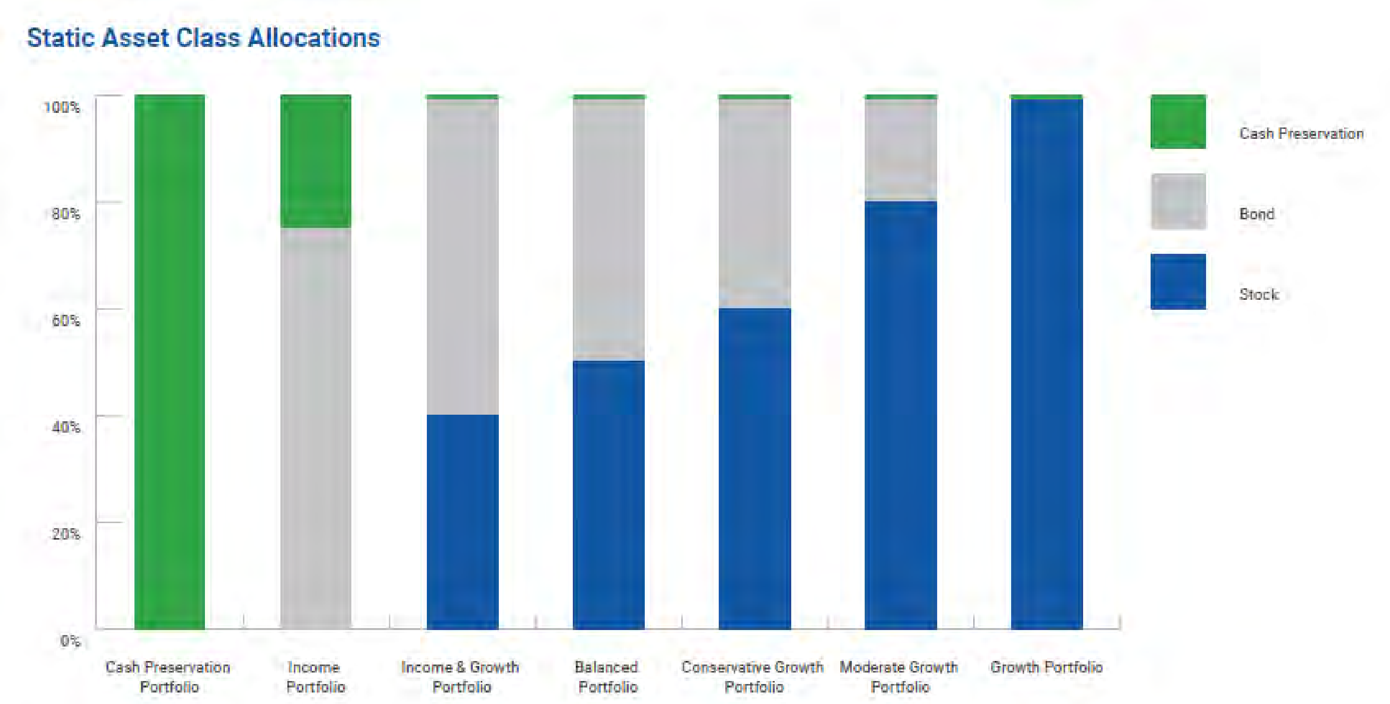
We still believe that current market conditions and high valuations, overall, warrant a cautious and protective stance for client assets at this juncture.

Of course, if you turn the red WIN pin upside down it becomes NIM. At the time, jokesters opined that the policy acronym meant "No Immediate Miracles" or "Need Immediate Money." Given that the markets appear disappointed without additional fiscal stimulus packages or additional measures from the Fed, these may be appropriate messages for markets today.

Performance Review

- All Static and Year of Enrollment portfolios have met their respective benchmarks in Q3 2020, year-to-date, and trailing 12 month period.
- No remedial action is necessary.
- There are no funds on the Watch List. All funds have performed as expected.

Static Portfolio Review



Source: SumDay Administration, LLC, a BNY Mellon Company. SumDay is an affiliate of Lockwood Advisors, Inc.
Portfolio allocations as of 9/30/2020

Static Portfolio Underlying Fund Allocations

Asset Category	Fund	Ticker	Cash Preservation Portfolio	Income Portfolio	Income and Growth Portfolio	Balanced Portfolio	Conservative Growth Portfolio	Moderate Growth Portfolio	Growth Portfolio
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	0	0	10	13	16	21	25
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	0	0	10	13	16	21	25
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	0	0	15	18	21	29	37
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	0	0	5	6	7	9	12
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	0	30	24	20	15	6	0
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	0	30	24	20	15	6	0
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	0	5	4	3	3	2	0
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	0	8	5	4	4	3	0
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	0	2	2	2	2	2	0
Cash	Vanguard Federal Money Market Fund Investor Shares	VMFXX	100	25	1	1	1	1	1
		Equity	0	0	40	50	60	80	99
		Fixed Income	0	75	59	49	39	19	0
		Cash	100	25	1	1	1	1	1
		Total	100	100	100	100	100	100	100

Source: SumDay Administration, LLC, a BNY Mellon Company. SumDay is an affiliate of Lockwood Advisors, Inc.
Portfolio allocations as of 9/30/2020

Growth Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	7.51	0.19	9.09
Net of All Fees Return	7.45	0.03	8.85
Blended Benchmark	7.48	-0.15	8.82
Excess Return	-0.03	0.18	0.03

Income & Growth Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	3.52	5.63	9.28
Net of All Fees Return	3.46	5.46	9.04
Blended Benchmark	3.55	5.01	8.77
Excess Return	-0.09	0.45	0.27

Moderate Growth Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	6.32	2.34	9.63
Net of All Fees Return	6.26	2.17	9.38
Blended Benchmark	6.31	1.86	9.21
Excess Return	-0.05	0.31	0.17

Income Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	0.61	6.06	6.06
Net of All Fees Return	0.56	5.89	5.83
Blended Benchmark	0.68	5.99	6.11
Excess Return	-0.12	-0.10	-0.28

Conservative Growth Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	5.00	4.39	9.91
Net of All Fees Return	4.94	4.21	9.67
Blended Benchmark	4.98	3.66	9.25
Excess Return	-0.04	0.55	0.42

Cash Preservation Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	0.01	0.37	0.78
Net of All Fees Return	-0.04	0.20	0.55
Benchmark	0.03	0.52	0.96
Excess Return	-0.07	-0.32	-0.41

Balanced Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	4.25	5.02	9.64
Net of All Fees Return	4.19	4.85	9.40
Blended Benchmark	4.25	4.27	8.97
Excess Return	-0.06	0.58	0.43

Please see Blended Benchmark Definitions in the Important Disclosures section at the end of this report.

Performance as of 9/30/2020.

Source: SumDay Administration, LLC, a BNY Mellon Company. SumDay is an affiliate of Lockwood Advisors, Inc.

Performance is calculated using a time and asset-weighted Modified Dietz methodology. The Gross of Fees Return shown reflects the deduction of fees and expenses associated with the underlying mutual funds held in the portfolio (the “Underlying Fund Fee”). The Net of Fees Return shown reflects the deduction of the Underlying Fund Fee, Service Fee, and State Administrative Fee (together, the “Total Annual Asset-Based Fee”). The returns shown do not reflect account maintenance fees or other account level service-based fees (e.g., returned check fees, statement delivery fees, etc.).

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Indices are unmanaged and are not available for direct investment.

Conservative Year of Enrollment Portfolio Review

Conservative Year of Enrollment Portfolio Underlying Fund Allocations

Asset Category	Fund	Ticker	YoE 2038	YoE 2036	YoE 2034	YoE 2032	YoE 2030	YoE 2028	YoE 2026	YoE 2024	YoE 2022	Enrolled
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	15	13	12	9	7	4	3	2	0	0
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	14	13	11	9	6	4	2	1	0	0
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	19	18	16	12	8	5	4	2	0	0
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	7	6	6	5	4	2	1	0	0	0
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	17	20	21	26	29	26	26	18	20	20
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	18	20	22	26	30	27	27	18	21	21
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	3	3	4	4	5	4	4	3	3	3
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	4	4	5	6	8	6	6	4	4	4
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	2	2	2	2	2	2	2	2	2	2
Cash	Vanguard Federal Money Market Fund Investor Shares	VMFXX	1	1	1	1	1	20	25	50	50	50
		Equity	55	50	45	35	25	15	10	5	0	0
		Fixed Income	44	49	54	64	74	65	65	45	50	50
		Cash	1	1	1	1	1	20	25	50	50	50
		Total	100	100	100	100	100	100	100	100	100	100

Source: SumDay Administration, LLC, a BNY Mellon Company. SumDay is an affiliate of Lockwood Advisors, Inc.
Portfolio allocations as of 9/30/2020.

Conservative Year of Enrollment 2036 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	4.34	4.24	9.35
Net of All Fees Return	4.28	4.07	9.12
Blended Benchmark	4.25	3.62	8.77
Excess Return	0.03	0.45	0.35

Conservative Year of Enrollment 2034 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	3.97	4.90	9.54
Net of All Fees Return	3.91	4.73	9.30
Blended Benchmark	3.94	3.96	8.64
Excess Return	-0.03	0.77	0.66

Conservative Year of Enrollment 2032 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	3.35	5.70	9.37
Net of All Fees Return	3.29	5.53	9.13
Blended Benchmark	3.28	4.74	8.48
Excess Return	0.01	0.79	0.65

Conservative Year of Enrollment 2030 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	2.73	6.25	9.03
Net of All Fees Return	2.67	6.07	8.79
Blended Benchmark	2.64	5.43	8.29
Excess Return	0.03	0.64	0.50

Conservative Year of Enrollment 2028 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	1.93	6.18	8.09
Net of All Fees Return	1.88	6.00	7.85
Blended Benchmark	1.75	5.32	7.29
Excess Return	0.13	0.68	0.56

Conservative Year of Enrollment 2026 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	1.48	5.78	7.22
Net of All Fees Return	1.42	5.60	6.99
Blended Benchmark	1.33	4.99	6.51
Excess Return	0.09	0.61	0.48

Conservative Year of Enrollment 2024 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	0.97	5.24	6.20
Net of All Fees Return	0.91	5.07	5.97
Blended Benchmark	0.79	4.72	5.78
Excess Return	0.12	0.35	0.19

Conservative Year of Enrollment 2022 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	0.53	3.74	4.36
Net of All Fees Return	0.47	3.57	4.13
Blended Benchmark	0.45	3.46	4.14
Excess Return	0.02	0.11	-0.01

Conservative Year of Enrollment Enrolled Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	0.42	NA	NA
Net of All Fees Return	0.37	NA	NA
Blended Benchmark	0.45	NA	NA
Excess Return	-0.08	NA	NA

Please see Blended Benchmark Definitions in the Important Disclosures section at the end of this report.

Performance as of 9/30/2020.

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Moderate Year of Enrollment Portfolio Review

Moderate Year of Enrollment Portfolio Underlying Fund Allocations

Asset Category	Fund	Ticker	YoE 2038	YoE 2036	YoE 2034	YoE 2032	YoE 2030	YoE 2028	YoE 2026	YoE 2024	YoE 2022	Enrolled
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	24	24	21	18	16	13	9	5	3	0
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	23	23	21	18	16	13	9	5	2	0
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	33	33	29	26	21	18	12	7	4	0
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	10	10	9	8	7	6	5	3	1	0
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	3	3	6	10	15	20	24	27	27	27
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	2	2	6	10	15	20	25	28	28	28
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	1	1	2	3	3	3	4	5	5	5
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	2	2	3	4	4	4	5	8	8	8
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	1	1	2	2	2	2	2	2	2	2
Cash	Vanguard Federal Money Market Fund Investor Shares	VMFXX	1	1	1	1	1	1	5	10	20	30
		Equity	90	90	80	70	60	50	35	20	10	0
		Fixed Income	9	9	19	29	39	49	60	70	70	70
		Cash	1	1	1	1	1	1	5	10	20	30
		Total	100	100	100	100	100	100	100	100	100	100

Source: SumDay Administration, LLC, a BNY Mellon Company. SumDay is an affiliate of Lockwood Advisors, Inc.
Portfolio allocations as of 9/30/2020.

Moderate Year of Enrollment 2036 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	6.85	1.43	9.58
Net of All Fees Return	6.79	1.27	9.34
Blended Benchmark	6.95	0.89	9.10
Excess Return	-0.16	0.38	0.24

Moderate Year of Enrollment 2034 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	6.49	0.78	8.88
Net of All Fees Return	6.43	0.62	8.65
Blended Benchmark	6.31	0.30	8.45
Excess Return	0.12	0.32	0.20

Moderate Year of Enrollment 2032 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	5.85	1.82	9.08
Net of All Fees Return	5.79	1.65	8.84
Blended Benchmark	5.61	1.19	8.49
Excess Return	0.18	0.46	0.35

Moderate Year of Enrollment 2030 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	5.24	3.18	9.55
Net of All Fees Return	5.18	3.01	9.31
Blended Benchmark	4.98	2.12	8.53
Excess Return	0.20	0.89	0.78

Moderate Year of Enrollment 2028 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	4.54	4.03	9.53
Net of All Fees Return	4.48	3.86	9.29
Blended Benchmark	4.25	2.95	8.50
Excess Return	0.23	0.91	0.79

Moderate Year of Enrollment 2026 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	3.67	4.67	9.31
Net of All Fees Return	3.61	4.50	9.07
Blended Benchmark	3.23	3.25	7.90
Excess Return	0.38	1.25	1.17

Moderate Year of Enrollment 2024 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	2.67	5.45	8.70
Net of All Fees Return	2.61	5.28	8.46
Blended Benchmark	2.19	4.14	7.45
Excess Return	0.42	1.14	1.01

Moderate Year of Enrollment 2022 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	1.73	6.05	7.91
Net of All Fees Return	1.67	5.87	7.67
Blended Benchmark	1.40	5.11	7.04
Excess Return	0.27	0.76	0.63

Moderate Year of Enrollment Enrolled Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	0.63	NA	NA
Net of All Fees Return	0.58	NA	NA
Blended Benchmark	0.66	NA	NA
Excess Return	-0.08	NA	NA

Please see Blended Benchmark Definitions in the Important Disclosures section at the end of this report.

Performance as of 9/30/2020.

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Growth Year of Enrollment Portfolio Review

Growth Year of Enrollment Portfolio Underlying Fund Allocations

Asset Category	Fund	Ticker	YoE 2038	YoE 2036	YoE 2034	YoE 2032	YoE 2030	YoE 2028	YoE 2026	YoE 2024	YoE 2022	Enrolled
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	25	25	24	24	22	21	18	13	8	3
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	24	24	23	23	22	21	18	13	7	2
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	35	35	33	33	31	29	26	18	11	4
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	11	11	10	10	10	9	8	6	4	1
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	1	1	3	3	3	6	10	20	28	24
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	1	1	2	2	4	6	10	20	28	24
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	1	1	1	1	2	2	3	3	4	4
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	0	0	2	2	3	3	4	4	7	6
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	1	1	1	1	2	2	2	2	2	2
Cash	Vanguard Federal Money Market Fund Investor Shares	VMFXX	1	1	1	1	1	1	1	1	1	30
		Equity	95	95	90	90	85	80	70	50	30	10
		Fixed Income	4	4	9	9	14	19	29	49	69	60
		Cash	1	1	1	1	1	1	1	1	1	30
		Total	100	100	100	100	100	100	100	100	100	100

Source: SumDay Administration, LLC, a BNY Mellon Company. SumDay is an affiliate of Lockwood Advisors, Inc.
Portfolio allocations as of 9/30/2020.

Growth Year of Enrollment 2036 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	7.19	0.37	8.88
Net of All Fees Return	7.13	0.21	8.64
Blended Benchmark	7.24	0.37	8.99
Excess Return	-0.11	-0.16	-0.35

Growth Year of Enrollment 2034 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	7.05	0.57	9.07
Net of All Fees Return	6.99	0.40	8.83
Blended Benchmark	6.95	0.10	8.69
Excess Return	0.04	0.30	0.14

Growth Year of Enrollment 2032 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	6.95	1.30	9.41
Net of All Fees Return	6.89	1.13	9.17
Blended Benchmark	6.95	0.89	9.10
Excess Return	-0.06	0.24	0.07

Growth Year of Enrollment 2030 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	6.77	1.13	9.25
Net of All Fees Return	6.71	0.96	9.01
Blended Benchmark	6.65	0.62	8.80
Excess Return	0.06	0.34	0.21

Growth Year of Enrollment 2028 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	6.49	1.74	9.46
Net of All Fees Return	6.43	1.57	9.22
Blended Benchmark	6.31	1.08	8.84
Excess Return	0.12	0.49	0.38

Growth Year of Enrollment 2026 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	5.91	2.08	9.38
Net of All Fees Return	5.85	1.92	9.14
Blended Benchmark	5.61	1.19	8.49
Excess Return	0.24	0.73	0.65

Growth Year of Enrollment 2024 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	4.57	3.84	9.35
Net of All Fees Return	4.51	3.67	9.11
Blended Benchmark	4.25	2.86	8.40
Excess Return	0.26	0.81	0.71

Growth Year of Enrollment 2022 Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	3.20	5.43	9.09
Net of All Fees Return	3.15	5.26	8.86
Blended Benchmark	2.91	4.46	8.20
Excess Return	0.24	0.80	0.66

Growth Year of Enrollment Enrolled Portfolio	Q3 2020	YTD	1 Year
Gross of Fees Return	1.25	NA	NA
Net of All Fees Return	1.20	NA	NA
Blended Benchmark	1.30	NA	NA
Excess Return	-0.10	NA	NA

Please see Blended Benchmark Definitions in the Important Disclosures section at the end of this report.

Performance as of 9/30/2020.

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DreamAhead College Investment Plan Mutual Fund Evaluations

Presented by Lockwood Advisors, Inc.

The following are evaluations of the funds used in DreamAhead. The sources used are BNY Mellon Manager Research Group (MRG), Morningstar, and the respective fund companies. Relevant MRG research was used where available, supplemented with Morningstar research and fund company data. The ratings and narratives used are taken directly from the sources noted. MRG and Morningstar use differing scales. MRG rates Organizations as Positive, Satisfactory, or Negative; while Morningstar rates Funds as Positive, Neutral or Negative; or High, Above Average, Average, Below Average, and Low. Source dates vary based on the most recent ratings available for a particular category, fund, or parent company.

The following information and opinions contained in this material are derived from proprietary and nonproprietary sources deemed by Lockwood to be reliable, but are not necessarily all inclusive. Opinions and ratings are subject to change at any time without notice. Please refer to the Important Disclosures at the end of this document.

Fidelity Emerging Markets Index Fund (FPADX)

Firm Background*

Fidelity Institutional Asset Management Trust Company (FIAM) is the US-based investment management subsidiary of Fidelity Management & Research (FRM). FRM is a large, privately-held, multi-service financial services firm founded in 1946 by Edward C. Johnson. FMR is currently under the leadership of CEO Abigail Johnson. Approximately 49% of FMR is owned by Ms. Johnson and other members of the Johnson family. 51% is held by employees and former employees.

FIAM was established in 2015 through the combination of Pyramis Global Advisors and Fidelity Financial Advisor Solutions, which served, respectively, institutional and retail investment management clients. The firm manages roughly $175 billion across fixed income (38%), multi-asset (32%), and equity (28%), with cash and alternatives comprising the balance. Judy Marlinski is President of FIAM, She reports to Mike Dervin, Head of Fidelity Institutional at FMR.

Organization: Satisfactory*

FMR and, by extension, FIAM are highly complex and deeply intertwined organizations. Differences between functional business units and legal entities are often indistinct, but the high degree of involvement from the senior ranks of the FMR organization, particularly given the hands-on approach of FMR CEO Abigail Johnson, appear to manage this complexity effectively. FIAM is large, owing a portion of its success to the strong brand and distribution power of the parent company. The firm maintains a diversified client base and product line, as well as a strong investment culture. Senior leadership at FIAM has experienced some significant changes over the past two years, most notably the retirement of Charlie Morrison, FMR's President of Asset Management, in December of 2018 and the departure of Scott Cuoto, President of FIAM in mid-2017. The President of FIAM reports into the President of Asset Management at FRM Additionally, the firm has experienced high profile sexual harassment claims in recent years, leading to some turnover among senior investment professionals. This may indicate that the firm has non-investment-related cultural issues, which can still damage the likelihood of success for the investment teams. However, senior management responded forcefully, and we will continue to monitor the organization for cultural and legal issues.

Strategy**

The Fidelity® Emerging Markets Index Fund seeks to provide investment results that correspond to the total return of emerging stock markets.

Normally investing at least 80% of assets in securities included in the MSCI Emerging Markets Index and in depository receipts representing securities included in the index. Using statistical sampling techniques based on such factors as capitalization, industry exposures, dividend yield, price/earnings ratio, price/book ratio, earnings growth, country weightings, and the effect of foreign taxes to attempt to replicate the returns of the MSCI Emerging Markets Index. Lending securities to earn income for the fund.

Summary

This fund has not been rated by Morningstar, Inc.

Performance

This fund has not been rated by Morningstar, Inc.

Price

This fund has not been rated by Morningstar, Inc.

Process

This fund has not been rated by Morningstar, Inc.

People

This fund has not been rated by Morningstar, Inc.

* Source: BNY Mellon Manager Research Group, as of July 2019
** Source: Fidelity (FMR, LLC), as of 9/30/2020

Release date 09-30-2020

Fidelity® Emerging Markets Idx (USD)

Morningstar Quantitative Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Bronze [Q] 09-30-2020	★★★ 695 US Fund Diversified Emerging Mkts	MSCI ACWI Ex USA NR USD	MSCI EM NR USD	US Fund Diversified Emerging Mkts

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	2.19	-8.83	-1.03	-7.41	-14.63
2019	9.75	0.86	-4.45	11.82	18.26
2020	-23.86	18.78	9.67	—	-0.82

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	10.90	2.43	8.81	—	2.94
Std 09-30-2020	10.90	—	8.81	—	2.94
Total Return	10.90	2.43	8.81	—	2.94
+/- Std Index	7.90	1.27	2.58	—	—
+/- Cat Index	0.36	0.01	-0.16	—	—
% Rank Cat	38	39	38	—	
No. in Cat	790	695	590	—	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	—	—

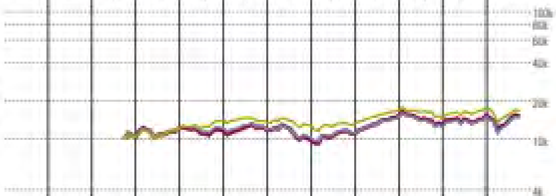
Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 sold or 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 800-835-5092 or visit www.institutional.fidelity.com.

Investment Style (Equity Stocks %)			89	89	94	93	99	99	99	94	98	97



Growth of $10,000

- Fidelity® Emerging Markets Idx 15,186
- Category Average 14,624
- Standard Index 16,603

Performance Quartile (within category)

History	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20
NAV/Price	—	—	8.90	10.25	9.56	9.42	7.73	8.46	11.42	9.54	10.98	10.89
Total Return %	—	—	—	17.62	-4.69	0.58	-15.84	11.28	37.65	-14.63	18.26	-0.82
+/- Standard Index	—	—	—	0.79	-19.98	4.46	-10.18	5.77	10.45	-0.43	-3.25	4.62
+/- Category Index	—	—	—	-0.60	-2.09	2.78	-0.92	0.07	0.36	-0.06	-0.16	0.34
% Rank Cat	—	—	—	60	74	17	65	30	34	35	57	—
No. of Funds in Cat	—	—	—	562	614	749	840	813	806	836	835	808

Portfolio Analysis 08-31-2020

Asset Allocation %	Net %	Long %	Short %
Cash	3.08	3.08	0.00
US Stocks	0.23	0.23	0.00
Non-US Stocks	96.64	96.64	0.00
Bonds	0.00	0.00	0.00
Other/Not Clsfd	0.06	0.06	0.00
Total	100.00	100.00	0.00

Equity Style (Value Blend Growth; Large Mid Small)

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	15.7	0.85	0.83
P/C Ratio TTM	9.5	1.01	0.86
P/B Ratio TTM	1.7	1.09	0.76
Geo Avg Mkt Cap $mil	46304	1.21	0.87

Fixed-Income Style (Ltd Mod Ext; High Med Low)

Avg Eff Maturity	—
Avg Eff Duration	—
Avg Wtd Coupon	—
Avg Wtd Price	—

Credit Quality Breakdown —	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stocks %	Rel Std Index
Americas	7.6	0.82
Greater Europe	11.9	0.28
Greater Asia	80.5	1.09

Share Chg since 07-2020	Share Amount	Holdings: 1,414 Total Stocks, 1 Total Fixed-Income, 3% Turnover Ratio	Net Assets %
	925,267	Alibaba Group Holding Ltd ADR	7.83
	3 mil	Tencent Holdings Ltd	5.69
	12 mil	Taiwan Semiconductor Manufacturing	5.21
⊕	2,220	MSCI Emerging Markets Index Future	3.80
	2 mil	Samsung Electronics Co Ltd	3.16
⊕	101 mil	Fidelity Revere Str Tr	2.99
	2 mil	Meituan Dianping	1.70
	219,022	Naspers Ltd Class N	1.18
	1 mil	Reliance Industries Ltd	1.18
	47 mil	China Construction Bank Corp Class	0.98
	418,777	JD.com Inc ADR	0.97
	3 mil	Ping An Insurance (Group) Co. of C	0.93
	2 mil	Infosys Ltd	0.83
	3 mil	China Mobile Ltd	0.82
	810,026	Housing Development Finance Corp L	0.80

Sector Weightings	Stocks %	Rel Std Index
Cyclical	**45.0**	**1.14**
Basic Materials	7.1	0.90
Consumer Cyclical	17.6	1.46
Financial Services	17.7	1.05
Real Estate	2.6	0.94
Sensitive	**41.8**	**1.15**
Communication Services	14.3	1.89
Energy	5.6	1.28
Industrials	4.3	0.37
Technology	17.8	1.47
Defensive	**13.1**	**0.54**
Consumer Defensive	6.8	0.68
Healthcare	4.3	0.40
Utilities	2.0	0.59

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.08
12b1 Expense %	NA
Net Expense Ratio %	**0.08**
Gross Expense Ratio %	**0.08**

Risk and Return Profile

	3 Yr 695 funds	5 Yr 590 funds	10 Yr 284 funds
Morningstar Rating™	3★	3★	—
Morningstar Risk	-Avg	Avg	—
Morningstar Return	Avg	Avg	—

	3 Yr	5 Yr	10 Yr
Standard Deviation	19.04	17.29	—
Mean	2.43	8.81	—
Sharpe Ratio	0.14	0.51	—

MPT Statistics	Standard Index	Best Fit Index MSCI EM NR USD
Alpha	1.64	0.04
Beta	1.11	1.00
R-Squared	88.64	98.88
12-Month Yield		—
Potential Cap Gains Exp		2.35%

Operations

Family:	Fidelity Investments	Base Currency:	USD	Purchase Constraints:	A
Manager:	Multiple	Ticker:	FPADX	Incept:	09-08-2011
Tenure:	9.1 Years	ISIN:	US3161463316	Type:	MF
Objective:	Diversified Emerging Markets	Minimum Initial Purchase:	$0	Total Assets:	$3,306.96 mil

Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
Fidelity® Emerging Markets Idx	—	—	10.90	8.81	—	2.94	09-08-2011	NA	NA	0.08	0.08	NA
BBgBarc US Agg Bond TR USD			**6.98**	**4.18**	**3.64**	**—**	**01-03-1980**					
MSCI ACWI Ex USA NR USD			**3.00**	**6.23**	**4.00**	**—**	**01-01-2001**					
MSCI EAFE NR USD			**0.49**	**5.26**	**4.62**	**—**	**03-31-1986**					
MSCI EM NR USD			**10.54**	**8.97**	**2.50**	**—**	**01-01-2001**					
S&P 500 TR USD			**15.15**	**14.15**	**13.74**	**—**	**01-30-1970**					

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	**—**	**02-28-1941**					

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Fidelity® Emerging Markets Idx	9.95	8.08	—	2.26	09-08-2011	6.68	6.71	—	2.02

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

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asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance
The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns
The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %
A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha
Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation
Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration
Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity
Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon
A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price
Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

Best Fit Index
Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta
Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown
Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %
The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %
The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %
The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization
Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000
For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %
The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %
The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean
Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™
Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

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10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

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Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

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P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD

This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

MSCI ACWI Ex USA NR USD

The MSCI AC World ex USA is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets. The index consists of 48 developed and emerging market country indices. The returns we publish for the index are total returns, which include reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core MSCI EAFE ETF.

MSCI EAFE NR USD

This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

MSCI EM NR USD

Description unavailable. The constituents displayed for this index are from the following proxy: Amundi IS MSCI Emerging Markets.

S&P 500 TR USD

A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon

Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

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Fidelity International Index Fund (FSPSX)

Firm Background*

Fidelity Institutional Asset Management Trust Company (FIAM) is the US-based investment management subsidiary of Fidelity Management & Research (FRM). FRM is a large, privately-held, multi-service financial services firm founded in 1946 by Edward C. Johnson. FMR is currently under the leadership of CEO Abigail Johnson. Approximately 49% of FMR is owned by Ms. Johnson and other members of the Johnson family. 51% is held by employees and former employees.

FIAM was established in 2015 through the combination of Pyramis Global Advisors and Fidelity Financial Advisor Solutions, which served, respectively, institutional and retail investment management clients. The firm manages roughly $175 billion across fixed income (38%), multi-asset (32%), and equity (28%), with cash and alternatives comprising the balance. Judy Marlinski is President of FIAM, She reports to Mike Dervin, Head of Fidelity Institutional at FMR.

Organization: Satisfactory*

FMR and, by extension, FIAM are highly complex and deeply intertwined organizations. Differences between functional business units and legal entities are often indistinct, but the high degree of involvement from the senior ranks of the FMR organization, particularly given the hands-on approach of FMR CEO Abigail Johnson, appear to manage this complexity effectively. FIAM is large, owing a portion of its success to the strong brand and distribution power of the parent company. The firm maintains a diversified client base and product line, as well as a strong investment culture. Senior leadership at FIAM has experienced some significant changes over the past two years, most notably the retirement of Charlie Morrison, FMR's President of Asset Management, in December of 2018 and the departure of Scott Cuoto, President of FIAM in mid-2017. The President of FIAM reports into the President of Asset Management at FRM Additionally, the firm has experienced high profile sexual harassment claims in recent years, leading to some turnover among senior investment professionals. This may indicate that the firm has non-investment-related cultural issues, which can still damage the likelihood of success for the investment teams. However, senior management responded forcefully, and we will continue to monitor the organization for cultural and legal issues.

Strategy**

Fidelity® International Index Fund seeks to provide investment results that correspond to the total return of foreign stock markets.

Normally investing at least 80% of assets in common stocks included in the Morgan Stanley Capital International Europe, Australasia, Far East Inde1 x, which represents the performance of foreign stock markets.

Summary***

Fidelity International Index has a well-diversified portfolio and rock-bottom fee that should add up to strong category-relative performance over the long-run. It earns a Morningstar Analyst Rating of Silver.

This fund tracks the MSCI EAFE Index. It holds large- and mid-cap stocks from 21 overseas developed markets. It weights them by market capitalization, an approach that benefits investors by capturing the market's collective opinion of each stock's value while keeping turnover low.

Market-cap weighting can be tough to beat because the market tends to do a good job valuing stocks over the long term. Occasionally it will increase the fund's exposure to expensive stocks when investors get excited about an area of the market. But this doesn't undermine its long-term efficacy.

The portfolio's solid diversification mitigates the consequences of owning the worst-performing names. It holds more than 900 stocks and has only 12% of assets in its 10 largest names. Its regional composition looks modestly different from a typical fund in the category because it excludes emerging-markets stocks. But stocks from these regions account for about 6% of a typical peer's portfolio, so ignoring them shouldn't have a large impact on the fund's category-relative performance.

Performance over the past decade has been good but not great. The fund managed to beat the category average by 61 basis points annually over the decade ending in November 2019. But this advantage didn't allow it stand out among its competitors. Its better-performing peers tended to be more conservative, allowing them to hold up better during market declines. Over the long run, fees tend to play a big role in determining category relative performance. So, this fund's ultra-low expense ratio should provide a strong long-term edge.

Performance***

The management team has delivered sound index-tracking performance, but the fund's return has not stood out among its peers in Morningstar's foreign large-blend category over the 10 years through November 2019. Foreign markets performed poorly by historical standards over this period. Many of the better-performing strategies in the category built their success through more-defensive portfolios. They tended to invest in relatively stable stocks or hold cash, which allowed them to better weather drawdowns than index tracking funds like this one.

Stocks listed in Japan and the United Kingdom collectively account for more than 42% of this portfolio. Consequently, the performance of these two markets can have an outsize effect on performance. Over the past decade, Japanese stocks have been a tailwind while those from the U.K. were less advantageous.

This fund does not hedge its currency risk. Over much of the past decade foreign-exchange rates have subtracted from its performance because the U.S. dollar has appreciated against the foreign currencies represented in this portfolio. Foreign-exchange rates tend to move in cycles, so an appreciating dollar will not always be a disadvantage. Over the long run, the impact of foreign exchange rates on total return tends to wash out.

Price***

It's critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category's cheapest quintile. Based on our assessment of the fund's People, Process and Parent pillars in the context of these fees, we think this share class will be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Silver.

Process: Above Average***

This strategy earns an Above Average Process Pillar rating for capturing most of the overseas market capitalization while diversifying its stock and sector-specific risks.

The fund's portfolio managers use full replication to track the MSCI EAFE Index. This benchmark starts with all stocks listed in 21 foreign developed markets. It targets companies that land in the top 85% of each country's market cap, with a buffer around that threshold to rein in unnecessary turnover. The index applies some additional liquidity screens to ensure its holdings are investable, and it weights its final constituents by their market capitalization. This approach helps control turnover and trading costs as each stock's weight will adjust proportionally to price changes. The index reconstitutes semiannually in May and November with smaller adjustments in February and August, such as adding recent IPOs.

The resulting portfolio captures a majority of the available foreign market capitalization. It effectively diversifies stock-specific risk, with only 12% of assets in its 10 largest holdings. Broad diversification causes the portfolio to look similar to the average of its category peers in certain ways. Sector weightings are comparable, with financial and industrial stocks collectively representing one-third of the fund's assets.

Country and regional allocations aren't far off the category average either. The fund modestly differs from its peers in this regard, but the gaps don't pose a significant threat to its category relative performance. Eurozone stocks represent 30% of the fund, while Japan and the United Kingdom make up an additional 24% and 16%, respectively.

The fund's selection universe doesn't include stocks listed in emerging markets and Canada. Japanese stocks mostly fill this gap, which is consistent with diversified, foreign developed market indexes. This strategy does not include small-cap names. This, combined with its market-cap-weighted approach, tilts the portfolio toward large-cap multinational corporations, with companies like Nestle, Toyota, and BP among its biggest names.

People: Average***

The fund's management team is experienced and well-supported. But it earns an Average People Pillar rating because personnel turnover has been on the high side.

The fund is managed by a team of five managers from Geode Capital Management, which subadvises Fidelity's index-tracking funds. Splitting responsibilities across several managers can reduce the impact of departures. However, six managers have left the fund since September 2012. Most recently, Tom Brussard was removed as a named manager in April 2018 and Patrick Waddell retired from Geode in April 2019. Payal Kapoor Gupta was added to the roster in June 2019 to fill the gap left by Waddell. She previously managed portfolios at State Street Global Advisors.

Louis Bottari, Peter Matthew, Robert Regan, and Deane Gyllenhaal are the other named managers on this fund. Bottari is the longest tenured manager, having served since January 2009, while Matthew joined three years later in 2012. Regan and Gylenhaal have only been at Geode for a few years, but they previously worked as portfolio managers for SSGA and Hartford Investment Management, respectively.

* Source: BNY Mellon Manager Research Group, as of July 2019
** Source: Fidelity (FMR, LLC), as of 9/30/2020
*** Source: Morningstar, Inc., as of 12/9/2019

Fidelity® International Index (USD)

Morningstar Analyst Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Silver 12-09-2019	★★★ 847 US Fund Foreign Large Blend	MSCI ACWI Ex USA NR USD	MSCI ACWI Ex USA NR USD	US Fund Foreign Large Blend

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-0.93	-1.60	1.28	-12.41	-13.52
2019	10.01	3.70	-0.92	7.93	22.00
2020	-23.02	15.78	4.78	—	-6.61

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	0.79	0.80	5.39	—	5.88
Std 09-30-2020	0.79	—	5.39	—	5.88
Total Return	0.79	0.80	5.39	*4.79*	5.88
+/- Std Index	-2.21	-0.36	-0.84	*0.78*	—
+/- Cat Index	-2.21	-0.36	-0.84	*0.78*	—
% Rank Cat	58	48	44	*30*	
No. in Cat	761	847	548	383	

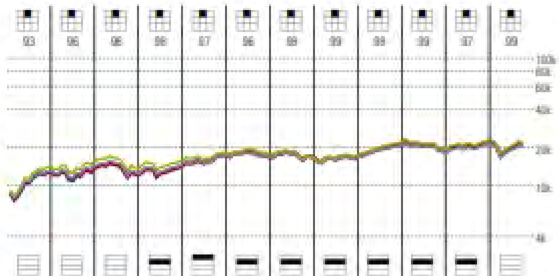
	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	—	—

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 sold or 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 800-635-5092 or visit www.institutional.fidelity.com.



Investment Style
Equity
Stocks %

Growth of $10,000
Fidelity® International Index 20,721
Category Average 20,172
Standard Index 21,717

Performance Quartile (within category)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20	History
—	—	29.75	34.28	40.67	37.22	35.93	35.32	43.18	36.35	42.96	40.12	NAV/Price
28.48	*7.70*	*-12.15*	18.85	21.87	-5.31	-0.73	1.34	25.38	-13.52	22.00	-6.61	Total Return %
-12.96	*-3.45*	*1.56*	2.02	6.59	-1.45	4.93	-3.15	-1.81	0.67	0.49	-1.17	+/- Standard Index
-12.96	*-3.45*	*1.56*	2.02	6.59	-1.45	4.93	-3.15	-1.81	0.67	0.49	-1.17	+/- Category Index
—	—	—	36	25	49	41	40	47	29	43	—	% Rank Cat
—	—	—	786	791	750	788	762	756	741	732	774	No. of Funds in Cat

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.04
12b1 Expense %	NA
Net Expense Ratio %	**0.04**
Gross Expense Ratio %	**0.04**

Risk and Return Profile

	3 Yr 847 funds	5 Yr 548 funds	10 Yr 383 funds
Morningstar Rating™	3★	3★	4☆
Morningstar Risk	Avg	-Avg	-Avg
Morningstar Return	Avg	Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	15.61	13.80	*14.46*
Mean	0.80	5.39	*4.79*
Sharpe Ratio	0.03	0.37	*0.35*

MPT Statistics	Standard Index	Best Fit Index MSCI EAFE NR USD
Alpha	-0.41	0.21
Beta	0.95	1.01
R-Squared	97.22	98.98

12-Month Yield	—
Potential Cap Gains Exp	-3.21%

Portfolio Analysis 08-31-2020

Asset Allocation %	Net %	Long %	Short %
Cash	0.64	0.64	0.00
US Stocks	1.05	1.05	0.00
Non-US Stocks	98.30	98.30	0.00
Bonds	0.00	0.00	0.00
Other/Not Clsfd	0.02	0.02	0.00
Total	100.00	100.00	0.00

Equity Style
Value Blend Growth
Large Mid Small

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	15.8	1.07	1.02
P/C Ratio TTM	9.3	0.99	0.96
P/B Ratio TTM	1.6	0.97	0.94
Geo Avg Mkt Cap $mil	36800	0.96	0.90

Fixed-Income Style
Ltd Mod Ext
High Med Low

Avg Eff Maturity	—
Avg Eff Duration	—
Avg Wtd Coupon	—
Avg Wtd Price	—

Credit Quality Breakdown —	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stocks %	Rel Std Index
Americas	1.0	0.11
Greater Europe	62.3	1.44
Greater Asia	36.7	0.77

Share Chg since 07-2020	Share Amount	Holdings: 931 Total Stocks, 0 Total Fixed-Income, 3% Turnover Ratio	Net Assets %
	6 mil	Nestle SA	2.51
	1 mil	Roche Holding AG Dividend Right Cert.	1.72
	4 mil	Novartis AG	1.29
	2 mil	SAP SE	1.21
⊕	3,469	MSCI EAFE Index Future Sept 20	1.21
	813,542	ASML Holding NV	1.11
⊕	3 mil	AstraZeneca PLC	1.02
	4 mil	Toyota Motor Corp	0.98
	530,563	LVMH Moet Hennessy Louis Vuitton SE	0.91
	23 mil	AIA Group Ltd	0.87
	3 mil	Novo Nordisk A/S B	0.82
	2 mil	Sanofi SA	0.80
	1 mil	Siemens AG	0.74
	2 mil	Sony Corp	0.70
⊖	5 mil	Total SA	0.69

Sector Weightings	Stocks %	Rel Std Index
Cyclical	**36.6**	**0.92**
Basic Materials	7.4	0.94
Consumer Cyclical	10.0	0.83
Financial Services	16.1	0.86
Real Estate	3.2	1.15
Sensitive	**33.5**	**0.92**
Communication Services	6.4	0.75
Energy	3.4	0.79
Industrials	14.8	1.30
Technology	8.9	0.74
Defensive	**29.9**	**1.24**
Consumer Defensive	11.6	1.16
Healthcare	14.3	1.33
Utilities	3.9	1.16

Operations

Family:	Fidelity Investments	Base Currency:	USD	Purchase Constraints:	A
Manager:	Multiple	Ticker:	FSPSX	Incept:	09-08-2011
Tenure:	11.8 Years	ISIN:	US3159117270	Type:	MF
Objective:	Foreign Stock	Minimum Initial Purchase:	$0	Total Assets:	$26,739.62 mil

Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
Fidelity® International Index	—	—	0.79	5.39	—	5.88	09-09-2011	NA	NA	0.04	0.04	NA
BBgBarc US Agg Bond TR USD			**6.98**	**4.18**	**3.64**	—	**01-03-1980**					
MSCI ACWI Ex USA NR USD			**3.00**	**6.23**	**4.00**	—	**01-01-2001**					
MSCI EAFE NR USD			**0.49**	**5.26**	**4.62**	—	**03-31-1986**					
S&P 500 TR USD			**15.15**	**14.15**	**13.74**	—	**01-30-1970**					
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	—	**02-28-1941**					

MORNINGSTAR

Annualized returns 09-30-2020

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Fidelity® International Index	0.07	4.56	—	4.91	09-08-2011	0.99	4.03	—	4.35

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance

The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns

The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %

A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha

Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation

Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration

Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity

Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon

A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price

Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

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Best Fit Index

Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta

Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown

Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %

The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %

The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %

The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization

Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000

For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %

The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %

The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean

Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™

Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

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10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

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P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

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to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD

This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

MSCI ACWI Ex USA NR USD

The MSCI AC World ex USA is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets. The index consists of 48 developed and emerging market country indices. The returns we publish for the index are total returns, which include reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core MSCI EAFE ETF.

MSCI EAFE NR USD
This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

S&P 500 TR USD
A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon
Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

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Fidelity Total Market Index Fund (FSKAX)

Firm Background*

Fidelity Institutional Asset Management Trust Company (FIAM) is the US-based investment management subsidiary of Fidelity Management & Research (FRM). FRM is a large, privately-held, multi-service financial services firm founded in 1946 by Edward C. Johnson. FMR is currently under the leadership of CEO Abigail Johnson. Approximately 49% of FMR is owned by Ms. Johnson and other members of the Johnson family. 51% is held by employees and former employees.

FIAM was established in 2015 through the combination of Pyramis Global Advisors and Fidelity Financial Advisor Solutions, which served, respectively, institutional and retail investment management clients. The firm manages roughly $175 billion across fixed income (38%), multi-asset (32%), and equity (28%), with cash and alternatives comprising the balance. Judy Marlinski is President of FIAM, She reports to Mike Dervin, Head of Fidelity Institutional at FMR.

Organization: Satisfactory*

FMR and, by extension, FIAM are highly complex and deeply intertwined organizations. Differences between functional business units and legal entities are often indistinct, but the high degree of involvement from the senior ranks of the FMR organization, particularly given the hands-on approach of FMR CEO Abigail Johnson, appear to manage this complexity effectively. FIAM is large, owing a portion of its success to the strong brand and distribution power of the parent company. The firm maintains a diversified client base and product line, as well as a strong investment culture. Senior leadership at FIAM has experienced some significant changes over the past two years, most notably the retirement of Charlie Morrison, FMR's President of Asset Management, in December of 2018 and the departure of Scott Cuoto, President of FIAM in mid-2017. The President of FIAM reports into the President of Asset Management at FRM Additionally, the firm has experienced high profile sexual harassment claims in recent years, leading to some turnover among senior investment professionals. This may indicate that the firm has non-investment-related cultural issues, which can still damage the likelihood of success for the investment teams. However, senior management responded forcefully, and we will continue to monitor the organization for cultural and legal issues.

Strategy**

Fidelity® Total Market Index Fund seeks to provide investment results that correspond to the total return of a broad range of United States stocks.

Normally investing at least 80% of assets in common stocks included in the Dow Jones U.S. Total Stock Market Index, which represents the performance of a broad range of U.S. stocks.

Summary***

It effectively replicates the composition of the total U.S. stock market, which has been hard to beat over the long term. The fund's low fee and broad diversification set it up for success. It earns a Morningstar Analyst Rating of Gold.

The fund tracks the Dow Jones U.S. Total Stock Market Index, which includes nearly all U.S. stocks and weights them by market capitalization. Market-cap weighting pulls the portfolio toward the largest stocks, so the fund lands in the large-blend Morningstar Category. This broad market-cap-weighted index accurately reflects the composition of the U.S. large-cap market and harnesses the market's collective wisdom. Compared with funds that target specific segments of the market, this fund isn't prone to forced buying or selling that is the result of stocks entering or exiting a market segment. This should mitigate transaction costs and turnover, which is among the lowest in the large-blend category.

The market doesn't always get prices right. Over short periods, investors may overreact and either drive prices too high or low. Market-cap weighting will increase or decrease exposure to stocks accordingly. This can at times lead to stock and sector level concentration. That said, the fund's broad diversification and low-cost advantage far outweigh these minor disadvantages.

The fund is always fully invested, which should help it more fully capture the market's returns over the long term than most of its category peers but could expose it to greater losses during market downturns. Unlike many of its active peers, this portfolio excludes stocks listed outside the United States. This should help the fund's category-relative performance when U.S. stocks outperform foreign stocks but hurt when they lag.

The fund charges 0.02%, which is its greatest strength. It builds on this cost advantage with low turnover, which helps mitigate transaction costs.

Performance***

Over the trailing 15 years ended February 2020, the fund beat the category average by 151 basis points annualized, with slightly higher risk. Much of this outperformance can be attributed to the fund's cost advantage, lower-than-average cash drag, and more favorable stock exposure in the healthcare, financial services, and consumer defensive sectors compared with the category average.

The fund ranked in the top half over the trailing three and five years through February 2020, consistently outperforming the category average while exhibiting slightly higher volatility. The fund also tended to hold up as well as most of its peers during downturns since inception, despite its lower-than-average cash balance.

This portfolio is always fully invested, which helps its category-relative performance during bull markets but could hurt during bear markets. Most actively managed funds in the category keep larger cash balances on hand to meet redemptions.

The fund has effectively tracked its index. Over the trailing five-year periods through February 2020, the fund trailed the Dow Jones U.S. Total Stock Market Index by 2 basis points, the amount of its expense ratio.

Price***

It's critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category's cheapest quintile. Based on our assessment of the fund's People, Process and Parent pillars in the context of these fees, we think this share class will be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Gold.

Process: High***

The fund represents the entire investable U.S. equity market, effectively harnessing the market's collective wisdom and diversifying risk. It earns a High Process rating.

The fund tracks the Dow Jones U.S. Total Stock Market Index, which holds nearly every U.S. stock listed on a major U.S. exchange. This gives the fund lower turnover than index funds that track specific size segments of the market, as it is not subject to forced trade when holdings migrate up and down the market-cap ladder. By sampling among the smallest stocks in the index, the fund can avoid trading the least-liquid names, which keeps transaction costs down. However, this fund's large asset base allows it to replicate the index more completely than other total market funds. The fund holds about 3,450 out of 3,700 stocks in the index.

The portfolio managers reinvest dividends and use derivatives to equitize cash and keep pace with the benchmark. The fund has historically used securities lending to generate additional income to offset expenses.

The fund mirrors the composition of the large-cap market, allowing the market to dictate its stock and sector weightings. This allows the fund to harness the market's collective view about the relative value of each stock and keeps turnover low; it is among the lowest in the category.

The fund's top 10 holdings account for about 20% of assets and the largest holding accounts for 4% of assets, which effectively diversifies firm-specific risk.

Although it has a smaller market-cap orientation than the large-blend category average, this fund is representative of this category. Currently, the fund is slightly underweight in financial services and overweight in technology compared with the category average.

Large companies tend to have greater competitive advantages compared with smaller companies, and this is evident here as close to 76% of the portfolio is invested in firms with wide or narrow moats. On average, the fund's constituents generate 37% of their revenue overseas.

People: Average***

Since early 2002, a team of quantitative specialists from Geode Capital Management has managed this fund. The team is experienced, but its support infrastructure does not stand out, and the team has experienced some turnover. It earns an Average People rating.

The fund's multimanager approach mitigates the impact of departures. Four listed managers have been removed from the fund since September 2012, but most of these shuffled internally at Geode and did not leave the firm. Patrick Waddell, the longest-tenured member of the current six-person team, retired in 2019. Payal Gupta was hired in June 2019 to replace Waddell. Louis Bottari and Peter Matthew joined this team as assistant portfolio managers in 2009 and 2012, respectively. Since Waddell's retirement, day-to-day management of the portfolio has been undertaken by Louis Bottari. Deane Gyllenhaal joined in April 2014 and previously served as a portfolio manager at Hartford Investment Management. The team also added Tom Brussard and Robert Regan in the past year. Brussard started in August 2016 and has been an assistant portfolio manager with Geode since 2015. Regan joined in December 2016 and previously served as a portfolio manager at State Street Global Advisors.

Manager compensation is tied to index-tracking performance, which helps align their interest with investors'.

* Source: BNY Mellon Manager Research Group, as of July 2019
** Source: Fidelity (FMR, LLC), as of 9/30/2020
*** Source: Morningstar, Inc., as of 3/17/2020

Fidelity® Total Market Index (USD)

Morningstar Analyst Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Gold 03-17-2020	★★★★ 1,229 US Fund Large Blend	S&P 500 TR USD	Russell 1000 TR USD	US Fund Large Blend

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-0.60	3.88	7.10	-14.35	-5.28
2019	14.04	4.08	1.15	9.05	30.92
2020	-20.97	22.09	9.08	—	5.24

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	14.76	11.54	13.62	—	14.18
Std 09-30-2020	14.76	—	13.62	—	14.18
Total Return	14.76	11.54	13.62	*13.43*	14.18
+/- Std Index	-0.39	-0.74	-0.53	*-0.37*	—
+/- Cat Index	-1.25	-0.83	-0.47	*-0.33*	—
% Rank Cat	33	36	26	*27*	
No. in Cat	1370	1229	1086	819	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	—	—

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 sold or 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 800-835-5092 or visit www.institutional.fidelity.com.

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.02
12b1 Expense %	NA
Net Expense Ratio %	**0.02**
Gross Expense Ratio %	**0.02**

Risk and Return Profile

	3 Yr 1229 funds	5 Yr 1086 funds	10 Yr 819 funds
Morningstar Rating™	3★	4★	4★
Morningstar Risk	+Avg	+Avg	Avg
Morningstar Return	Avg	+Avg	+Avg

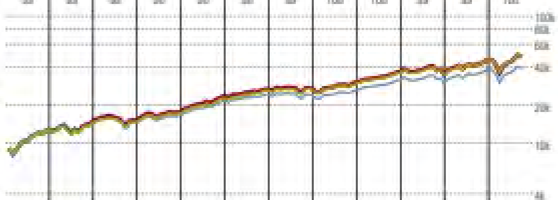
	3 Yr	5 Yr	10 Yr
Standard Deviation	18.47	15.49	*13.78*
Mean	11.54	13.62	*13.43*
Sharpe Ratio	0.60	0.83	*0.94*

MPT Statistics	Standard Index	Best Fit Index Russell 3000 TR USD
Alpha	-0.98	-0.10
Beta	1.04	1.00
R-Squared	99.62	100.00

12-Month Yield	—
Potential Cap Gains Exp	24.71%

Investment Style
Equity
Stocks %

99	99	99	98	98	98	99	100	100	99	99	100



Growth of $10,000
- Fidelity® Total Market Index 47,601
- Category Average 39,746
- Standard Index 47,618

Performance Quartile (within category)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20	History
—	—	36.12	41.22	54.11	59.88	58.66	64.51	76.35	70.59	90.59	95.05	NAV/Price
28.39	*17.41*	*1.01*	16.36	33.42	12.47	0.47	12.68	21.18	-5.28	30.92	5.24	Total Return %
1.93	*2.34*	*-1.10*	0.36	1.04	-1.22	-0.91	0.72	-0.65	-0.90	-0.57	-0.33	+/- Standard Index
-0.04	*1.37*	*-0.49*	-0.06	0.31	-0.77	-0.45	0.62	-0.51	-0.50	-0.51	-1.15	+/- Category Index
—	—	—	28	32	38	36	19	44	44	37	—	% Rank Cat
—	—	—	1686	1559	1568	1606	1409	1396	1402	1387	1387	No. of Funds in Cat

Portfolio Analysis 08-31-2020

Asset Allocation %	Net %	Long %	Short %
Cash	0.02	0.02	0.00
US Stocks	98.88	98.88	0.00
Non-US Stocks	1.10	1.10	0.00
Bonds	0.00	0.00	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	100.00	0.00

Equity Style
Value Blend Growth
Large Mid Small

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	26.5	1.02	1.09
P/C Ratio TTM	14.8	0.99	0.97
P/B Ratio TTM	3.5	0.97	0.99
Geo Avg Mkt Cap $mil	102377	0.65	0.46

Fixed-Income Style
Ltd Mod Ext
High Med Low

Avg Eff Maturity	—
Avg Eff Duration	—
Avg Wtd Coupon	—
Avg Wtd Price	—

Credit Quality Breakdown —	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stocks %	Rel Std Index
Americas	98.9	1.00
Greater Europe	0.8	0.94
Greater Asia	0.2	6.10

Share Chg since 07-2020	Share Amount	Holdings: 3,334 Total Stocks , 0 Total Fixed-Income, 11% Turnover Ratio	Net Assets %
⊖	24 mil	Apple Inc	6.10
⊖	11 mil	Microsoft Corp	4.96
⊖	528,392	Amazon.com Inc	4.19
⊖	4 mil	Facebook Inc A	2.04
⊖	449,421	Alphabet Inc A	1.42
⊕	439,185	Alphabet Inc Class C	1.39
⊖	3 mil	Berkshire Hathaway Inc Class B	1.23
⊖	4 mil	Johnson & Johnson	1.17
⊖	1 mil	Tesla Inc	1.06
⊖	3 mil	Visa Inc Class A	1.04
⊖	4 mil	Procter & Gamble Co	0.99
⊖	922,486	NVIDIA Corp	0.95
⊖	1 mil	Mastercard Inc A	0.92
⊖	2 mil	The Home Depot Inc	0.89
⊖	5 mil	JPMorgan Chase & Co	0.88

Sector Weightings	Stocks %	Rel Std Index
Cyclical	**38.7**	**1.06**
Basic Materials	2.3	0.99
Consumer Cyclical	12.2	1.07
Financial Services	12.7	0.99
Real Estate	3.6	1.35
Sensitive	**45.8**	**0.99**
Communication Services	10.3	0.95
Energy	2.2	1.07
Industrials	8.8	1.02
Technology	24.5	0.99
Defensive	**23.5**	**0.95**
Consumer Defensive	6.7	0.89
Healthcare	14.2	0.99
Utilities	2.7	0.90

Operations

Family:	Fidelity Investments	Base Currency:	USD	Purchase Constraints:	A
Manager:	Multiple	Ticker:	FSKAX	Incept:	09-08-2011
Tenure:	11.8 Years	ISIN:	US3159116934	Type:	MF
Objective:	Growth and Income	Minimum Initial Purchase:	$0	Total Assets:	$49,491.38 mil

Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
Fidelity® Total Market Index	—	—	14.76	13.62	—	14.18	09-08-2011	NA	NA	0.02	0.02	NA
BBgBarc US Agg Bond TR USD			**6.98**	**4.18**	**3.64**	—	**01-03-1980**					
MSCI EAFE NR USD			**0.49**	**5.26**	**4.62**	—	**03-31-1986**					
Russell 1000 TR USD			**16.01**	**14.09**	**13.76**	—	**12-31-1978**					
Russell 3000 TR USD			**15.00**	**13.69**	**13.48**	—	**12-31-1978**					
S&P 500 TR USD			**15.15**	**14.15**	**13.74**	—	**01-30-1970**					

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	**—**	**02-28-1941**					

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Fidelity® Total Market Index	13.90	12.60	—	13.27	09-08-2011	8.69	10.39	—	11.34

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types
Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

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asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance
The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns
The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %
A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha
Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation
Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration
Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity
Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon
A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price
Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

Best Fit Index
Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta
Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown
Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %
The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %
The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %
The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization
Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000
For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %
The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %
The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean
Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™
Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

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10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

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P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD
This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

MSCI EAFE NR USD
This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index

Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

Russell 1000 TR USD

Consists of the 1000 largest companies within the Russell 3000 index, which represents approximately 98% of the investable US equity market. Also known as the Market-Oriented Index, because it represents the group of stocks from which most active money managers choose. The constituents displayed for this index are from the following proxy: iShares Russell 1000 ETF.

Russell 3000 TR USD

Composed of the 3000 largest U.S. companies by market capitalization, representing approximately 98% of the U.S. equity market. The constituents displayed for this index are from the following proxy: iShares Russell 3000 ETF.

S&P 500 TR USD

A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon

Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

Fidelity U.S. Bond Index Fund (FXNAX)

Firm Background*

Fidelity Institutional Asset Management Trust Company (FIAM) is the US-based investment management subsidiary of Fidelity Management & Research (FRM). FRM is a large, privately-held, multi-service financial services firm founded in 1946 by Edward C. Johnson. FMR is currently under the leadership of CEO Abigail Johnson. Approximately 49% of FMR is owned by Ms. Johnson and other members of the Johnson family. 51% is held by employees and former employees.

FIAM was established in 2015 through the combination of Pyramis Global Advisors and Fidelity Financial Advisor Solutions, which served, respectively, institutional and retail investment management clients. The firm manages roughly $175 billion across fixed income (38%), multi-asset (32%), and equity (28%), with cash and alternatives comprising the balance. Judy Marlinski is President of FIAM, She reports to Mike Dervin, Head of Fidelity Institutional at FMR.

Organization*

FMR and, by extension, FIAM are highly complex and deeply intertwined organizations. Differences between functional business units and legal entities are often indistinct, but the high degree of involvement from the senior ranks of the FMR organization, particularly given the hands-on approach of FMR CEO Abigail Johnson, appear to manage this complexity effectively. FIAM is large, owing a portion of its success to the strong brand and distribution power of the parent company. The firm maintains a diversified client base and product line, as well as a strong investment culture. Senior leadership at FIAM has experienced some significant changes over the past two years, most notably the retirement of Charlie Morrison, FMR’s President of Asset Management, in December of 2018 and the departure of Scott Cuoto, President of FIAM in mid-2017. The President of FIAM reports into the President of Asset Management at FRM Additionally, the firm has experienced high profile sexual harassment claims in recent years, leading to some turnover among senior investment professionals. This may indicate that the firm has non-investment-related cultural issues, which can still damage the likelihood of success for the investment teams. However, senior management responded forcefully, and we will continue to monitor the organization for cultural and legal issues.

Strategy**

Fidelity® U.S. Bond Index Fund seeks to provide investment results that correspond to the aggregate price and interest performance of the debt securities in the Bloomberg Barclays U.S. Aggregate Bond Index.

Normally investing at least 80% of the fund's assets in bonds included in the Bloomberg Barclays U.S. Aggregate Bond Index. Using statistical sampling techniques based on duration, maturity, interest rate sensitivity, security structure, and credit quality to attempt to replicate the returns of the Index using a smaller number of securities. Engaging in transactions that have a leveraging effect on the fund, including investments in derivatives - such as swaps (interest rate, total return, and credit default) and futures contracts - and forward-settling securities, to adjust the fund's risk exposure. Investing in Fidelity's central funds (specialized investment vehicles used by Fidelity funds to invest in particular security types or investment disciplines).

Summary***

Under our new ratings framework, which places greater emphasis on fees, the fund warrants an upgrade to a Morningstar Analyst Rating of Gold from Silver.

The strategy tracks the Bloomberg Barclays U.S. Aggregate Bond Index, which includes investment-grade U.S. dollar-denominated bonds with at least one year until maturity. The index is weighted by market value, tilting the portfolio toward the largest, most liquid issues, which are easy to obtain and cheap to trade. This approach also harnesses the market's collective wisdom about the relative value of each security. That said, bond issuing activity influences the composition of this portfolio.

The U.S. government is the largest debt issuer in the United States, so the portfolio maintains a larger position in Treasuries relative to the intermediate core bond Morningstar Category average. The strategy invests nearly 70% of its assets in Treasuries and agency mortgaged-backed securities, which carry AAA ratings, while the corresponding figure for the category average is only about 45%. While this might limit the fund's return potential, its lower credit risk should offer better downside protection.

This portfolio has minimal credit risk, which can make it a low hurdle for active managers. That does not make this an unattractive proposition, as risk and return are highly correlated in the fixed-income market. Nearly 75% of the assets in this portfolio carry a AAA rating, making it one of the more conservative options in the category. Like most investment-grated portfolios, interest-rate risk is the biggest drivers of this fund's returns. Its average effective duration is about 5.50 years as of February 2020, generally in line with the category average.

While conservative, the fund's corporate bond sleeve maintains a tilt toward BBB rated issues. As of February 2020, about 20% of the fund's assets were in corporate bonds, while just under 10% of the fund's assets were rated BBB.

Performance***

The fund's performance from its inception in May 2011 through March 2020 has been solid. It beat the category average by 30 basis points annually, which ranked in the category's top third, largely thanks to its cost advantage.

The fund's category-relative performance is largely related to credit spreads, given its Treasury-heavy tilt. The fund has tended to outperform category peers during periods of widening credit spreads, and it has tended to lag during periods of tightening credit spreads. For example, the strategy outperformed its average category peer by 1.13% during 2011, as the ICE Bank of America BBB Option-Adjusted Spread, or OAS, widened by 1.04%. Conversely, the fund lagged the category average by 1.41% during 2012, as the OAS tightened by 1.07%.

The fund's conservative credit risk should help it weather periods of market turmoil better than most of its category peers. For instance, the strategy did not decline by nearly as much as its average peer during the onset of the novel coronavirus economic crisis, between Feb. 20, 2020, and March 22, 2020. During that time, the fund fell by 2.01% while the category average fell by 3.75%.

Over the trailing five years through March 2020, the strategy's returns matched its index.

Price***

It's critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category's cheapest quintile. Based on our assessment of the fund's People, Process and Parent pillars in the context of these fees, we think this share class will be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Gold.

Process: Above Average***

This portfolio replicates the composition of the U.S.-dollar-denominated investment-grade bond market, effectively harnessing the market's collective wisdom about the relative value of each bond. This is a sound approach because it promotes low turnover, is cost-effective, and because the market does a decent job pricing these bonds. It earns an Above Average Process Pillar rating.

The strategy employs representative sampling to track the performance of the Aggregate Index, which includes investment-grade U.S.-dollar-denominated bonds with at least one year until maturity. Qualifying bonds must have at least $300 million in outstanding face value. The index weights its holdings by their market value and is rebalanced monthly. This yields a conservative portfolio, which limits its return potential but also cuts downside risk.

The composition of the portfolio is conservative, reflecting the size and quality of the U.S. investment-grade bond market. The amount of debt issued by the U.S. Treasury Department grew sharply since the global financial crisis, and the portfolio maintains a larger percentage of its assets in Treasury bonds as a result.

As of February 2020, approximately 45% of the fund's assets were in Treasury bonds, versus the category average of slightly less than 25%. The bulk of the fund's remaining balance is composed of agency MBS and corporate debt, which represent about 25% and 22% of the portfolio's assets, respectively. While this limit's the fund's potential for returns, it also limits potential losses.

Although it represents only about one fifth of the portfolio, the fund's corporate bond sleeve contains most of the fund's credit risk. In addition to the growth of the Treasury bonds, the U.S. corporate bond market also grew in response to the global financial crisis, as companies issued debt to capitalize on low interest rates. As a result, BBB corporate bonds grew rapidly and now represent about half of the market value of all investment-grade corporate bonds. Accordingly, nearly 10% of the strategy's assets are rated BBB.

The strategy's interest-rate risk is line with category peers. As of February 2020, its average effective duration was 5.5 years.

People: Above Average***

Fidelity maintains a relatively small portfolio management team, but the team enjoys strong support from Fidelity's broader fixed-income portfolio management department. As a result, it enjoys the benefits of a large and experienced team supported by a centralized trading desk, which mitigates key-person risk. This team earns an Above Average People rating.

Brandon Bettencourt and Jay Small have managed this fund since 2014 and 2015, respectively. Prior to serving as portfolio managers, Bettencourt was a portfolio analyst while Small was a corporate bond trader. Two quantitative research analysts assist the named managers.

The portfolio managers are primarily responsible for managing the daily operations of the fund. The quant analysts act as an extension of the portfolio managers, applying input from Fidelity's research team to help mitigate index-tracking error. The portfolio managers benefit from the technical expertise of the quant analysts when identifying baskets of securities for creations or redemptions.

Independent oversight of the fund is provided by the office of the chief investment officer, who leads a team that independently reviews the index portfolios and index-tracking performance. Fidelity links manager compensation to index-tracking performance, aligning managers' interest with investors'.

* Source: BNY Mellon Manager Research Group, as of July 2019
** Source: Fidelity (FMR, LLC), as of 9/30/2020
*** Source: Morningstar, Inc., as of 4/1/2020

Release date 09-30-2020 | Note: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

Fidelity® US Bond Index (USD)

Morningstar Analyst Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Gold 04-01-2020	★★★ 380 US Fund Intermediate Core Bond	BBgBarc US Agg Bond TR USD	BBgBarc US Agg Bond TR USD	US Fund Intermediate Core Bond

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-1.51	-0.22	0.07	1.70	0.01
2019	2.96	2.97	2.27	0.06	8.48
2020	3.86	2.77	0.43	—	6.99

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	7.06	5.22	4.14	—	3.76
Std 09-30-2020	7.06	—	4.14	—	3.76
Total Return	7.06	5.22	4.14	3.59	3.76
+/- Std Index	0.07	-0.02	-0.04	-0.04	—
+/- Cat Index	0.07	-0.02	-0.04	-0.04	—
% Rank Cat	38	28	39	47	
No. in Cat	417	380	335	255	

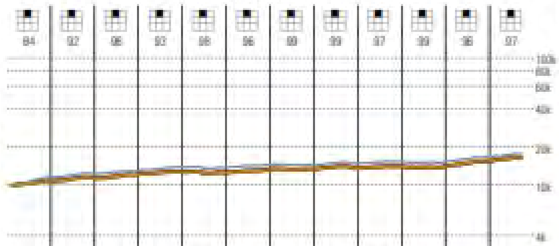
	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	—	—

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 sold or 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 800-544-8544 or visit www.institutional.fidelity.com.



Investment Style
Fixed-Income
Bond %

Growth of $10,000
— Fidelity® US Bond Index 16,333
— Category Average 17,558
— Standard Index 16,341

Performance Quartile (within category)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20	History
—	—	11.78	11.89	11.36	11.73	11.49	11.49	11.59	11.28	11.91	12.54	NAV/Price
6.45	6.29	7.79	4.23	-2.19	5.99	0.63	2.52	3.50	0.01	8.48	6.99	Total Return %
0.52	-0.25	-0.06	0.02	-0.17	0.02	0.08	-0.13	-0.04	0.00	-0.23	0.20	+/- Standard Index
0.52	-0.25	-0.06	0.02	-0.17	0.02	0.08	-0.13	-0.04	0.00	-0.23	0.20	+/- Category Index
—	—	—	62	69	26	18	66	57	29	49	—	% Rank Cat
—	—	—	1165	1079	1038	1042	985	986	1019	430	422	No. of Funds in Cat

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.03
12b1 Expense %	NA
Net Expense Ratio %	**0.03**
Gross Expense Ratio %	**0.03**

Risk and Return Profile

	3 Yr 380 funds	5 Yr 335 funds	10 Yr 255 funds
Morningstar Rating™	4★	3★	3★
Morningstar Risk	-Avg	Avg	Avg
Morningstar Return	+Avg	Avg	Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	3.38	3.21	3.05
Mean	5.22	4.14	3.59
Sharpe Ratio	1.06	0.93	0.98

MPT Statistics	Standard Index	Best Fit Index BBgBarc US Agg Bond TR USD
Alpha	-0.01	-0.01
Beta	1.00	1.00
R-Squared	99.02	99.02

12-Month Yield	—
Potential Cap Gains Exp	0.01%

Portfolio Analysis 08-31-2020

Asset Allocation %	Net %	Long %	Short %
Cash	2.05	2.05	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	97.37	97.37	0.00
Other/Not Clsfd	0.59	0.59	0.00
Total	100.00	100.00	0.00

Equity Style (Value Blend Growth; Large Mid Small)

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	—	—	—
P/C Ratio TTM	—	—	—
P/B Ratio TTM	—	—	—
Geo Avg Mkt Cap $mil	—	—	—

Fixed-Income Style (Ltd Mod Ext; High Med Low)

Avg Eff Maturity	—
Avg Eff Duration	5.63
Avg Wtd Coupon	—
Avg Wtd Price	110.73

Credit Quality Breakdown 08-31-2020	Bond %
AAA	73.78
AA	4.06
A	11.86
BBB	10.08
BB	0.17
B	0.00
Below B	0.00
NR	0.05

Regional Exposure	Stocks %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

Share Chg since 07-2020	Share Amount	Holdings: 0 Total Stocks , 2,224 Total Fixed-Income, 58% Turnover Ratio	Net Assets %
⊖	1,497 mil	Fannie Mae 3% 30 Year	2.85
⊖	1,233 mil	Fannie Mae 3.5% 30 Year	2.35
⊕	1,115 mil	Ginnie Mae 3% 30 Year	2.11
⊖	1,068 mil	Ginnie Mae 3.5% 30 Year	2.04
⊖	1,049 mil	Fannie Mae 4% 30 Year	2.02
⊖	1,028 mil	Fidelity Revere Str Tr	1.84
⊖	842 mil	Freddie Mac 3.5% 30 Year	1.60
	646 mil	United States Treasury Notes 1.5%	1.24
	611 mil	United States Treasury Notes 2.25%	1.23
	659 mil	United States Treasury Notes 0.12%	1.18
⊕	595 mil	Freddie Mac 2.5% 30 Year	1.12
☼	586 mil	United States Treasury Notes 0.25%	1.05
⊖	519 mil	Ginnie Mae 4% 30 Year	1.00
	320 mil	United States Treasury Bonds 5%	0.93
⊕	487 mil	Umbs 3% 30 Year	0.92

Sector Weightings	Stocks %	Rel Std Index
Cyclical	—	—
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
Sensitive	—	—
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
Defensive	—	—
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

Operations

Family:	Fidelity Investments	Base Currency:	USD	Purchase Constraints:	A
Manager:	Multiple	Ticker:	FXNAX	Incept:	05-04-2011
Tenure:	6.4 Years	ISIN:	US3161463563	Type:	MF
Objective:	Multisector Bond	Minimum Initial Purchase:	$0	Total Assets:	$55,267.92 mil

MORNINGSTAR®

Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
Fidelity® US Bond Index	—	—	7.06	4.14	—	3.76	05-04-2011	**NA**	**NA**	**0.03**	**0.03**	**NA**
BBgBarc US Agg Bond TR USD			**6.98**	**4.18**	**3.64**	**—**	**01-03-1980**					
MSCI EAFE NR USD			**0.49**	**5.26**	**4.62**	**—**	**03-31-1986**					
S&P 500 TR USD			**15.15**	**14.15**	**13.74**	**—**	**01-30-1970**					
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	**—**	**02-28-1941**					

Annualized returns 09-30-2020

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Fidelity® US Bond Index	6.08	3.02	—	2.64	05-04-2011	4.16	2.67	—	2.42

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance

The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns

The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %

A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha

Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation

Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration

Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity

Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon

A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price

Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

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Best Fit Index

Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta

Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown

Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %

The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %

The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %

The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization

Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000

For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %

The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %

The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean

Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™

Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

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10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

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to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD
This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

MSCI EAFE NR USD
This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index

Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

S&P 500 TR USD

A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon

Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

Schwab Total Stock Market Index Fund® (SWTSX)

Firm Background*

Charles Schwab Investment Management, Inc., (CSIM or the firm), was founded in 1989 as a wholly-owned subsidiary of The Charles Schwab Corporation (Schwab), a publicly held company. Schwab was founded in 1971 by Charles Schwab as a full service brokerage firm. Since its founding Schwab has expanded its services to include investment management for retail and institutional clients, as well as traditional banking and lending. Initially founded to serve as the investment adviser to the Schwab Money Funds, CSIM now provides advisory services to proprietary mutual funds, separately managed accounts participating in wrap programs, exchange-traded funds, and collective trust funds. The majority of CSIM's asset base resides in passive index (52%) and money market (38%) strategies. The remainder is in active and target date/asset allocation strategies. CSIM is headquartered in San Francisco, CA, with operations also residing in Colorado and California. The firm has more than 600 employees, including approximately 150 investment professionals.

In 2019, the firm became part of a combined broader business unit, Schwab Asset Management Solutions (SAMS) that was established to unite asset management related services across Schwab. SAMS includes CSIM, Charles Schwab Investment Advisory, Inc. (CSIA), Asset Management Client Solutions and the Schwab Center for Financial Research. SAMS is led by Rick Wurster, who also serves as the CEO of CSIA. Effective November 1, 2019, Mr. Wurster became CEO of CSIM. All CIOs within the firm now report directly to Mr. Wurster, while performing their respective day-to-day investment functions. Jonathan de St. Paer remains in his role as the firm's President (since October 1, 2018) responsible for the overseeing the firm's product, strategy and governance groups.

Organization: Satisfactory*

In our view, CSIM has grown into one of the larger asset management companies in the US and is a substantial provider of retail index funds, money market funds, and exchange traded funds. While there have been changes to the firm's senior management team since its founding, we believe the transitioning of leadership has been thoughtfully executed. Further, we believe the firm has effectively expanded its product base over time and placed adequate resources to support its strategies and business segments. We believe the firm's client base is diverse, as its products have gained acceptance across both retail and institutional client segments. Additionally, we believe the creation of SAMS has been thoughtfully constructed to strengthen client services and create efficiencies in product development across the broader organization.

Strategy**

The investment seeks to track the total return of the entire U.S. stock market, as measured by the Dow Jones U.S. Total Stock Market Index℠. The fund generally invests at least 80% of its net assets (including, for this purpose, any borrowings for investment purposes) in these stocks; typically, the actual percentage is considerably higher. It generally gives the same weight to a given stock as the index does. The fund may invest in derivatives, principally futures contracts, and lend its securities to minimize the gap in performance that naturally exists between any index fund and its corresponding index.

Summary***

It effectively replicates the composition of the total U.S. stock market, which has been hard to beat over the long term. The fund's low fee and broad diversification set it up for success. It earns a Morningstar Analyst Rating of Gold.

The fund tracks the Dow Jones U.S. Total Stock Market Index, which includes nearly all U.S. stocks and weights them by market capitalization. Market-cap weighting pulls the portfolio toward the largest stocks, so the fund lands in the large-blend Morningstar Category. This broad market-cap-weighted index accurately reflects the composition of the U.S. large-cap market and harnesses the market’s collective wisdom. Compared with funds that target specific segments of the market, this fund isn’t prone to forced buying or selling that is the result of stocks entering or exiting a market segment. This should mitigate transaction costs and turnover, which is among the lowest in the large-blend category.

The market doesn’t always get prices right. Over short periods, investors may overreact and either drive prices too high or low. Market-cap weighting will increase or decrease exposure to stocks accordingly. This can at times lead to stock- and sector-level concentration. That said, the fund’s broad diversification and low-cost advantage far outweigh these minor disadvantages.

The fund is always fully invested, which should help it more fully capture the market’s returns over the long term than most of its category peers but could expose it to greater losses during market downturns. Unlike many of its active peers, this portfolio excludes stocks listed outside the U.S. This should help the fund’s category-relative performance when U.S. stocks outperform foreign stocks but hurt when they lag.

The fund charges 0.03%, which is its greatest strength. It builds on this cost advantage with low turnover, which helps mitigate transaction costs. Long-term investors will likely come out ahead with this fund compared with more expensive options.

Performance***

Over the trailing 15 years through February 2020, the fund beat the category average by 152 basis points annualized, with slightly higher risk. Much of this outperformance can be attributed to the fund's cost advantage, lower-than-average cash drag, and more favorable stock exposure in the healthcare, financial services, and consumer defensive sectors compared with the category average.

The fund ranked in the top quartile over the trailing 10 and 15 years through February 2020, consistently outperforming the category average while exhibiting slightly higher volatility. The fund also tended to hold up as well as most of its peers during downturns since inception, despite its lower-than-average cash balance.

This portfolio is always fully invested, which helps its category-relative performance during bull markets but could hurt during bear markets. Most actively managed funds in the category keep larger cash balances on hand to meet redemptions.

The fund has effectively tracked its index. Over the trailing five-year periods through February 2020, the fund trailed the Dow Jones U.S. Total Stock Market Index by 3 basis points, the amount of its expense ratio.

Price***

It’s critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category’s cheapest quintile. Based on our assessment of the fund’s People, Process and Parent pillars in the context of these fees, we think this share class will be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Gold.

Process: High***

The fund represents the entire investable U.S. equity market, effectively harnessing the market's collective wisdom and diversifying risk. It earns a High Process rating.

The fund tracks the Dow Jones U.S. Total Stock Market Index, which holds nearly every U.S. stock listed on a major U.S. exchange. This gives the fund lower turnover than index funds that track specific size segments of the market, as it is not subject to forced trade when holdings migrate up and down the market-cap ladder. By sampling among the smallest stocks in the index, the fund can avoid trading the least-liquid names, which keeps transaction costs down. However, this fund's large asset base allows it to replicate the index more completely than other total market funds. The fund holds about 2,900 out of 3,700 stocks in the index.

The portfolio managers reinvest dividends and use derivatives to equitize cash and keep pace with the benchmark. The fund has historically used securities lending to generate additional income to offset expenses.

The fund mirrors the composition of the large-cap market, allowing the market to dictate its stock and sector weightings. This allows the fund to harness the market's collective view about the relative value of each stock and keeps turnover low, which is among the lowest in the category.

The fund's top 10 holdings account for about 20% of assets and the largest holding accounts for 4% of assets, which effectively diversifies firm-specific risk.

Although it has a smaller market cap orientation than the large-blend category average, this fund is representative of this category. Currently, the fund is slightly underweight in financial services and overweight in technology compared with the category average.

Large companies tend to have greater competitive advantages compared to smaller companies and this is evident here as close to 76% of the portfolio is invested in firms with wide or narrow moats. On average, the fund's constituents generate 37% of their revenue overseas.

People: Average***

The team is competent and experienced, but many of its members haven't worked together long. Additionally, its supporting infrastructure does not stand out, so it earns an Average People Pillar rating.

Schwab's passive equity funds follow a team approach under the direction of Chris Bliss, who leads the firm's equity index portfolio management team and is a named manager on this fund. Bliss joined Schwab in September 2016 after spending 12 years at BlackRock. Ferian Juwono and Sabya Sinha are also listed portfolio managers on the fund. Juwono joined Schwab in 2010 and became a named comanager on the fund in 2011. He previously spent three years as an equity index portfolio manager at Barclays Global Investors. Sinha joined the firm in 2015 from F-Squared investments, where he worked in product development. Prior to that, Sinha served as an index portfolio manager at IndexIQ from 2011 to 2014, and as a portfolio manager at Columbia Management from 2006 to 2010.

These three managers are listed on most of Schwab's U.S. equity index portfolios. None of the listed portfolio managers are currently invested in this fund, but managers' incentives are aligned with shareholders' through a bonus structure that rewards managers based on index-relative performance and compliance with risk oversight.

* Source: BNY Mellon Manager Research Group, as of September 2020
** Source: Charles Schwab Investment Management, Inc. (CSIM), as of 9/30/2020
*** Source: Morningstar, Inc., as of 3/19/2020

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Schwab Total Stock Market Index (USD)

Morningstar Analyst Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Gold 03-19-2020	★★★★ 1,229 US Fund Large Blend	S&P 500 TR USD	Russell 1000 TR USD	US Fund Large Blend

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-0.59	3.87	7.09	-14.36	-5.30
2019	14.04	4.08	1.12	9.04	30.88
2020	-20.98	22.07	9.06	—	5.20

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	14.71	11.49	13.56	13.39	8.97
Std 09-30-2020	14.71	—	13.56	13.39	8.97
Total Return	14.71	11.49	13.56	13.39	8.97
+/- Std Index	-0.44	-0.79	-0.59	-0.35	—
+/- Cat Index	-1.30	-0.89	-0.53	-0.37	—
% Rank Cat	34	37	28	22	
No. in Cat	1370	1229	1086	819	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield	—	—

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 sold or 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 877-824-5615 or visit www.schwab.com.

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.03
12b1 Expense %	NA
Net Expense Ratio %	**0.03**
Gross Expense Ratio %	**0.03**

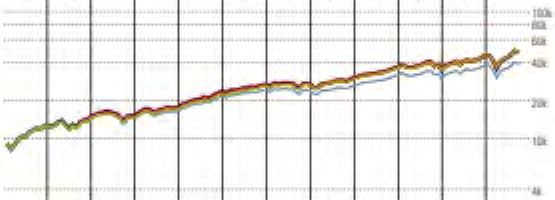
Risk and Return Profile

	3 Yr 1229 funds	5 Yr 1086 funds	10 Yr 819 funds
Morningstar Rating™	3★	3★	4★
Morningstar Risk	+Avg	+Avg	Avg
Morningstar Return	Avg	+Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	18.46	15.48	13.74
Mean	11.49	13.56	13.39
Sharpe Ratio	0.60	0.83	0.94

MPT Statistics	Standard Index	Best Fit Index Russell 3000 TR USD
Alpha	-1.03	-0.15
Beta	1.04	1.00
R-Squared	98.61	100.00
12-Month Yield		—
Potential Cap Gains Exp		39.78%

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20	
Equity Stocks %	99	99	99	99	97	98	99	99	99	99	99	100	Investment Style



Growth of $10,000
- Schwab Total Stock Market Index 47,401
- Category Average 39,746
- Standard Index 47,518

Performance Quartile (within category)

History	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20
NAV/Price	19.75	22.75	22.62	25.76	33.67	36.98	36.11	39.74	47.25	43.58	55.96	58.87
Total Return %	28.29	17.23	1.32	16.30	33.36	12.39	0.41	12.58	21.06	-5.30	30.88	5.20
+/- Standard Index	1.83	2.15	-0.79	0.30	0.98	-1.29	-0.98	0.62	-0.77	-0.92	-0.60	-0.37
+/- Category Index	-0.14	1.13	-0.18	-0.12	0.25	-0.84	-0.51	0.53	-0.63	-0.52	-0.54	-1.20
% Rank Cat	42	12	28	29	32	39	37	21	48	44	38	—
No. of Funds in Cat	2027	2010	1786	1686	1559	1568	1606	1409	1396	1402	1387	1387

Portfolio Analysis 09-30-2020

Asset Allocation %	Net %	Long %	Short %
Cash	0.47	0.47	0.00
US Stocks	98.44	98.44	0.00
Non-US Stocks	1.08	1.08	0.00
Bonds	0.00	0.00	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	100.00	0.00

Equity Style

Value Blend Growth; Large Mid Small

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	25.6	0.99	1.05
P/C Ratio TTM	14.1	0.95	0.93
P/B Ratio TTM	3.3	0.94	0.95
Geo Avg Mkt Cap $mil	92806	0.59	0.42

Fixed-Income Style

Ltd Mod Ext; High Med Low

Avg Eff Maturity	—
Avg Eff Duration	—
Avg Wtd Coupon	—
Avg Wtd Price	—

Credit Quality Breakdown —	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stocks %	Rel Std Index
Americas	98.9	1.00
Greater Europe	0.8	0.92
Greater Asia	0.2	8.31

Share Chg since 08-2020	Share Amount	Holdings: 3,191 Total Stocks, 0 Total Fixed-Income, 3% Turnover Ratio	Net Assets %
⊖	6 mil	Apple Inc	5.48
⊖	3 mil	Microsoft Corp	4.69
⊕	147,856	Amazon.com Inc	3.85
⊖	835,106	Facebook Inc A	1.85
⊖	104,341	Alphabet Inc A	1.30
⊖	101,954	Alphabet Inc Class C	1.27
⊕	698,318	Berkshire Hathaway Inc Class B	1.24
⊖	914,373	Johnson & Johnson	1.15
⊖	864,619	Procter & Gamble Co	1.02
⊖	585,552	Visa Inc Class A	0.99
☼	214,201	NVIDIA Corp	0.98
⊖	259,880	Tesla Inc	0.94
⊖	373,887	The Home Depot Inc	0.88
⊖	306,804	Mastercard Inc A	0.88
⊖	330,093	UnitedHealth Group Inc	0.87

Sector Weightings	Stocks %	Rel Std Index
Cyclical	**30.6**	**1.05**
Basic Materials	2.4	1.03
Consumer Cyclical	12.1	1.07
Financial Services	12.5	0.98
Real Estate	3.5	1.34
Sensitive	**45.3**	**0.98**
Communication Services	10.2	0.94
Energy	1.9	0.94
Industrials	9.0	1.04
Technology	24.3	0.98
Defensive	**24.1**	**0.97**
Consumer Defensive	6.8	0.90
Healthcare	14.6	1.02
Utilities	2.9	0.94

Operations

Family:	Schwab Funds	Base Currency:	USD	Purchase Constraints:	—
Manager:	Multiple	Ticker:	SWTSX	Incept:	06-01-1999
Tenure:	7.7 Years	ISIN:	US8085097561	Type:	MF
Objective:	Growth and Income	Minimum Initial Purchase:	$0	Total Assets:	$11,502.25 mil

Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
Schwab Total Stock Market Index	—	—	14.71	13.58	13.39	8.97	06-01-1999	NA	NA	0.03	0.03	NA
BBgBarc US Agg Bond TR USD			6.98	4.18	3.64	—	01-03-1980					
MSCI EAFE NR USD			0.49	5.26	4.62	—	03-31-1986					
Russell 1000 TR USD			16.01	14.09	13.76	—	12-31-1978					
Russell 3000 TR USD			15.00	13.69	13.48	—	12-31-1978					
S&P 500 TR USD			15.15	14.15	13.74	—	01-30-1970					

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	**—**	**02-28-1941**					

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Schwab Total Stock Market Index	13.87	12.57	12.51	6.33	06-01-1999	8.73	10.35	10.75	5.52

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

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asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance
The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns
The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %
A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha
Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation
Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration
Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity
Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon
A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price
Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

Best Fit Index
Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta
Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown
Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %
The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %
The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %
The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization
Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000
For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %
The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %
The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean
Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™
Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

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10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

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Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD

This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

MSCI EAFE NR USD

This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index

MORNINGSTAR®

Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

Russell 1000 TR USD
Consists of the 1000 largest companies within the Russell 3000 index, which represents approximately 98% of the investable US equity market. Also known as the Market-Oriented Index, because it represents the group of stocks from which most active money managers choose. The constituents displayed for this index are from the following proxy: iShares Russell 1000 ETF.

Russell 3000 TR USD
Composed of the 3000 largest U.S. companies by market capitalization, representing approximately 98% of the U.S. equity market. The constituents displayed for this index are from the following proxy: iShares Russell 3000 ETF.

S&P 500 TR USD
A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon
Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

Schwab® Treasury Inflation Protected Securities Index Fund (SWRSX)

Firm Background*

Charles Schwab Investment Management, Inc., (CSIM or the firm), was founded in 1989 as a wholly-owned subsidiary of The Charles Schwab Corporation (Schwab), a publicly held company. Schwab was founded in 1971 by Charles Schwab as a full service brokerage firm. Since its founding Schwab has expanded its services to include investment management for retail and institutional clients, as well as traditional banking and lending. Initially founded to serve as the investment adviser to the Schwab Money Funds, CSIM now provides advisory services to proprietary mutual funds, separately managed accounts participating in wrap programs, exchange-traded funds, and collective trust funds. The majority of CSIM's asset base resides in passive index (52%) and money market (38%) strategies. The remainder is in active and target date/asset allocation strategies. CSIM is headquartered in San Francisco, CA, with operations also residing in Colorado and California. The firm has more than 600 employees, including approximately 150 investment professionals.

In 2019, the firm became part of a combined broader business unit, Schwab Asset Management Solutions (SAMS) that was established to unite asset management related services across Schwab. SAMS includes CSIM, Charles Schwab Investment Advisory, Inc. (CSIA), Asset Management Client Solutions and the Schwab Center for Financial Research. SAMS is led by Rick Wurster, who also serves as the CEO of CSIA. Effective November 1, 2019, Mr. Wurster became CEO of CSIM. All CIOs within the firm now report directly to Mr. Wurster, while performing their respective day-to-day investment functions. Jonathan de St. Paer remains in his role as the firm's President (since October 1, 2018) responsible for the overseeing the firm's product, strategy and governance groups.

Organization: Satisfactory*

In our view, CSIM has grown into one of the larger asset management companies in the US and is a substantial provider of retail index funds, money market funds, and exchange traded funds. While there have been changes to the firm's senior management team since its founding, we believe the transitioning of leadership has been thoughtfully executed. Further, we believe the firm has effectively expanded its product base over time and placed adequate resources to support its strategies and business segments. We believe the firm's client base is diverse, as its products have gained acceptance across both retail and institutional client segments. Additionally, we believe the creation of SAMS has been thoughtfully constructed to strengthen client services and create efficiencies in product development across the broader organization.

Strategy**

The investment seeks as closely as possible, before fees and expenses, the total return of the Bloomberg Barclays US Treasury Inflation-Linked Bond Index (Series-L)℠. To pursue its goal, the fund generally invests in securities that are included in the index. The index includes all publicly-issued TIPS that have at least one year remaining to maturity, are rated investment grade and have $500 million or more of outstanding face value. The TIPS in the index must be denominated in U.S. dollars and must be fixed-rate and non-convertible.

Summary

This fund has not been rated by Morningstar, Inc.

Performance

This fund has not been rated by Morningstar, Inc.

Price

This fund has not been rated by Morningstar, Inc.

Process

This fund has not been rated by Morningstar, Inc.

People

This fund has not been rated by Morningstar, Inc.

* Source: BNY Mellon Manager Research Group, as of September 2020
** Source: Charles Schwab Investment Management, Inc. (CSIM), as of 9/30/2020

Release date 09-30-2020

Schwab® Treasury Infl Protected Secs Idx (USD)

Morningstar Quantitative Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Silver 09-30-2020	★★★★ 200 US Fund Inflation-Protected Bond	BBgBarc US Agg Bond TR USD	BBgBarc US Treasury US TIPS TR USD	US Fund Inflation-Protected Bond

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-0.78	0.73	-0.80	-0.48	-1.32
2019	3.20	2.67	1.31	0.77	8.38
2020	1.69	4.19	3.02	—	9.15

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	10.00	5.73	4.51	3.33	4.12
Std 09-30-2020	10.00	—	4.51	3.33	4.12
Total Return	10.00	5.73	4.51	3.33	4.12
+/- Std Index	3.01	0.49	0.33	-0.31	—
+/- Cat Index	-0.09	-0.08	-0.11	-0.25	—
% Rank Cat	31	23	25	29	
No. in Cat	212	200	172	116	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 10-29-20	3.47	5.39

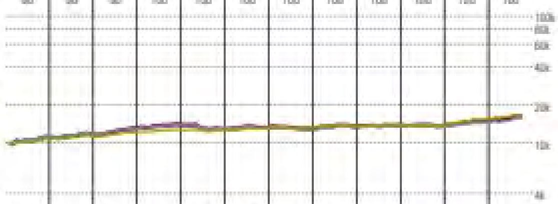
Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 sold or 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 800-407-0256 or visit www.schwab.com.

Investment Style
Fixed-Income
Bond %: 98, 98, 98, 100, 100, 100, 100, 100, 100, 100, 100, 100



Growth of $10,000
— Schwab® Treasury Infl Protected Secs Idx 16,197
— Category Average 15,572
— Standard Index 16,341

Performance Quartile (within category)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20	History
10.43	10.73	11.59	12.09	10.87	10.98	10.69	10.97	11.07	10.62	11.26	12.24	NAV/Price
9.24	5.82	12.80	6.59	-8.83	3.48	-1.61	4.47	2.94	-1.32	8.38	9.15	Total Return %
3.31	-0.72	4.96	2.38	-6.80	-2.49	-2.16	1.82	-0.60	-1.34	-0.34	2.36	+/- Standard Index
-2.17	-0.49	-0.76	-0.39	-0.22	-0.16	-0.17	-0.21	-0.06	-0.06	-0.05	-0.07	+/- Category Index
74	52	25	39	52	9	30	45	36	42	30	—	% Rank Cat
158	162	193	198	212	218	228	235	231	228	221	212	No. of Funds in Cat

Portfolio Analysis 09-30-2020

Asset Allocation %	Net %	Long %	Short %
Cash	0.00	0.00	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	100.00	100.00	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	100.00	0.00

Equity Style (Value Blend Growth; Large Mid Small)

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	—	—	—
P/C Ratio TTM	—	—	—
P/B Ratio TTM	—	—	—
Geo Avg Mkt Cap $mil	—	—	—

Fixed-Income Style (Ltd Mod Ext; High Med Low)

Avg Eff Maturity	8.22
Avg Eff Duration	7.68
Avg Wtd Coupon	0.75
Avg Wtd Price	114.81

Credit Quality Breakdown 06-30-2020	Bond %
AAA	100.00
AA	0.00
A	0.00
BBB	0.00
BB	0.00
B	0.00
Below B	0.00
NR	0.00

Regional Exposure	Stocks %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

Share Chg since 08-2020	Share Amount	Holdings: 0 Total Stocks, 42 Total Fixed-Income, 25% Turnover Ratio	Net Assets %
⊕	54 mil	United States Treasury Notes 0.12%	3.76
⊕	52 mil	United States Treasury Notes 0.38%	3.72
⊕	50 mil	United States Treasury Notes 0.62%	3.62
⊕	49 mil	United States Treasury Notes 0.25%	3.52
⊕	48 mil	United States Treasury Notes 0.12%	3.48
⊕	50 mil	United States Treasury Notes 0.12%	3.43
⊕	46 mil	United States Treasury Notes 0.38%	3.38
⊕	44 mil	United States Treasury Notes 0.12%	3.31
⊖	48 mil	United States Treasury Notes 0.12%	3.29
⊕	47 mil	United States Treasury Notes 0.12%	3.28
⊕	45 mil	United States Treasury Notes 0.62%	3.21
⊕	40 mil	United States Treasury Notes 0.5%	3.08
⊕	39 mil	United States Treasury Notes 0.62%	2.96
⊕	38 mil	United States Treasury Notes 0.38%	2.89
⊕	36 mil	United States Treasury Notes 0.75%	2.81

Sector Weightings	Stocks %	Rel Std Index
Cyclical	—	—
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
Sensitive	—	—
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
Defensive	—	—
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.05
12b1 Expense %	NA
Net Expense Ratio %	**0.05**
Gross Expense Ratio %	**0.05**

Risk and Return Profile

	3 Yr 200 funds	5 Yr 172 funds	10 Yr 116 funds
Morningstar Rating™	4★	4★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	+Avg	+Avg	+Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	3.75	3.55	4.41
Mean	5.73	4.51	3.33
Sharpe Ratio	1.07	0.93	0.63

MPT Statistics	Standard Index	Best Fit Index BBgBarc US Treasury US TIPS TR USD
Alpha	0.63	-0.01
Beta	0.98	0.99
R-Squared	71.81	99.63

12-Month Yield	1.29%
Potential Cap Gains Exp	4.16%

Operations

Family:	Schwab Funds	Base Currency:	USD	Purchase Constraints:	—
Manager:	Multiple	Ticker:	SWRSX	Incept:	03-31-2006
Tenure:	14.6 Years	ISIN:	US8085178171	Type:	MF
Objective:	Income	Minimum Initial Purchase:	$0	Total Assets:	$1,521.00 mil

Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
Schwab® Treasury Infl Protected Secs Idx	—	—	10.00	4.51	3.33	4.12	03-31-2006	**NA**	**NA**	**0.05**	**0.05**	**NA**
BBgBarc US Agg Bond TR USD			**6.98**	**4.18**	**3.64**	**—**	**01-03-1980**					
BBgBarc US Treasury US TIPS TR USD			**10.08**	**4.61**	**3.57**	**—**	**04-15-1998**					
MSCI EAFE NR USD			**0.49**	**5.26**	**4.62**	**—**	**03-31-1986**					
S&P 500 TR USD			**15.15**	**14.15**	**13.74**	**—**	**01-30-1970**					
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	**—**	**02-28-1941**					

MORNINGSTAR

Annualized returns 09-30-2020

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Schwab® Treasury Infl Protected Secs Idx	9.39	3.82	2.47	3.10	03-31-2006	5.90	3.07	2.21	2.81

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

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asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance
The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns
The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %
A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha
Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation
Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration
Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity
Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon
A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price
Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

Best Fit Index
Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta
Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown
Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %
The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %
The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %
The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization
Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000
For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %
The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %
The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean
Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™
Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

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Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

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to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD
This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

BBgBarc US Treasury US TIPS TR USD
BarCap U.S. Treasury TIPS is an unmanaged market index made up of U.S. Treasury Inflation Linked Index securities. The rules to be included in the index are as follows: all bonds must have cash flows linked to an inflation index, the minimum amounts outstanding will be 100 million U.S. dollars, all bonds must be sovereign issues and be denominated in the relevant national currency, and

all bonds must have more than one year to maturity. The constituents displayed for this index are from the following proxy: iShares TIPS Bond ETF.

MSCI EAFE NR USD
This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

S&P 500 TR USD
A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon
Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

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Vanguard Emerging Markets Government Bond Index Fund Institutional Shares (VGIVX)

Firm Background*

The Vanguard Group, Inc. is one of the largest providers of low-cost mutual funds and index-tracking products. Jack Bogle founded Vanguard in 1975 with the philosophy that low costs are crucial to generate consistently attractive investment performance. Vanguard was the first firm to provide widespread passive index products to retail investors. Over time, Vanguard expanded its product set to include various asset classes and actively managed funds. Vanguard's active products are either managed internally or subadvised by external asset managers. Equity strategies represent more than two-thirds of firm assets, fixed income strategies account for approximately 25% of assets, and cash and multi-asset strategies comprise the balance of assets. The firm's client mix is approximately 60% institutional and 40% retail investors.

Headquartered in Malvern, PA, Vanguard employs over 17,000 people. The firm has offices around the world, but investment management is concentrated in a limited number of them (Malvern; Melbourne, Australia; and London, UK). The firm is owned by its own investment funds, which are, in turn, owned by their shareholders. As a result, Vanguard's fund investors indirectly own the firm. Fund management fees pay for the firm's expenses and Vanguard reinvests profits to lower future expense ratios. Effective January 1, 2018, Tim Buckley succeeded William McNabb as Vanguard's Chief Executive Officer. Mr. Buckley joined the firm in 1991 and has held a number of senior leadership positions during his tenure. Mr. McNabb will remain chairman of Vanguard's board, a role he has held since 2009.

Organization: Satisfactory (4 out of 5)*

Vanguard has a decades-long legacy of client service and thoughtful product development that dates to its founding as an indexing provider. It launches funds after thorough consideration of where it believes product offerings are consistent with investor interests as well as the firm's philosophy and long-term focus. In our view, Vanguard's mutual fund ownership structure has both advantages and disadvantages. For instance, the firm's trademark low fees provide Vanguard with a persistent return advantage over peers, which contributes to the strength of the franchise. These low fees are a direct result of the ownership structure, which has also greatly contributed to the firm's considerable level of assets under management. On the other hand, a disadvantage of the firm's ownership structure is that it does not allow employees to benefit from a profit sharing or equity compensation scheme; although, Vanguard does make use of deferred bonus compensation for key executives and investment professionals. The firm actively rotates senior employees across roles and disciplines. While this may result in longevity and broad perspectives, it reduces specialization and tenure in the roles left behind. Vanguard has experienced tremendous growth over the past decade to become one of the world's largest asset managers. Along with this growth, the firm has had to address the issues that often accompany a significant increase in AUM.

Strategy**

Vanguard Emerging Markets Government Bond Index Fund seeks to track the performance of a benchmark index that measures the investment return of U.S. dollar-denominated bonds issued by governments and government related issuers in emerging markets countries.

The fund employs an indexing investment approach designed to track the performance of the Bloomberg Barclays USD Emerging Markets Government RIC Capped Index. The index includes U.S. dollar-denominated bonds that have maturities longer than one year and that were issued by emerging market governments and government agencies, as well as government-owned corporations.

The fund invests by sampling the index, meaning that it holds a range of securities that, in the aggregate, approximates the full index in terms of key risk factors and other characteristics. All of the fund's investments will be selected through the sampling process, and at least 80% of the fund's assets will be invested in bonds included in the index. The fund maintains a dollar-weighted average maturity consistent with that of the index, which generally ranges between 10 and 15 years.

Summary

This fund has not been rated by Morningstar, Inc.

Performance

This fund has not been rated by Morningstar, Inc.

Price

This fund has not been rated by Morningstar, Inc.

Process

This fund has not been rated by Morningstar, Inc.

People

This fund has not been rated by Morningstar, Inc.

* Source: BNY Mellon Manager Research Group, as of December 2019
** Source: Vanguard Group, Inc., as of 9/30/2020

Release date 09-30-2020 | Note: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

Vanguard Emerging Mkts Govt Bd Idx Instl (USD)

Morningstar Quantitative Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Gold ® 09-30-2020	★★★★ 239 US Fund Emerging Markets Bond	BBgBarc US Agg Bond TR USD	JPM EMBI Global Diversified TR USD	US Fund Emerging Markets Bond

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-1.71	-2.62	1.76	-0.20	-2.80
2019	5.60	4.14	1.48	2.18	14.02
2020	-12.61	11.63	2.55	—	0.05

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	2.23	3.69	6.06	—	5.31
Std 09-30-2020	2.23	—	6.06	—	5.31
Total Return	2.23	3.69	6.06	—	5.31
+/- Std Index	-4.76	-1.56	1.88	—	—
+/- Cat Index	0.93	0.19	-0.09	—	—
% Rank Cat	32	15	28	—	
No. in Cat	276	239	187	—	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 10-28-20	3.91	3.94

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 sold or 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 800-749-7447 or visit www.vanguard.com.

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.22
12b1 Expense %	NA
Net Expense Ratio %	**0.23**
Gross Expense Ratio %	**0.23**

Risk and Return Profile

	3 Yr 239 funds	5 Yr 187 funds	10 Yr 57 funds
Morningstar Rating™	4★	4★	—
Morningstar Risk	-Avg	-Avg	—
Morningstar Return	+Avg	+Avg	—

	3 Yr	5 Yr	10 Yr
Standard Deviation	9.98	8.40	—
Mean	3.69	6.06	—
Sharpe Ratio	0.25	0.61	—

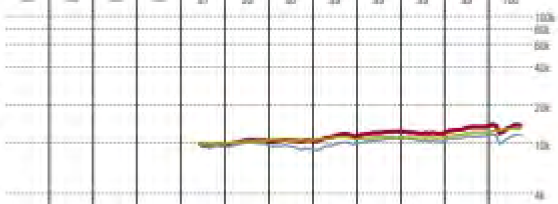
MPT Statistics	Standard Index	Best Fit Index JPM EMBI Global Diversified TR USD
Alpha	-1.29	0.28
Beta	1.07	0.93
R-Squared	12.89	98.95
12-Month Yield		4.62%
Potential Cap Gains Exp		2.19%

Investment Style

Fixed-Income

—	—	—	—	97	99	98	99	99	99	99	100

Bond %



Growth of $10,000

- Vanguard Emerging Mkts Govt Bd Idx Instl 13,708
- Category Average 11,453
- Standard Index 13,002

Performance Quartile (within category)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20	History
—	—	—	—	—	—	29.76	31.20	32.30	30.03	32.66	31.57	NAV/Price
—	—	—	—	—	*5.13*	*1.56*	9.91	8.47	-2.80	14.02	0.05	Total Return %
—	—	—	—	—	*-0.84*	*1.00*	7.27	4.93	-2.81	5.30	-6.75	+/- Standard Index
—	—	—	—	—	*-2.30*	*0.27*	-0.24	-1.78	1.46	-1.01	0.56	+/- Category Index
—	—	—	—	—	—	—	57	80	21	35	—	% Rank Cat
—	—	—	—	—	—	—	279	295	295	286	276	No. of Funds in Cat

Portfolio Analysis 09-30-2020

Asset Allocation %	Net %	Long %	Short %
Cash	0.07	0.07	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	99.93	99.93	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	100.00	0.00

Equity Style Value Blend Growth; Large Mid Small

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	—	—	—
P/C Ratio TTM	—	—	—
P/B Ratio TTM	—	—	—
Geo Avg Mkt Cap $mil	—	—	—

Fixed-Income Style Ltd Mod Ext; High Med Low

Avg Eff Maturity	—
Avg Eff Duration	—
Avg Wtd Coupon	5.11
Avg Wtd Price	—

Credit Quality Breakdown 06-31-2020	Bond %
AAA	-0.16
AA	9.84
A	16.57
BBB	31.23
BB	0.00
B	0.00
Below B	42.52
NR	0.00

Regional Exposure	Stocks %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

Share Chg since 08-2020	Share Amount	Holdings: 0 Total Stocks, 713 Total Fixed-Income, 48% Turnover Ratio	Net Assets %
⊕	12 mil	State of Qatar	0.77
⊕	11 mil	State of Qatar	0.74
⊕	13 mil	Saudi Arabia (Kingdom of)	0.74
	11 mil	Russian Federation	0.71
☼	38 mil	Argentina (Republic of)	0.69
☼	30 mil	Argentina (Republic of)	0.60
	15 mil	Petroleos Mexicanos	0.58
	9 mil	State of Qatar	0.56
	9 mil	KSA Sukuk Limited	0.50
⊕	8 mil	Republic of Colombia	0.47
⊕	8 mil	Saudi Arabia (Kingdom of)	0.47
⊕	10 mil	Petroleos Mexicanos	0.47
☼	17 mil	Republic of Ecuador	0.46
⊕	7 mil	Uruguay (Republic of)	0.46
⊕	8 mil	State of Kuwait	0.45

Sector Weightings	Stocks %	Rel Std Index
Cyclical	—	—
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
Sensitive	—	—
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
Defensive	—	—
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

Operations

Family:	Vanguard	Base Currency:	USD	Purchase Constraints:	—
Manager:	Joshua Barrickman	Ticker:	VGIVX	Incept:	02-11-2015
Tenure:	7.4 Years	ISIN:	US9219467035	Type:	MF
Objective:	Government Bond - General	Minimum Initial Purchase:	$5 mil	Total Assets:	$1,866.29 mil

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Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and
Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
Vanguard Emerging Mkts Govt Bd Idx Instl	—	—	2.23	6.06	—	5.31	02-11-2015	**NA**	**NA**	**0.23**	**0.23**	**NA**
BBgBarc US Agg Bond TR USD			**6.98**	**4.18**	**3.64**	**—**	**01-03-1980**					
JPM EMBI Global Diversified TR USD			**1.29**	**6.15**	**5.43**	**—**	**07-30-1999**					
MSCI EAFE NR USD			**0.49**	**5.26**	**4.62**	**—**	**03-31-1986**					
S&P 500 TR USD			**15.15**	**14.15**	**13.74**	**—**	**01-30-1970**					
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	**—**	**02-28-1941**					

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Annualized returns 09-30-2020

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Vanguard Emerging Mkts Govt Bd Idx Instl	0.31	4.00	—	3.25	02-11-2015	1.29	3.74	—	3.14

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance

The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns

The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %

A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha

Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation

Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration

Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity

Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon

A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price

Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

Best Fit Index

Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta

Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown

Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %

The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %

The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %

The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization

Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000

For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %

The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %

The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean

Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™

Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the"Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

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Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

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to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD
This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

JPM EMBI Global Diversified TR USD
Description unavailable.

MSCI EAFE NR USD
This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

S&P 500 TR USD
A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon
Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

MORNINGSTAR®

Vanguard Federal Money Market Fund (VMFXX)

Firm Background*

The Vanguard Group, Inc. is one of the largest providers of low-cost mutual funds and index-tracking products. Jack Bogle founded Vanguard in 1975 with the philosophy that low costs are crucial to generate consistently attractive investment performance. Vanguard was the first firm to provide widespread passive index products to retail investors. Over time, Vanguard expanded its product set to include various asset classes and actively managed funds. Vanguard's active products are either managed internally or subadvised by external asset managers. Equity strategies represent more than two-thirds of firm assets, fixed income strategies account for approximately 25% of assets, and cash and multi-asset strategies comprise the balance of assets. The firm's client mix is approximately 60% institutional and 40% retail investors.

Headquartered in Malvern, PA, Vanguard employs over 17,000 people. The firm has offices around the world, but investment management is concentrated in a limited number of them (Malvern; Melbourne, Australia; and London, UK). The firm is owned by tits own investment funds, which are, in turn, owned by their shareholders. As a result, Vanguard's fund investors indirectly own the firm. Fund management fees pay for the firm's expenses and Vanguard reinvests profits to lower future expense ratios. Effective January 1, 2018, Tim Buckley succeeded William McNabb as Vanguard's Chief Executive Officer. Mr. Buckley joined the firm in 1991 and has held a number of senior leadership positions during his tenure. Mr. McNabb will remain chairman of Vanguard's board, a role he has held since 2009.

Organization: Satisfactory (4 out of 5)*

Vanguard has a decades-long legacy of client service and thoughtful product development that dates to its founding as an indexing provider. It launches funds after thorough consideration of where it believes product offerings are consistent with investor interests as well as the firm's philosophy and long-term focus. In our view, Vanguard's mutual fund ownership structure has both advantages and disadvantages. For instance, the firm's trademark low fees provide Vanguard with a persistent return advantage over peers, which contributes to the strength of the franchise. These low fees are a direct result of the ownership structure, which has also greatly contributed to the firm's considerable level of assets under management. On the other hand, a disadvantage of the firm's ownership structure is that it does not allow employees to benefit from a profit sharing or equity compensation scheme; although, Vanguard does make use of deferred bonus compensation for key executives and investment professionals. The firm actively rotates senior employees across roles and disciplines. While this may result in longevity and broad perspectives, it reduces specialization and tenure in the roles left behind. Vanguard has experienced tremendous growth over the past decade to become one of the world's largest asset managers. Along with this growth, the firm has had to address the issues that often accompany a significant increase in AUM.

Strategy**

Vanguard Federal Money Market Fund seeks to provide current income while maintaining liquidity and a stable share price of $1.

The fund invests primarily in high-quality, short-term money market instruments issued by the U.S. government and its agencies and instrumentalities. Although these securities are high-quality, most of the securities held by the fund are neither guaranteed by the U.S. Treasury nor supported by the full faith and credit of the U.S. government. To be considered high quality, a security must be determined by Vanguard to present minimal credit risk based in part on a consideration of maturity, portfolio diversification, portfolio liquidity, and credit quality. The fund maintains a dollar-weighted average maturity of 60 days or less and a dollar-weighted average life of 120 days or less. Under the new money market reforms, government money market funds are required to invest at least 99.5% of their total assets in cash, government securities, and/or repurchase agreements that are collateralized solely by government securities or cash (collectively, government securities). The fund generally invests 100% of its assets in government securities and therefore will satisfy the 99.5% requirement for designation as a government money market fund.

Summary

This fund has not been rated by Morningstar, Inc.

Performance

This fund has not been rated by Morningstar, Inc.

Price

This fund has not been rated by Morningstar, Inc.

Process

This fund has not been rated by Morningstar, Inc.

People

This fund has not been rated by Morningstar, Inc.

* Source: BNY Mellon Manager Research Group, as of December 2019
** Source: Vanguard Group, Inc., as of 9/30/2020

Fact sheet | September 30, 2020

Vanguard®

Vanguard Federal Money Market Fund

Money market fund

Fund facts

Risk level Low ⟵⟶ High	Total net assets	Expense ratio as of 12/20/19	Ticker symbol	Inception date	Fund number
1 2 3 4 5	$199,581 MM	0.11%	VMFXX	07/13/81	0033

Investment objective

Vanguard Federal Money Market Fund seeks to provide current income while maintaining liquidity and a stable share price of $1.

Investment strategy

The fund invests primarily in high-quality, short-term money market instruments issued by the U.S. government and its agencies and instrumentalities. Although these securities are high-quality, most of the securities held by the fund are neither guaranteed by the U.S. Treasury nor supported by the full faith and credit of the U.S. government. To be considered high quality, a security must be determined by Vanguard to present minimal credit risk based in part on a consideration of maturity, portfolio diversification, portfolio liquidity, and credit quality. The fund maintains a dollar-weighted average maturity of 60 days or less and a dollar-weighted average life of 120 days or less. Under the new money market reforms, government money market funds are required to invest at least 99.5% of their total assets in cash, government securities, and/or repurchase agreements that are collateralized solely by government securities or cash (collectively, government securities). The fund generally invests 100% of its assets in government securities and therefore will satisfy the 99.5% requirement for designation as a government money market fund.

For the most up-to-date fund data, please scan the QR code below.

Benchmark

US Gov't Money Market Funds Average

Growth of a $10,000 investment : January 31, 2010—December 31, 2019

Annual returns

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fund	0.02	0.01	0.01	0.02	0.01	0.04	0.30	0.81	1.78	2.14
Benchmark	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.34	1.23	1.61

Total returns

Periods ended September 30, 2020

	7-Day SEC Yield	Quarter	Year to date	One year	Three years	Five years	Ten years
Fund	0.05%	0.02%	0.44%	0.87%	1.54%	1.10%	0.55%
Benchmark	—	0.00%	0.23%	0.52%	1.07%	0.68%	0.34%

The performance data shown represent past performance, which is not a guarantee of future results. Investment returns will fluctuate. Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at vanguard.com/performance.

Figures for periods of less than one year are cumulative returns. All other figures represent average annual returns. Performance figures include the reinvestment of all dividends and any capital gains distributions. All returns are net of expenses.

Seven-day current yield net of expenses. The yield quotation more closely reflects the current earnings of the fund than the total return quotation.

US Gov't Money Market Funds Average: Derived from data provided by Lipper, a Thomson Reuters Company.

F0033 092020

Fact sheet | September 30, 2020

Vanguard Federal Money Market Fund

Money market fund

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Plain talk about risk

The fund is designed for investors with a low tolerance for risk; however, the fund's performance could be hurt by:

Income risk: The chance that the fund's income will decline because of falling interest rates. Because the fund's income is based on short-term interest rates—which can fluctuate significantly over short periods—income risk is expected to be high.

Manager risk: The chance that poor security selection will cause the fund to underperform relevant benchmarks or other funds with a similar investment objective.

Credit risk: The chance that the issuer of a security will fail to pay interest or principal in a timely manner or that negative perceptions of the issuer's ability to make such payments will cause the price of that security to decline. Credit risk should be very low for the fund because it invests primarily in securities that are considered to be of high quality.

While U.S. Treasury or government agency securities provide substantial protection against credit risk, they do not protect investors against price changes due to changing interest rates. Unlike stocks and bonds, U.S. Treasury bills are guaranteed as to the timely payment of principal and interest.

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

For more information about Vanguard funds or to obtain a prospectus, see below for which situation is right for you.

If you receive your retirement plan statement from Vanguard or log on to Vanguard's website to view your plan, visit **vanguard.com** or call **800-523-1188**.

If you receive your retirement plan statement from a service provider other than Vanguard or log on to a recordkeeper's website that is not Vanguard to view your plan, please call **855-402-2646**.

Visit vanguard.com to obtain a prospectus or, if available, a summary prospectus. Investment objectives, risks, charges, expenses, and other important information about a fund are contained in the prospectus; read and consider it carefully before investing.

Financial advisor clients: For more information about Vanguard funds, contact your financial advisor to obtain a prospectus.

Investment Products: Not FDIC Insured • No Bank Guarantee • May Lose Value

F0033 092020

Vanguard Long-Term Treasury Index Fund Institutional Shares (VLGIX)

Firm Background*

The Vanguard Group, Inc. is one of the largest providers of low-cost mutual funds and index-tracking products. Jack Bogle founded Vanguard in 1975 with the philosophy that low costs are crucial to generate consistently attractive investment performance. Vanguard was the first firm to provide widespread passive index products to retail investors. Over time, Vanguard expanded its product set to include various asset classes and actively managed funds. Vanguard's active products are either managed internally or subadvised by external asset managers. Equity strategies represent more than two-thirds of firm assets, fixed income strategies account for approximately 25% of assets, and cash and multi-asset strategies comprise the balance of assets. The firm's client mix is approximately 60% institutional and 40% retail investors.

Headquartered in Malvern, PA, Vanguard employs over 17,000 people. The firm has offices around the world, but investment management is concentrated in a limited number of them (Malvern; Melbourne, Australia; and London, UK). The firm is owned by its own investment funds, which are, in turn, owned by their shareholders. As a result, Vanguard's fund investors indirectly own the firm. Fund management fees pay for the firm's expenses and Vanguard reinvests profits to lower future expense ratios. Effective January 1, 2018, Tim Buckley succeeded William McNabb as Vanguard's Chief Executive Officer. Mr. Buckley joined the firm in 1991 and has held a number of senior leadership positions during his tenure. Mr. McNabb will remain chairman of Vanguard's board, a role he has held since 2009.

Organization: Satisfactory (4 out of 5)*

Vanguard has a decades-long legacy of client service and thoughtful product development that dates to its founding as an indexing provider. It launches funds after thorough consideration of where it believes product offerings are consistent with investor interests as well as the firm's philosophy and long-term focus. In our view, Vanguard's mutual fund ownership structure has both advantages and disadvantages. For instance, the firm's trademark low fees provide Vanguard with a persistent return advantage over peers, which contributes to the strength of the franchise. These low fees are a direct result of the ownership structure, which has also greatly contributed to the firm's considerable level of assets under management. On the other hand, a disadvantage of the firm's ownership structure is that it does not allow employees to benefit from a profit sharing or equity compensation scheme; although, Vanguard does make use of deferred bonus compensation for key executives and investment professionals. The firm actively rotates senior employees across roles and disciplines. While this may result in longevity and broad perspectives, it reduces specialization and tenure in the roles left behind. Vanguard has experienced tremendous growth over the past decade to become one of the world's largest asset managers. Along with this growth, the firm has had to address the issues that often accompany a significant increase in AUM.

Strategy**

Vanguard Long-Term Treasury Index Fund seeks to track the performance of a market-weighted Treasury index with a long-term dollar-weighted average maturity.

The fund employs an index sampling technique to select securities. Using sophisticated computer programs, the fund's advisor generally selects a representative sample of securities that approximates the full target index in terms of key risk factors and other characteristics.

These factors include duration, cash flow, quality, and callability of the underlying bonds. In addition, the fund keeps sector and subsector exposure within tight boundaries relative to its target index. Because the fund does not hold all issues in its target index, some of the issues (and issuers) that are held will likely be overweighted (or underweighted) compared with the target index. The maximum overweight (or underweight) is constrained at the issuer level with the goal of producing well-diversified credit exposure in the portfolio.

Summary

This fund has not been rated by Morningstar, Inc.

Performance

This fund has not been rated by Morningstar, Inc.

Price

This fund has not been rated by Morningstar, Inc.

Process

This fund has not been rated by Morningstar, Inc.

People

This fund has not been rated by Morningstar, Inc.

* Source: BNY Mellon Manager Research Group, as of December 2019
** Source: Vanguard Group, Inc., as of 9/30/2020

Vanguard Long-Term Treasury Idx Instl (USD)

Morningstar Quantitative Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Gold 09-30-2020	★★★ 28 US Fund Long Government	BBgBarc US Agg Bond TR USD	BBgBarc US Government Long TR USD	US Fund Long Government

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-3.49	0.44	-2.83	4.43	-1.83
2019	4.87	5.67	8.12	-4.42	14.30
2020	20.86	0.36	-0.03	—	21.27

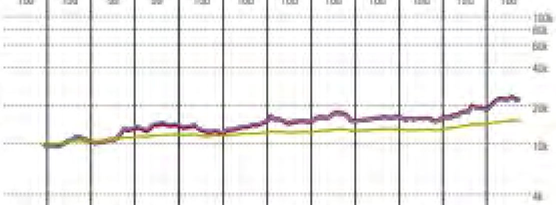
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	15.91	11.77	8.14	7.12	7.53
Std 09-30-2020	15.91	—	8.14	7.12	7.53
Total Return	15.91	11.77	8.14	7.12	7.53
+/- Std Index	8.92	6.52	3.96	3.49	—
+/- Cat Index	-0.30	-0.02	-0.05	-0.05	—
% Rank Cat	59	46	34	37	
No. in Cat	31	28	25	22	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 10-29-20	1.37	1.26

Performance Disclosure
The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.
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 sold or 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 800-662-7447 or visit www.vanguard.com.

Investment Style	100	100	99	99	100	100	100	100	100	100	100	100

Investment Style
Fixed-Income
Bond %



Growth of $10,000
Vanguard Long-Term Treasury Idx Instl 22,363
Category Average 21,923
Standard Index 15,185

Performance Quartile (within category)

History	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20
NAV/Price	24.00	25.81	32.09	32.23	27.30	33.13	31.81	31.46	33.30	31.86	35.51	42.47
Total Return %	—	9.35	28.94	3.52	-12.73	25.09	-1.32	1.38	8.67	-1.63	14.30	21.27
+/- Standard Index	—	2.80	21.10	-0.69	-10.71	19.12	-1.87	-1.27	5.12	-1.64	5.58	14.48
+/- Category Index	—	-0.08	-0.20	-0.26	-0.25	0.42	-0.15	-0.05	0.13	0.16	-0.45	0.14
% Rank Cat	—	—	58	55	26	31	40	28	42	32	43	—
No. of Funds in Cat	—	—	34	32	24	30	34	34	32	31	32	32

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

Management Fees %	0.04
12b1 Expense %	NA
Net Expense Ratio %	**0.05**
Gross Expense Ratio %	**0.05**

Risk and Return Profile

	3 Yr 28 funds	5 Yr 25 funds	10 Yr 22 funds
Morningstar Rating™	3★	3★	3★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	12.34	11.40	11.65
Mean	11.77	8.14	7.12
Sharpe Ratio	0.84	0.64	0.60

MPT Statistics	Standard Index	Best Fit Index BBgBarc US Government Long TR USD
Alpha	-0.64	-0.19
Beta	3.06	1.02
R-Squared	69.18	99.54

12-Month Yield	1.87%
Potential Cap Gains Exp	11.85%

Portfolio Analysis 09-30-2020

Asset Allocation %	Net %	Long %	Short %
Cash	-0.41	0.00	0.41
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	100.41	100.41	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	100.41	0.41

Equity Style
Value Blend Growth

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	—	—	—
P/C Ratio TTM	—	—	—
P/B Ratio TTM	—	—	—
Geo Avg Mkt Cap $mil	—	—	—

Fixed-Income Style
Ltd Mod Ext

Avg Eff Maturity	25.10
Avg Eff Duration	18.74
Avg Wtd Coupon	2.92
Avg Wtd Price	131.69

Credit Quality Breakdown 08-31-2020	Bond %
AAA	99.33
AA	0.00
A	0.00
BBB	0.67
BB	0.00
B	0.00
Below B	0.00
NR	0.00

Regional Exposure	Stocks %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

Share Chg since 08-2020	Share Amount	Holdings: 0 Total Stocks, 58 Total Fixed-Income, 16% Turnover Ratio	Net Assets %
⊕	225 mil	United States Treasury Bonds	4.62
⊕	166 mil	United States Treasury Bonds	3.88
⊕	124 mil	United States Treasury Bonds	3.08
⊕	141 mil	United States Treasury Bonds	3.03
⊕	114 mil	United States Treasury Bonds	2.88
⊕	108 mil	United States Treasury Bonds	2.86
⊕	166 mil	United States Treasury Bonds	2.85
⊕	114 mil	United States Treasury Bonds	2.81
⊕	157 mil	United States Treasury Bonds	2.80
⊕	110 mil	United States Treasury Bonds	2.71
⊕	109 mil	United States Treasury Bonds	2.70
⊕	113 mil	United States Treasury Bonds	2.67
⊕	99 mil	United States Treasury Bonds	2.64
⊕	100 mil	United States Treasury Bonds	2.48
⊕	111 mil	United States Treasury Bonds	2.48

Sector Weightings	Stocks %	Rel Std Index
Cyclical	—	—
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
Sensitive	—	—
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
Defensive	—	—
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

Operations

Family:	Vanguard	Base Currency:	USD	Purchase Constraints:	—
Manager:	Joshua Barrickman	Ticker:	VLGIX	Incept:	11-19-2009
Tenure:	7.7 Years	ISIN:	US92206C8394	Type:	MF
Objective:	Government Bond - General	Minimum Initial Purchase:	$5 mil	Total Assets:	$2,618.37 mil

MORNINGSTAR®

Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
Vanguard Long-Term Treasury Idx Instl	—	—	15.91	8.14	7.12	7.53	11-19-2009	NA	NA	0.05	0.05	NA
BBgBarc US Agg Bond TR USD			**6.98**	**4.18**	**3.64**	**—**	**01-03-1980**					
BBgBarc US Government Long TR USD			**16.21**	**8.18**	**7.18**	**—**	**05-01-1991**					
MSCI EAFE NR USD			**0.49**	**5.26**	**4.62**	**—**	**03-31-1986**					
S&P 500 TR USD			**15.15**	**14.15**	**13.74**	**—**	**01-30-1970**					
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	**—**	**02-28-1941**					

Annualized returns 09-30-2020

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Vanguard Long-Term Treasury Idx Instl	14.98	7.01	5.91	6.31	11-19-2009	9.39	5.80	5.07	5.42

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

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asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance

The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns

The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %

A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha

Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation

Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration

Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity

Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon

A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price

Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

Best Fit Index
Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta
Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown
Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %
The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %
The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %
The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization
Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000
For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %
The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %
The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean
Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™
Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the"Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

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to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD
This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

BBgBarc US Government Long TR USD
Includes those indexes found in the BarCap Government index which have a maturity of 10 years or more. The constituents displayed for this index are from the following proxy: iShares 20+ Year Treasury Bond ETF.

MSCI EAFE NR USD

This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

S&P 500 TR USD

A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon

Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

Vanguard Total Bond Market Index Fund Institutional Plus Shares (VBMPX)

Firm Background*

The Vanguard Group, Inc. is one of the largest providers of low-cost mutual funds and index-tracking products. Jack Bogle founded Vanguard in 1975 with the philosophy that low costs are crucial to generate consistently attractive investment performance. Vanguard was the first firm to provide widespread passive index products to retail investors. Over time, Vanguard expanded its product set to include various asset classes and actively managed funds. Vanguard's active products are either managed internally or subadvised by external asset managers. Equity strategies represent more than two-thirds of firm assets, fixed income strategies account for approximately 25% of assets, and cash and multi-asset strategies comprise the balance of assets. The firm's client mix is approximately 60% institutional and 40% retail investors.

Headquartered in Malvern, PA, Vanguard employs over 17,000 people. The firm has offices around the world, but investment management is concentrated in a limited number of them (Malvern; Melbourne, Australia; and London, UK). The firm is owned by its own investment funds, which are, in turn, owned by their shareholders. As a result, Vanguard's fund investors indirectly own the firm. Fund management fees pay for the firm's expenses and Vanguard reinvests profits to lower future expense ratios. Effective January 1, 2018, Tim Buckley succeeded William McNabb as Vanguard's Chief Executive Officer. Mr. Buckley joined the firm in 1991 and has held a number of senior leadership positions during his tenure. Mr. McNabb will remain chairman of Vanguard's board, a role he has held since 2009.

Organization: Satisfactory (4 out of 5)*

Vanguard has a decades-long legacy of client service and thoughtful product development that dates to its founding as an indexing provider. It launches funds after thorough consideration of where it believes product offerings are consistent with investor interests as well as the firm's philosophy and long-term focus. In our view, Vanguard's mutual fund ownership structure has both advantages and disadvantages. For instance, the firm's trademark low fees provide Vanguard with a persistent return advantage over peers, which contributes to the strength of the franchise. These low fees are a direct result of the ownership structure, which has also greatly contributed to the firm's considerable level of assets under management. On the other hand, a disadvantage of the firm's ownership structure is that it does not allow employees to benefit from a profit sharing or equity compensation scheme; although, Vanguard does make use of deferred bonus compensation for key executives and investment professionals. The firm actively rotates senior employees across roles and disciplines. While this may result in longevity and broad perspectives, it reduces specialization and tenure in the roles left behind. Vanguard has experienced tremendous growth over the past decade to become one of the world's largest asset managers. Along with this growth, the firm has had to address the issues that often accompany a significant increase in AUM.

Fund Strategy**

Vanguard Total Bond Market Index Fund seeks to track the performance of a broad, market-weighted bond index.

The fund employs an indexing investment approach designed to track the performance of the Bloomberg Barclays U.S. Aggregate Float Adjusted Bond Index. This index measures a wide spectrum of public, investment-grade, taxable, fixed income securities in the United States—including government, corporate, and international dollar-denominated bonds, as well as mortgage-backed and asset-backed securities, all with maturities of more than 1 year. The fund invests by sampling the index, meaning that it holds a range of securities that, in the aggregate, approximate the full index in terms of key risk factors and other characteristics. All of the fund's investments will be selected through the sampling process, and at least 80% of the fund's assets will be invested in bonds held in the index. The fund maintains a dollar-weighted average maturity consistent with that of the index, which currently ranges between 5 and 10 years.

Summary***

Vanguard Total Bond Market Index is a great core bond holding. Under our enhanced ratings framework, which places a greater emphasis on fees, the Morningstar Analyst Rating for the strategy's cheapest share classes has been upgraded to Gold from Silver. The strategy's more expensive Admiral and Investor share classes are rated Silver and Bronze rating, respectively.

The strategy tracks the Bloomberg Barclays U.S. Aggregate Float-Adjusted Index, which includes investment-grade U.S. dollar-denominated bonds with at least one year until maturity. The index is weighted by market-value, tilting the portfolio toward the largest, most liquid issues, which tend to be easy to obtain and cheap to trade. The float adjustment excludes the value of bonds held by the Federal reserve from the weighting calculations, which slightly increases the fund's exposure to agency mortgage-backed securities. The float adjustment should not have a material impact. The fund's weighting approach harnesses the market's collective wisdom about the relative value of each security. That said, bond issuing activity influences the composition of this portfolio.

The U.S. government is the largest debt issuer in the nation, so the portfolio maintains a larger position in treasuries relative to the intermediate core bond Morningstar Category average. The strategy invests just about 65% of its assets in treasuries and agency MBS, which carry AAA ratings, while the category average is about 45%. While this might limit the fund's return potential, its lower credit risk should offer better downside protection.

This is a conservative portfolio with minimal credit risk, which can make it a low hurdle for active managers. That does not make this an unattractive investment, as risk and return are highly correlated in the fixed-income market. Approximately 65% of the assets in this portfolio carry an AAA rating, making it one of the more conservative options in the category. After controlling for risk, this portfolio is tougher to beat.

Performance***

The fund's performance during the trailing 10 years through May 2020 has been solid. It beat the category average by 6 basis points annually, ranking in the category's middle third, as its cost advantage offset the lower returns from its more conservative portfolio.

The fund's category-relative performance is largely related to credit spreads, given its Treasury-heavy tilt. The fund has tended to outperform category peers when credit spreads widen, and lag when they tighten. For example, it outperformed its average category peer by 93 basis points during 2011, as the ICE Bank of America BBB OAS Spread widened by 1.04%. Conversely, the fund lagged the category average by 1.61% during 2012, as that spread tightened by 1.07%.

The fund's conservative credit risk should help it weather periods of market turmoil better than most category peers. For instance, it did not decline by nearly as much as the category average during the onset of the coronavirus-driven crisis between Feb. 19 and March 23, 2020. During that time, the exchange-traded share class fell by 1.04%, while the category average fell by 3.15%.

Like most investment-grade bond funds, interest-rate risk is the primary driver of this portfolio's absolute returns.

Price***

It's critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category's cheapest quintile. Based on our assessment of the fund's People, Process and Parent pillars in the context of these fees, we think this share class will be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Gold.

Process: Above Average***

This portfolio replicates the composition of the U.S.-dollar-denominated investment-grade bond market, effectively harnessing the market's collective wisdom about the relative value of each bond. This is a sound approach because it promotes low turnover, it is cost-effective, and the market does a decent job pricing these bonds. It earns an Above Average Pillar process rating.

The strategy employs representative sampling to track the performance of the Bloomberg Barclays U.S. Aggregate Float-Adjusted Index, which includes investment-grade U.S.-dollar-denominated bonds with at least one year until maturity. Qualifying bonds must have at least $300 million in outstanding face value. The float adjustment excludes holdings in the Federal Reserve's account, which should not have a significant impact on the composition of the portfolio.

The index weights its holdings by market value and is rebalanced monthly. This yields a conservative portfolio, which limits its return potential but also cuts downside risk and makes this a good complement for stock holdings.

While it may seem risky to allocate larger weightings to bigger debt issuers, this is a very conservative portfolio, largely because U.S. Treasury and agency MBS represent most of the U.S. investment-grade market. These securities are rated AAA.

As of May 2020, just about 40% of the fund's assets were in Treasury bonds, while the corresponding figure for the category average is slightly more than 20%. The bulk of the fund's remaining balance is composed of corporate bonds and agency MBS, which represent about 28% and 23% of the portfolio's assets, respectively. While this limits the fund's potential for returns, it also limits potential losses.

Although corporate bonds only represent about one fourth of the portfolio, these holdings are where most of the fund's credit risk resides. In addition to the growth of the Treasury bonds, the U.S. corporate bond market also grew in response to the financial crisis of 2008, as companies issued debt to capitalize on low interest rates. As a result, BBB rated corporate bonds grew rapidly and now represent about half of the market value of all investment-grade corporate bonds. Accordingly, just over 15% of the strategy's assets are rated BBB.

The fund's interest-rate risk is line with the intermediate core bond category average. As of May 2020, its average effective duration was 6.0 years.

People: Above Average***

An experienced team manages all of Vanguard's fixed-income index strategies, supporting a positive People Pillar rating.

Joshua Barrickman was named as manager in 2013. He has worked in investment management at Vanguard since 1999 and managed investment portfolios since 2005. In 2013, he was promoted to head of Vanguard's Bond Index Group.

Portfolio management at Vanguard is a team effort, so key-person risk is not a concern. Barrickman leads a team of sector specialists, including a manager focused on government bonds, along with an ETF team, which helps with ETF basket creation. These managers are also supported by a team of traders who focus on execution, as well as a data team that checks incoming index data and helps the managers prepare for upcoming index changes. These teams free up time for the managers to focus on portfolio construction and index tracking. There's also a separate risk management team that independently monitors the managers' performance.

Although fund managers are not required to invest in this strategy, Vanguard aligns managers' incentives with investors' by tying their compensation and performance evaluation to the strategy's tracking error.

* Source: BNY Mellon Manager Research Group, as of December 2019
** Source: Vanguard Group, Inc., as of 9/30/2020
*** Source: Morningstar, Inc., as of 7/11/2020

Vanguard Total Bond Market Idx InstlPls (USD)

Morningstar Analyst Rating™	Overall Morningstar Rating™	Standard Index	Category Index	Morningstar Cat
Gold 07-12-2020	★★★★ 380 US Fund Intermediate Core Bond	BBgBarc US Agg Bond TR USD	BBgBarc US Agg Bond TR USD	US Fund Intermediate Core Bond

Performance 09-30-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-1.47	-0.17	0.03	1.62	-0.01
2019	2.95	3.08	2.43	0.03	8.74
2020	3.28	2.98	0.62	—	7.02

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	7.05	5.33	4.22	3.62	3.97
Std 09-30-2020	7.05	—	4.22	3.62	3.97
Total Return	7.05	5.33	4.22	3.62	3.97
+/- Std Index	0.07	0.08	0.04	-0.02	—
+/- Cat Index	0.07	0.08	0.04	-0.02	—
% Rank Cat	36	23	31	46	
No. in Cat	417	380	335	255	

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 10-29-20	1.19	1.20

Performance Disclosure

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

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 sold or 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 800-662-7447 or visit www.vanguard.com.

Fees and Expenses

Sales Charges

Front-End Load %	**NA**
Deferred Load %	**NA**

Fund Expenses

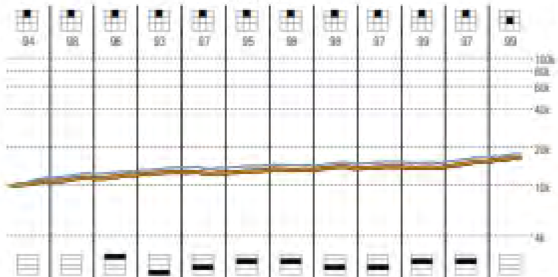
Management Fees %	0.03
12b1 Expense %	NA
Net Expense Ratio %	**0.03**
Gross Expense Ratio %	**0.03**

Risk and Return Profile

	3 Yr 380 funds	5 Yr 335 funds	10 Yr 255 funds
Morningstar Rating™	4★	4★	3★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	+Avg	+Avg	Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	3.44	3.27	3.07
Mean	5.33	4.22	3.62
Sharpe Ratio	1.07	0.93	0.98

MPT Statistics	Standard Index	Best Fit Index BBgBarc US Agg Bond TR USD
Alpha	0.02	0.02
Beta	1.02	1.02
R-Squared	99.17	99.17
12-Month Yield		2.37%
Potential Cap Gains Exp		3.47%



Investment Style
Fixed-Income
Bond %

Growth of $10,000
Vanguard Total Bond Market Idx InstlPls 16,321
Category Average 17,558
Standard Index 16,341

Performance Quartile (within category)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-20	History
—	10.60	11.00	11.09	10.56	10.87	10.64	10.65	10.75	10.45	11.05	11.52	NAV/Price
5.93	*6.57*	7.74	4.20	-2.12	5.92	0.42	2.62	3.59	-0.01	8.74	7.02	Total Return %
0.00	*0.03*	-0.10	-0.01	-0.09	-0.05	-0.13	-0.03	0.04	-0.02	0.02	0.23	+/- Standard Index
0.00	*0.03*	-0.10	-0.01	-0.09	-0.05	-0.13	-0.03	0.04	-0.02	0.02	0.23	+/- Category Index
—	—	11	62	67	29	27	62	54	30	33	—	% Rank Cat
—	—	1195	1165	1079	1038	1042	985	986	1019	430	422	No. of Funds in Cat

Portfolio Analysis 09-30-2020

Asset Allocation %	Net %	Long %	Short %
Cash	0.07	0.08	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	99.12	99.85	0.73
Other/Not Clsfd	0.81	0.81	0.00
Total	100.00	100.73	0.73

Equity Style
Value Blend Growth
Large Mid Small

Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	—	—	—
P/C Ratio TTM	—	—	—
P/B Ratio TTM	—	—	—
Geo Avg Mkt Cap $mil	—	—	—

Fixed-Income Style
Ltd Mod Ext
High Med Low

Avg Eff Maturity	8.50
Avg Eff Duration	6.55
Avg Wtd Coupon	2.97
Avg Wtd Price	111.49

Credit Quality Breakdown 06-31-2020	Bond %
AAA	62.99
AA	3.71
A	12.84
BBB	20.46
BB	0.00
B	0.00
Below B	0.00
NR	0.00

Regional Exposure	Stocks %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

Share Chg since 06-2020	Share Amount	Holdings: 0 Total Stocks, 15,805 Total Fixed-Income, 31% Turnover Ratio	Net Assets %
☼	2,244 mil	Federal National Mortgage Associat	0.81
☼	2,200 mil	Federal National Mortgage Associat	0.78
⊕	1,993 mil	United States Treasury Notes	0.69
⊖	1,532 mil	United States Treasury Bonds	0.50
	1,040 mil	United States Treasury Notes	0.42
	1,112 mil	United States Treasury Notes	0.42
	1,111 mil	United States Treasury Notes	0.41
⊕	1,173 mil	United States Treasury Notes	0.40
	1,092 mil	United States Treasury Notes	0.40
	1,100 mil	United States Treasury Notes	0.40
	1,083 mil	United States Treasury Notes	0.39
⊕	819 mil	United States Treasury Bonds	0.38
	985 mil	United States Treasury Notes	0.36
	867 mil	United States Treasury Notes	0.36
	904 mil	United States Treasury Notes	0.36

Sector Weightings	Stocks %	Rel Std Index
Cyclical	—	—
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
Sensitive	—	—
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
Defensive	—	—
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

Operations

Family:	Vanguard	Base Currency:	USD	Purchase Constraints:	—
Manager:	Joshua Barrickman	Ticker:	VBMPX	Incept:	02-05-2010
Tenure:	7.7 Years	ISIN:	US9219377853	Type:	MF
Objective:	Income	Minimum Initial Purchase:	$100 mil	Total Assets:	$64,047.22 mil

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Standardized and Tax Adjusted Returns Disclosure Statement

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 visit http://advisor.morningstar.com/familyinfo.asp.

Standardized Returns assume reinvestment of dividends and capital gains. They depict performance without adjusting for the effects of taxation, but are adjusted to reflect sales charges and ongoing fund expenses.

If adjusted for taxation, the performance quoted would be significantly reduced. For variable annuities, additional expenses will be taken into account, including M&E risk charges, fund-level expenses such as management fees and operating fees, contract-level administration fees, and charges such as surrender, contract, and sales charges. The maximum redemption fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase.

After-tax returns are calculated using the highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their fund shares through tax-deferred arrangements such as 401(k) plans or an IRA. After-tax returns exclude the effects of either the alternative minimum tax or phase-out of certain tax credits. Any taxes due are as of the time the distributions are made, and the taxable amount and tax character of each distribution are as specified by the fund on the dividend declaration date. Due to foreign tax credits or realized capital losses, after-tax returns may be greater than before-tax returns. After-tax returns for exchange-traded funds are based on net asset value.

Money Market Fund Disclosures

If money market fund(s) are included in the Standardized Returns table below, each money market fund's name will be followed by a superscripted letter that links it to the applicable disclosure below:

Institutional Money Market Funds (designated by an "S"):

You could lose money by investing in the fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "L") and

Retail Money Market Funds (designated by an "L"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions (designated by an "N"):

You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

Annualized returns 09-30-2020

Standardized Returns (%)	7-day Yield Subsidized *as of date*	7-day Yield Unsubsidized *as of date*	1Yr	5Yr	10Yr	Since Inception	Inception Date	**Max Front Load %**	**Max Back Load %**	**Net Exp Ratio %**	**Gross Exp Ratio %**	**Max Redemption %**
Vanguard Total Bond Market Idx InstlPls	—	—	7.05	4.22	3.62	3.97	02-05-2010	**NA**	**NA**	**0.03**	**0.03**	**NA**
BBgBarc US Agg Bond TR USD			**6.98**	**4.18**	**3.64**	**—**	**01-03-1980**					
MSCI EAFE NR USD			**0.49**	**5.26**	**4.62**	**—**	**03-31-1986**					
S&P 500 TR USD			**15.15**	**14.15**	**13.74**	**—**	**01-30-1970**					
USTREAS T-Bill Auction Ave 3 Mon			**0.77**	**1.17**	**0.61**	**—**	**02-28-1941**					

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Annualized returns 09-30-2020

Return after Tax (%)	On Distribution					On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
Vanguard Total Bond Market Idx InstlPls	6.00	3.08	2.45	2.79	02-05-2010	4.16	2.72	2.29	2.57

Mutual Fund Detail Report Disclosure Statement

The Mutual Fund Detail Report is supplemental sales literature, and therefore must be preceded or accompanied by the mutual fund's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Mutual Fund Detail Report. Morningstar is not itself a FINRA-member firm.

All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Unless otherwise specified, the definition of "funds" used throughout this Disclosure Statement includes closed-end funds, exchange-traded funds, grantor trusts, index mutual funds, open-ended mutual funds, and unit investment trusts. It does not include exchange-traded notes or exchange-traded commodities.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

Comparison of Fund Types

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publically-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

A closed-end fund is an investment company, which typically makes one public offering of a fixed number of shares. Thereafter, shares are traded on a secondary market. As a result, the secondary market price may be higher or lower than the closed-end fund's net asset value (NAV). If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. A closed-end mutual fund's expense ratio is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Closed-end funds may also have 12b-1 fees. Income distributions and capital gains of the closed-end fund are subject to income tax, if held in a taxable account.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV, they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds.

Holding company depository receipts (HOLDRs) are similar to ETFs, but they focus on narrow industry groups. HOLDRs initially own 20 stocks, which are unmanaged, and can become more concentrated due to mergers, or the disparate performance of their holdings. HOLDRs can only be bought in 100-share increments. Investors may exchange shares of a HOLDR for its underlying stocks at any time.

A money-market fund is an investment company that invests in commercial paper, banker's acceptances, repurchase agreements, government securities, certificates of deposit and other highly liquid securities, and pays money market rates of interest. Money markets are not FDIC-insured, may lose money, and are not guaranteed by a bank or other financial institution.

An open-end fund is an investment company that issues shares on a continuous basis. Shares can be purchased from the open-end mutual fund itself, or through an intermediary, but cannot be traded on a secondary market, such as the New York Stock Exchange. Investors pay the open-end mutual fund's current net asset value plus any initial sales loads. Net asset value is calculated daily, at the close of business. Open-end mutual fund shares can be redeemed, or sold back to the fund or intermediary, at their current net asset value minus any deferred sales loads or redemption fees. The expense ratio for an open-end mutual fund is an annual fee charged to a shareholder. It includes operating expenses and management fees, but does not take into account any brokerage costs. Open-end funds may also have 12b-1 fees. Income distributions and capital gains of the open-end fund are subject to income tax, if held in a taxable account.

A unit investment trust (UIT) is an investment company organized under a trust agreement between a sponsor and trustee. UITs typically purchase a fixed portfolio of securities and then sell units in the trust to investors. The major difference between a UIT and a mutual fund is that a mutual fund is actively managed, while a UIT is not. On a periodic basis, UITs usually distribute to the unit holder their pro rata share of the trust's net investment income and net realized capital gains, if any. If the trust is one that invests only in tax-free securities, then the income from the trust is also tax-free. UITs generally make one public offering of a fixed number of units. However, in some cases, the sponsor will maintain a secondary market that allows existing unit holders to sell their units and for new investors to buy units. A one-time initial sales charge is deducted from an investment made into the trust. UIT investors may also pay creation and development fees, organization costs, and/or trustee and operation expenses. UIT units may be redeemed by the sponsor at their net

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asset value minus a deferred sales charge, and sold to other investors. UITs have set termination dates, at which point the underlying securities are sold and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance
The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns
The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts pre-inception returns downward to reflect higher expenses in the Report Share Class, we do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns please see the Morningstar Extended Performance Methodology.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

12b1 Expense %
A 12b-1 fee is a fee used to pay for a mutual fund's distribution costs. It is often used as a commission to brokers for selling the fund. The amount of the fee is taken from a fund's returns.

Alpha
Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation
Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average, and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Average Effective Duration
Duration is a time measure of a bond's interest-rate sensitivity. Average effective duration is a weighted average of the duration of the fixed-income securities within a portfolio.

Average Effective Maturity
Average Effective Maturity is a weighted average of the maturities of all bonds in a portfolio.

Average Weighted Coupon
A coupon is the fixed annual percentage paid out on a bond. The average weighted coupon is the asset-weighted coupon of each bond in the portfolio.

Average Weighted Price
Average Weighted Price is the asset-weighted price of bonds held in a portfolio, expressed as a percentage of par (face) value. This number reveals if the portfolio favors bonds selling at prices above or below par value (premium or discount securities respectively.)

Best Fit Index
Alpha, beta, and R-squared statistics are presented for a broad market index and a "best fit" index. The Best Fit Index identified in this report was determined by Morningstar by calculating R-squared for the fund against approximately 100 indexes tracked by Morningstar. The index representing the highest R-squared is identified as the best fit index. The best fit index may not be the fund's benchmark, nor does it necessarily contain the types of securities that may be held by the fund or portfolio.

Beta
Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Credit Quality Breakdown
Credit Quality breakdowns are shown for corporate-bond holdings in the fund's portfolio and depict the quality of bonds in the underlying portfolio. It shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). Bonds not rated by an NRSRO are included in the Other/Not-Classified category.

Deferred Load %
The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Expense Ratio %
The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Front-end Load %
The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization
Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth of 10,000
For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Management Fees %
The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maximum Redemption Fee %
The Maximum Redemption Fee is the maximum amount a fund may charge if redeemed in a specific time period after the fund's purchase (for example, 30, 180, or 365 days).

Mean
Mean is the annualized geometric return for the period shown.

Morningstar Analyst Rating™
Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at east every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a

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10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings").The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

- ***Morningstar Quantitative Rating:*** Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

- ***Quantitative Parent pillar:*** Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative People pillar:*** Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

- ***Quantitative Process Pillar:*** Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings **have not been made available** to the issuer of the security prior to publication.

Risk Warning

The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

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Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for funds and separate accounts with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. For more information about the Morningstar Rating for funds, including its methodology, please go to global.morningstar.com/managerdisclosures

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as measured by a bond's effective duration. Morningstar seeks credit rating information from fund companies on a periodic basis (for example, quarterly). In compiling credit rating information, Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations. For a list of all NRSROs, please visit http://www.sec.gov/divisions/marketreg/ ratingagency.htm. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/ agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating; and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. NRSRO or rating agency ratings can change from time to time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal-bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases, static breakpoints are used. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

P/E Ratio TTM
The Price/Earnings Ratio (or P/E Ratio) for a fund is the weighted average of the P/E Ratios of the stocks in its portfolio. The P/E Ratio of a stock is the stock's current price divided by the company's trailing 12-month earnings per share. A high P/E Ratio usually indicates the market will pay more to obtain the company's earnings because it believes in the company's abilities to increase their earnings. A low P/E Ratio indicates the market has less confidence that the company's earnings will increase, however value investors may believe such stocks have an overlooked or undervalued potential for appreciation.

Percentile Rank in Category
Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Performance Quartile
Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure
Potential Capital Gains Exposure is an estimate of the percent of a fund's assets that represent gains. It measures how much the fund's assets have appreciated, and it can be an indicator of possible future capital gains distributions. A positive potential capital gains exposure value means that the fund's holdings have generally increased in value while a negative value means that the fund has reported losses on its book.

Quarterly Returns
Quarterly Return is calculated applying the same methodology as Total Return except it represents return through each quarter-end.

R-Squared
R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure
The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Sector Weightings
Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change
Shares Change represents the number of shares of a stock bought or sold by a fund since the previously reported portfolio of the fund.

Sharpe Ratio
Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation
Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Total Return
Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Trailing Returns
Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Investment Risks

International/Emerging Market Equities: Investing in international securities involves special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies: Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor

to increased industry-specific risks.

Non-Diversified Strategies: Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities: Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities: Portfolios that invest in companies with market capitalization below $10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds: Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDRs: The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDR might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds: The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt: Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs): ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs: Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions: When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short: Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk: Closed-end fund, ETF, and HOLDR trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk: The market price of ETFs, HOLDRs, and closed-end funds traded on the secondary market is subject to the forces of supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk: The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds: Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns: High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

Benchmark Disclosure

BBgBarc US Agg Bond TR USD
This index is composed of the BarCap Government/Credit Index, the Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which includes the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond ETF.

MSCI EAFE NR USD
This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index

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Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

S&P 500 TR USD
A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: SPDR® S&P 500 ETF Trust.

USTREAS T-Bill Auction Ave 3 Mon
Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

Important Disclosures

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Any factors discussed, including past performance of various investment strategies, sectors, vehicles and indices, are not indicative of future results.

Past performance is not a guarantee of future results. Current performance may be lower or higher than the performance data quoted. The investment return and principal value of an investment will fluctuate, so that an investor's assets, when sold, may be worth more or less than their original cost.

The performance data provided is calculated using a time and asset-weighted Modified Dietz methodology. The Gross of Fees Return shown reflects the deduction of fees and expenses associated with the underlying mutual funds held in the portfolio (the "Underlying Fund Fee"). The Net of Fees Return shown reflects the deduction of the Underlying Fund Fee, Service Fee, and State Administrative Fee (together, the "Total Annual Asset-Based Fee"). The returns shown do not reflect account maintenance fees or other account level service-based fees (e.g., returned check fees, statement delivery fees, etc.).

There is no guarantee that investment objectives will be attained. Results may vary. There is no guarantee that risk can be managed successfully.

Diversification and strategic asset allocation do not guarantee a profit or protect against a loss in declining markets. **All investments are subject to risk, including the loss of principal.**

It is important to remember that there are risks inherent in any investment and that there is no assurance that any money manager, fund, asset class, index, style or strategy will provide positive performance over time.

Investors should carefully consider the investment objectives, risks, charges and expenses of any mutual fund before investing. This and other important information can be found in the fund prospectus and, if available, the summary prospectus, which may be obtained by visiting www.morningstar.com. Please read the prospectus and, if available, the summary prospectus carefully.

Foreign investments are subject to risks not ordinarily associated with domestic investments, such as currency, economic and political risks, and may follow different accounting standards than domestic investments.

Investments in emerging or developing markets involve exposure to economic structures that are generally less diverse and mature, and to political systems that can be expected to have less stability than those of more developed countries. These securities may be less liquid and more volatile than investments in US and longer established non-US markets.

Portfolios that invest in fixed income securities are subject to several general risks, including interest rate risk, credit risk, the risk of issuer default, liquidity risk and market risk. These risks can affect a security's price and yield to varying degrees, depending upon the nature of the instrument, and may occur from fluctuations in interest rates, a change to an issuer's individual situation or industry, or events in the financial markets. In general, a bond's yield is inversely rated to its price. Bonds can lose their value as interest rates rise and an investor can lose principal. If sold prior to maturity, fixed income securities are subject to gains/losses based on the level of interest rates, market conditions and the credit quality of the issuer.

Liquidity risk increases when particular investments are difficult to purchase or sell. A lack of liquidity also may cause the value of investments to decline. Illiquid investments may be harder to value, especially in changing markets. Typically liquid investments may become illiquid, particularly during periods of market turmoil. When illiquid assets must be sold in such market conditions (to meet redemption requests or other cash needs for example), it may be necessary to sell such assets at a loss.

Short-term fixed income securities are susceptible to fluctuations in interest rates. If interest rates rise, bond prices will decline, despite the lack of change in both coupon and maturity. Price volatility typically increases with the length of the maturity and decreases as the size of the coupon decreases.

Investments in intermediate- and long-term fixed income securities involve interest rate risk and inflation risk, which could reduce the value or real return of an investment should interest rates rise.

Inflation is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling.

Mutual funds included in portfolios charge additional fees and expenses outside of the Total Annual Asset-Based Fee for this program. Mutual funds may additionally charge a redemption fee if shares are redeemed by within a specified period of time. The amount of the redemption fee, as well as the minimum holding period, is disclosed in each of the respective fund prospectuses. For complete details, please refer to the applicable fund prospectus.

Mutual funds may use derivatives that are often more volatile than other investments and may magnify the fund's gains or losses. An investment that uses derivatives could be negatively affected if the change in the market value of its securities fails to correlate adequately with the values of the derivatives it purchased or sold.

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Securities are not insured or guaranteed by the Federal Deposit Insurance Corporation (FDIC), the Federal Reserve, the U.S Securities and Exchange Commission (SEC) or any other government agency.

All performance is expressed in US dollars. Sources: Bloomberg Barclay; Federal Reserve Board; MSCI; Standard & Poor's; US Treasury Department; Bloomberg; and US Bureau of Labor Statistics.

The information on indices is presented for illustrative purposes only and is not intended to imply the potential performance of any fund or investment. Index performance assumes the reinvestment of all distributions, but does not assume any transaction costs, taxes, management fees or other expenses, which would reduce the performance shown. Indices are unmanaged and are not available for direct investment.

Bloomberg Barclays Global Aggregate ex-U.S. Bond Index is designed to be a broad-based measure of the global investment-grade, fixed rate, fixed income corporate markets outside the United States.

Bloomberg Barclays Global Aggregate Negative Yielding Debt TR Index Value Unhedged USD represents the market value in US dollars ($) of unhedged global negative-yielding debt securities.

Bloomberg Barclays U.S. Aggregate Bond Index represents securities that are SEC registered, taxable and dollar denominated. The index covers the U.S. investment-grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis. Securities must have at least one year to final maturity regardless of call features and must have at least $250 million par amount outstanding.

Bloomberg Barclays U.S. Treasury Bill 6–9 Month Index represents United States-issued government debt with a bond maturity between six months and nine months.

Bloomberg Commodity Index is designed to be a highly liquid and diversified benchmark for the commodity futures market. The index is composed of exchange-traded futures and represents 20 physical commodities, which are weighted to account for economic significance and market liquidity (subject to weighting restrictions).

Bloomberg Barclays Long U.S. Treasury Index includes all publicly issued, U.S. Treasury securities that have a remaining maturity of 10 or more years, are rated investment grade and have $250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non-convertible.

Bloomberg Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index represents inflation-protected securities issued by the U.S. Treasury. Securities must be investment-grade, publicly issued, dollar-denominated, have at least one year remaining to maturity and have at least $250 million par amount outstanding.

Bloomberg Barclays USD Emerging Markets Government RIC Capped Index is designed to measure the investment return of dollar-denominated bonds that have maturities longer than one year and were issued by emerging market governments and government-related issuers. The index is capped, which means that its exposure to any particular bond is limited to a maximum of 20% and its aggregate exposure to issuers that individually constitute 5% or more is limited to 48%. If the index, as constituted based on market weights, exceeds the 20% or 48% limits, the excess is reallocated to bonds of other issuers represented in the index.

Bloomberg Barclays U.S. Treasury Bill 1–3 Month Index is the one-to-three month component of the U.S. Treasury Bill Index. The Bloomberg Barclays Treasury Bill Index includes U.S. Treasury bills with a remaining maturity from one up to (but not including) 12 months. It excludes zero coupon strips.

Bloomberg Barclays U.S. Aggregate Float Adjusted Index provides broad exposure to the U.S. investment-grade bond market. The float-adjusted index excludes U.S. Treasuries, agencies, and mortgage-backed securities (MBS) held in Federal Reserve accounts, thereby reducing the market value weight of these securities.

Dow Jones U.S. Total Stock Market Index is an unmanaged, float-adjusted market-capitalization-weighted index providing broad-based coverage of the U.S. equity market. The index is considered a total market index, representing the top 95% of the U.S. stock market based on market capitalization. To be included in the index, a security generally must be all of the following: an equity security (common stock, REIT or limited partnership), a security that has its primary market listing in the U.S. and be issued by U.S. headquartered company.

MSCI ACWI (All Country World Index) Index ex-USA (net of taxes) is a subset of the MSCI ACWI Index, a free-float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. This version of the index excludes the United States. The index is net because dividends are reinvested after deducting a withholding tax from dividend distributions. Since taxes are withheld from the MSCI ACWI Index ex-USA (net of taxes), the performance of the MSCI ACWI Index ex-USA (net of taxes) will generally be lower than that of the MSCI ACWI Index ex-USA (gross of taxes).

MSCI ACWI (All Country World Index) Index (net of taxes) is a free-float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. As of May 30, 2019, the MSCI ACWI consisted of 47 country indices comprising 23 developed and 24 emerging market country indices. The developed market country indices included are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indices included are Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates. The index is net because dividends are reinvested after deducting a withholding tax from dividend distributions. Since taxes are withheld from the MSCI ACWI Index (net of taxes), the performance of the MSCI ACWI Index (net of taxes) will generally be lower than that of the MSCI ACWI Index (gross of taxes).

MSCI EAFE (Europe, Australasia and the Far East) Index (net of taxes) is a free-float-adjusted market-capitalization index that is designed to measure developed market equity performance, excluding the United States and Canada. As of May 30, 2019, the MSCI EAFE Index consisted of the following 21 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom. The index is net because dividends are reinvested after deducting a withholding tax from dividend distributions. Since taxes are withheld from the MSCI EAFE Index (net of taxes), the performance of the MSCI EAFE Index (net of taxes) will generally be lower than that of the MSCI EAFE Index (gross of taxes).

MSCI Emerging Markets Index (net of taxes) is a free-float adjusted, market-capitalization index that is designed to measure equity market performance of emerging markets. As of May 30, 2019, the MSCI Emerging Markets Index consisted of the following 26 emerging market country indices: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates. The index is net because dividends are reinvested after deducting a withholding tax from dividend distributions. Since taxes are withheld from the MSCI Emerging Markets Index (net of taxes), the performance of the MSCI Emerging Markets Index (net of taxes) will generally be lower than that of the MSCI Emerging Markets Index (gross of taxes).

MSCI USA Investable Market Index (IMI) is designed to measure the performance of the large, mid and small cap segments of the US market. With 2,428 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in the U.S.

MSCI USA Small Cap Index is an unmanaged index designed to measure the performance of the small-cap segment of the US equity market. The index represents approximately 14% of the free float-adjusted market capitalization in the U.S.

Purchasing Managers' Index™ (PMI™) data are compiled by IHS Markit for more than 40 economies worldwide. The monthly data are derived from surveys of senior executives at private sector companies and are available only via subscription. The PMI dataset features a headline number, which indicates the overall health of an economy, and sub-indices, which provide insights into other key economic drivers such as GDP, inflation, exports, capacity utilization, employment and inventories. The PMI data are used by financial and corporate professionals to better understand where economies and markets are headed, and to uncover opportunities.

S&P GSCI Gold Index, a sub-index of the S&P GSCI Index, provides investors with a reliable and publicly available benchmark for investment performance in the gold commodity markets. The index is designed to be tradable, readily accessible to market participants and cost efficient to implement. The S&P GSCI Index is widely recognized as the leading measure of general commodity price movements and inflation in the world economy.

S&P GSCI Crude Oil Index, a sub-index of the S&P GSCI, provides investors with a reliable and publicly available benchmark for investment performance in the crude oil commodity markets. The index is designed to be tradable, readily accessible to market participants and cost efficient to implement. The S&P GSCI is widely recognized as the leading measure of general commodity price movements and inflation in the world economy. Spot price in the S&P GSCI means the price of the S&P GSCI futures holdings.

S&P 500 Index, an unmanaged index, includes 500 of the largest stocks (in terms of stock market value) in the United States; prior to March 1957, it consisted of 90 of the largest stocks. Although the S&P 500 focuses on the large-cap segment of the market, with approximately 80% coverage of U.S. equities, it is also used as a proxy for the total U.S. equity market.

US Dollar Index: The US Dollar Index (USDX, DXY, DX) is an index (or measure) of the value of the United States dollar relative to a basket of foreign currencies, often referred to as a basket of U.S. trade partners' currencies.

Blended Benchmark Definitions

As of September 30, 2020

Growth Portfolio

50% Dow Jones US Total Stock Market TR USD, 37% MSCI EAFE NR USD, 12% MSCI EM NR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Growth Portfolio

42% Dow Jones US Total Stock Market TR USD, 29% MSCI EAFE NR USD, 9% MSCI EM NR USD, 12% Bloomberg Barclays US Aggregate Bond TR USD, 2% Bloomberg Barclays Long Term US Treasury TR USD, 3% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Growth Portfolio

32% Dow Jones US Total Stock Market TR USD, 21% MSCI EAFE NR USD, 7% MSCI EM NR USD, 30% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Balanced Portfolio

26% Dow Jones US Total Stock Market TR USD, 18% MSCI EAFE NR USD, 6% MSCI EM NR USD, 40% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Income & Growth Portfolio

20% Dow Jones US Total Stock Market TR USD + 15% MSCI EAFE NR USD + 5% MSCI EM NR USD + 48% Bloomberg Barclays US Aggregate Bond TR USD + 4% Bloomberg Barclays Long Term US Treasury TR USD + 5% Bloomberg Barclays US Treasury US TIPS TR USD + 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD + 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Income Portfolio

60% Bloomberg Barclays US Aggregate Bond TR USD + 5% Bloomberg Barclays Long Term US Treasury TR USD + 8% Bloomberg Barclays US Treasury US TIPS TR USD + 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD + 25% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Cash Preservation Portfolio

100% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2038 Portfolio

29% Dow Jones US Total Stock Market TR USD, 19% MSCI EAFE NR USD, 7% MSCI EM NR USD, 35% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2036 Portfolio

26% Dow Jones US Total Stock Market TR USD, 18% MSCI EAFE NR USD, 6% MSCI EM NR USD, 40% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2034 Portfolio

23% Dow Jones US Total Stock Market TR USD, 16% MSCI EAFE NR USD, 6% MSCI EM NR USD, 43% Bloomberg Barclays US Aggregate Bond TR USD, 4% Bloomberg Barclays Long Term US Treasury TR USD, 5% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2032 Portfolio

18% Dow Jones US Total Stock Market TR USD, 12% MSCI EAFE NR USD, 5% MSCI EM NR USD, 52% Bloomberg Barclays US Aggregate Bond TR USD, 4% Bloomberg Barclays Long Term US Treasury TR USD, 6% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2030 Portfolio

13% Dow Jones US Total Stock Market TR USD, 8% MSCI EAFE NR USD, 4% MSCI EM NR USD, 59% Bloomberg Barclays US Aggregate Bond TR USD, 5% Bloomberg Barclays Long Term US Treasury TR USD, 8% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2028 Portfolio

8% Dow Jones US Total Stock Market TR USD, 5% MSCI EAFE NR USD, 2% MSCI EM NR USD, 53% Bloomberg Barclays US Aggregate Bond TR USD, 4% Bloomberg Barclays Long Term US Treasury TR USD, 6% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 20% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2026 Portfolio

5% Dow Jones US Total Stock Market TR USD, 4% MSCI EAFE NR USD, 1% MSCI EM NR USD, 53% Bloomberg Barclays US Aggregate Bond TR USD, 4% Bloomberg Barclays Long Term US Treasury TR USD, 6% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 25% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2024 Portfolio

3% Dow Jones US Total Stock Market TR USD, 2% MSCI EAFE NR USD, 0% MSCI EM NR USD, 36% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 50% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment 2022 Portfolio

41% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 50% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Conservative Year of Enrollment Enrolled Portfolio

41% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 50% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2038 Portfolio

47% Dow Jones US Total Stock Market TR USD, 33% MSCI EAFE NR USD, 10% MSCI EM NR USD, 5% Bloomberg Barclays US Aggregate Bond TR USD, 1% Bloomberg Barclays Long Term US Treasury TR USD, 2% Bloomberg Barclays US Treasury US TIPS TR USD, 1% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2036 Portfolio

47% Dow Jones US Total Stock Market TR USD, 33% MSCI EAFE NR USD, 10% MSCI EM NR USD, 5% Bloomberg Barclays US Aggregate Bond TR USD, 1% Bloomberg Barclays Long Term US Treasury TR USD, 2% Bloomberg Barclays US Treasury US TIPS TR USD, 1% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2034 Portfolio

42% Dow Jones US Total Stock Market TR USD, 29% MSCI EAFE NR USD, 9% MSCI EM NR USD, 12% Bloomberg Barclays US Aggregate Bond TR USD, 2% Bloomberg Barclays Long Term US Treasury TR USD, 3% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2032 Portfolio

36% Dow Jones US Total Stock Market TR USD, 26% MSCI EAFE NR USD, 8% MSCI EM NR USD, 20% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2030 Portfolio

32% Dow Jones US Total Stock Market TR USD, 21% MSCI EAFE NR USD, 7% MSCI EM NR USD, 30% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2028 Portfolio

26% Dow Jones US Total Stock Market TR USD, 18% MSCI EAFE NR USD, 6% MSCI EM NR USD, 40% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2026 Portfolio

18% Dow Jones US Total Stock Market TR USD, 12% MSCI EAFE NR USD, 5% MSCI EM NR USD, 49% Bloomberg Barclays US Aggregate Bond TR USD, 4% Bloomberg Barclays Long Term US Treasury TR USD, 5% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 5% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2024 Portfolio

10% Dow Jones US Total Stock Market TR USD, 7% MSCI EAFE NR USD, 3% MSCI EM NR USD, 55% Bloomberg Barclays US Aggregate Bond TR USD, 5% Bloomberg Barclays Long Term US Treasury TR USD, 8% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 10% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment 2022 Portfolio

5% Dow Jones US Total Stock Market TR USD, 4% MSCI EAFE NR USD, 1% MSCI EM NR USD, 55% Bloomberg Barclays US Aggregate Bond TR USD, 5% Bloomberg Barclays Long Term US Treasury TR USD, 8% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 20% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Moderate Year of Enrollment Enrolled Portfolio

55% Bloomberg Barclays US Aggregate Bond TR USD, 5% Bloomberg Barclays Long Term US Treasury TR USD, 8% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 30% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment 2038 Portfolio

49% Dow Jones US Total Stock Market TR USD, 35% MSCI EAFE NR USD, 11% MSCI EM NR USD, 2% Bloomberg Barclays US Aggregate Bond TR USD, 1% Bloomberg Barclays Long Term US Treasury TR USD, 1% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment 2036 Portfolio

49% Dow Jones US Total Stock Market TR USD, 35% MSCI EAFE NR USD, 11% MSCI EM NR USD, 2% Bloomberg Barclays US Aggregate Bond TR USD, 1% Bloomberg Barclays Long Term US Treasury TR USD, 1% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment 2034 Portfolio

47% Dow Jones US Total Stock Market TR USD, 33% MSCI EAFE NR USD, 10% MSCI EM NR USD, 5% Bloomberg Barclays US Aggregate Bond TR USD, 1% Bloomberg Barclays Long Term US Treasury TR USD, 2% Bloomberg Barclays US Treasury US TIPS TR USD, 1% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment 2032 Portfolio

47% Dow Jones US Total Stock Market TR USD, 33% MSCI EAFE NR USD, 10% MSCI EM NR USD, 5% Bloomberg Barclays US Aggregate Bond TR USD, 1% Bloomberg Barclays Long Term US Treasury TR USD, 2% Bloomberg

Barclays US Treasury US TIPS TR USD, 1% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment 2030 Portfolio

44% Dow Jones US Total Stock Market TR USD, 31% MSCI EAFE NR USD, 10% MSCI EM NR USD, 7% Bloomberg Barclays US Aggregate Bond TR USD, 2% Bloomberg Barclays Long Term US Treasury TR USD, 3% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment 2028 Portfolio

42% Dow Jones US Total Stock Market TR USD, 29% MSCI EAFE NR USD, 9% MSCI EM NR USD, 12% Bloomberg Barclays US Aggregate Bond TR USD, 2% Bloomberg Barclays Long Term US Treasury TR USD, 3% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment 2026 Portfolio

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Growth Year of Enrollment 2024 Portfolio

26% Dow Jones US Total Stock Market TR USD, 18% MSCI EAFE NR USD, 6% MSCI EM NR USD, 40% Bloomberg Barclays US Aggregate Bond TR USD, 3% Bloomberg Barclays Long Term US Treasury TR USD, 4% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment 2022 Portfolio

15% Dow Jones US Total Stock Market TR USD, 11% MSCI EAFE NR USD, 4% MSCI EM NR USD, 56% Bloomberg Barclays US Aggregate Bond TR USD, 4% Bloomberg Barclays Long Term US Treasury TR USD, 7% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 1% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Growth Year of Enrollment Enrolled Portfolio

5% Dow Jones US Total Stock Market TR USD, 4% MSCI EAFE NR USD, 1% MSCI EM NR USD, 48% Bloomberg Barclays US Aggregate Bond TR USD, 4% Bloomberg Barclays Long Term US Treasury TR USD, 6% Bloomberg Barclays US Treasury US TIPS TR USD, 2% Bloomberg Barclays USD Emerging Markets Government RIC Capped TR USD, 30% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

Tax considerations, while important, are just one factor to consider before making any investment decision. **Lockwood is not a tax advisor and this communication does not constitute tax advice.** Advisors should consult with a qualified tax professional for specific tax advice.

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Brochure) which may be obtained through your financial advisor or by writing to: Lockwood, Attn: Legal Department (AIM #19K-0203), 760 Moore Road, King of Prussia, PA 19406, or by calling (800) 200-3033, option 3.

Office of the State Actuary
"Supporting financial security for generations."

2020 ACTUARIAL VALUATION REPORT

Guaranteed Education Tuition Program

NOVEMBER 2020

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Melinda Aslakson

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Kelly Burkhart

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Graham Dyer

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Guaranteed Education Tuition Program
Actuarial Valuation Report
As of June 30, 2020

November 2020

This report documents the results of an actuarial valuation of the Guaranteed Education Tuition (GET) program. The primary purpose of this report is to update the annual financial status of the program through the calculation of the funded status for current contracts, in combination with the projection of the expected funded status in future years. This report also provides information on the sensitivity of the valuation results to key assumptions and developments in the program since the last valuation.

This report is organized in the following sections:

- Executive Summary.
- Actuarial Certification Letter.
- Background.
- Best Estimate Results.
- Sensitivity of Best Estimate Results.
- Appendices.

The **Executive Summary** provides the key results for this actuarial valuation. The **Background** section explains how this valuation complements annual Washington College Savings Plans (WA529) communications, how the Office of the State Actuary (OSA) supports the GET program, and provides a general understanding of the GET program. The next two sections provide detailed actuarial asset, liability, and cash flow information over the next 25 years. The **Appendices** describe the key assumptions and methods, assets, participant data, and additional information used to prepare this valuation. It also includes information on the most recently adopted unit price including the assumptions and methods that went into the best estimate unit price calculation.

We encourage you to submit any questions you might have concerning this report to our mailing address or our e-mail address at state.actuary@leg.wa.gov. We also invite you to visit WA529's website for further information regarding Washington's GET program.

Sincerely,

Matthew M. Smith, FCA, EA, MAAA
State Actuary

Sarah Baker
Actuarial Analyst

Executive Summary

EXECUTIVE SUMMARY

INTENDED USE

The purpose of this report is to provide an annual update of the financial status of the GET program based on a June 30, 2020, measurement date. This report provides valuation results of the funded status for current contracts, the projected funded status, and developments in the program over the past year. This report also discloses the data, assumptions, and methods we – OSA – used to develop the valuation results and shows the sensitivity of the valuation results to key assumptions.

All this information should be used together to understand the current status of the GET program.

This report is one of several key documents related to the GET program throughout a fiscal year. This report is not intended to replace program information supplied by WA529 staff or other analysis supplied by OSA, including analysis provided for the Comprehensive Annual Financial Report. Please replace this report when a more recent report becomes available.

COMMENTS ON 2020 RESULTS

Many factors can influence how actuarial valuation results change from one measurement date to the next. Those factors include – changes in the covered population; changes in program provisions, assumptions, and methods; and experience that varies from our expectations.

Significant factors for this year's valuation include the following:

- Investment returns of 7.40 percent exceeding the expected 5.25 percent for the plan year ending June 30, 2020, (increase to funded status);
- Reduction to the prospective assumed rate of investment return from 5.25 percent to 4.75 percent (decrease to funded status); and
- The addition of new units purchased after last year's actuarial valuation.

This valuation reflects unredeemed purchased or contracted units at June 30, 2020. Please see the Gain/Loss Analysis in the **Best Estimate Results** Section for information on other factors.

The WA529 Committee, at their September 2020 meeting, adopted a new unit price of $133 for the 2020-21 enrollment period. We will include the impact of new units purchased or contracted during the next enrollment period in next year's actuarial valuation report.

EXECUTIVE SUMMARY

COMMENTS ON 2020 RESULTS *continued*

The results of the valuation exclude the impacts of differential, or tiered tuition. If differential tuition were implemented and included in the GET unit payout value, the results of this valuation could materially change.

FUNDED STATUS OF CURRENT CONTRACTS

The following table summarizes the key measures of the program's funded status as of the current and prior year's valuation dates. This table provides a point-in-time estimate of the health of the program and should not be considered in isolation or as the sole measure of the program's status.

Funded Status Summary		
(Dollars in Millions)	**2020**	**2019**
Present Value of Future Obligations	$1,190	$1,108
Present Value of Fund	$1,559	$1,456
Funded Status	131.0%	131.3%
Reserve/(Deficit)	$369	$347

RISKS INHERENT IN ACTUARIAL MEASUREMENTS

Readers should exercise caution when interpreting and reaching conclusions based on a single, point-in-time measurement. In the course of conducting actuarial analyses, we make many assumptions. In some cases, small changes in these assumptions, or experience that plays out differently than expected, can lead to significant changes in the measurements.

For example, the program's funded status is highly sensitive to changes in tuition policy and associated changes in assumed tuition growth. The program's funded status is also sensitive to changes to the long-term assumed rate of investment return. Small increases/decreases in the assumed rate of return can produce large increases/decreases in the funded status, while small increases/decreases in the assumed tuition growth can produce large decreases/increases in the funded status.

Given recent projected state revenue shortfalls and volatility in the financial markets, there is a higher likelihood that experience in the short-term will deviate from our assumptions. Additionally, these assumptions may change next year as a result of:

- Updated Capital Market Assumptions (CMAs) from the Washington State Investment Board (WSIB);
- Tuition policy set by the Legislature for the 2021-23 Biennium; and
- The results of the next GET Experience Study.

To evaluate how the point-in-time measurements may change, we perform sensitivity tests – a process for assessing the impact of a change in an actuarial assumption or method on an actuarial measurement. Please see the **Sensitivity of Best Estimate Results** section and the **Appendices** for more information, including the results of the sensitivity tests.

EXECUTIVE SUMMARY

PROJECTION OF CURRENT CONTRACTS

The next table shows a projection of the program's funded status at future even-year measurement dates assuming no future unit sales, aside from unit purchases already under contract. Along with the funded status, the table shows the expected assets, net cash flows, and present value of obligations (so the reader can assess the size of the program). A full version of this table can be found in the **Best Estimate Results** section.

Projection of Current Contracts Only *(If all Assumptions are Realized)*				
(Dollars in Millions); EOY = End of Year				
Fiscal Year Ending June 30	**Funded Status**	**EOY Obligation Value**	**EOY Fund Value**	**Net Cash Flow**
2020	131%	$1,190	$1,559	N/A
2022	137%	1,102	1,507	(17)
2024	146%	965	1,409	(46)
2026	161%	794	1,281	(47)
2028	186%	620	1,155	(59)
2030	232%	444	1,031	(55)
2032	314%	301	945	(34)
2034	455%	199	906	(12)
2036	721%	125	900	2
2038	*	66	917	11
2040	*	24	958	24
2042	*	4	1,029	39
2044	*	$0	$1,124	50

**Funded Status exceeds 1,000% due to very small obligation value.*

A large funded status develops under this projection because we assume the current reserve of $369 million will continue to grow with the long-term expected 4.75 percent rate of investment return each year. However, if the program is permanently closed or terminated, the program's asset allocation may change leading to a lower assumed rate of investment return.

Please see the **Sensitivity of Best Estimate Results** section for how these results could change under different assumptions and how the results change if the program were terminated.

EXECUTIVE SUMMARY

KEY ASSUMPTIONS

The results of this valuation are based on several assumptions that include both economic and demographic factors. We summarize the key assumptions in the next table. Please see the Assumptions, Methods, and Data sections in the **Appendices** for how we developed the assumptions used in this valuation. Note that the investment return assumption decreased from 5.25 percent to 4.75 percent from our last valuation.

Key Assumptions	
Investment Return	
All Years	4.75%
Tuition Growth	
2020-21	2.4%
2021-29	5.5%
2029-31+	5.0%

CONTRACT DATA

The table below summarizes the current contract and unit data used in this valuation for the plan year ending June 30, 2020, as well as for the prior year. Please see the Participant Data in the **Best Estimate Results** section for a table reconciling outstanding GET units from last year to this year. Please also see the Contract Data section in the **Appendices** for additional information on when units were purchased and their expected use years.

Contract Summary		
	2020	2019
Number of Current Contracts	67,153	67,215
Number of Units Outstanding	10,289,070	10,418,088

Actuarial Certification Letter

Actuarial Certification Letter
Guaranteed Education Tuition Program
Actuarial Valuation Report
As of June 30, 2020

November 2020

This report documents the results of an actuarial valuation for the Washington Guaranteed Education Tuition (GET) Program defined under Chapter 28B.95 of the Revised Code of Washington (RCW). The primary purpose of this report is to update the annual financial status of the program through the calculation of the funded status for current contracts, in combination with the projection of the expected funded status in future years. This report also provides information on the sensitivity of the valuation results to key assumptions and developments in the program since the last valuation. This report should not be used for other purposes. Please replace this report with a more recent report when available.

The results summarized in this report involve calculations that require assumptions about future economic and demographic events. With the exception of subsequent changes to the investment return and tuition growth assumptions, we developed the assumptions used in this valuation during the *2015 GET Experience Study*. Copies of this letter are available upon request. We provide supporting analysis for the investment return and tuition growth assumptions in the **Appendices** of this report.

Actuarial standards of practice that specifically apply to the measurement of obligations under prepaid tuition programs have not been defined within the actuarial profession. We used the standards of practice for pension systems where possible to guide the actuarial valuation of the GET program. In our opinion, the assumptions, methods, and calculations used in the valuation are reasonable and appropriate for the primary purpose as stated above and are in conformity with generally accepted actuarial principles and standards of practice as of the date of this publication. The use of another set of assumptions and methods, however, could also be reasonable and could produce materially different results. Actual results may vary from our expectations.

The results of the valuation exclude the potential impacts of differential tuition. If differential tuition were implemented and included in the GET unit payout value, the results of this valuation could materially change. This analysis will need to be updated in the future if changes are made to the GET program or the Legislature modifies current tuition policy.

Washington College Savings Plans (WA529) staff provided the participant and historical data to us. We checked the data for reasonableness as appropriate based on the purpose of this valuation. The Washington State Investment Board (WSIB) provided financial and asset information. We did not audit the data and relied on all the information provided as complete and accurate. In our opinion, this information is adequate and substantially complete for the purposes of this valuation.

No members of the WA529 Committee or their respective staff attempted to bias our work product. We are not aware of any matters that impacted the independence and objectivity of our work.

We intend this valuation to be used by the WA529 Committee during the 2021 Fiscal Year only. We advise readers of this valuation to seek professional guidance as to its content and interpretation, and not to rely upon this communication without such guidance. Please read the analysis shown in this valuation as a whole. Distribution of, or reliance on, only parts of this valuation could result in its misuse and may mislead others.

Consistent with the Code of Professional Conduct that applies to actuaries, I (Michael T. Harbour) must disclose any potential conflict of interest as required under Precept 7. I purchased and have unredeemed units in GET; however, this does not impair my ability to act fairly. I performed all analysis without bias or influence. The Legislature mandated OSA to perform actuarial services for GET and Matthew M. Smith supervised the actuarial analysis.

The undersigned, with actuarial credentials, meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. While this report is intended to be complete, we are available to offer extra advice and explanations as needed.

Sincerely,

Matthew M. Smith, FCA, EA, MAAA	Michael T. Harbour, ASA, MAAA
State Actuary	Actuary

Background

BACKGROUND

PROGRAM HISTORY AND GOALS

The Washington State Legislature created the GET program in 1997. The program sold units annually from September 1, 1998, through June 30, 2015, when the, then named, GET Committee suspended new unit sales. The program reopened (and sold new units) starting on November 1, 2017.

RCW 28B.95 outlines the purpose of the GET program along with general guidelines regarding how it is administered. It includes the following goals,

- Help make higher education affordable and accessible to all citizens of the state of Washington;
- Provide an additional financial option for individuals, organizations, and families to save for college;
- Encourage savings and enhance the ability of Washington citizens to obtain financial access to institutions of higher education;
- Encourage elementary and secondary school students to do well in school as a means of preparing for and aspiring to higher education attendance; and
- Promote a well-educated and financially secure population to the ultimate benefit of all citizens of the state of Washington.

The statute establishes the five-member Committee on Advanced Tuition Payment and College Savings also known as the WA529 Committee. The WA529 Committee meets regularly to discuss the goals and status of the program, make administrative decisions, and set the unit price for each enrollment period.

WA529 staff supports the functions of the program and the WA529 Committee by administering the program and staffing WA529 Committee meetings. WA529 staff also prepare studies and reports that are directed to the WA529 Committee by the Legislature. Communications from WA529 staff can be found on the Washington Student Achievement Council (WSAC) website.

BACKGROUND

PROGRAM HISTORY AND GOALS *continued*

OSA assists the WA529 Committee and the Legislature by providing actuarial services and consulting. OSA's three primary services for WA529 include:

- Prepare an annual actuarial valuation of GET (this document) for the WA529 Committee.
- Prepare unit price-setting analysis for the WA529 Committee.
- Consult, price, and communicate the effects of potential changes to the GET program for the WA529 Committee or the Legislature.

This valuation should not be used in isolation to understand the ongoing health of the GET program. Rather, this document should be used together with the annual report from WA529 staff, OSA's price-setting analysis (when performed), and any other studies or reports created by WA529 staff or OSA.

BACKGROUND

PLAN DESCRIPTION

The terms of the GET program are a combination of RCW 28B.95 (determined by the Legislature) and the GET participant agreement (determined by the WA529 Committee). Statute provides general guidelines and certain rules for the WA529 Committee, whereas the GET participant agreement states all specific details for the purchaser.

The main plan provisions are outlined below so the reader can get a sense for what cash flows occur, what parties are involved, and what drives the results of the actuarial valuation. For a complete description of the plan provisions we direct you to the GET website, which includes both summarized plan provisions and the full GET participant agreement. If the summary below conflicts with relevant statute or the GET participant agreement, the relevant statute and participant agreement supersede this summary.

The graphic below illustrates the standard yearly process when new unit sales are allowed and under normal refund rules.

Unit Price is Set	• WA529 Committee sets the price annually for the current enrollment period. • Based on adopted price-setting guidelines.
Units are Purchased	• Maximum of 800 units. • Can be purchased either through a lump sum payment or a monthly contract (with finance charges).
Money is Invested	• Investment returns on the proceeds from unit sales are expected to pay a portion of the future unit value and lowers the price of the unit today. • Invested by the Washington State Investment Board.
Units are Redeemed	• Unit Value (specific dollar amount) equals 1 percent of annual resident undergraduate tuition and state mandated fees at most expensive public Washington university at time of unit use. • Maximum of 200 units per year, plus any unused units from a prior year. • Used at any eligible in-state or out-of-state higher education institution based on Unit Value, or • Refunded based on Unit Value or transferred to another eligible beneficiary.

In December of 2019, qualified distributions were expanded as part of the Further Consolidated Appropriations Act, 2020. This federal spending bill included new 529 plan-specific provisions that allow 529 plan account owners to withdraw assets to pay for certain expenses associated with apprenticeship programs registered and certified by the Secretary of Labor under the National Apprenticeship Act, and to pay principal and interest on certain qualified education loans.

Best Estimate Results

BEST ESTIMATE RESULTS

This section provides details on our best estimate of the GET present value of obligations, assets, cash flows, and funded status information for outstanding units at June 30, 2020. Also provided in this section is a summary of the participant data used to derive these estimates.

The first subsection shows an overview of the program participant data as of the valuation date. It is this data that is used to determine how many units will be redeemed in a given year for current contracts. These future unit redemptions, along with program expenses, make up the program liabilities described in the second subsection.

In the second subsection, we show the expected value, as of the valuation date, of obligations for all future payments from the program for current contracts only. The future payments represent both unit payout values and expenses (please see the **Appendices** for further details on the expenses included in this valuation). We discount future payments to the valuation date using the expected rate of investment return to determine the present value of those future payments. To see how obligations differed from our expectations in the prior year, we include an actuarial gain/loss from fiscal year 2019 to 2020.

The third subsection shows the market value of the fund along with the actuarial value. That is, the assets currently set aside for the contracts sold as of the valuation date, along with the smoothed measure of assets of the program. The present value of the fund represents both assets currently on hand and the present value of monthly contract receivables. Similar to program obligations, we provide the actuarial gain/loss for assets over the prior fiscal year.

In the subsections, the obligations and assets combine to produce the program funded status and future cash flows. We show a history of the program's key metrics followed by our projections for the future under a closed program.

BEST ESTIMATE RESULTS

PARTICIPANT DATA

Program obligations are based on the participant data supplied by GET staff. Below we provide a summary of outstanding units by the initial "use year" for the plan year ending June 30, 2020, along with a reconciliation of units from last year's valuation. The projected benefit use year, provided by contract holders when an account is established, represents the first year the Student Beneficiary is expected to enter college and/or turn 18 years old.

Number of Units Outstanding by Use Year

Use Year	Expected Unit Value	Units Starting to be Used
2020*	$111	2,808,498
2021	117	803,298
2022	124	808,960
2023	130	790,208
2024	138	775,161
2025	145	765,091
2026	153	728,113
2027	162	603,848
2028	170	519,547
2029	179	367,904
2030	188	304,508
2031	197	239,347
2032	207	189,459
2033	217	148,081
2034	228	126,857
2035	240	114,429
2036	252	104,396
2037	264	66,296
2038	278	25,058
2039	291	8
2040	$306	0

**Includes contracts that already started using units.*

Change in Number of Outstanding Units

Number of Outstanding Units at June 30, 2019[1]	10,418,088
New Units Purchased	505,222
Units Redeemed[2]	(517,310)
Units Refunded, Defaulted, or Downgraded[3]	(101,120)
Units Rolled Over to Other 529 Plans[4]	(15,905)
Other[5]	94
Number of Outstanding Units at June 30, 2020[1]	10,289,070

[1] GET reports two fewer outstanding units.

[2] Includes adjustments for unused distributions in prior fiscal year.

[3] Includes total units in refunded account. Unit downgrades are performed upon customer request.

[4] Includes rollovers to DreamAhead and other states' 529 plans.

[5] Includes other, unexplained changes.

BEST ESTIMATE RESULTS

ACTUARIAL LIABILITIES

The following table shows the actuarial liabilities (program obligations). The obligations are the sum of the present value of future unit redemptions and administrative expenses for all unredeemed units at June 30, 2020. The obligations are measured under a closed program and exclude tuition payments or administrative costs from new units purchased after June 30, 2020. Please see **Appendix A** for further details.

Present Value of Obligations	
(Dollars in Millions)	
Present Value of Unit Redemptions	$1,161
Present Value of Administrative Expenses	30
2020 Present Value of Obligations	**$1,190**
2019 Present Value of Obligations	**$1,108**

WA529 staff provide the expected administrative expenses of the program. They represent the anticipated expenses of the program for each year until all current outstanding units are redeemed based on our current assumptions. We then calculate the present value of those expenses. In the following table, we outline the development of the present value of this obligation along with the underlying expense values.

Development of Expenses		
Fiscal Year	**Administrative Expenses**	**PV of Expenses**
2021	$5,080,610	$4,964,526
2022	3,101,777	2,893,467
2023	2,384,925	2,123,873
2024	1,942,742	1,651,638
2025	1,481,079	1,202,054
2026	1,545,733	1,197,640
2027	1,545,548	1,143,195
2028	1,602,859	1,131,824
2029	1,657,369	1,117,246
2030	1,609,590	1,035,836
2031	1,665,747	1,023,365
2032	1,707,379	1,001,377
2033	1,755,924	983,149
2034	1,804,722	964,650
2035	1,854,034	946,070
2036	1,911,065	930,951
2037	1,772,135	824,127
2038	1,819,490	807,780
2039	1,867,851	791,647
2040	1,917,785	775,953
2041	1,829,017	706,479
2042	1,600,679	590,244
2043	1,320,783	464,948
2044	$1,345,906	$452,308
PV of Expenses		**$29,724,348**

Note: PV means Present Value.

BEST ESTIMATE RESULTS

ACTUARIAL LIABILITIES *continued*

The following table demonstrates actuarial gains and losses for program obligations. We use gain/loss analysis to compare actual changes to assumed changes in the assets and obligations. We also use this analysis to determine:

- The accuracy of our valuation model and annual processing;
- Why obligations and assets changed; and,
- The reasonableness of the actuarial assumptions.

Actuarial gains will increase funded status; actuarial losses will decrease funded status. Under a reasonable set of actuarial assumptions, actuarial gains and losses will offset over long-term experience periods. Please see the following section for the gains and losses for program assets.

Gain/(Loss) Analysis Change in Obligations by Source	
2019 Present Value of Obligations	**$1,108**
Changes in 2020	
Expected Change	**($31)**
Program Gains/Losses	
Tuition Payments and Account Changes*	$17
New Units Purchased or Contracted	$55
Other	($0)
Total Program Obligations Gains/Losses	**$71**
Additional Changes	
Tuition Growth Assumption Change**	$2
Investment Return Assumption Change	$38
Method Change	$0
Update of Administrative Expenses	$1
Total Additional Changes Gains/Losses	**$41**
Total Change in 2020	**$82**
2020 Present Value of Obligations	**$1,190**

Note: Totals may not agree due to rounding.

**Includes other unit changes such as refunds, conversions, and rollovers.*

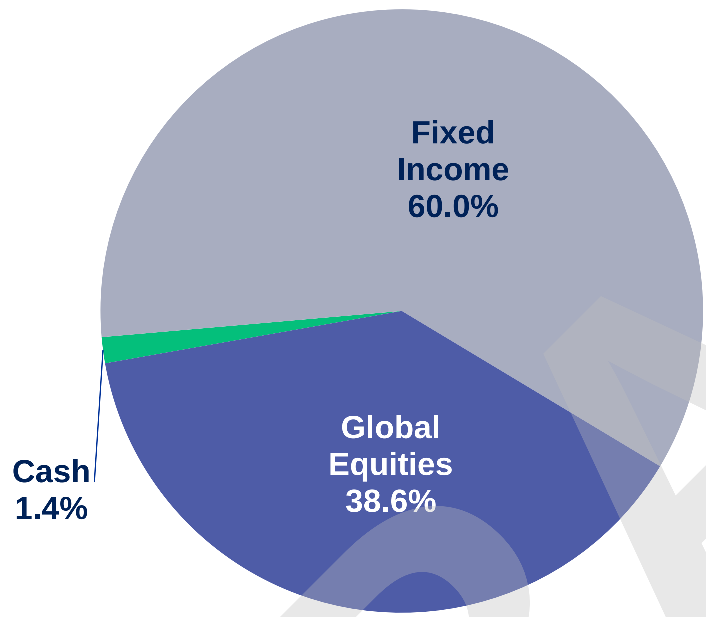
***Includes the annual update to the unit payout value.*

BEST ESTIMATE RESULTS

PROGRAM ASSETS

The chart below shows how GET program assets were invested at June 30, 2020. In late 2019, WSIB adopted a new asset allocation. The target asset allocation was moved to 40 percent global equity and 60 percent fixed income (the percentages were reversed under the prior allocation). Under current investment policy, the program is allowed to allocate up to 5 percent in cash with a long-term target of 0 percent. The figures displayed below reflect the new asset allocation.

2020 GET Fund Asset Allocation



Cash: Highly liquid, very safe investments that can be easily converted into cash, such as Treasury Bills and money-market funds.

Fixed Income: Securities representing debt obligations and usually having fixed payments and maturities. Different types of fixed income securities include government and corporate bonds, mortgage-backed securities, asset-backed securities, convertible issues, and may also include money-market instruments.

Global Equities: Shares of U.S. and non-U.S. corporations that trade on public exchanges or "over-the-counter." The ownership of a corporation is represented by shares that are claimed on the corporation's earnings and assets.

The following table shows the GET market fund value. The value of the fund includes the Market Value of Assets held by the WSIB along with the present value of the monthly contract receivables. We assume mid-valuation year timing on payments in and out of the fund for purposes of the valuation.

Market Fund Value	
(Dollars in Millions)	
Market Value of Assets at 6/30/2020	
Cash	$20
Global Equities	$563
Fixed Income	$874
Total Market Value of Assets	**$1,458**
Present Value of Monthly Contracts	$102
Total Market Fund Value	**$1,559**

BEST ESTIMATE RESULTS

PROGRAM ASSETS *continued*

The next two tables show reconciliations from last year to this year for the Market Value of Assets and Present Value (PV) of Monthly Contracts.

Change in Market Value of Assets	
(Dollars in Millions)	
2019 Market Value of Assets	**$1,355**
Changes in Net Asset Value	
Revenue	
Lump Sum Unit Purchases	$42
Custom Monthly Unit Purchases	$19
Investment Return	$100
Other Revenue	$0
Total Revenue	**$161**
Disbursements	
Refunds	($7)
Redemptions	($56)
Other Disbursements	$5
Total Disbursements	**($58)**
Net Cash Flow	**$103**
2020 Market Value of Assets	**$1,458**

Change in PV of Monthly Contract Receivables	
(Dollars in Millions)	
PV of Monthly Contracts at June 30, 2019	**$101**
Changes in PV Monthly Contracts	
Actual Payments Received in 2020	(18)
Interest Adjustment	5
Account Conversions*	(8)
PV of Monthly Contracts for New Units in 2020	20
Other**	1
Preliminary PV Receivables at June 30, 2020	**$100**
Assumption Changes or Program Changes	2
Total Changes in PV Monthly Contracts	**$1**
PV of Monthly Contracts at June 30, 2020	**$102**

**Conversion of Custom Monthly accounts to Lump-Sum accounts. Includes voluntary refunds.*

***Includes account downgrades, interest on advanced payments, and unexplained changes.*

BEST ESTIMATE RESULTS

PROGRAM ASSETS *continued*

Similar to the program obligations, we measure actuarial gains and losses for the program assets as illustrated in the following table. The gain/loss on investment earnings represents the gain or loss on all investment income including investment gain/loss on contributions and disbursements.

Gain/(Loss) Analysis Change in Assets by Source	
2019 Market Value of Fund	**$1,456**
Changes in 2020	
Expected Change	**($11)**
Program Assets Gains/Losses	
Distributions	$27
Contributions	
Existing Contracts	($1)
New Unit Sales	$42
Contract Receivables	
Existing Contracts	($6)
New Unit Sales	$20
Investment Earnings	$31
Other	($0)
Total Program Assets Gains/(Losses)	**$112**
Additional Changes	
Investment Return Assumption Change*	$2
Total Change in 2020	**$104**
2020 Market Value of Fund	**$1,559**

Note: Totals may not agree due to rounding.

**Includes an update to the discount rate used for PV of receivables.*

BEST ESTIMATE RESULTS

PROGRAM ASSETS *continued*

The following table shows the actuarial fund value, or smoothed fund value. The actuarial fund value extends the recognition of annual investment gains and losses (returns above or below expected) in order to limit the volatility due to year-to-year market fluctuation. For the purposes of this calculation, we smooth each gain or loss over an eight-year recognition period and limit the resulting actuarial value of assets to within 30 percent of the actual market value of assets as of the valuation date. We then add the best estimate present value of receivables to get the actuarial fund value.

We use the market fund value based on the market value of assets to calculate the best estimate funded status. We provide the actuarial value of assets to help readers evaluate how much a single, point-in-time measurement impacts the program's assets and funded status. Please see the **Sensitivity of Best Estimate Results** section for a funded status calculation based on the actuarial fund value. The use of another asset valuation method may also be reasonable and could produce materially different results. We believe the selected approach (as noted in the prior paragraph) is reasonable given its intended use and may not be appropriate for other uses.

Calculation of Actuarial Fund Value			
(Dollars in Millions)			
a) Market Value at 6/30/2020			$1,458
Deferred Gains and (Losses)			
Program Year Ending	**Years Remaining**	**Total Deferral**	**Remaining Deferral**
6/30/2020	7	$29	$25
6/30/2019	6	($13)	($10)
6/30/2018	5	$20	$12
6/30/2017	4	$99	$50
6/30/2016	3	($150)	($56)
6/30/2015	2	($123)	($31)
6/30/2014	1	$245	$31
b) Total Deferral			**$21**
c) Market Value less Deferral 6/30/2020 (a - b)			$1,436
d) 70% of Market Value of Assets			$1,020
e) 130% of Market Value of Assets			$1,895
f) Actuarial Value of Assets			$1,436
g) PV of Receivables			$102
h) Actuarial Fund Value (f + g)			**$1,538**

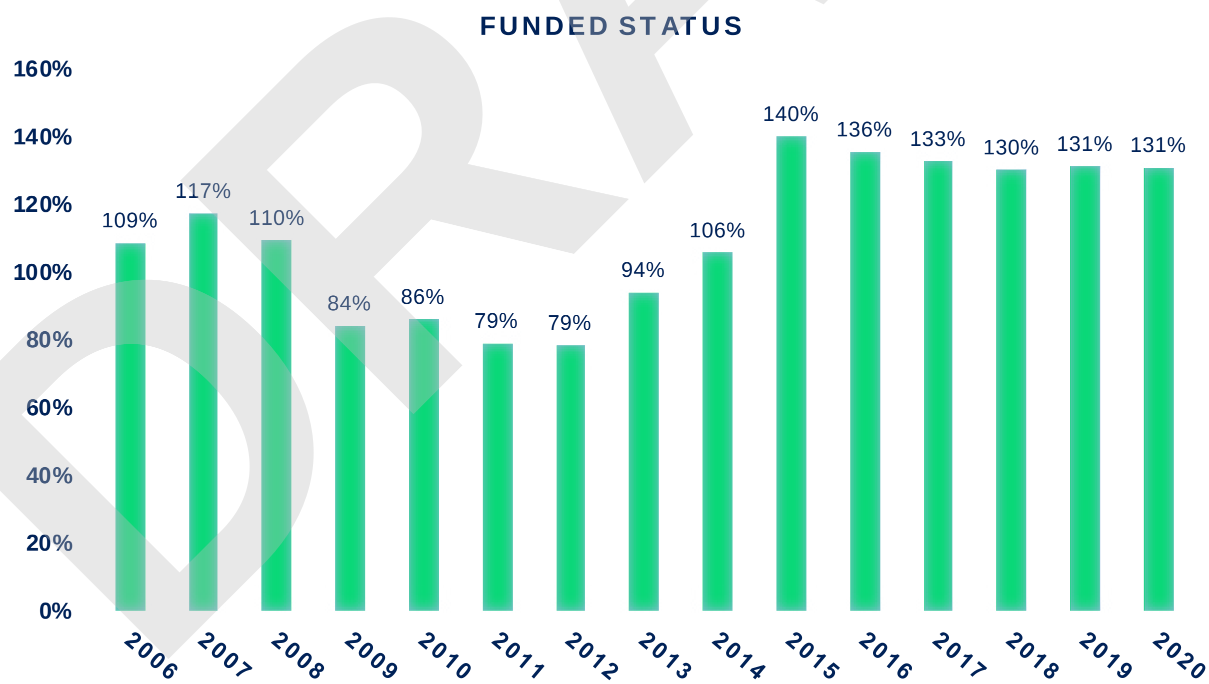
BEST ESTIMATE RESULTS

FUNDED STATUS

The funded status helps readers evaluate the health of the GET program at a single point in time. A history of funded status measured consistently over a defined period helps readers evaluate a plan's long-term ability to accurately assess and react to experience. A plan more/less than 100 percent funded is not automatically considered over-funded/at-risk. The following table calculates the program's funded status and reserve.

2020 Funded Status	
(Dollars in Millions)	
Obligations	
a) Present Value of Unit Redemptions	$1,161
b) Present Value of Administrative Expenses	$30
c) Present Value of Obligations (a+b)	$1,190
Market Fund Value	
d) Assets	$1,458
e) Present Value of Monthly Contract Receivables	$102
f) Present Value of Fund (d+e)	$1,559
Calculation of Funded Status	
g) Present Value of Fund (f)	$1,559
h) Present Value of Obligations (c)	$1,190
i) Ratio of Market Fund Value to Obligations (g/h)	131.0%
j) Reserve / (Deficit) (g-h)	$369

The following chart demonstrate the program's funded status history over the past 15 years. A full history of the program's funded status can be found in **Appendix B**.



BEST ESTIMATE RESULTS

FUNDED STATUS *continued*

The reserve/(deficit) indicates the excess/shortfall of the fund assets on hand to cover the program's obligations at the valuation date if all assumptions are realized. The reserve level can be interpreted similarly to the funded status.

A self-sustaining program that collects all cash inflows up front, like the GET program, may want to aim for a long-term reserve of approximately 15 percent (or 115 percent funded status) in order to protect against unexpected adverse outcomes over the life of the program. The program may require a reserve above 15 percent under future circumstances that vary from today's environment.

PROGRAM PROJECTIONS

The following table shows how the program is expected to fare beyond the valuation date, assuming no future unit sales other than those purchased through existing monthly payment contracts. Under a closed program scenario, all existing customers with unredeemed units can redeem those units under current program terms, but the program would sell no additional units.

Projection of Current Contracts Only (If all Assumptions are Realized)

(Dollars in Millions); EOY = End of Year

Fiscal Year Ending June 30	Funded Status	Unit Value[2]	Number of Units Used	EOY Obligation Value	EOY Market Fund Value	EOY MVA	EOY PV of Receivables	Net Cash Flow
2020[1]	131%	N/A	N/A	$1,190	$1,559	$1,458	$102	N/A
2021	134%	111	805,442	1,150	1,537	1,449	87	(8)
2022	137%	117	829,772	1,102	1,507	1,433	74	(17)
2023	141%	124	877,945	1,041	1,465	1,403	62	(30)
2024	146%	130	927,124	965	1,409	1,357	52	(46)
2025	153%	138	978,928	871	1,337	1,294	43	(63)
2026	161%	145	787,377	794	1,281	1,247	35	(47)
2027	172%	153	771,830	709	1,220	1,192	28	(55)
2028	186%	162	730,625	620	1,155	1,133	22	(59)
2029	206%	170	677,050	530	1,090	1,073	17	(60)
2030	232%	179	596,321	444	1,031	1,019	13	(55)
2031	268%	188	504,133	367	982	972	9	(46)
2032	314%	197	405,694	301	945	938	7	(34)
2033	376%	207	323,231	245	919	915	4	(23)
2034	455%	217	249,276	199	906	903	3	(12)
2035	565%	228	201,177	159	900	898	1	(5)
2036	721%	240	163,285	125	900	900	1	2
2037	965%	252	136,341	94	906	906	0	6
2038	*	264	111,931	66	917	917	0	11
2039	*	278	87,219	43	934	934	0	17
2040	*	291	62,014	24	958	958	0	24
2041	*	306	39,126	11	989	989	0	31
2042	*	321	18,213	4	1,029	1,029	0	39
2043	*	337	5,014	1	1,075	1,075	0	46
2044	*	354	2	0	1,124	1,124	0	50
2045	*	$372	0	$0	$1,178	$1,178	$0	$53

[1] *Please see **Participant Data** and **Program Assets** for actual experience in Fiscal Year 2020.*

[2] *Shown in Dollars (not in Millions).*

**Funded Status exceeds 1,000% due to very small obligation value.*

BEST ESTIMATE RESULTS

PROGRAM PROJECTIONS *continued*

The net cash flows used in the preceding table are based on expected inflows and outflows as illustrated below.

Projection of Current Contracts Only (If all Assumptions are Realized)						
(Dollars in Millions)						
		Cash Inflows			Cash Outflows	
Fiscal Year Ending June 30	Net Cash Flow	Monthly Contracts	Investment Return	State Contributions	Unit Use	Expense
2021	($8)	$19	$67	$0	($89)	($5)
2022	(17)	17	67	0	(97)	(3)
2023	(30)	15	66	0	(108)	(2)
2024	(46)	13	64	0	(121)	(2)
2025	(63)	11	62	0	(135)	(1)
2026	(47)	10	59	0	(114)	(2)
2027	(55)	8	57	0	(118)	(2)
2028	(59)	7	54	0	(118)	(2)
2029	(60)	6	51	0	(115)	(2)
2030	(55)	5	49	0	(107)	(2)
2031	(46)	4	46	0	(95)	(2)
2032	(34)	3	44	0	(80)	(2)
2033	(23)	2	43	0	(67)	(2)
2034	(12)	2	42	0	(54)	(2)
2035	(5)	1	42	0	(46)	(2)
2036	2	1	42	0	(39)	(2)
2037	6	0	42	0	(34)	(2)
2038	11	0	42	0	(30)	(2)
2039	17	0	43	0	(24)	(2)
2040	24	0	44	0	(18)	(2)
2041	31	0	45	0	(12)	(2)
2042	39	0	47	0	(6)	(2)
2043	46	0	49	0	(2)	(1)
2044	50	0	51	0	(0)	(1)
2045	$53	$0	$53	$0	$0	$0

We advise readers to exercise caution when using, distributing, or relying on the projection. As with any projection, these results will only remain accurate if all assumptions are realized. Furthermore, this projection represents current contracts only (no future unit sales) and assumes no future changes to current program provisions.

A large expected reserve develops under this projection because we assume the current reserve of $369 million will continue to grow with the long-term expected 4.75 percent rate of investment return each year. However, if the program is permanently closed or terminated, WSIB may change the program's asset allocation. That in turn may lead to a lower assumed rate of investment return. A lower assumed rate of return would increase the present value of program obligations and lower the program's reserve and funded status.

Sensitivity of Best Estimate Results

SENSITIVITY OF BEST ESTIMATE RESULTS

The best estimate results are sensitive to the key assumptions used in the valuation. In this section, we calculated the results after varying the assumed rates of investment return and tuition growth to illustrate the sensitivity of the results to these assumptions. We also show the sensitivity of the June 30, 2020, best estimate funded status using the actuarial fund value.

CLOSED PROGRAM SCENARIO SENSITIVITY

The following table shows the best estimate results under a closed program scenario. This scenario is based on current contracts only, assuming no new units are purchased in the future. This scenario is consistent with our best estimate results shown elsewhere in the report.

Sensitivity of Results to Key Assumptions							
Closed Program*							
(Dollars in Millions)	+1% Tuition	Best Estimate	-1% Tuition	-2% Return	-1% Return	Best Estimate	+1% Return
PV of Fund	$1,559	$1,559	$1,559	$1,568	$1,564	$1,559	$1,555
PV of Obligations	$1,263	$1,190	$1,124	$1,364	$1,272	$1,190	$1,117
Reserve/(Deficit)	$297	$369	$436	$205	$291	$369	$439
2020 Funded Status	123%	131%	139%	115%	123%	131%	139%
Projected Funded Status (as of June 30)							
2021	125%	134%	142%	116%	125%	134%	143%
2022	128%	137%	146%	117%	127%	137%	147%
2023	130%	141%	152%	119%	130%	141%	152%
2024	134%	146%	159%	121%	133%	146%	160%
2025	139%	153%	169%	124%	138%	153%	170%
2026	145%	161%	179%	128%	144%	161%	181%
2027	152%	172%	194%	132%	151%	172%	195%
2028	162%	186%	213%	138%	161%	186%	215%
2029	176%	206%	240%	146%	174%	206%	242%
2030	194%	232%	276%	156%	191%	232%	279%
2031	219%	268%	324%	170%	215%	268%	329%
2032	251%	314%	389%	188%	246%	314%	395%
2033	293%	376%	474%	212%	287%	376%	482%
2034	348%	455%	584%	242%	339%	455%	596%
2035	422%	564%	736%	283%	410%	564%	753%
2036	528%	721%	953%	342%	511%	721%	978%
2037	695%	965%	**	433%	669%	965%	**
2038	982%	**	**	587%	940%	**	**
2039	**	**	**	881%	**	**	**

Note: PV means Present Value.
**Based on current contracts only, no future unit sales.*
***Funded Status exceeds 1,000% due to very small obligation value.*

SENSITIVITY OF BEST ESTIMATE RESULTS

ACTUARIAL FUND VALUE SENSITIVITY

The following table compares the best estimate funded status calculated under the market fund value to the funded status calculated under the actuarial fund value.

Sensitivity to Market Fund Value		
Closed Program*		
(Dollars in Millions)	Best Estimate	Actuarial Fund Value
PV of Fund	$1,559	$1,538
PV of Obligations	$1,190	$1,190
Reserve/(Deficit)	$369	$348
Funded Status	131%	129%

Note: PV means Present Value.

**Based on current contracts only, no future unit sales.*

TERMINATED PROGRAM SCENARIO CASH FLOWS

The WA529 Committee or Legislature may decide to close or terminate the program in the future. We show the termination liability under RCW 28B95.090 and the corresponding expected cash flows if GET were to be terminated as of the valuation date. Under a termination scenario, all outstanding units outside four years of unit use would be refunded at the current unit value. All participants within four years of unit use could remain in the program and redeem units over the following ten years.

If program termination were to occur, we estimate the present value of obligations as of the valuation date would be $1.1 billion and the market fund value would be $1.5 billion, which would result in a reserve of approximately $400 million and a funded status of 136 percent. This represents the funded status if the program were terminated at the valuation date and before the immediate payout occurs. The decrease in liability (compared to the closed program scenario projection) is due to paying out a portion of the units sooner than expected at a lower payout value (after considering assumed future returns). The decrease in market fund value (compared to the closed program scenario projection) is due to a portion of the outstanding monthly contracts being canceled (since their use year is beyond the four-year window), resulting in lower than expected contract receivables.

SENSITIVITY OF BEST ESTIMATE RESULTS

TERMINATED PROGRAM SCENARIO CASH FLOWS *continued*

The following table shows these results.

Projection of Program Termination (If All Assumptions are Realized)								
(Dollars in Millions); EOY = End of Year								
Fiscal Year Ending June 30	Funded Status	Unit Value[1]	Number of Units Used	EOY Obligation Value	EOY Fund Value[2]	EOY MVA	EOY PV of Receivables	Net Cash Flow
2020	136%	N/A	N/A	$1,083	$1,470	$1,458	$12	N/A
2021	166%	111	4,507,002	617	1,022	1,015	7	(442)
2022	178%	117	829,772	544	968	965	3	(50)
2023	198%	124	877,945	456	901	899	1	(65)
2024	232%	130	927,002	352	818	818	0	(82)
2025	313%	138	978,702	230	717	717	0	(100)
2026	453%	145	633,070	145	656	656	0	(62)
2027	802%	153	471,454	76	611	611	0	(44)
2028	*	162	309,308	27	588	588	0	(24)
2029	*	$170	152,754	$0	$587	$587	$0	($0)

[1] *Shown in Dollars (not in Millions).*
**Funded Status exceeds 1,000% due to very small obligation value.*

The net cash flows used in the preceding table are based on expected inflows and outflows as illustrated below.

Projection of Program Termination (If All Assumptions are Realized)						
(Dollars in Millions)						
		Cash Inflows			Cash Outflows	
Fiscal Year Ending June 30	Net Cash Flow	Monthly Contracts	Investment Return	State Contributions	Unit Use	Expense
2021	($442)	$6	$57	$0	($500)	($5)
2022	(50)	4	46	0	(97)	(3)
2023	(65)	2	43	0	(108)	(2)
2024	(82)	1	40	0	(121)	(2)
2025	(100)	0	36	0	(135)	(1)
2026	(62)	0	32	0	(92)	(2)
2027	(44)	0	29	0	(72)	(2)
2028	(24)	0	28	0	(50)	(2)
2029	(0)	0	27	0	(26)	(2)

SENSITIVITY OF BEST ESTIMATE RESULTS

TERMINATED PROGRAM SCENARIO SENSITIVITY

Program termination may occur during periods of either low economic growth or a high tuition growth environment. Historically, lower rates of investment return correlate with higher tuition growth rates. If the program enters a termination scenario, WSIB may change the program's asset allocation to increase liquidity. In turn, a closed or terminated program scenario may lead to a lower assumed rate of investment return. A lower assumed rate of return would increase the present value of program obligations and lower the program's funded status. Below we show how our best estimate results under a terminated program change when assuming lower discount rates and higher tuition growth rates.

Sensitivity of Results to Key Assumptions			
Terminated Program*			
(Dollars in Millions)	**Best Estimate**	**+1% Tuition & -1% Return**	**+1% Tuition & -2% Return**
PV of Fund	$1,470	$1,470	$1,470
PV of Obligations	$1,083	$1,131	$1,159
Reserve/(Deficit)	$387	$339	$311
2020 Funded Status	136%	130%	127%
Projected Funded Status (as of June 30)			
2021	166%	154%	147%
2022	178%	163%	155%
2023	197%	178%	168%
2024	232%	205%	191%
2025	313%	266%	243%
2026	453%	372%	332%
2027	802%	635%	554%
2028	**	**	**
2029	**	**	**

Note: PV means Present Value.

**Program is terminated; all contracts with expected use year beyond four years immediately refunded.*

***Funded Status exceeds 1,000% due to very small obligation value.*

Appendices

Appendix A ★ Assumptions, Methods, and Data

The assumptions used in this report can be divided into two broad categories – economic and behavioral. We discuss the assumptions used in this valuation throughout the next two subsections. However, for more detailed and supporting information on these assumptions, please see the *2015 GET Experience Study*. This letter is available upon request.

ECONOMIC ASSUMPTIONS

The two key economic assumptions are expected investment returns and expected tuition growth. The next table shows what we have assumed for this valuation.

Key Economic Assumptions	
Investment Returns	
All Years	4.75%
Tuition Growth *(Excludes Differential Tuition)*	
2020-21	2.4%
2021-29	5.5%
2029-31+	5.0%

Expected investment returns are based on the new asset allocation, WSIB's 2019 CMAs, simulated returns over a 15-year period, and anticipated long-term market impacts from the current recession. We relied on the CMAs provided by WSIB as accurate and have reviewed them for reasonableness. We've implicitly assumed the current 40 percent global equity/60 percent fixed income portfolio will remain unchanged throughout the projection period. The expected investment returns, net of expenses, are used as the discount rate for expected program payments, expenses, and receivables as well as the investment returns in our closed program projections. For additional information on the program's assets and our return assumption, see the **Best Estimate Results** section and **Appendix B**.

We updated our tuition growth model with the *2015 GET Experience Study* to model short-term changes in tuition policy with long-term tuition growth trends. We use a tuition growth model, information from the most recently enacted state budget, and our professional judgment to set tuition growth rates. Our tuition growth model has three main structural components.

1. Long-Term Inflationary Growth — Represents the increase in total dollars spent on instruction. Over the last twenty years, this has increased by about 4.5 percent per year. We assume it will grow by 5.0 percent in the future. We estimate the total dollars required for the Cost of Instruction for undergraduate programs at the University of Washington. Consistent with the results of our recent experience study, we then increase that amount by an assumed long-term inflationary growth factor of 5 percent per year.

2. State Funding — Represents the increase or decrease in the percent of total dollars assumed to come from the state versus tuition. Historically, this percentage has decreased from approximately 80 percent (in 1990) to 37 percent (in 2020). This decrease has put upward pressure on tuition since tuition increased to compensate for lower levels of state funding. We assume state funding will continue to decline to approximately 30 percent starting in the next biennium and subsequently level out. As a result, we project that tuition will increase above long-term inflationary levels during the period when state funding is assumed to decrease. In Step 2, we assume every lost dollar of state support is replaced by an increased dollar from tuition. We use the resulting growth rates as the basis for Step 3.

Appendix A ★ Assumptions, Methods, and Data

3. Scaling Factor — Represents an adjustment to the increase or decrease in assumed tuition in response to a corresponding decrease or increase in state funding. For every dollar decrease (increase) in state funding, we scale the assumed tuition increases (decreases) by a fraction of that dollar, because past experience indicates that not every dollar of state funding is replaced by an increased dollar of tuition growth. Our scaling factor assumption is 75 percent. In Step 3 of the model, we adjust the tuition growth rates after state funding by our scaling factor assumption, but not below our long-term assumption of 5 percent. Lastly, we set the first two years of tuition growth rates consistent with the recently enacted state budget for higher education and smooth the growth rates for years thereafter.

We combine these three steps of the model to inform our expectations for the future and rely on professional judgment in setting the best estimate tuition growth assumptions.

Chapter 36, Laws of 2015, 3rd Special Legislative Session, also established a policy to limit resident, undergraduate tuition growth rates to no more than the annual growth rate in the median state wage. If future Legislatures continue this policy, we would expect future tuition growth rates closer to 3-4 percent per year. However, the current Legislature cannot obligate a future Legislature. The long-term sustainability of the current higher education budget is not certain, and past experience consistently demonstrates that higher education tuition policy changes typically remain for short-term periods consistent with business cycles. Because of historical experience, legislative past practice, and significant revenue shortfalls due to COVID-19 impacts, we have assumed tuition growth rates that we believe are more reflective of long-term practices and consistent with our expectations for the future. We will continue to monitor future tuition policy and update our tuition growth assumptions with actual tuition growth experience.

The program's funded status is highly sensitive to short-term changes in tuition growth. For example, under an alternate tuition scenario (as shown in the following table), we assume the recently enacted tuition policy changes hold indefinitely. Under that scenario, the funded status, measured at June 30, 2020, would rise from 131 percent to 152 percent and the reserve would increase from $369 million to $537 million.

The tuition growth assumption does not consider the potential impacts of differential tuition. The impact from differential tuition could vary based on how it interacts with the current contracts. If the payout value is tied to the highest rate of differential tuition, the tuition growth assumption would likely increase. However, if the payout value were tied to the lowest rate of differential tuition, the tuition growth assumption could decrease, as base tuition may not need to increase as fast with higher differential tuition making up the difference.

Tuition Growth Assumption Alternate Growth Scenario

School Year	Annual Tuition Growth
2021-22	2.3%
2022-23	2.4%
2023-24	2.5%
2024-25	2.6%
2025-26	2.7%
2026-27	2.8%
2027-28	2.9%
2028-29	3.1%
2029-30	3.2%
2030-31	3.4%
2031-32+	3.5%

Appendix A ★ Assumptions, Methods, and Data

BEHAVIORAL ASSUMPTIONS

We've made the following assumptions for GET contract holders.

- **Rate of Redemption —** The following shows what percent of a contract holder's total units we expect will be used upon reaching college (or their "use year").

Redemption Rate	
All Years	20%

As a result of the last experience study, we removed the Rate of Monthly Payment Default and Rate of Refund from our model. We found those assumptions unnecessary (and not material) for the purposes of this measurement. However, those assumptions could be necessary for another measurement. Please see the *2015 GET Experience Study* for further details.

While this valuation does not consider the impact of future unit sales, **Appendix D** of this report outlines the best estimate unit price for the prior and upcoming enrollment periods, the price-setting guidelines used to determine the best estimate, and the unit price adopted by the WA529 Committee. The best estimate is based on the expected investment returns and tuition growth discussed in the Economic Assumptions subsection. We assumed that neither the Legislature nor the WA529 Committee will make changes to the program over the enrollment period.

MISCELLANEOUS

For purposes of the valuation, we assume mid-valuation year timing on payments in and out of the fund.

METHODS

We valued the current unredeemed units and asset values in the GET program by estimating the future tuition payments (cash outflow from unit redemptions), administrative expenses (cash outflow), and monthly contract payments (cash inflow). The estimation of future cash flows required assumptions about:

- When the contract holder will redeem their units (based on the reported "use year").
- What tuition will be in future years.
- What administrative expenses will be over time.
- The payment amount and payments due for each monthly contract.

We discounted these cash flows to today's value in order to calculate the plan's funded status at the valuation date. Discounting the cash flows to today's value requires an assumption for how invested money will grow over time. In this case, we've assumed a growth rate of 4.75 percent, which means \$1 today is worth \$1.0475 next year due to investment earnings. Discounting moves the opposite way and states that \$1.0475 a year from now will be worth \$1 today. Discounting all the cash flows to one common year allows for an apples-to-apples comparison of all cash flows.

Appendix A ★ Assumptions, Methods, and Data

DATA

We used the contract data file provided by WA529 staff. We relied on this data as accurate and complete, and valued each entry in the file. We did not perform an audit of this data but reviewed the data and believe it is reasonable for the purposes of our work. We used data entries such as:

- **Program Year —** The contract holder's entry year into the program.
- **Use Year —** When the contract holder expects to start using units for tuition (or other qualified expenses).
- **Payment Amount —** The monthly amount the contract holder owes on their payment plan.
- **Payments Due —** The number of monthly payments left on contract holder's monthly payment plan.
- **Units Outstanding —** The number of units the contract holder currently owns, and units still being paid for under a monthly payment plan.

To set our tuition growth assumption, we studied the historical tuition data in the following table. We also examined average tuition growth and standard deviation over different time periods.

Historical Tuition Growth

Year	Tuition Growth	Year	Tuition Growth
1982-83	11.0%	2002-03	16.0%
1983-84	11.2%	2003-04	7.0%
1984-85	0.0%	2004-05	6.6%
1985-86	22.7%	2005-06	6.8%
1986-87	0.0%	2006-07	6.9%
1987-88	7.9%	2007-08	6.8%
1988-89	3.8%	2008-09	6.8%
1989-90	1.7%	2009-10	13.1%
1990-91	6.9%	2010-11	13.1%
1991-92	11.5%	2011-12	19.0%
1992-93	3.4%	2012-13	15.2%
1993-94	12.4%	2013-14	0.0%
1994-95	14.8%	2014-15	0.0%
1995-96	3.9%	2015-16	(5.0%)
1996-97	4.0%	2016-17	(9.1%)
1997-98	3.9%	2017-18	2.1%
1998-99	4.0%	2018-19	2.1%
1999-00	3.7%	2019-20	2.3%
2000-01	3.4%	2020-21	2.4%
2001-02	7.1%		

Historical Tuition Growth

Time Period	Average	Standard Deviation
5-Years	(0.2%)	4.9%
10-Years	2.6%	8.5%
20-Years	5.7%	6.9%
39-Years	6.2%	6.4%

Appendix B ★ Assets

The table below provides information on the types of asset investments, or asset classes, and WSIB 2019 CMAs. In late 2019, WSIB adopted a new asset allocation. The target asset allocation was moved to 40 percent global equity and 60 percent fixed income (the percentages were reversed under the prior allocation). This resulted in a more conservative program portfolio. For additional information on the program's assets, see the **Best Estimate Results** section.

Capital Market Assumptions			
Asset	**Return**	**Standard Deviation**	**Weight**
Fixed Income	4.40%	6.00%	60%
Global Equities	8.50%	18.50%	40%
Portfolio	**6.04%**	**8.70%**	**100%**
Correlation	**Fixed Income**	**Global Equities**	
Fixed Income	1.00		
Global Equities	0.15	1.00	

The average 6.04 percent portfolio return is a one-year arithmetic return. When compounded over a 15-year period, the arithmetic return decreases to a 5.45 percent median geometric return.

In past valuations, we selected a best estimate assumption that approximated the 45th percentile of simulated annual returns over a 15-year period to represent a margin for "adverse deviation" given the large degree of uncertainty with future returns. Under the more conservative asset allocation, we no longer believe this margin is needed.

However, we believe the actions taken by the Federal Reserve in the wake of COVID-19 will result in lower investment yields over the next 15 years. This reduction could have a material impact on future returns for the GET portfolio due to the larger allocation to fixed income investments from the new investment policy.

Taking into consideration the more conservative asset allocation, the removal of the margin for "adverse deviation", and future expectations around long-term economic impacts from COVID-19, we used our professional judgment to select an assumed 4.75 percent rate of investment return per year (down from 5.25 percent). We will continue to monitor the program's investment returns, investment policy, and will review and potentially update the return assumption after we receive updated CMAs from WSIB in the Spring of 2021.

Appendix B ★ Assets

The following tables shows the historical rates of investment return and program funded status for the GET trust fund since the inception of the program.

Historical Investment Returns	
Fiscal Year	Investment Return
1999*	4.96%
2000	10.25%
2001	(1.63%)
2002	(2.79%)
2003	7.56%
2004	16.00%
2005	10.07%
2006	8.94%
2007	14.77%
2008	(0.70%)
2009	(16.02%)
2010	12.68%
2011	20.46%
2012	0.07%
2013	9.59%
2014	16.36%
2015	0.83%
2016	0.61%
2017	10.92%
2018	6.35%
2019	5.29%
2020	7.40%

Represents 9-month return.

Historical Funded Status	
Fiscal Year	Funded Status
1999	110.1%
2000	113.4%
2001	104.9%
2002	89.6%
2003	98.4%
2004	104.5%
2005	108.1%
2006	108.8%
2007	117.4%
2008	109.5%
2009	84.2%
2010	86.2%
2011	79.1%
2012	78.5%
2013	94.1%
2014	105.8%
2015	140.1%
2016	135.6%
2017	132.8%
2018*	130.2%
2019*	131.3%
2020	131.0%

Includes the impacts of ESB 6087 (C 188, L 2018).

Appendix C ★ Contract Data

The following tables summarize units and contracts by the contract enrollment year and initial contract use year.

Number of Units Sold by Unit Price		
Enrollment Year	Unit Price	Units Sold
1998-99	$35	1,374,095
1999-00	38	615,327
2000-01	41	523,702
2001-02	42	2,463,500
2002-03	52	2,099,531
2003-04	57	1,896,635
2004-05	61	2,108,360
2005-06	66	2,146,191
2006-07	70	2,339,431
2007-08	74	2,102,305
2008-09	76	3,177,699
2009-10	101	2,624,367
2010-11	117	2,697,696
2011-12	163*	1,503,962**
2012-13	172*	1,038,773
2013-14	172*	741,701
2014-15	172*	618,367
2015-16***	-	0
2016-17***	-	0
2017-18	113	770,665
2018-19	113	639,646
2019-20	$121	505,222

*Price includes amortization component that was subsequently refunded.

**Restated number of units sold.

***Unit sales suspended.

Appendix C ★ Contract Data

Number of Units Outstanding by Use Year		
Use Year	Expected Unit Value	Units Starting to be Used
2020*	$111	2,808,498
2021	117	803,298
2022	124	808,960
2023	130	790,208
2024	138	775,161
2025	145	765,091
2026	153	728,113
2027	162	603,848
2028	170	519,547
2029	179	367,904
2030	188	304,508
2031	197	239,347
2032	207	189,459
2033	217	148,081
2034	228	126,857
2035	240	114,429
2036	252	104,396
2037	264	66,296
2038	278	25,058
2039	291	8
2040	$306	0

**Includes contracts that already started using units.*

Number of Contracts Outstanding by Use Year		
Use Year	Expected Unit Value	Contracts Starting to be Used
2020*	$111	20,578
2021	117	4,058
2022	124	4,165
2023	130	4,130
2024	138	4,260
2025	145	4,237
2026	153	4,189
2027	162	3,653
2028	170	3,357
2029	179	2,622
2030	188	2,400
2031	197	2,074
2032	207	1,736
2033	217	1,379
2034	228	1,152
2035	240	1,112
2036	252	1,067
2037	264	723
2038	278	260
2039	291	1
2040	$306	0

**Includes contracts that already started using units.*

Appendix D ★ Price-Setting Guidelines

In 2011, the GET Committee adopted new price-setting guidelines that determine how we price future units. These guidelines address the new tuition-setting policy established by the Legislature at that time and were intended to return the program to a fully funded status. The price-setting guidelines adopted in 2011 include the following four parts:

- **Expected Cost —** Covers the expected cost of future tuition and applicable state-mandated fees.
- **Expenses —** Contributes to the payment of administrative expenses. We calculate this amount as the present value of expected administrative expenses per outstanding unit and adjust forward for one year of interest.
- **Reserve —** Covers unexpected future costs such as above-expected tuition growth or below-expected investment returns. This component can be increased or decreased to alter the probability that a unit will ever create an unfunded liability in the future.
- **Amortization —** An optional component that covers unexpected past costs from significant program or policy changes. This component did not apply to the most recent price-setting analysis.

The WA529 Committee, at their September 2020 meeting, adopted a new unit price of $133 for future sales starting on November 1, 2020. For further details, including sensitivity and risk analysis, please see the presentation titled, *2020-21 GET Unit Price-Setting*, in the WA529 September meeting material located on the WSAC website.

GET Unit Price Information			
	2020-21 Enrollment		2019-20 Enrollment
Unit Price	Best Estimate Range*	Best Estimate	Best Estimate
Expected Cost		$116.91	$102.86
Expenses		3.03	2.78
Reserve		17.99	15.85
Amortization		N/A	N/A
Total Unit Price	**$129.00 - $147.00**	**$137.00**	**$121.00**
Unit Price Adopted**		**$133.00**	**$121.00**

Note: Totals may not agree due to rounding.

**Best estimate range based on tuition growth rates shown in this report.*

***Unit price adopted by the WA529 Committee.*

Appendix D ★ Price-Setting Guidelines

To determine the best estimate unit price and range, we estimate the future payout value of a single unit based on assumptions for future tuition growth and holding periods for the unit (the duration between purchase and redemption). We calculate the present value of this unit by discounting the future payout value using the expected rate of investment return.

This calculation is performed using economic assumptions for tuition growth and investment return matching those used in the valuation. Please see **Appendix A** for more information.

The holding periods for the unit are based on demographic assumptions about new enrollments. We use the new entrant profile outlined in the table below to estimate the present value cost of future unit payouts associated with the sale of a single unit. Please see the *2015 GET Experience Study* for further details.

Future Purchaser Cohort Assumption					
Length in Program (Years)	% Lump Sum	Lump Sum Units Purchased	% Monthly Payment Plan	Monthly Payment Plan Units Purchased	Length of Monthly Payment Plan (Months)
2	0.2%	94	0.0%	0	0
3	1.6%	78	0.2%	76	25
4	1.0%	77	0.4%	79	37
5	1.5%	82	0.7%	78	48
6	1.9%	80	0.9%	101	59
7	2.2%	89	1.2%	93	69
8	2.7%	99	1.3%	106	80
9	2.9%	93	1.4%	113	92
10	3.1%	84	1.5%	110	102
11	3.0%	97	1.7%	108	114
12	3.3%	87	1.8%	119	125
13	3.6%	89	1.7%	120	132
14	5.0%	79	2.5%	114	144
15	4.8%	62	2.2%	111	156
16	5.5%	63	2.6%	115	163
17	6.5%	56	2.7%	121	175
18	12.0%	59	4.2%	123	190
19	8.3%	76	3.9%	133	199
20	0.0%	7	0.0%	133	112
Total	**69.1%**	**74**	**30.7%**	**115**	**142**

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2020 ACTUARIAL VALUATION REPORT

Guaranteed Education Tuition Program

NOVEMBER 2020

WA529
WASHINGTON COLLEGE SAVINGS PLANS

DRAFT
Washington College Savings Plans Rollover Report to the Governor and the Legislature December 2020

Introduction

The Committee on Advanced Tuition Payment and College Savings operates two 529 college savings plans: The Guaranteed Education Tuition (GET) program and the DreamAhead College Investment Plan. Per the plans' enabling statute, Chapter 28B.95 RCW, GET and DreamAhead were established to encourage savings and enhance the ability of Washington citizens to obtain financial access to institutions of higher education. The plans are also designed to complement one another to save towards the full cost of attending college.

Washington is one of 49 states, along with the District of Columbia, that offers one or more 529 college savings plans to the public. These tax-advantaged savings vehicles offer tax-deferred growth and tax-free withdrawals when a qualifying distribution is made. Qualifying distributions include those to cover qualified higher education expenses such as tuition, fees, room and board, books, and supplies. They also include rollover distributions to other 529 or 529A (ABLE) plans.

Statute, RCW 28B.95.045(2), requires the WA529 Committee to report annually to the Governor and the appropriate committees of the Legislature on:

(a) The number of accounts that have been rolled into the Washington college savings program from out of state and
(b) The number of accounts rolled out of the Washington college savings program to 529 plans into other states.

This statutory requirement only applies to DreamAhead (known statutorily as the "Washington College Savings Program"). However, for additional context, the following report provides these rollover statistics for both GET and DreamAhead for State Fiscal Year 2020.

WA529 Rollovers

Table 1 below provides an overview of these GET to DreamAhead rollovers, as well as rollovers between GET and out-of-state plans and DreamAhead and out-of-state plans.

TABLE 1: GET and DreamAhead Rollovers – State Fiscal Year 2020

Rollover Type	Number of Accounts
Incoming Rollovers From Out-of-State Plans	
Rollovers into GET	63
Rollovers into DreamAhead	61
Outgoing Rollovers to Out-of-State Plans	
Rollovers from GET	68
Rollovers from DreamAhead	558
Rollovers between GET and DreamAhead	
Rollovers from GET to DreamAhead	28
Rollovers from DreamAhead to GET	29

Additional Notes

- Of the 558 rollovers from DreamAhead to out-of-state plans, 469 (84%) of them were for accounts that originally rolled over from GET as part of the incentive program offered by Senate Bill 6087 (2018).
- Additional details underlying these rollovers (dollar amounts, sending/receiving plans, etc.) are available upon request to WA529 Director, Luke Minor at lucasm@wsac.wa.gov.
- The WA529 Committee will provide an update to this report by December 1, 2021.

WA529
WASHINGTON COLLEGE SAVINGS PLANS

DRAFT

DreamAhead College Investment Plan Program Fees Report to the Governor and the Legislature December 2020

Introduction

The DreamAhead College Investment Plan is the state's 529 college investment plan, opened in April 2018. Per the plan's enabling statute, Chapter 28B.95 RCW, DreamAhead is intended to complement the Guaranteed Education Tuition (GET) prepaid tuition program to help families save towards the full cost of college.

Washington is one of 49 states, along with the District of Columbia, that offers a direct-sold 529 college investment plan directly to the public without an intermediary such as an investment advisor or broker. Unlike prepaid tuition plans such as GET, which typically permit only savers who reside within the plan's home state, college investment plans are typically available to savers nationwide.

Accordingly, in order to ensure DreamAhead is competitive nationally, the Legislature has set statutory limitations on investment fees charged to plan participants. Specifically, RCW 28B.95.087(3) states: "beginning January 1, 2018, fees charged to the owner may not exceed one-half of one percent for any investment option on an annual basis." Additionally, the Legislature requires the WA529 Committee to report to the Governor and the appropriate committees of the Legislature regarding the total fees charged to each investment option offered by DreamAhead.

The following report provides the fees charged for each investment portfolio, as of December 1, 2020.

DreamAhead Fee Review

DreamAhead has no commissions, loads, or sales charges. As of December 1, 2020, total annual asset-based fees vary from 0.254% to 0.330%, depending upon the Portfolio(s) a participant chooses. See Table 1 below for an overview of the asset-based fees charged for each of the 37 different investment portfolios, as well as fee reductions that have taken place within the last year.

TABLE 1: ANNUAL DREAMAHEAD ASSET-BASED FEES BY INVESTMENT PORTFOLIO (EFFECTIVE DECEMBER 1, 2020)

Portfolio name	Underlying fund fee	Service fee	State Administrative fee	Total Annual Asset-Based Fee	Change since 12/1/19 (in bps)[3]
Static					
Growth	0.034%	0.120%	0.100%	0.254%	-0.1 bps
Moderate Growth	0.053%	0.120%	0.100%	0.273%	-0.2 bps
Conservative Growth	0.052%	0.120%	0.100%	0.272%	-0.2 bps
Balanced	0.052%	0.120%	0.100%	0.272%	-0.2 bps
Income & Growth	0.052%	0.120%	0.100%	0.272%	-0.2 bps
Income	0.070%	0.120%	0.100%	0.290%	-1.9 bps
Cash Preservation	0.110%	0.120%	0.100%	0.330%	-7.0 bps
Conservative Year of Enrollment					
2038[1]	0.052%	0.120%	0.100%	0.272%	-0.1 bps
2036	0.052%	0.120%	0.100%	0.272%	-0.2 bps
2034	0.052%	0.120%	0.100%	0.272%	-0.2 bps
2032	0.052%	0.120%	0.100%	0.272%	-0.2 bps
2030	0.052%	0.120%	0.100%	0.272%	-0.2 bps
2028	0.066%	0.120%	0.100%	0.286%	-1.5 bps
2026	0.070%	0.120%	0.100%	0.290%	-1.9 bps
2024	0.089%	0.120%	0.100%	0.309%	-3.6 bps
2022	0.089%	0.120%	0.100%	0.309%	-3.6 bps
College Enrolled[2]	0.089%	0.120%	0.100%	0.309%	-3.6 bps
Moderate Year of Enrollment					
2038[1]	0.043%	0.120%	0.100%	0.263%	-0.1 bps
2036	0.043%	0.120%	0.100%	0.263%	-0.1 bps
2034	0.053%	0.120%	0.100%	0.273%	-0.2 bps
2032	0.053%	0.120%	0.100%	0.273%	-0.2 bps
2030	0.052%	0.120%	0.100%	0.272%	-0.2 bps
2028	0.052%	0.120%	0.100%	0.272%	-0.2 bps
2026	0.055%	0.120%	0.100%	0.275%	-0.5 bps
2024	0.059%	0.120%	0.100%	0.279%	-0.8 bps
2022	0.066%	0.120%	0.100%	0.286%	-1.5 bps
College Enrolled[2]	0.074%	0.120%	0.100%	0.294%	-2.2 bps
Growth Year of Enrollment					
2038[1]	0.044%	0.120%	0.100%	0.264%	-0.1 bps
2036	0.044%	0.120%	0.100%	0.264%	-0.1 bps
2034	0.043%	0.120%	0.100%	0.263%	-0.1 bps
2032	0.043%	0.120%	0.100%	0.263%	-0.1 bps
2030	0.054%	0.120%	0.100%	0.274%	-0.2 bps
2028	0.053%	0.120%	0.100%	0.273%	-0.2 bps
2026	0.053%	0.120%	0.100%	0.273%	-0.2 bps
2024	0.052%	0.120%	0.100%	0.272%	-0.2 bps
2022	0.052%	0.120%	0.100%	0.272%	-0.2 bps
College Enrolled[2]	0.074%	0.120%	0.100%	0.294%	-2.2 bps

[1]The 2038 Year of Enrollment portfolios are new portfolios introduced on July 1, 2020.

[2]On July 1, 2020, the 2018 and 2020 Year of Enrollment portfolios moved into the new College Enrolled 'terminal' portfolios. On July 1 of every even numbered year beginning in 2022, that year's portfolios will move into the College Enrolled portfolios.

[3]One basis point is equal to 1/100th of one percent. Total underlying fund fees for each Year of Enrollment portfolio can differ year-to-year as the portfolios adjust asset allocations over time. Accordingly, fee changes are calculated based on comparing current fees charged for each portfolio as of December 1, 2020 to fees that were charged (or would have been charged) for the corresponding asset allocation as of December 1, 2019.

Additional Notes

- On October 27, 2020, investment ratings outlet, Morningstar, released it's 2020 529 plan ratings. For the first time, Morningstar included DreamAhead in its coverage. DreamAhead received a "Bronze Medal" rating which, according to Morningstar, makes DreamAhead a "best-in-class" 529 savings plan. As part of this rating, Morningstar determined that DreamAhead's fees were "Below Average," which garnered a "Positive" rating in their "Price" pillar.
- DreamAhead continues to be rated highly by savingforcollege.com, based on their "5-cap" rating system. As of November 1, 2020, DreamAhead was rated 5 out of 5 caps for in-state residents and 4.5 out of 5 caps for out-of-state residents, with a "Fee Score" of 4.5 out of 5.
- Since this report was last updated in December 2019, DreamAhead has again been able lower asset-based fees for participants (see Table 1 above for reduction amounts). The most notable decreases occurred in the more conservative investment options, primarily due to a change in the underlying money market fund. Notable decreases include:
    - Seven basis point (7 bps) reduction to the Cash Preservation Portfolio;
    - 3.6 bps reduction to the 2024, 2022, and College Enrolled Conservative Year of Enrollment Portfolios;
    - 2.2 bps reduction to the College Enrolled Growth and College Enrolled Moderate Year of Enrollment Portfolios;
    - 1.9 bps reduction to the Static Income Portfolio and the 2026 Conservative Year of Enrollment Portfolio; and
    - 1.5 bps reduction to the 2028 Conservative and 2022 Moderate Year of Enrollment Portfolios.
- DreamAhead also charges an Annual Account Maintenance Fee of $35 to each Account. As stated in the *DreamAhead College Investment Plan: Policy Goals, Objectives, and Performance Measures Update* report to the Legislature dated January 2020, the WA529 Committee is committed to eliminating the plan's account maintenance fee as soon as possible, as plan assets grow.
- The WA529 Committee will provide an update to this report before December 1, 2021.