

# WA529 Committee Meeting

## Wednesday, May 6, 2020

### Virtual Meeting

Registration Link: <https://attendee.gotowebinar.com/register/7339450527926355724>

2:00 p.m. – 4:00 p.m.

## AGENDA

### Call to Order: Welcome

- |  |             |
|--|-------------|
| • Member Introductions: Welcome New Committee Member   | INFORMATION |
| • Approval of the January 7, 2020 Minutes  | ACTION      |
| • Program Updates<br><i>Luke Minor, WA529 Director</i><br><i>Sally Riefenstahl, Sunday Administration</i>        | INFORMATION |
| • WA529 Marketing/Business Development Update<br><i>Rodger O'Connor, WA529 Assoc. Dir. for Mktg. &amp; Comm.</i> | INFORMATION |
| • GET Actuarial Update<br><i>Matt Smith, State Actuary</i>   | INFORMATION |
| • GET Investment Update<br><i>Chris Phillips, Washington State Investment Board</i>                              | INFORMATION |
| • DreamAhead Investment Update and Portfolio Review<br><i>Nick Procyk, Lockwood Advisors</i>                     | ACTION      |
| • Public Comment   |             |
| • Adjournment  |             |

**Next Regularly Scheduled Meeting:**  
**Wednesday, September 9, 2020**  
**John A. Cherberg Building, Olympia**  
**Senate Hearing Room 3**  
**2:00 p.m. – 4:00 p.m.**

**WA529 Committee Meeting Minutes**  
**January 7, 2020**  
**John A. Cherberg Building, Capitol Campus**  
**Senate Hearing Room 3**

**WSAC Staff in Attendance:**

Lucas Minor, Director of College Savings Plans  
Christina Crawford, WA529 Administrative Assistant  
Daniel Payne, Communications Specialist  
Betsy Hagen, Associate Director of Operations  
Rodger O'Connor, Associate Director of Marketing & Communications  
Don Bennett, Deputy Director Washington Student Achievement Council

**Guests in Attendance:**

Matt Smith, Office of the State Actuary  
Chris Phillips, Washington State Investment Board  
Aileen Liu, Washington State Investment Board  
Brenda Snyder, Office of the State Treasurer  
Rick Brady, Office of the Attorney General  
Doug Magnolia, BNY Mellon  
Sally Riefenstahl, BNY Mellon  
Jennifer O'Neill, BNY Mellon

**WELCOME**

Mike Meotti, Chair of the WA529 Committee, called the meeting to order at 2:05 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, and new citizen member, Linden Rhoads.

**MEMBER INTRODUCTIONS:**

Meotti welcomed new Committee member, Linden Rhoads. Rhoads gave an overview of her career background and experience serving on various boards and committees as they relate to education. Rhoads is a technology entrepreneur who runs the W Fund and previously served for six years as Vice Provost for Commercialization and Innovation at the University of Washington.

**APPROVAL OF THE NOVEMBER 13, 2019 MINUTES**

Motion to approve the minutes by Schumacher. Seconded by Snyder. Four ayes by Meotti, Snyder, Rhoads and Schumacher. Motion carries and minutes approved as presented.

**PROGRAM UPDATES**

Luke Minor, WA529 Director, provided a program update. GET has had 1,075 new enrollments in the 2019-20 enrollment period, which is flat compared to the same time last year. DreamAhead recently achieved a 5-cap rating for in-state residents from savingforcollege.com – the highest marks a plan can receive. WA529 is closely following Children's Savings Accounts (CSA) policy developments as there continues to be interest within Washington to offer a statewide plan connected with GET or DreamAhead.

Sally Riefenstahl with Sundry Administration provided a DreamAhead update. Sundry has made security enhancements which include 2-step authentication as well as an email verification process and plans to incorporate Plaid micro deposits to further enhance fraud monitoring efforts. Recent changes to the system allow investors to see prior year contributions and there has been an increase to the withdrawal limit from 90% to 95% and 100% for cash portfolios.

Doug Magnolia with Sundry Administration noted that BNY Mellon has had recent discussions with a large employer based in Redmond and will be working towards partnerships with other large Washington-based companies from an employer engagement perspective.

### **GET ASSET ALLOCATION UPDATE**

Aileen Liu with the Washington State Investment Board (WSIB) reported on the GET Asset Allocation. The WA529 Committee deliberated and accepted the recommendation by WSIB to shift the strategic asset allocation for GET from 60% global equity/40% fixed income to 40% global equity/60% fixed income at the November 13, 2019 committee meeting. This decision was uniformly approved by the WSIB board on December 12, 2019. While reducing risk, the asset allocation is expected to deliver returns that meet or exceed both the Office of the State Actuary's (OSA) assumed tuition growth rate as well as investment return assumptions.

### **DREAMAHEAD INVESTMENT UPDATE**

Matt Forester with Lockwood Advisors provided an update on capital markets and preliminary information on DreamAhead portfolio performance. Because it is early in the month, a full fourth quarter report is not yet available. Every component of all portfolios had positive performance for 2019. The largest returns came in the growth-oriented portfolios, as the U.S. equity market was up over 30%. Forester warned that not every year will look like 2019 and that Lockwood is keeping a close eye on economic indicators that may affect future returns. A detailed fourth quarter report will be provided in the near future.

### **DREAMAHEAD POLICY GOALS**

Minor reviewed a draft report to the Legislature that sets objectives and measures for five statutory policy goals for DreamAhead: Process, People, Parent, Performance and Price. These preliminary objectives and performance measures represent a starting point; the Committee is to provide updates before each Legislative Session occurring in even-numbered years. During 2020, a dashboard will be developed for both GET and DreamAhead where these measures will be tracked and visible to stakeholders, as well as the public. In addition, customer surveys will be conducted in a continued effort to monitor the customer experience.

Rhoads moved to authorize WA529 staff to submit the report dated January 2020 and entitled "DreamAhead College Investment Plan: Policy Goals, Objectives and Performance Measures Update" as presented to the Legislature as soon as possible. Seconded by Schumacher. Four Ayes from Snyder, Meotti, Schumacher and Rhoads. Motion is passed as presented.

Snyder commented that since this is a report from the Committee to the Legislature, additional lead time is requested in the future to allow more time for review and revisions. In addition, Snyder requested that a review of roles and responsibilities of WSAC operational staff and committee members in regard to operational oversight be conducted at the next meeting.

Meotti commented that is essentially a narrative response to the Legislature's directive on how to frame the performance measures for the program. Going forward the reports need to be the performance measures themselves which requires engagement with the Committee and a dashboard needs to be created.

### **DREAMAHEAD AND GET PROGRAM DETAILS SUPPLEMENTS**

On December 19, 2019, the Setting Every Community Up for Retirement Enhancement Act of 2019 (SECURE Act) was signed into law as part of the federal Further Consolidated Appropriations Act, 2020. This bill includes new 529 plan-specific provisions that allow 529 plan account owners to withdraw assets to pay for certain expenses associated with Apprenticeship Programs and for certain Education Loan Repayments.

In response to the SECURE Act, revisions are needed in the GET and DreamAhead Program Details Booklets. Minor presented draft supplements containing the new disclosures to the GET and DreamAhead Program Details Booklets.

Schumacher moved that the GET Program Details Booklet Supplement be approved. Seconded by Snyder. Four ayes from Meotti, Snyder, Rhoads and Schumacher. Motion is passed as presented.

Rhoades moved to approve the DreamAhead Program Details Booklet Supplement. Seconded by Snyder. Four ayes from Meotti, Snyder, Rhoads and Schumacher. Motion is passed as presented.

### **WA529 MARKETING/BUSINESS DEVELOPMENT UPDATE**

Rodger O'Connor, Associate Director for WA529 Marketing & Communications, gave an overview of current marketing efforts noting that there has been a decrease in broadcast TV and radio advertising and an increase in advertising for digital media. Comparing 2018-19 to 2019-20 so far, GET's enrollment rate is almost exactly the same despite a higher unit price and less fall media spending. DreamAhead has had 140 new enrollments in the past three weeks despite a somewhat limited media budget. There will be another advertising push in the Spring before the GET enrollment period ends.

Meotti noted that he would like to research different ways to measure success. This includes determining what else can be done within the Washington Student Achievement Council to promote household savings for higher education and may include a public information campaign, among other things. Meotti would like to see a high-level, strategic conversation begin to take place with the WA529 Committee.

### **PUBLIC COMMENT**

No public comment.

### **ADJOURNMENT**

Snyder motioned to adjourn meeting at 3:16 p.m. Seconded by Rhoads. Four ayes from Meotti, Snyder, Rhoads and Schumacher. Meeting adjourned.



# **WA529 Committee Meeting**

May 6, 2020

# Welcome

## Approve Meeting Minutes

January 7, 2020



# Program Updates

Luke Minor

Director, WA529

Sally Riefenstahl

Account Executive, Sunday Administration



# GET Program Updates

## COVID-19 Update

### Operational Adjustments

- Staff
- Customer needs
- Account activity
- Marketing / Outreach efforts





# GET Program Updates

## COVID-19 Update

### Operational Adjustments



#### **Staff working remote**

- Maintaining excellent service to customers
- Answering customer calls via VOIP, email, support tickets
- Weekly in-office tasks
  - Mail
  - Scanning
  - Form processing
- Payment processing uninterrupted
- Utilizing digital imaging for various processes

# GET Program Updates

## COVID-19 Update

### Customer Behavior and Trends



- New enrollments ↓
- Account contributions ↓
- Customer calls/inquiries
  - Overall volume ↓
  - Common questions: payment holds, Custom Monthly info

# GET Program Updates

## COVID-19 Update

Efforts to inform customers



### **Custom monthly options, recontribution deadlines**

- Website alerts
- Updated FAQs
- Direct emails to AOs
- Webinars

# GET Program Updates

## COVID-19 Update

### Variables being monitored



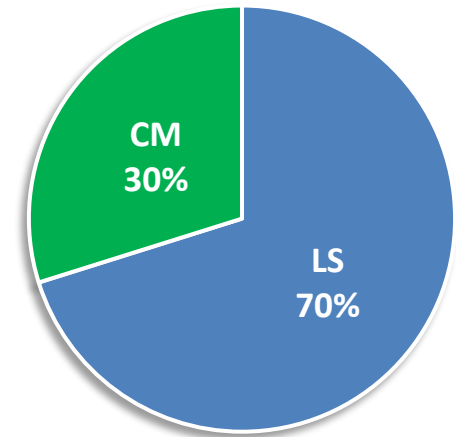
- Market activity
- State budget and future tuition policy considerations
- Federal changes
  - Recontribution deadline extended to July 15
- Media Interest
  - KIRO Seattle – story on April 7
  - Seattle Times interview

# GET Program Updates

## GET Account Statistics (as of 4/3/20)

### 2019 enrollment figures:

- New accounts: 2,074
  - New Lump Sum accounts: 1,455
  - New Custom Monthly accounts: 619
- New units purchased/contracted: 283,461
  - Lump Sum units: 185,361
  - Custom Monthly units: 98,100



# GET Program Updates

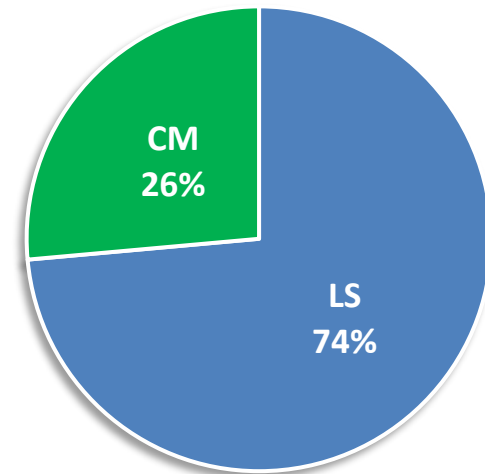
## GET Account Statistics (as of 4/3/20)

Total active accounts: 66,430

- Lump Sum accounts: 48,873
- Custom Monthly accounts: 17,557

Total undistributed units: 10.17 million

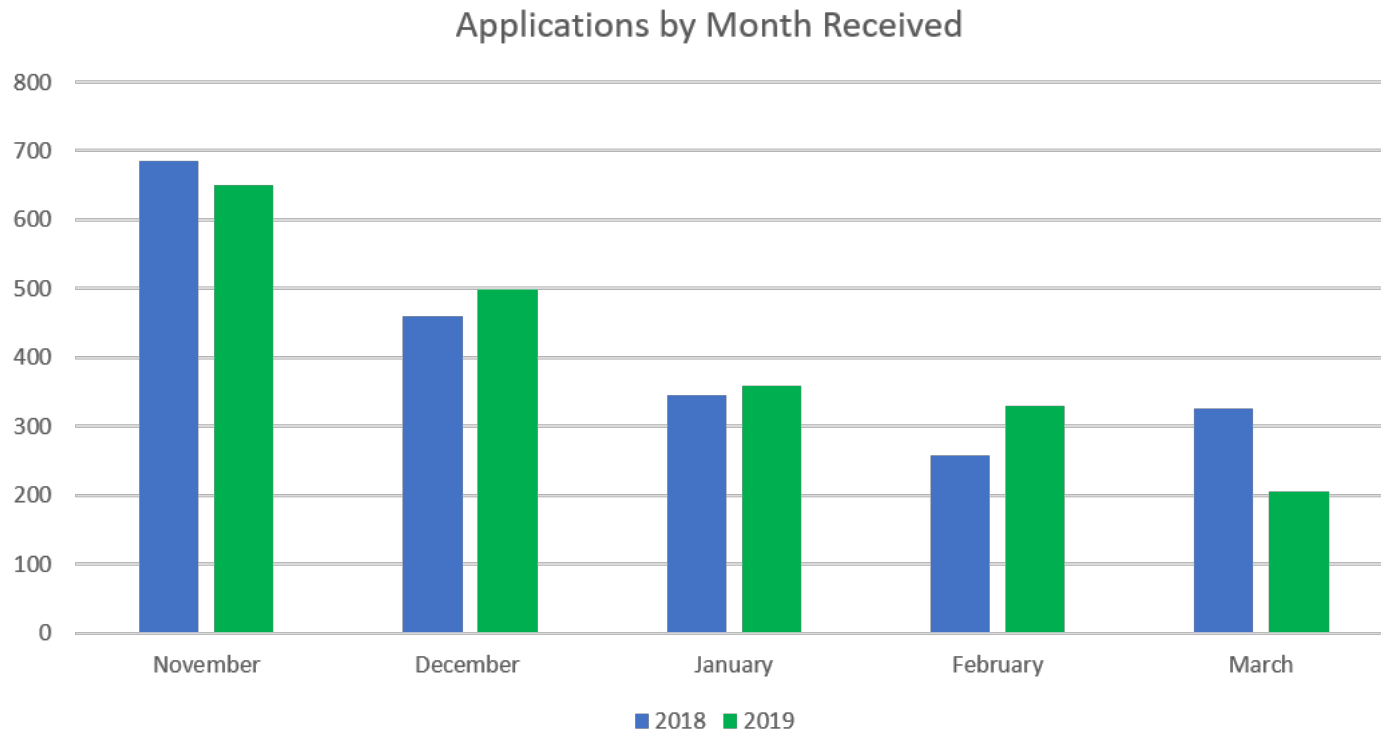
- Purchased units: 9.5 million
- Contracted, unpurchased Custom Monthly Plan units: 670,000



# GET Program Updates

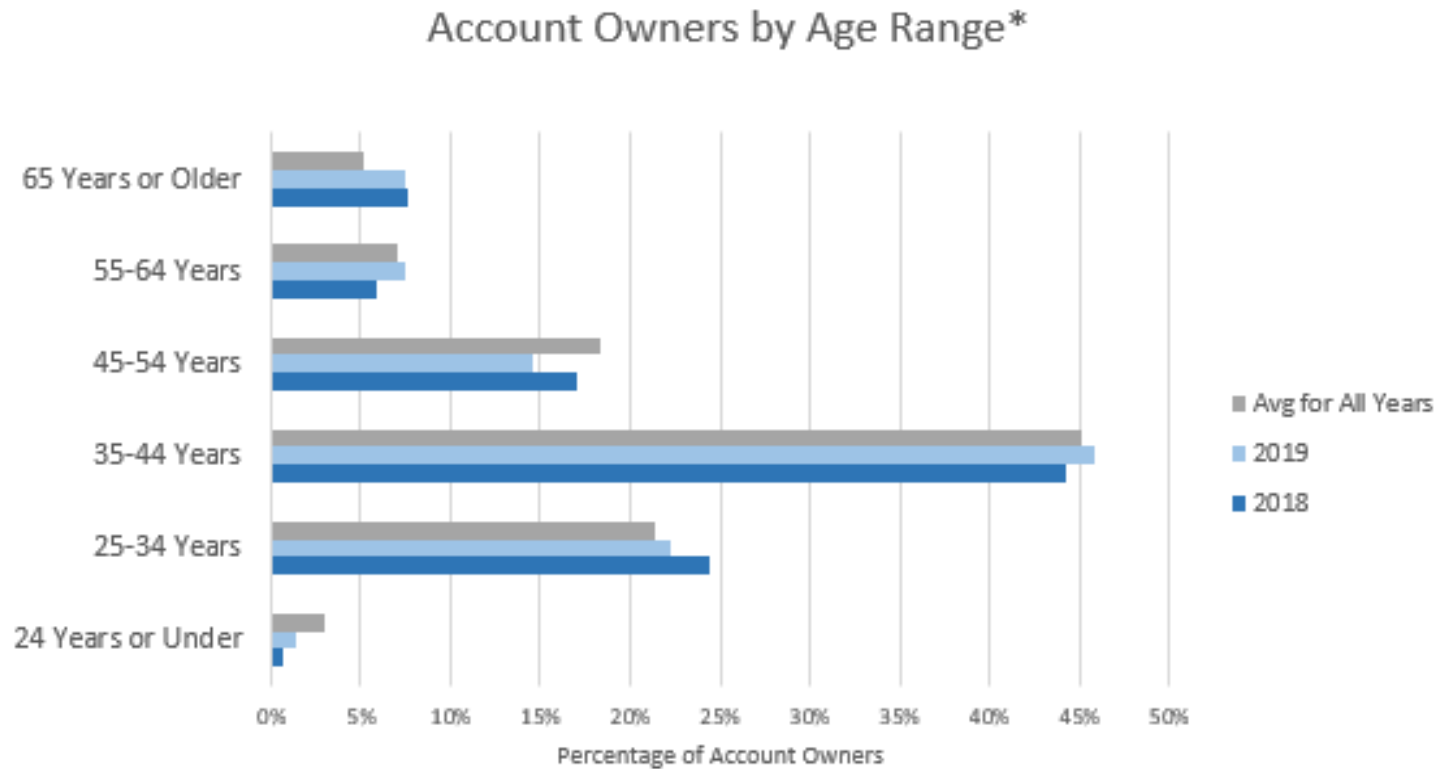
## GET Account Statistics

### Monthly Enrollments 2019 vs 2018



# GET Program Updates

## GET Account Statistics

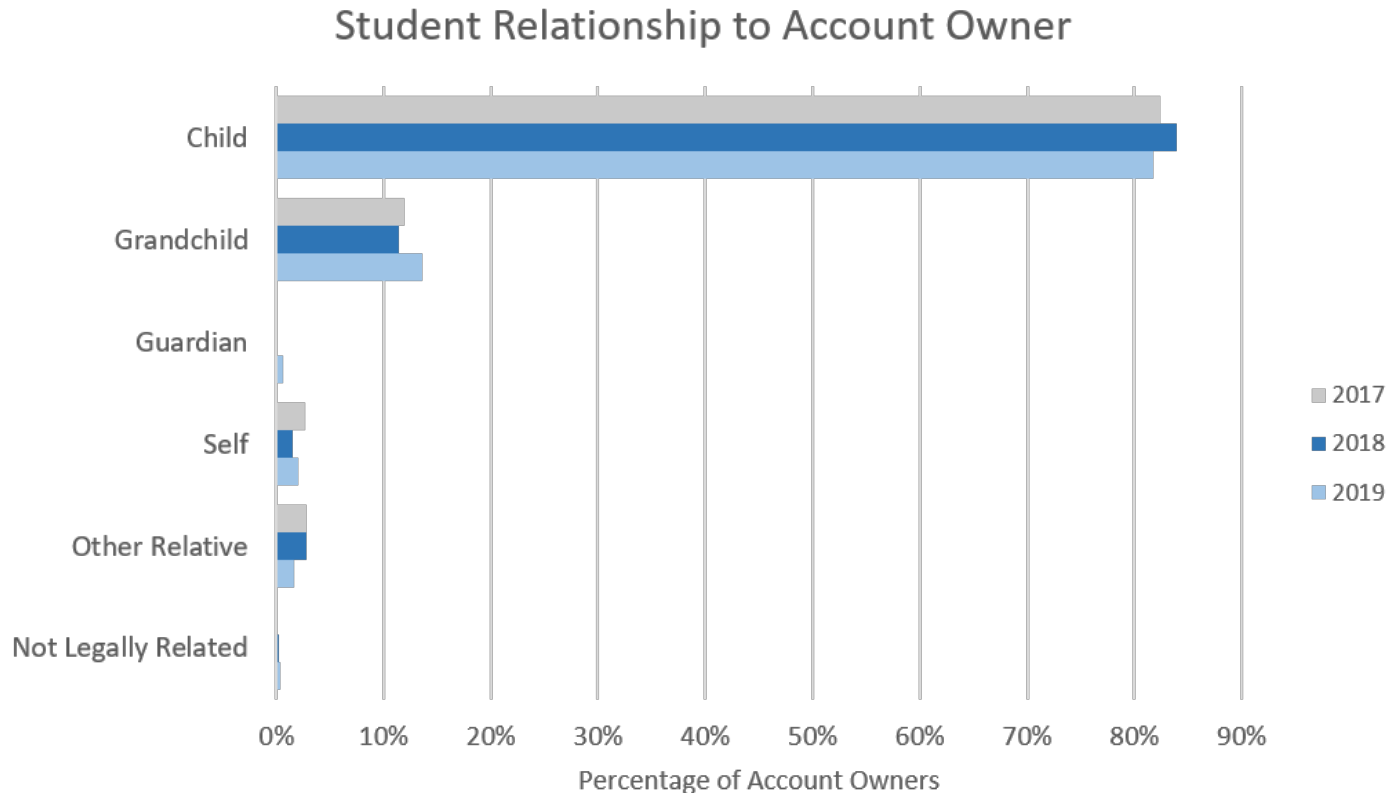


\*Excludes “no data” account owners



# GET Program Updates

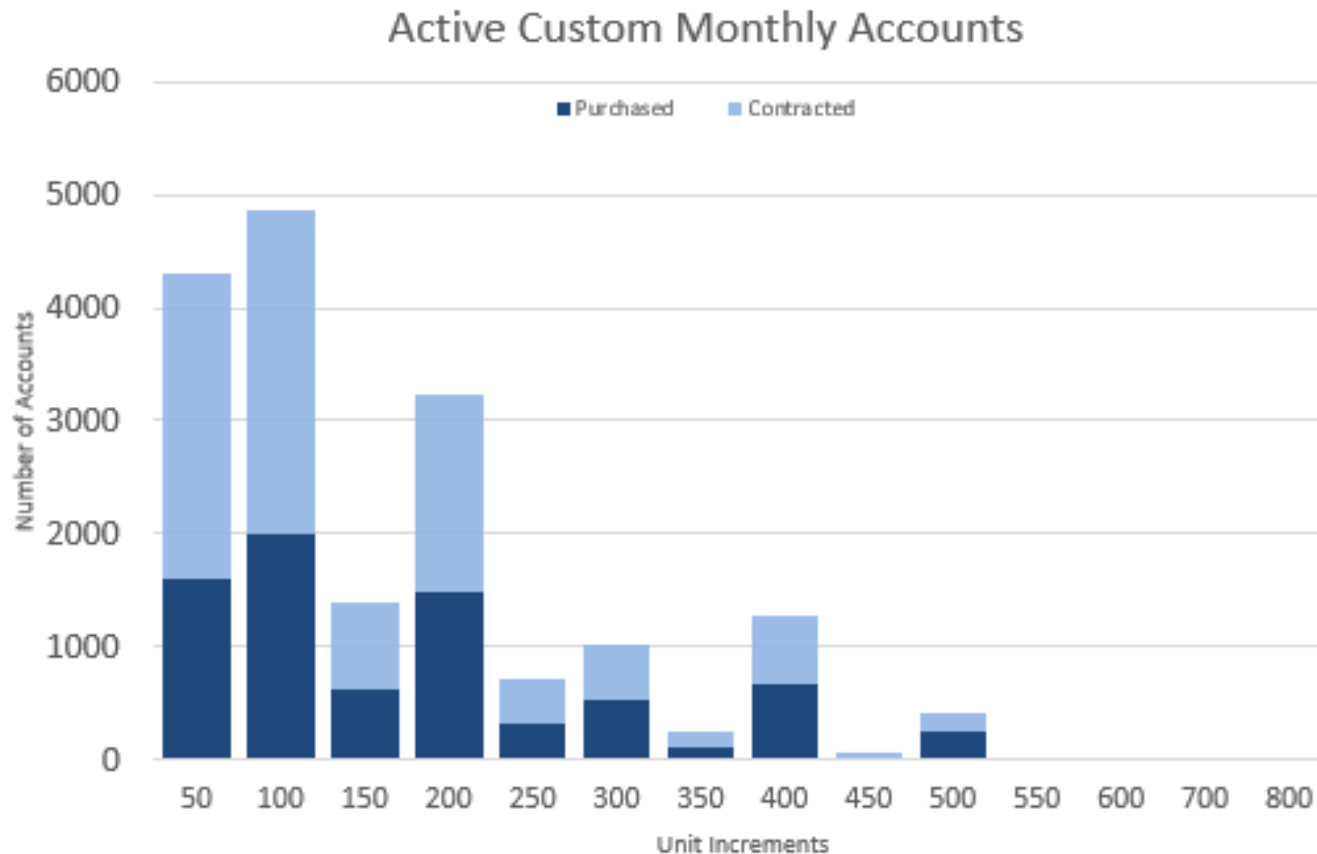
## GET Account Statistics



Excludes account owners who selected the “decline to answer” option

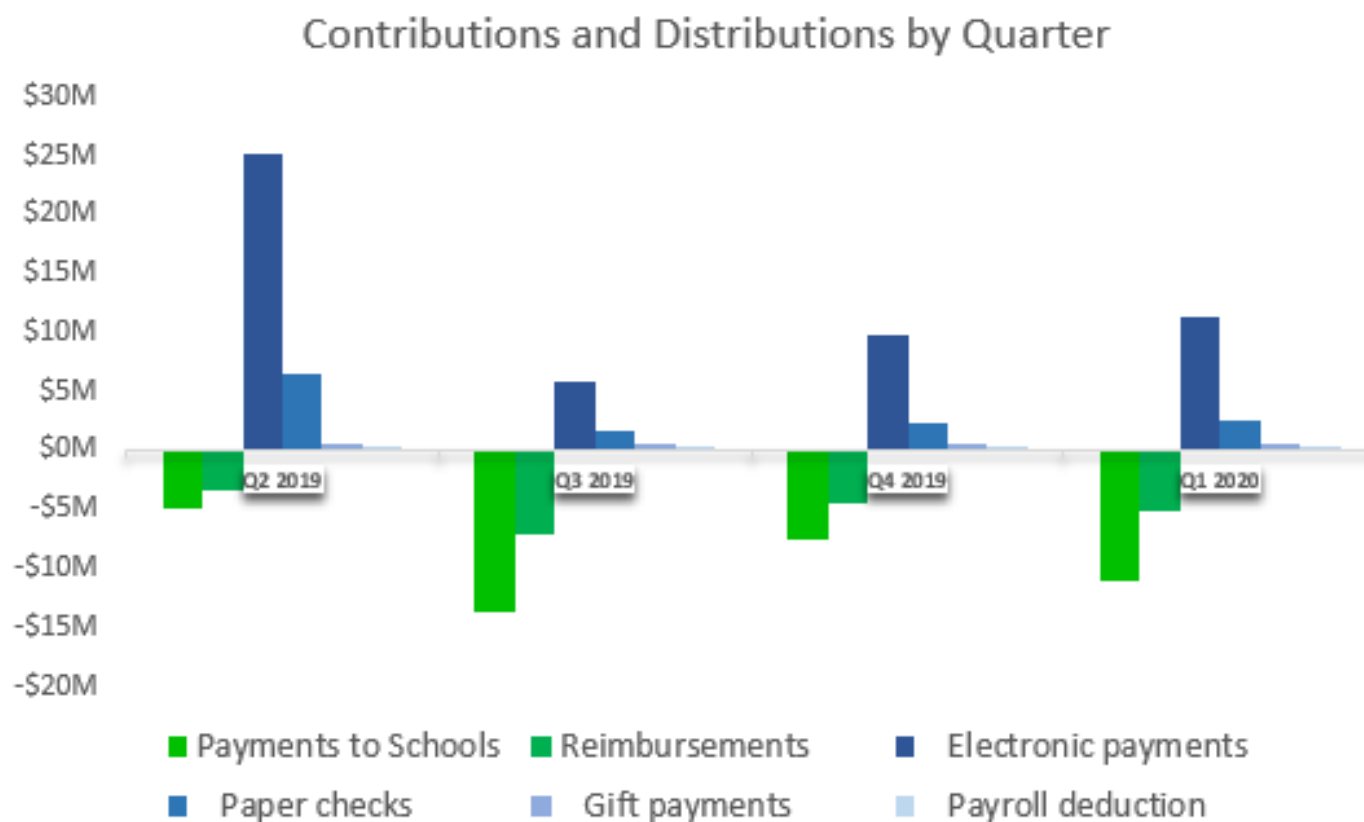
# GET Program Updates

## GET Account Statistics



# GET Program Updates

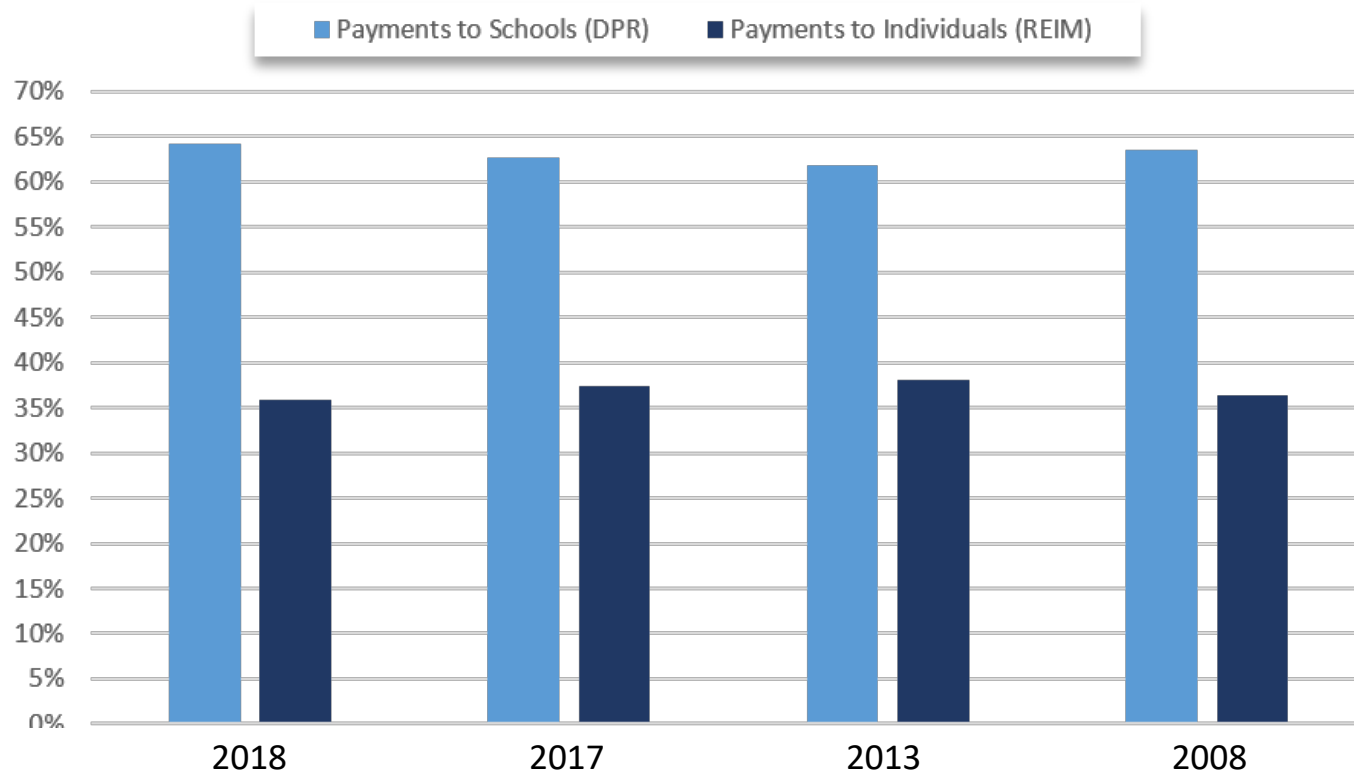
## GET Account Statistics



# GET Program Updates

## GET Account Statistics

### Distributions to Schools vs. Individuals (July 1 – June 30)

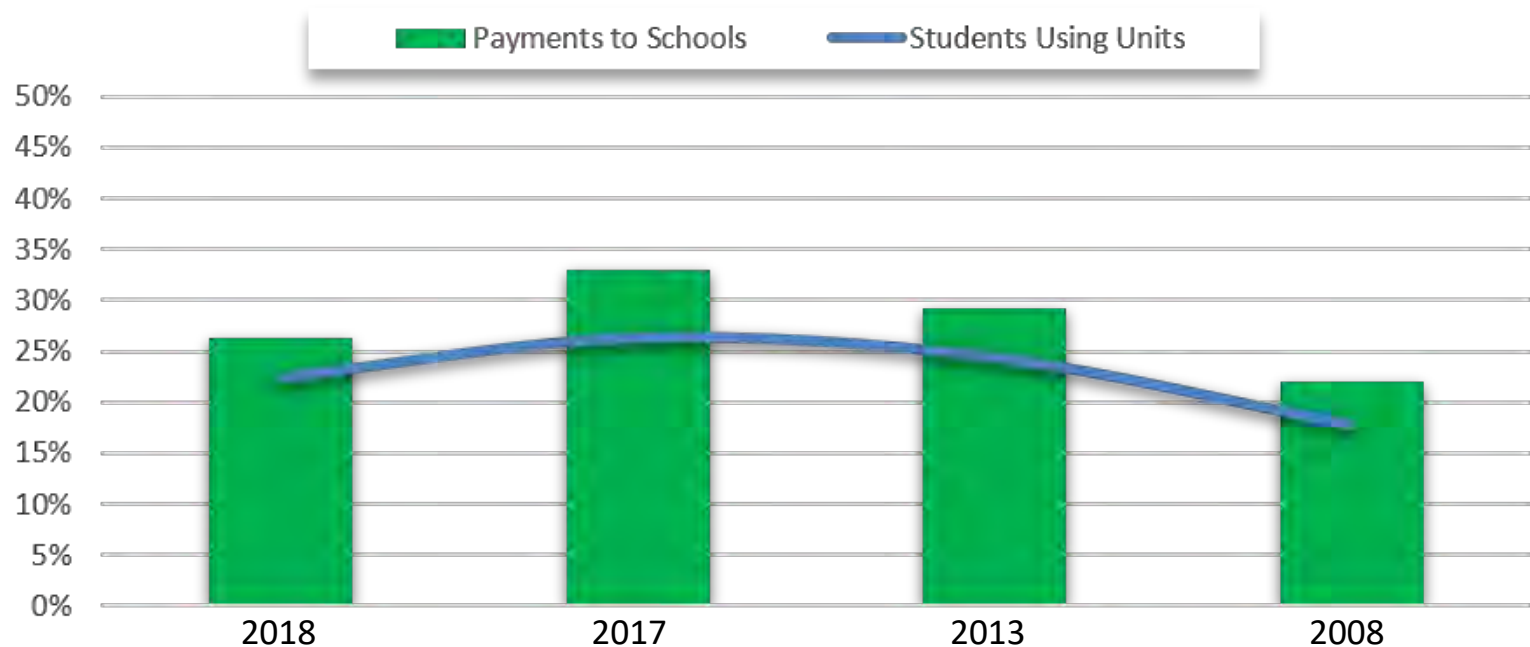


Source: DataMart

# GET Program Updates

## GET Account Statistics

### Distributions to Out of State Schools (July 1 – June 30)



Source: DataMart

# GET Program Updates

## Contact Center Activity



Contact Center Statistics	Q4 2019	Q1 2020
Incoming Calls:	2723	2464
Calls Answered:	2661	2398
Average Speed of Answer:	:40	:46
Average Talk Time:	5:07	4:56
Outgoing Calls:	987	912
Secure Messages Sent:	983	1138
Emails Received in GETInfo:	365	376
Outgoing Emails:	286	251

# DreamAhead Program Update

Sally Riefenstahl

Account Executive, Sunday Administration



See “[DreamAhead 2020 First Quarter Committee Report](#)”

# WA529 Dashboard Project

## Introduction

- Outgrowth of DreamAhead Policy Goals Report
- Insights into plan participation, community impact, and operational efficiencies
- Stakeholder communication tool
- Currently building framework
  - Spring/summer: build
  - September/November: updates and adjustments
  - End 2020: Implementation





## Preliminary Framework

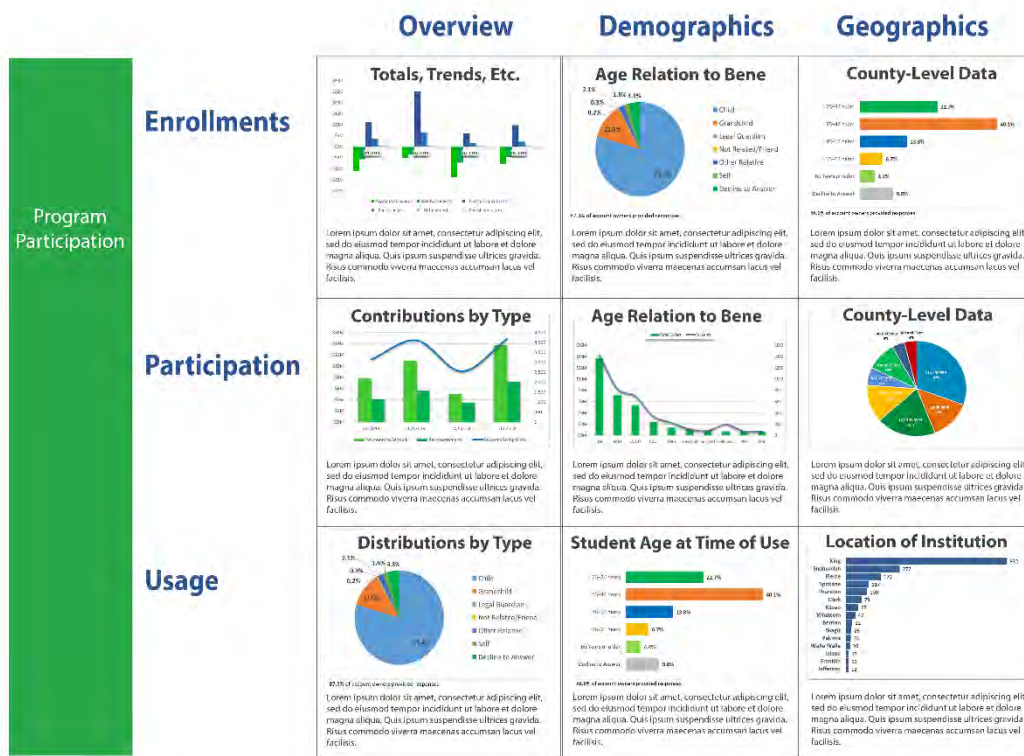
### Measurable categories:

- **Program Participation**
  - Enrollments
  - Participation
  - Usage
- **Program Impact**
  - Awareness Building
  - Community Partnerships / Statewide Initiatives
  - National 529 Efforts
- **Program Operations**
  - GET
  - DreamAhead

# WA529 Dashboard Project

## Design Mockup DRAFT

## Program Participation Grid



# Program Impact Grid



# WA529 Dashboard Project

## Design Mockup DRAFT

### Program Operations Grid

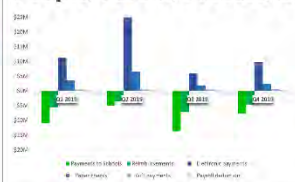


DreamAhead

GET

#### Administration

##### People, Parent, Process, Etc.



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##### Pricing, Policies, Etc.



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#### Performance/ Metrics

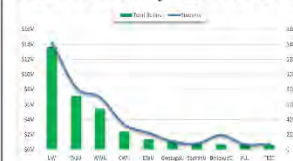
##### Price, Performance



87.3% of account owners provided responses

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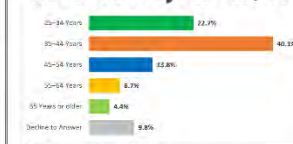
##### Actuarial Analysis, WSIB Data



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#### Budget

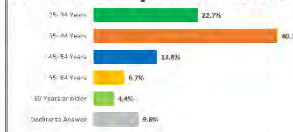
##### Committee Approved Budget, Revenue Projections, Etc.



86.6% of account owners provided responses

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##### Committee Approved Budget, Admin Component Calc, Etc.



86.6% of account owners provided responses

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# WA529 Dashboard Project

## Design Mockup DRAFT

### Zooming into a Topic





## Zooming into a Topic



# Legislative Updates

## Short session - Limited discussion of GET

- GET Legislative Advisory Committee retired as of July 1, 2020
  - Joint Higher Education Committee's scope includes WA529
- Proposal on Children Savings Account (CSA) study
  - WSAC/WA529 to conduct study
  - Convene workgroup of stakeholders
  - Passed initially, but removed from final budget due to COVID-19 impacts

# Partnership Update

## Building community partnerships:

- Master Scholarships
- Child Savings Accounts
- School Savings initiative





# Partnership Update

## Master Scholarships

- Building new Master Scholarship Portal
- Enables entities to manage scholarship accounts
- Can also be used for CSAs

## Child Savings Accounts (CSA)

- Exploring partnership with Tacoma Housing Authority's CSA program
- Currently low-yield accounts in community bank
- Partnership would likely shift younger CSA participants to GET

Discussions continue ↔ Timing ideal

# Partnership Update

## School Savings initiative

- Brings school savings, 529s and financial literacy to classrooms
- Successful pilot programs in other states
- Gauging interest from multiple partners
  - WA529
  - FEPPP
  - SBE
  - OST



<https://ww2.schoolsavings.com/>

# WA529 Marketing Update

Rodger O'Connor

Associate Director for Marketing & Communications  
WA529

- Spring Media Update
- Outreach
- Community Partnerships
- Look ahead to 2021

# WA529 Marketing Update

## Spring Media Strategy

- **COVID-19 adjustments**

- Abandoned plans for billboards
- Moved funds to Digital, Social, TV News programming
- Negotiated additional DreamAhead summer transit campaign



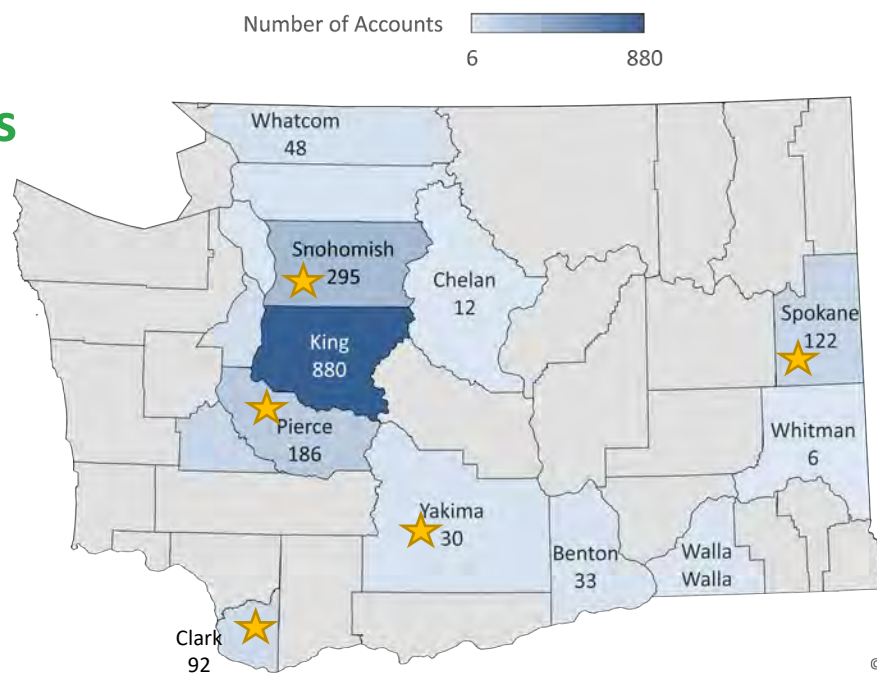
## Opportunity Counties

- TV & Radio news
- Transit (Seattle)
- Family-targeted publications

## Statewide

- Paid Search
- Digital Display
- Social Media
- Streaming Audio

2019 Accounts by County - Top 15 by Number of Accounts



# WA529 Marketing Update

## Multi-Care Hospital campaign

### Pilot run:

- Launched prior to COVID-19 crisis
- Puget Sound area
- Five hospitals
- Eleven displays





# WA529 Marketing Update

## Summer Media Strategy

- **Shift to DreamAhead**
  - Search
  - Paid/organic Social
  - Display
  - Seattle transit
    - No charge bonus from Spring campaign



## Outreach adjustments during COVID-19

- **Creating new engagement opportunities**

- Webinars
- Virtual learning sessions
- Informational video library



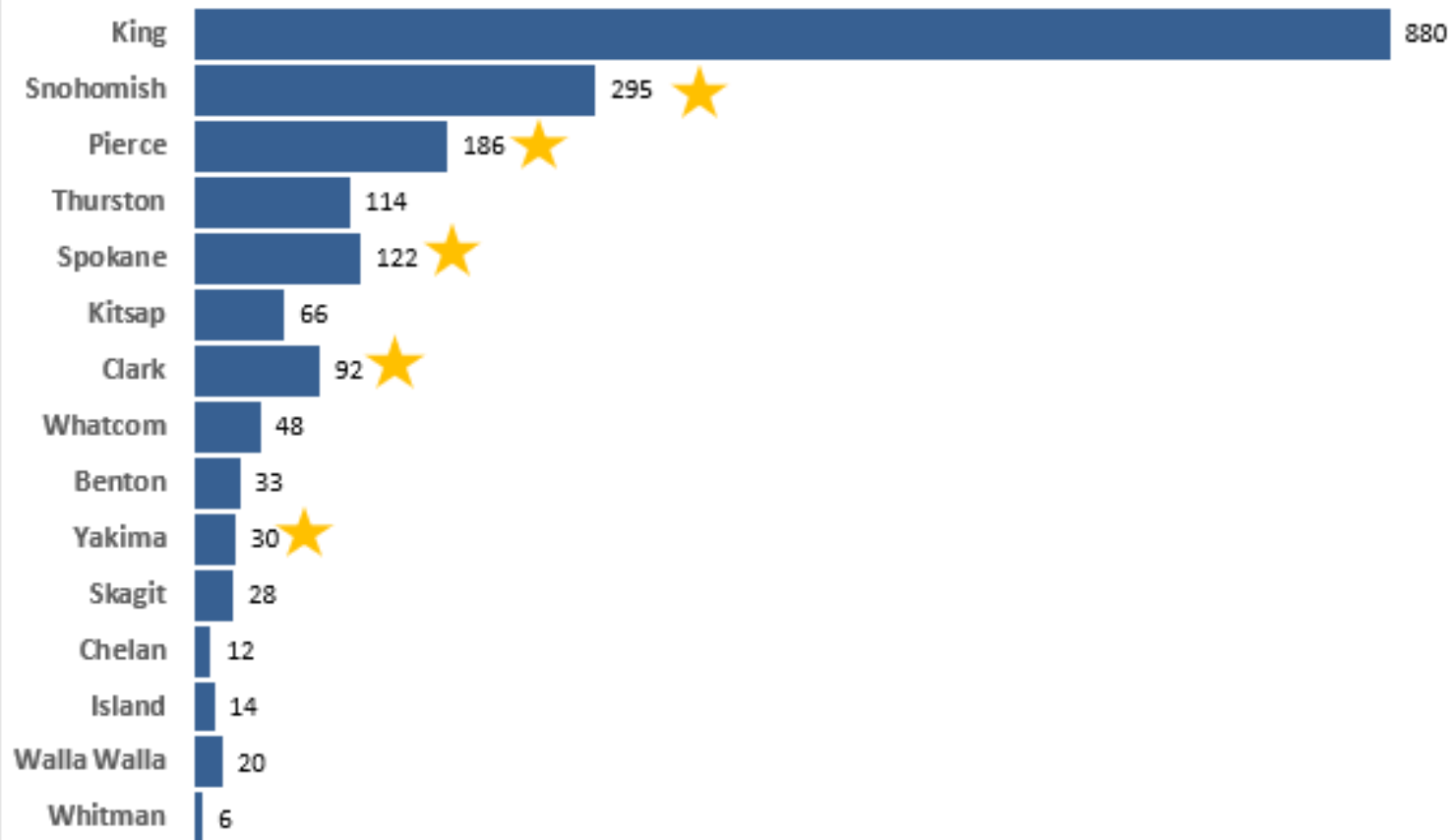


## Partnerships

- Consumer Education & Training Services (CENTS)
- Association of Washington School Principals (AWSP)
- Program for Early Parent Support (PEPS)
- Financial Education Public Private Partnership (FEPPP)
- Financial Beginnings Washington
- Gift of College

# WA529 Marketing Update

2019 Enrollments - Top 15 Counties by Number of Accounts



# WA529 Marketing Update

County	2019 # of Accounts thru 3/31/20	2019 Avg Units Purchased	2018 # of Accounts	2018 Avg Units Purchased
Snohomish	295	<b>84.0539</b>	503	81.7749
Pierce	186	<b>76.5054</b>	447	77.7909
Spokane	<b>122</b>	<b>72.3379</b>	199	57.5695
Clark	<b>92</b>	37.9784	134	95.0229
Yakima	<b>30</b>	44.3686	39	110.9440

# WA529 Marketing Update

## 2021 Planning Notes

- **Merlino Media** 
  - Year two
- **WA529 Website rebuild**
  - Visual redesign
  - Improved navigation



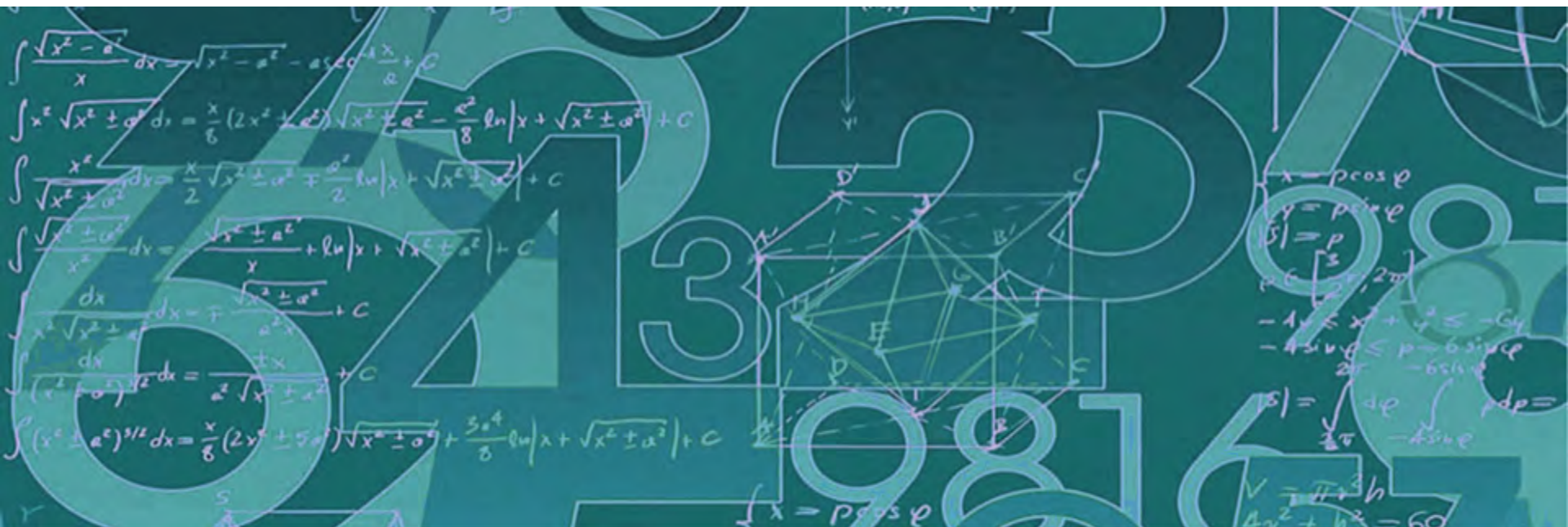
# 2020 GET Actuarial Update

*Presentation to:*

*WA529 Committee*

*Matthew M. Smith, State Actuary*

*FCA, EA, MAAA*



# Today's Presentation

- Brief review of OSA's role and history with the GET program
- Current status of the program
- Overview of planned actuarial work for the year
- Q&A

# Who We Are and Why We're Here

- OSA started consulting on the GET program in 2009 with a financial solvency study
- In 2011 we became the primary actuarial consultants for GET
- We assist the WA529 Committee through three primary services
  - Prepare an annual actuarial valuation report
  - Prepare unit price-setting analysis
  - Consult, price, and communicate the effects of potential changes to the GET program
- We are here to help you and to support the soundness of the program

## financial solvency study

Guaranteed Education Tuition  
(G.E.T.)  
Program



Office of the State Actuary  
*"Securing tomorrow's pensions today."*

November 13, 2009

# Program Status at June 30, 2019

Funded Status Summary	
<i>(Dollars in Millions)</i>	2019
Present Value of Future Obligations	\$1,108
Present Value of Fund	\$1,456
Funded Status	131.3%
Reserve/(Deficit)	\$347

Contract Data Summary	
	2019
Number of Current Contracts	67,215
Number of Units Outstanding	10,418,088

Key Assumptions	
Annual Investment Return	5.25%*
Annual Tuition Growth**	
2019-20	2.3%
2020-21	2.2%
2021-29	5.5%
2029-31+	5.0%

- See the *June 30, 2019, GET Actuarial Valuation Report* for all supporting information

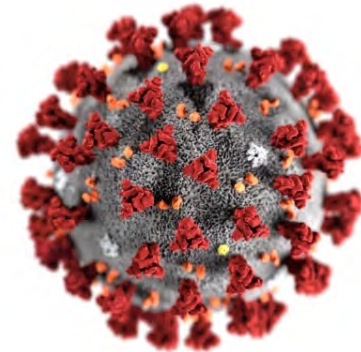
\*Target asset allocation: 60% global equities; 40% fixed income.

\*\*Academic school year.

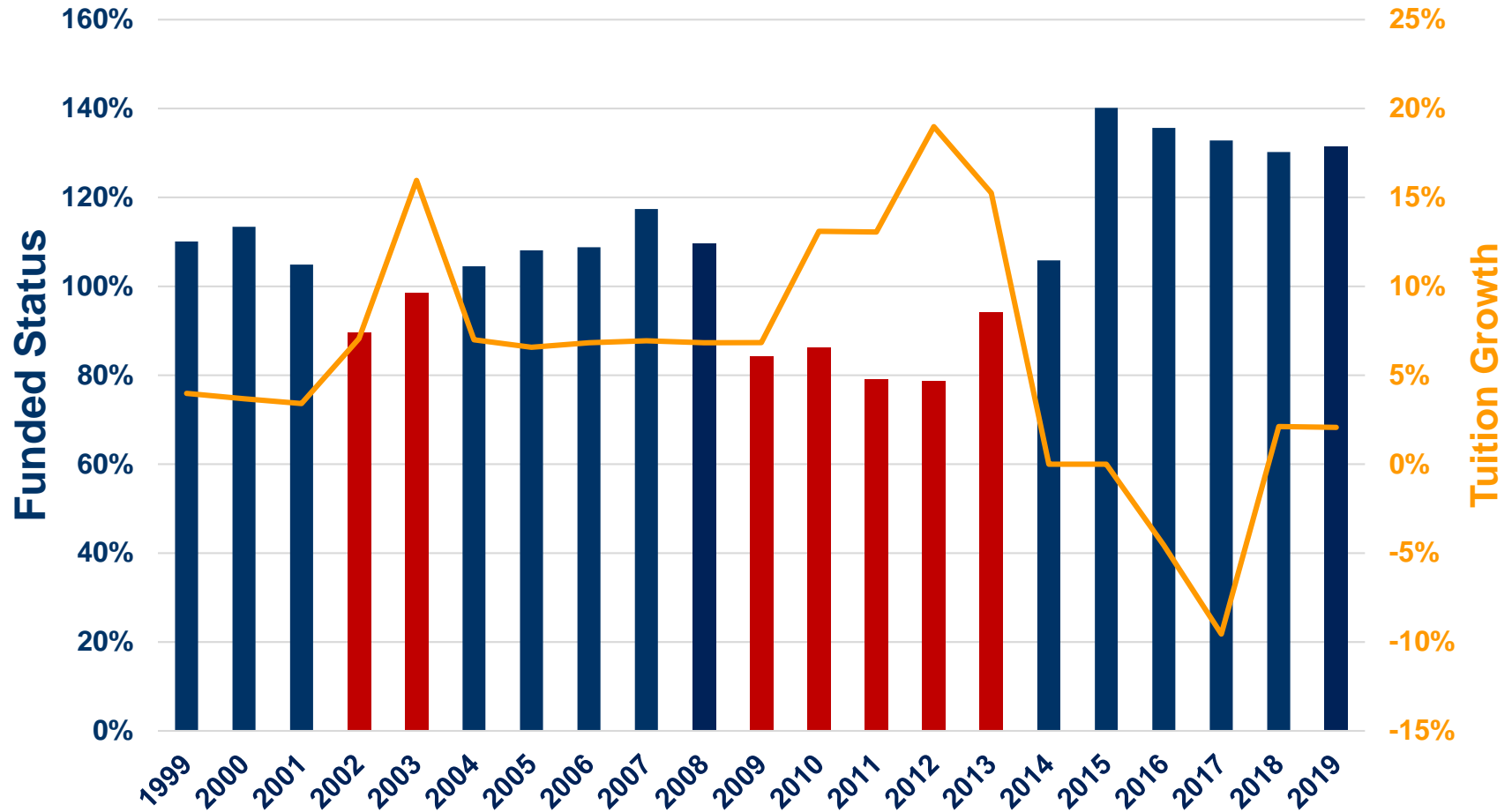


# Impacts of COVID-19

- The financial impacts have been significant and are still evolving
- Volatile investment markets
  - S&P down about 20% in the first quarter of 2020
  - GET portfolio down about 10% in comparison
  - -4.07% return for the GET portfolio for fiscal year to date
- Global recession will lead to state budget cuts and potential above-expected tuition growth in the short run
- Short-term asset losses combined with above-expected tuition growth can produce short-term shocks in point-in-time actuarial measurements
- Not uncharted territory for GET



# GET Weathered the Past Two Recessions



# GET Had A Larger Reserve Heading Into This Recession

- GET Program was 117% funded before the Great Recession (2007)
- Excess above 100% represents a “reserve” that protects the program from poor or unexpected experience
- The current long-term reserve target for the program is 15% or a 115% funded status
- As of June 30, 2019, the program was 131% funded
  - A decrease in assets of 24% would lead to a 100% funded status
  - A decrease in assets of 12% would lead to a 115% funded status
  - Both measured at June 30, 2019, and further assume no change to expected program obligations

# We Already Assume Higher Tuition Growth Rates After 2019-21

- Current law tuition policy limits annual resident undergraduate tuition growth to no more than the annual growth rate of the median state wage
- We assume tuition growth rates, after the current biennium, are more reflective of past practices and historical growth rates

Key Assumptions	
Annual Investment Return	5.25%*
Annual Tuition Growth**	
2019-20	2.3%
2020-21	2.2%
2021-29	5.5%
2029-31+	5.0%

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

\*\*Academic school year.

# Additional Tools to Manage Risk

- New asset allocation
  - Now 40/60 global equities/fixed income (was 60/40)
  - Change implemented before the current market downturn and limited some of the recent asset losses
- Future unit pricing
  - Control over when/if you sell new units and how much you charge (reserve)
  - Optional amortization policy under [RCW 28B.95.030\(10\)](#)
- New asset smoothing method
  - We now report funded status under a “smoothed” measure in addition to the market value of assets
  - Provides additional context for interpreting a point-in-time measurement

# Upcoming Actuarial Work

- CAFR Roll-Forward (August)
  - Will include asset experience through June 30, 2020
- Price-Setting Analysis (September)
- 2020 Actuarial Valuation Report (November)
  - June 30, 2020, measurement date
- Preparing for 2021 experience study



## Summary Comments

- OSA is here to help you and support the soundness of the program
- We're monitoring the financial impacts of COVID-19 and will keep you updated as we learn more
- GET program weathered the past two recessions and entered the current recession with a higher reserve than previous recessions
- We already assume higher tuition growth rates after 2019-21
- You have additional tools to help manage program risk

*Questions? Please Contact:  
The Office of the State Actuary*

*[leg.wa.gov/OSA](http://leg.wa.gov/OSA); [state.actuary@leg.wa.gov](mailto:state.actuary@leg.wa.gov)*

*360-786-6140, PO Box 40914, Olympia, WA 98504*

*Matthew Smith*

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**Thank You**





## GET Investment Report May 6, 2020

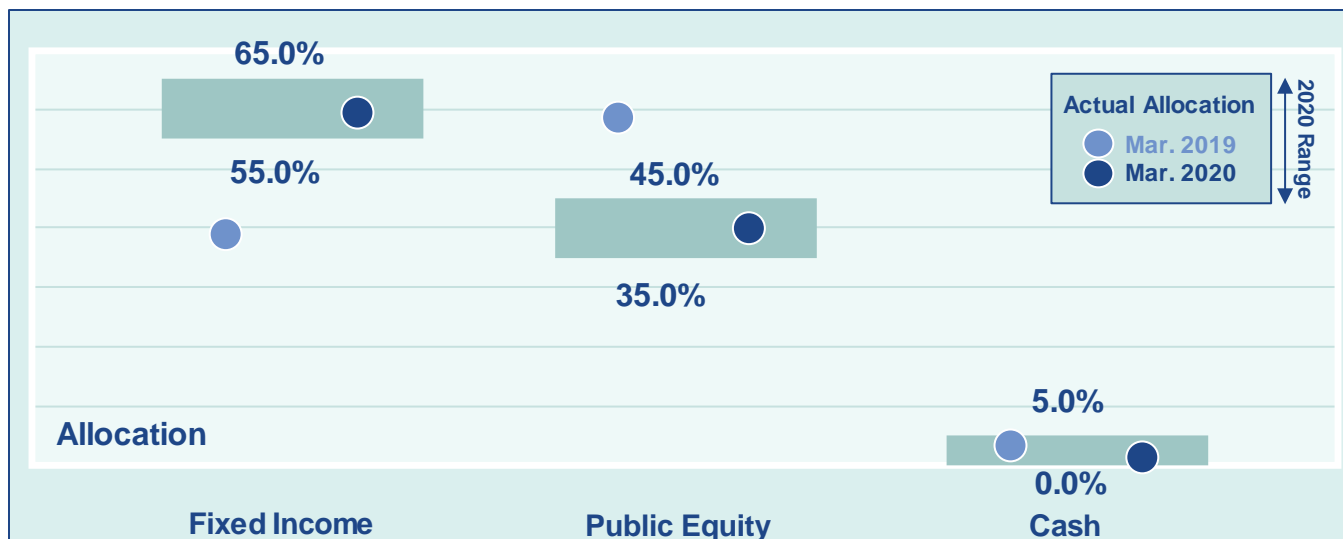
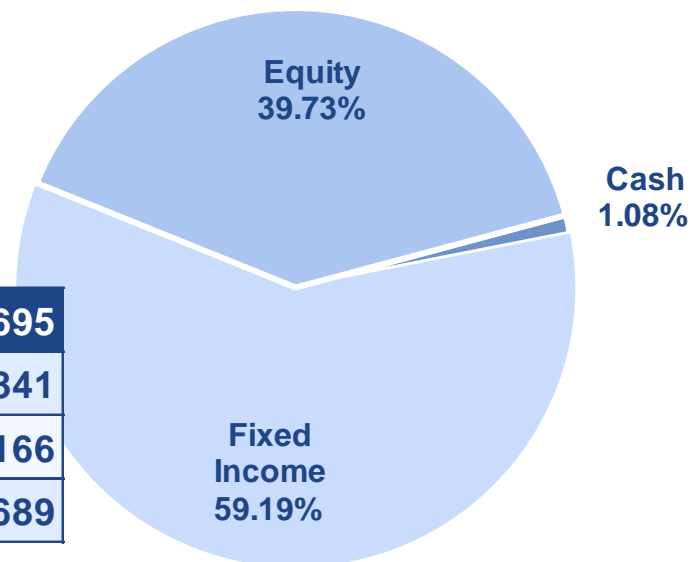


Chris Phillips  
Institutional Relations Director

# GET Market Values, Asset Allocation, Targets and Ranges

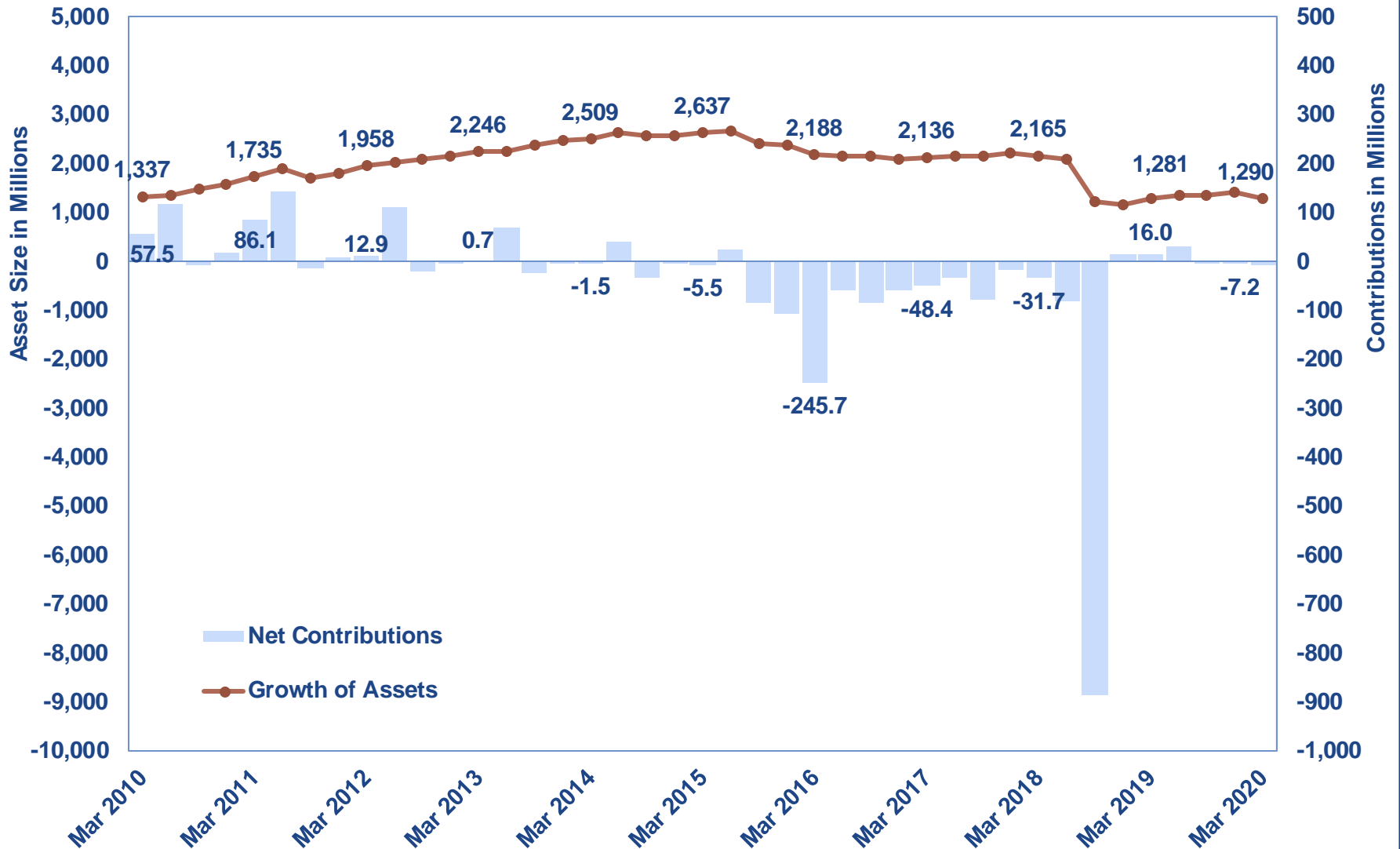
March 31, 2020

<b>Total</b>	<b>\$1,290,368,695</b>
<b>Cash</b>	<b>\$13,912,841</b>
<b>Fixed Income</b>	<b>\$763,805,166</b>
<b>Equity</b>	<b>\$512,650,689</b>



# GET Net Contributions and Growth of Assets

March 31, 2020

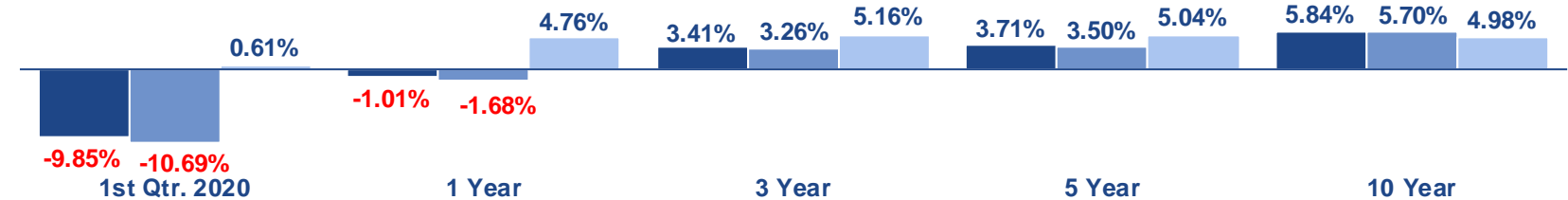


# GET Performance

March 31, 2020

## Total Return

■ GET College Tuition Program ■ Passive Benchmark ■ CPI (inflation) + 3.25%



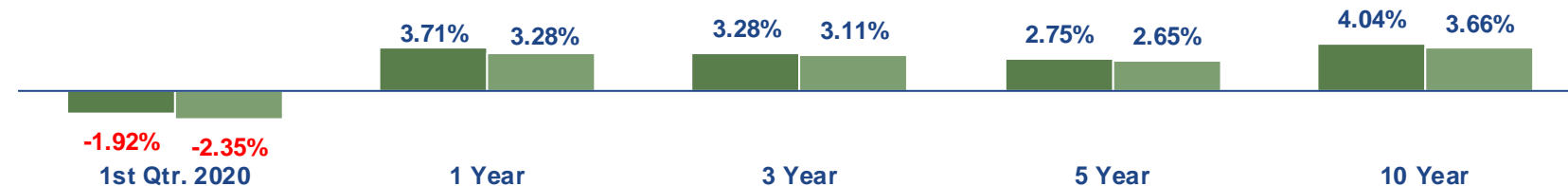
## Equity Return

■ Equity ■ Equity Benchmark



## Fixed Income Return

■ Fixed Income ■ Fixed Income Benchmark



Fixed Income Benchmark: Bloomberg Barclays Intermediate Credit and a historical blended return  
Equity Benchmark: MSCI ACWI IMI w/U.S. Gross and a historical blended return

# Capital Markets at a Glance

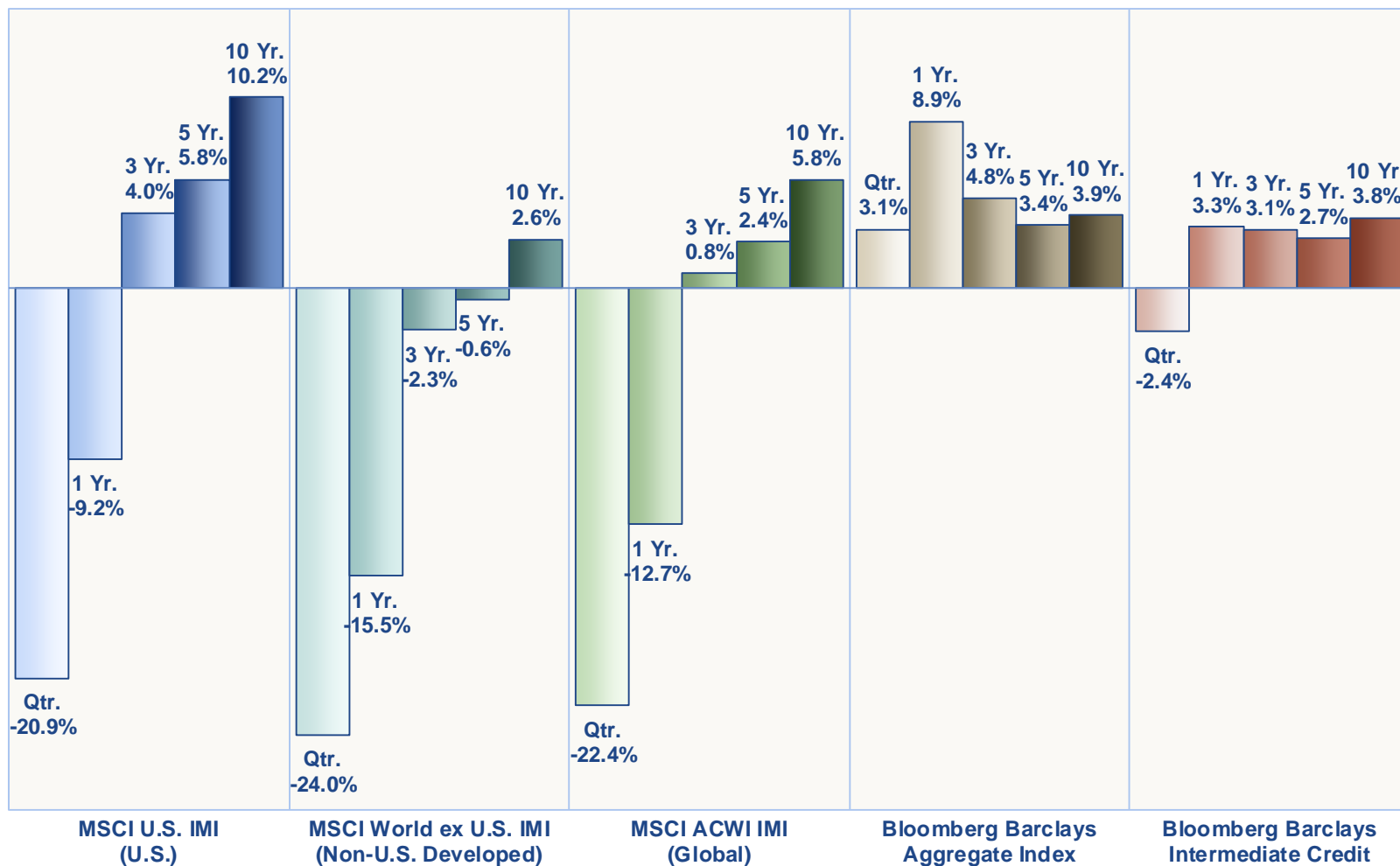
*March 31, 2020*



- A COVID-19 pandemic triggered an unprecedented global shock for investment markets in 1Q 2020
- Global developed markets declined -22.2% for the quarter and -14.2% in March alone
- Central banks applied monetary policies: The Fed lowered interest rates 50 bps on March 3; 75 bps on March 15, to target rate of 0.25%
- Governments enacted fiscal policies: Congress enacted a stimulus package worth an estimated 10% of GDP
- In fixed income, extremely low interest rates and wide credit spreads created mixed results
- U.S. Treasuries were up 8.2% for the quarter; high yield bonds dropped -12.7%; 10-year U.S. Treasury rate ended the quarter at 0.67%
- Oil, hit with diminished demand and disagreements over supply levels, saw a return -65.6% for the quarter

# Capital Markets at a Glance

March 31, 2020



# Contact Information

**Web Site:** <http://www.sib.wa.gov>



**Address:**

2100 Evergreen Park Drive SW  
P.O. Box 40916  
Olympia, WA 98504-0916

**Phone Number:**

(360) 956-4600

# DreamAhead Investment Update

**WA529**  
WASHINGTON COLLEGE SAVINGS PLANS

Nick Procyk  
Lockwood Advisors



See “[DreamAhead Investment Report Q1 2020](#)”



# Public Comment

## Share Your Thoughts

---

### Process

- Sign-up sheet
- Submit comment through GoToWebinar chat function
- You can submit written comments
  - Send to [GETInfo@wsac.wa.gov](mailto:GETInfo@wsac.wa.gov) and include the subject line: "GET Committee Statement."



# Next Regular Meeting

**September 9, 2020**

2:00 pm – 4:00 pm

John A. Cherberg Building Capitol  
Campus, Olympia  
Senate Hearing Room 3





**Adjournment**





# 2020 First Quarter Committee Report

May 6, 2020



BNY MELLON



# Agenda

- COVID Operational Updates
- Year of Enrollment Terminal Portfolio Communications
- Sunday Year of Enrollment Portfolio Options Communication Plan
- Program Overview
- Program Statistics & Analysis
- Appendix

# Sumday COVID-19 update

## Steps taken this quarter in response to global pandemic:








- > 100% of Call Center team working remotely
  - Call Center hours of operation reduced to 9am -5pm ET to manage transition to remote working
- > 100% of Operations team working remotely
  - No processing delays
- > Provided Pandemic Planning Overview and Ongoing Client Servicing Updates
- > Confirmed similar operational-resiliency plans with third-party vendors (e.g. Plaid, True Link, Microsoft)

# Sumday Year of Enrollment Portfolio Options Communication Plan

Sumday will update the following collateral, once the Board decides on the terminal investment options:

- > Program Details Booklet
- > Website
- > Targeted Email to Impacted Account Owners
- > Quarterly Statement Message

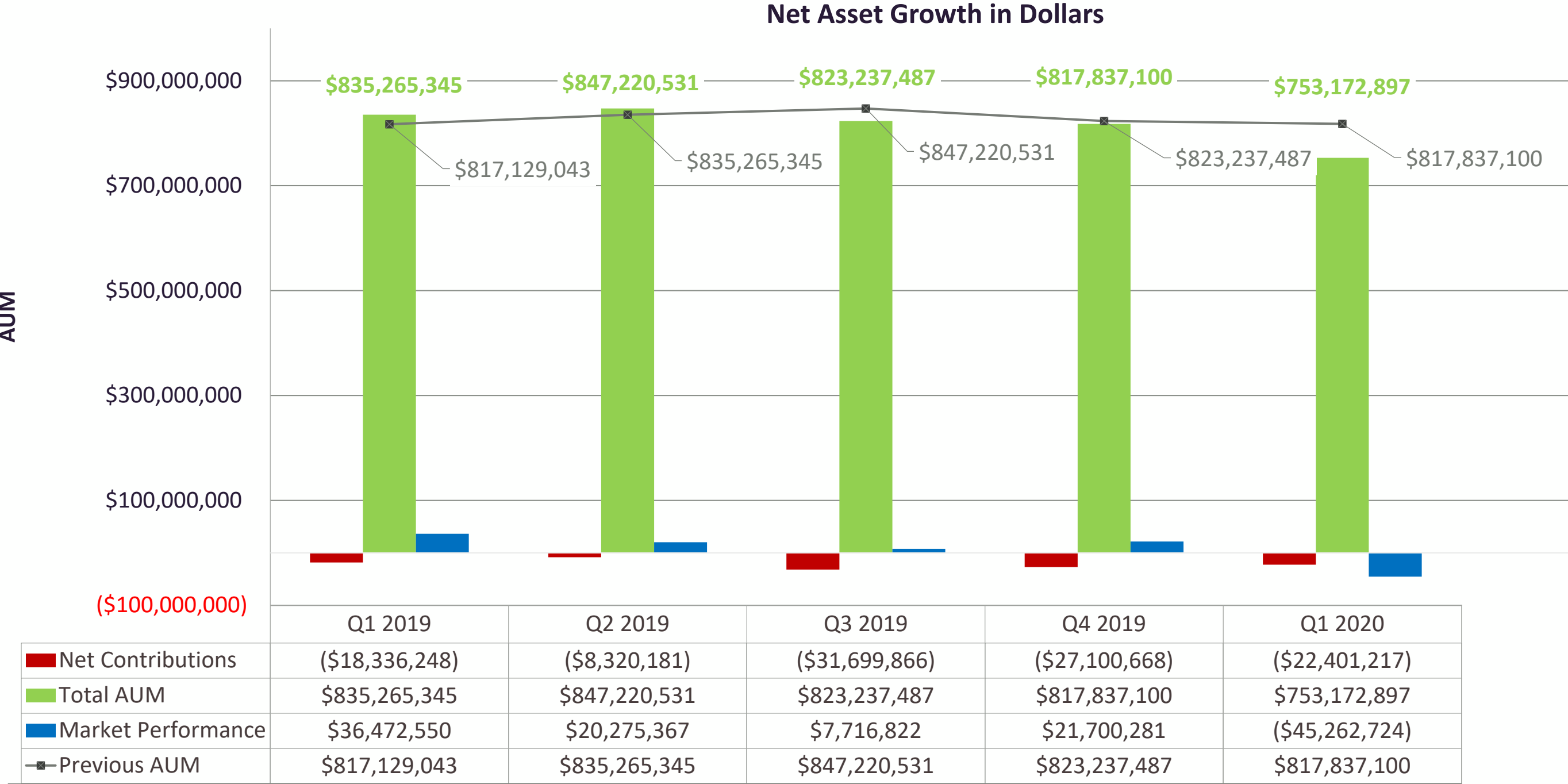
# Overview for the Current Quarter

- \$753,172,897 in AUM 
- 25,797 Funded Accounts 
- 742 New Accounts 
- 2,509 Accounts Closed With Zero Dollar Balance 
- Market Performance of -\$45,262,724 
- Contributions of \$8,982,869 
- Distributions of \$31,384,086 



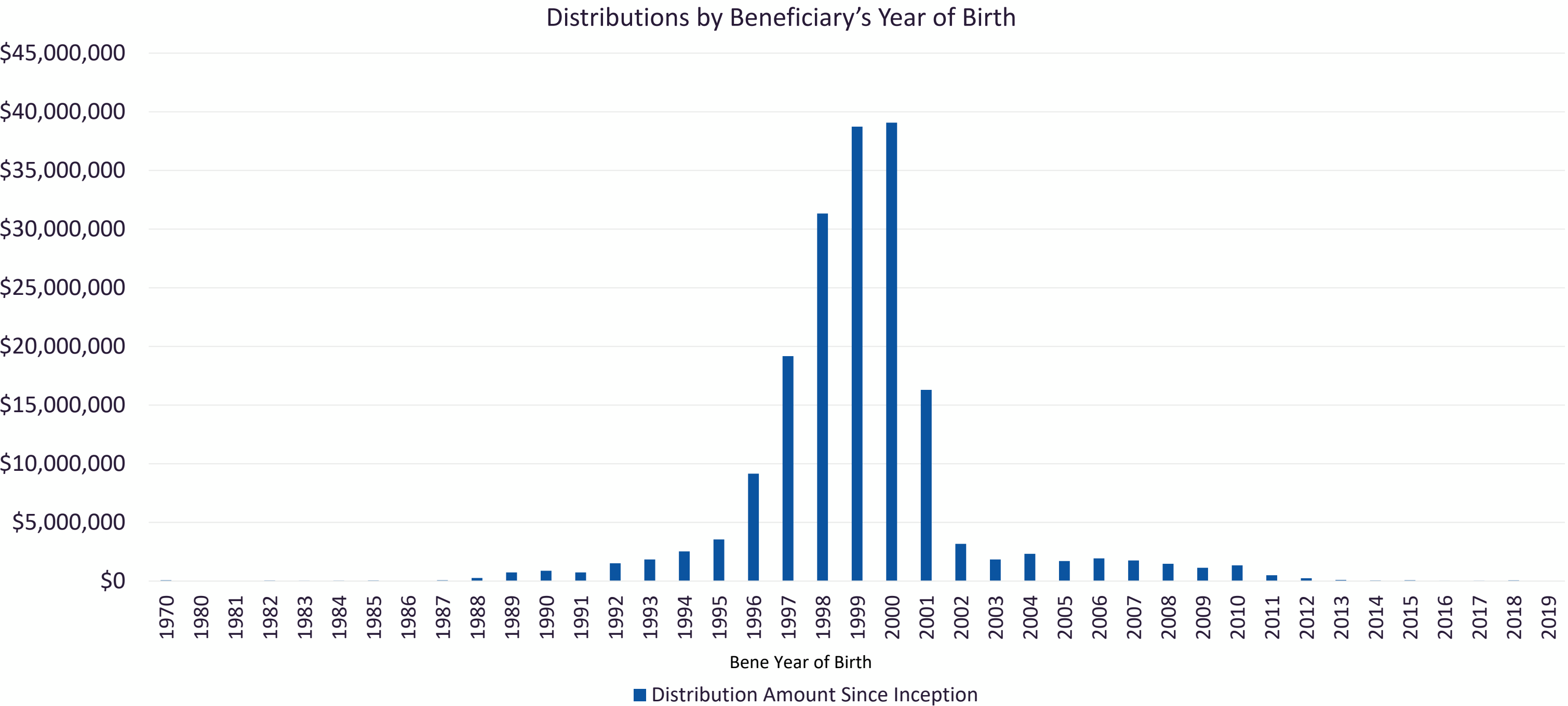
# Net Asset Growth

Asset growth reflects both net contributions and market performance



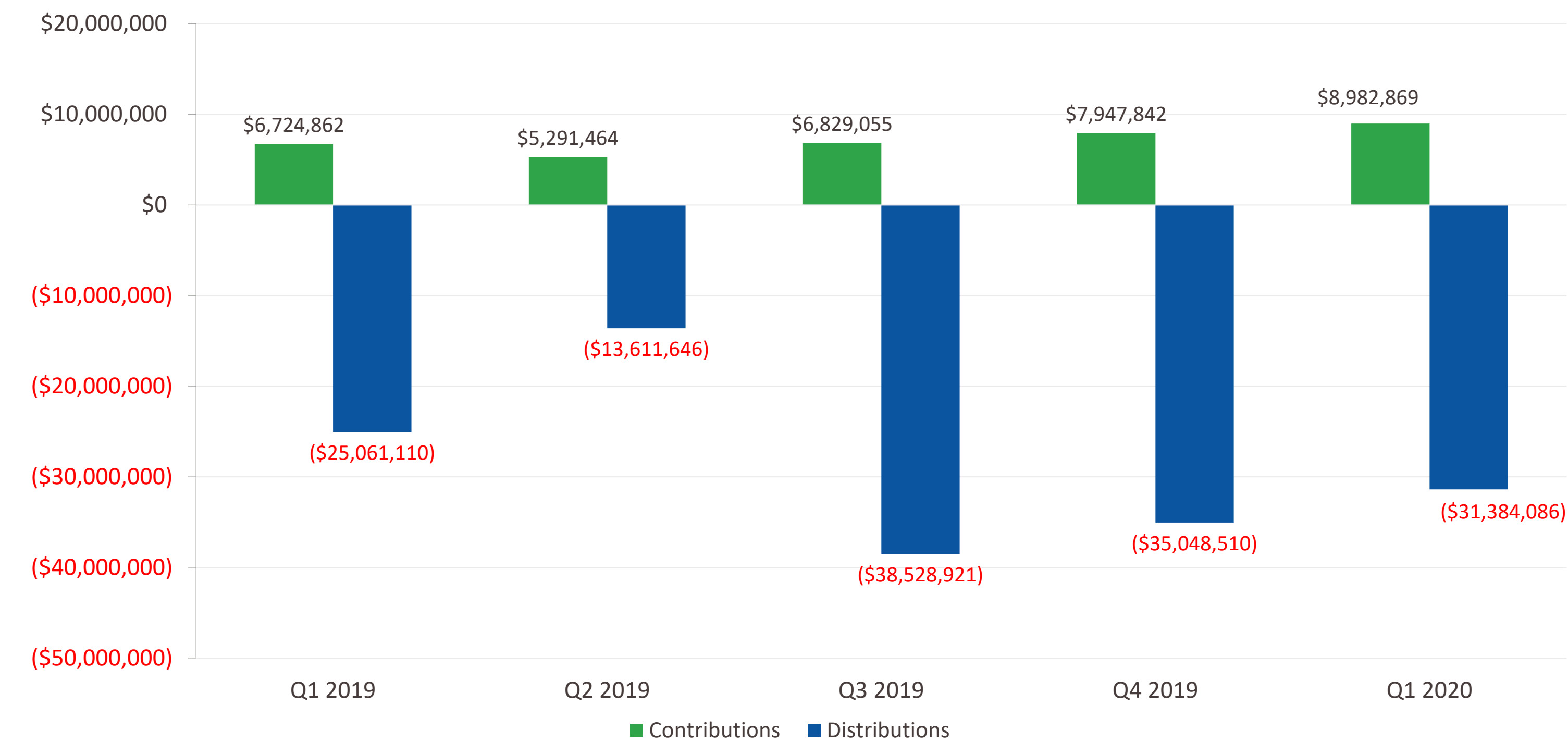
# Distributions by Age Since Plan Inception

Total Plan Distributions Since Inception: \$187,553,060 as of 3/31/2020

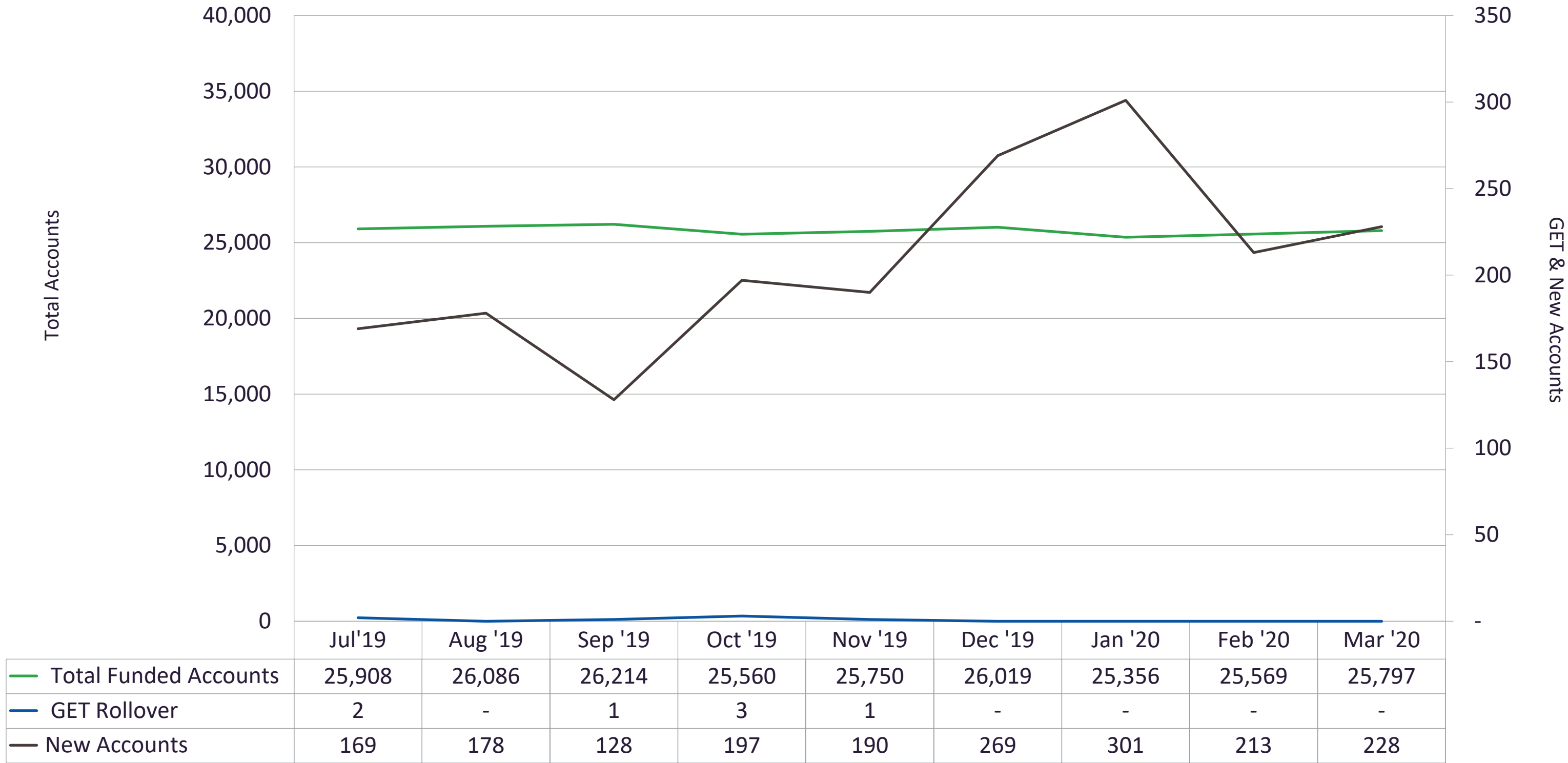


# Contributions & Distributions

Contributions continue to grow as distributions decline. Post quarter close, April net flows shifted from negative to positive for the first time.

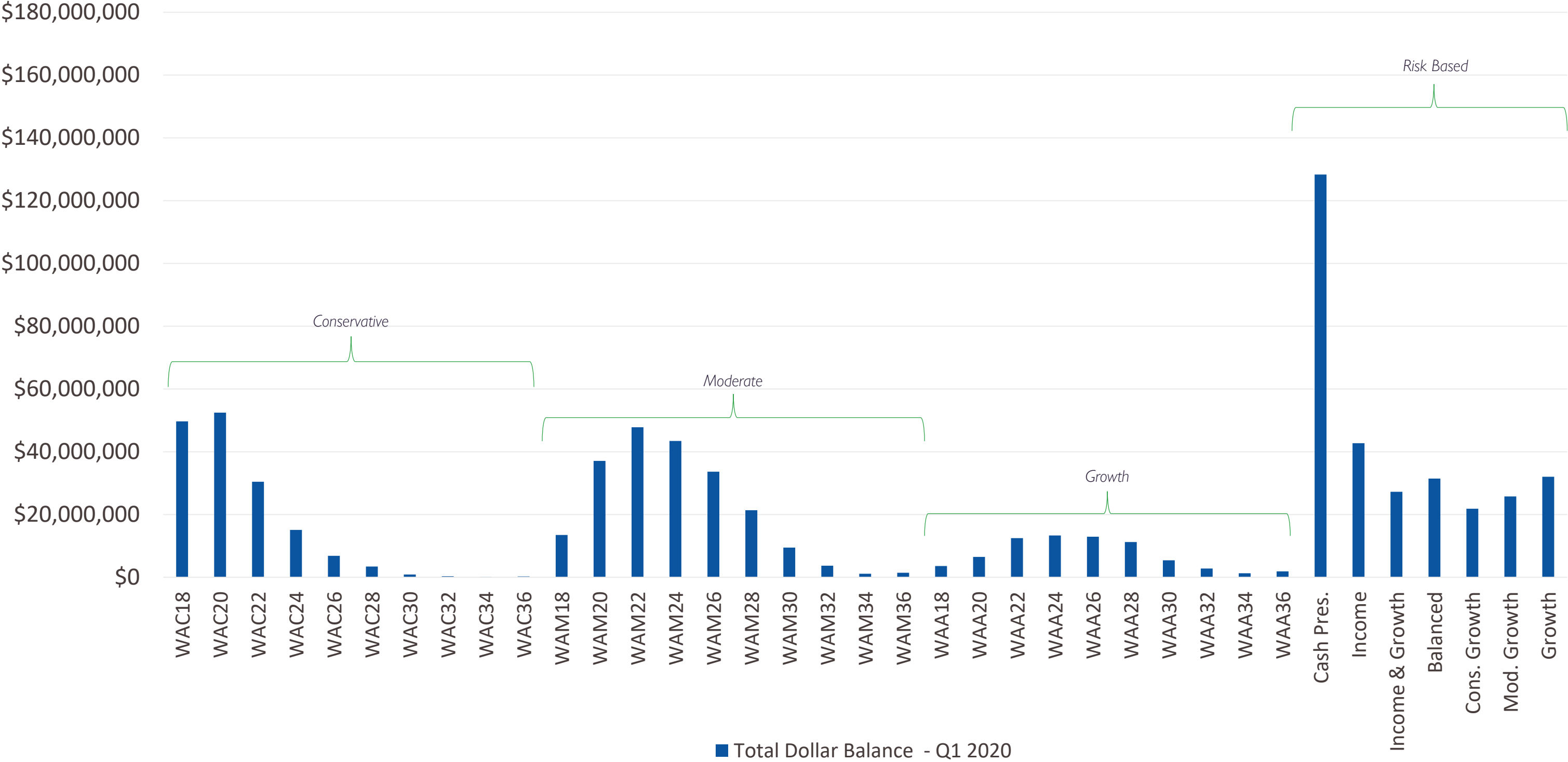


# Cumulative Account Growth FY2020

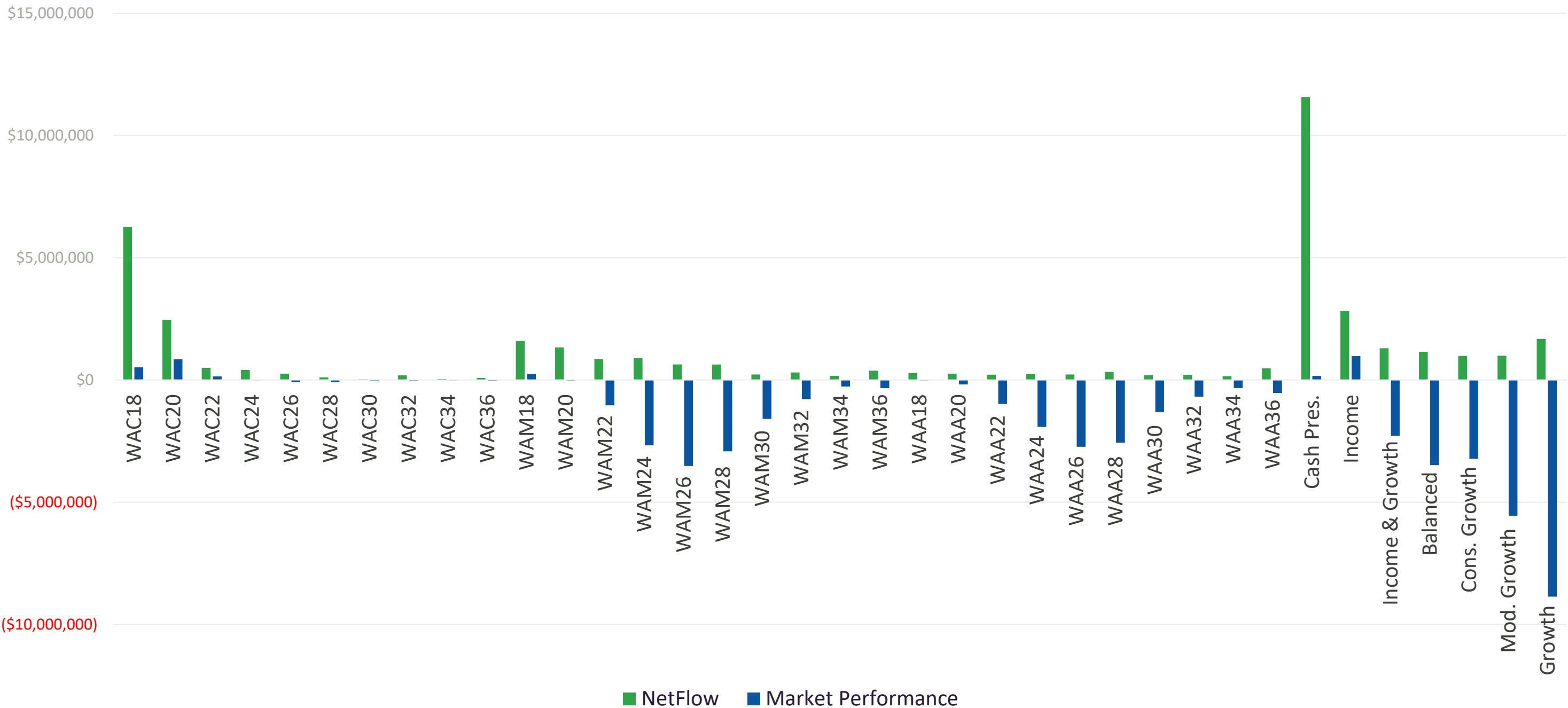


# Investment Distribution

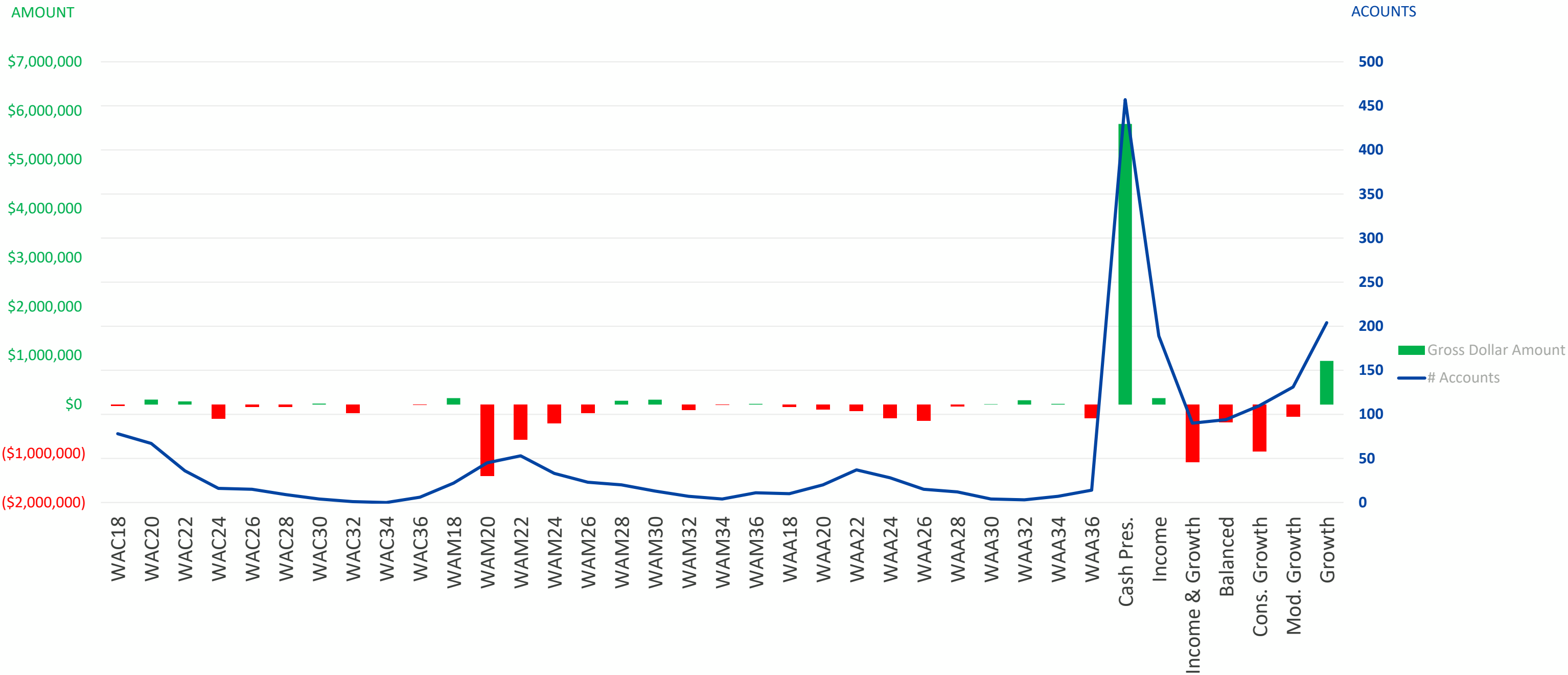
AUM by Investment Type



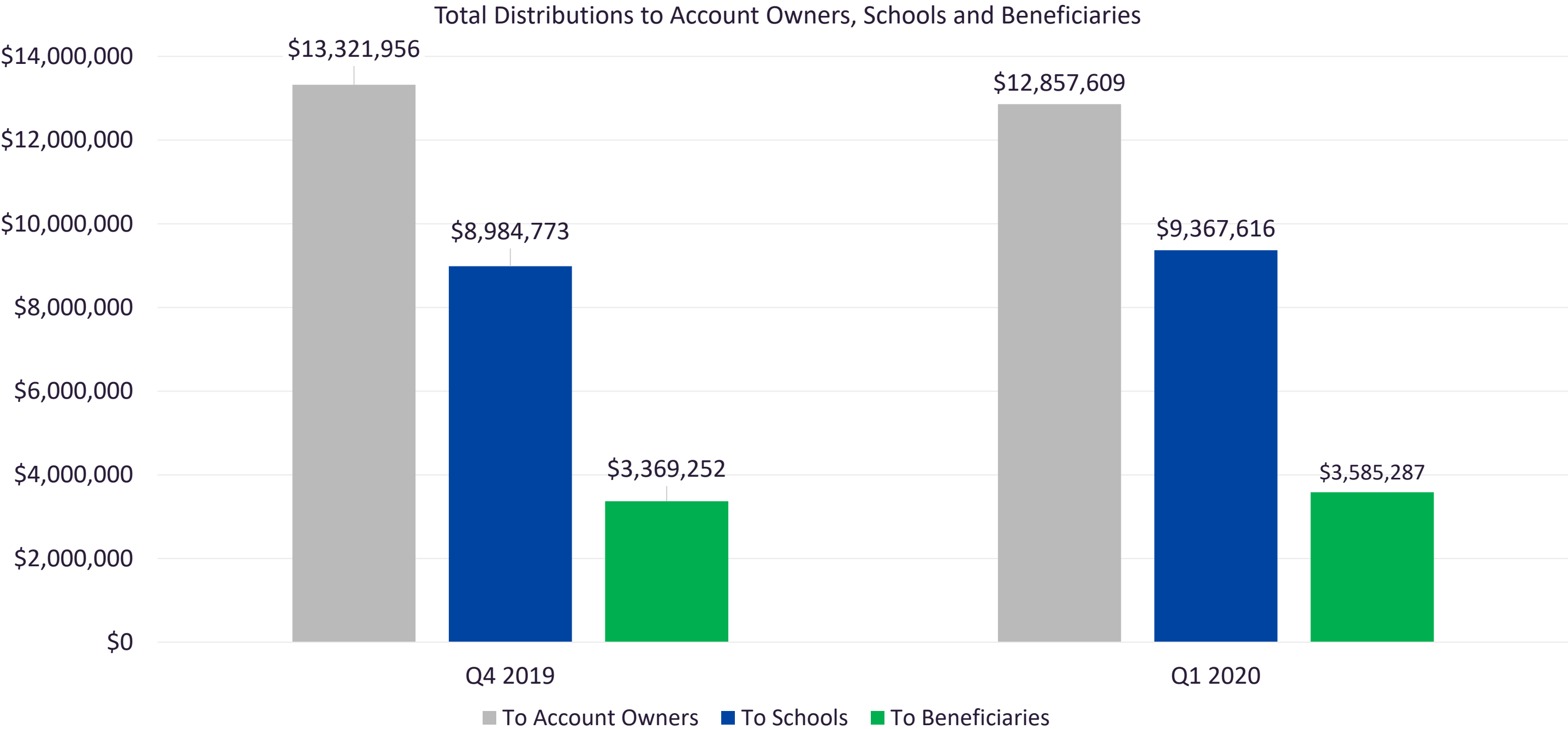
# Cash Flow by Investment Portfolio Q1 2020



# Fund Exchange Report Q1 2020

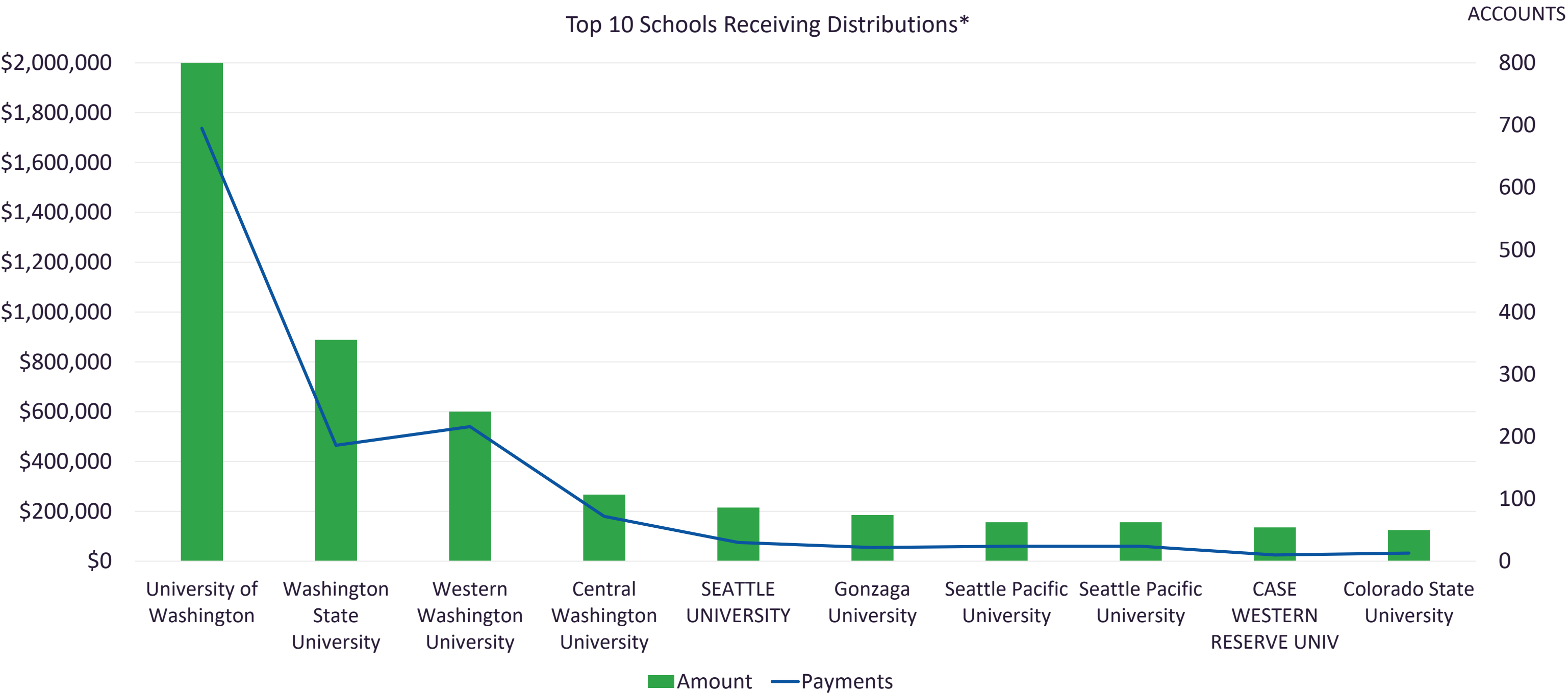


# Distributions by Recipient

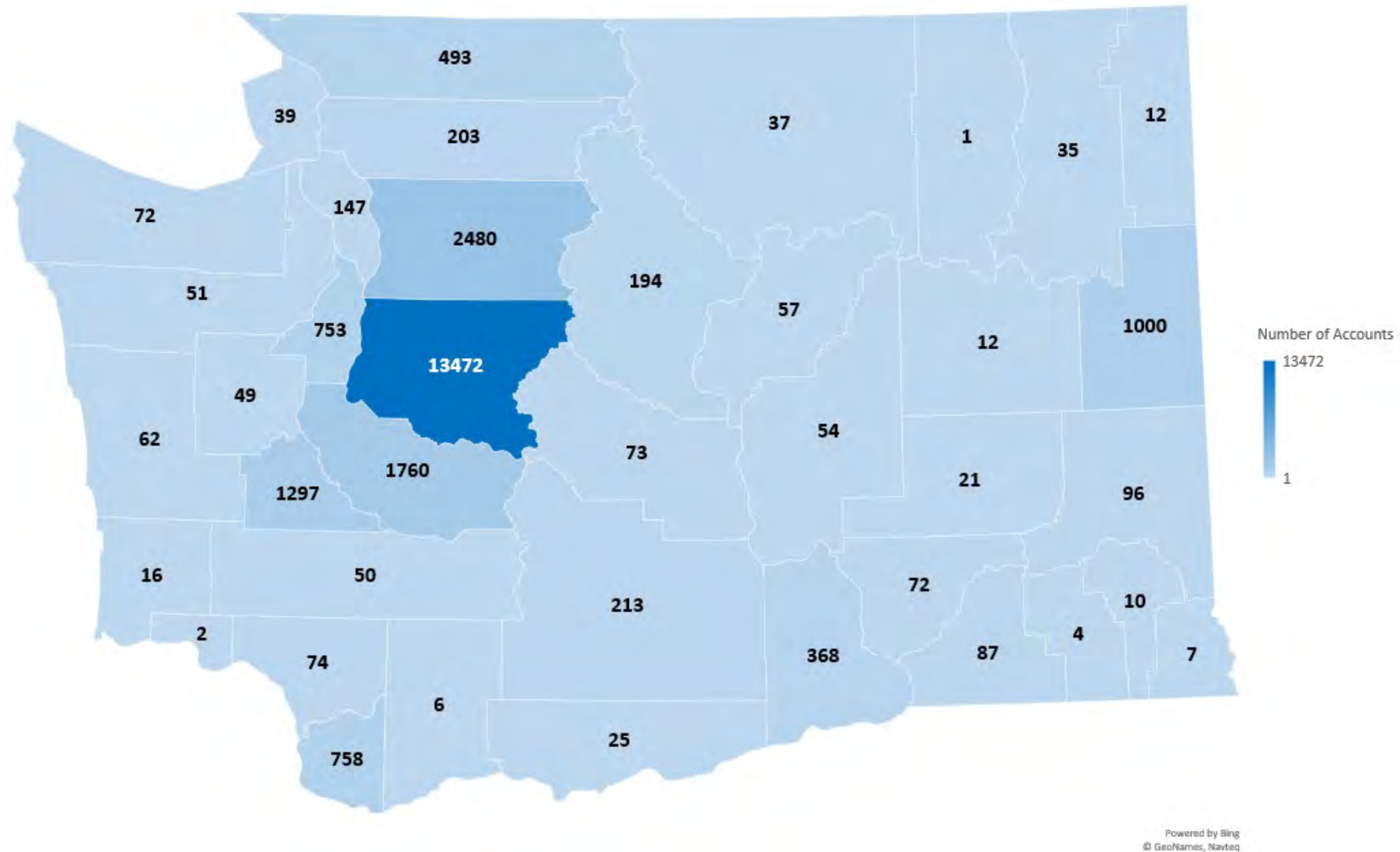




# Tuition Distributions Q1 2020

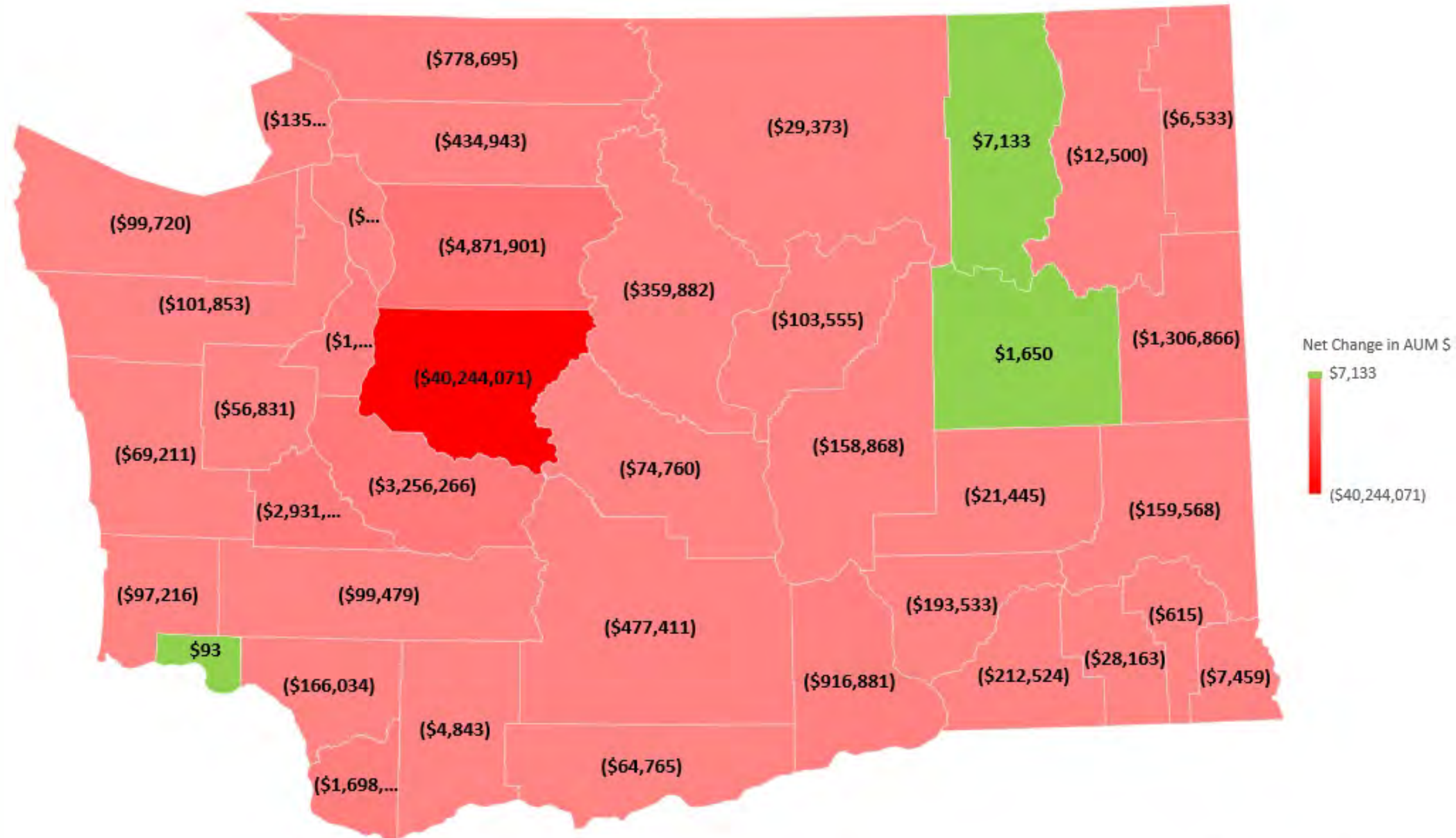


# Number of Accounts by County Q1 2020



# Net Change in Average AUM by County Q1 2020

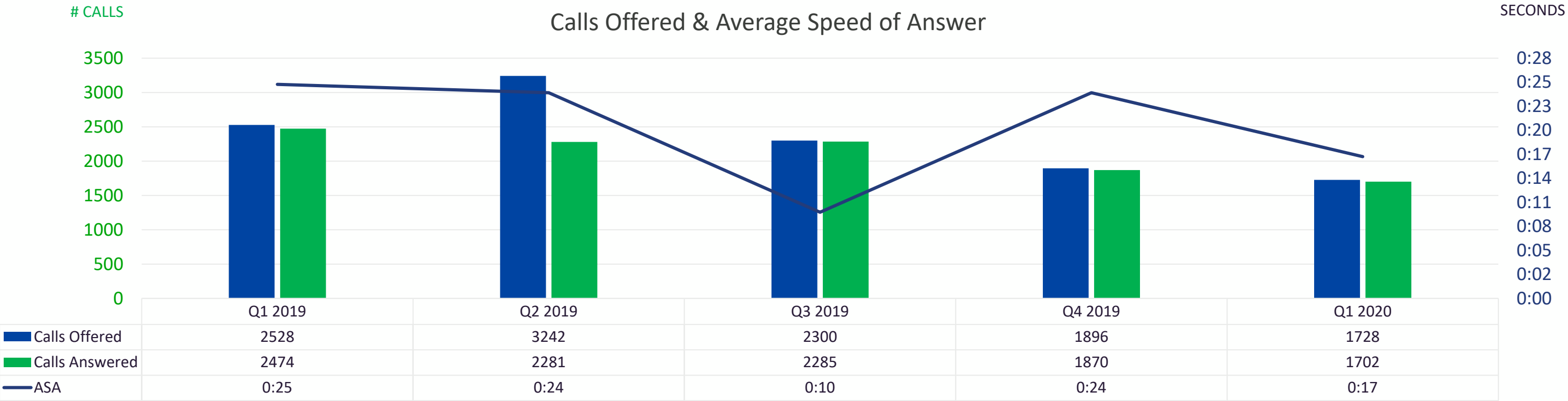
In Q1, the plan achieved having account owners in every county of the state.



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# Customer Service

## Call Center Statistics



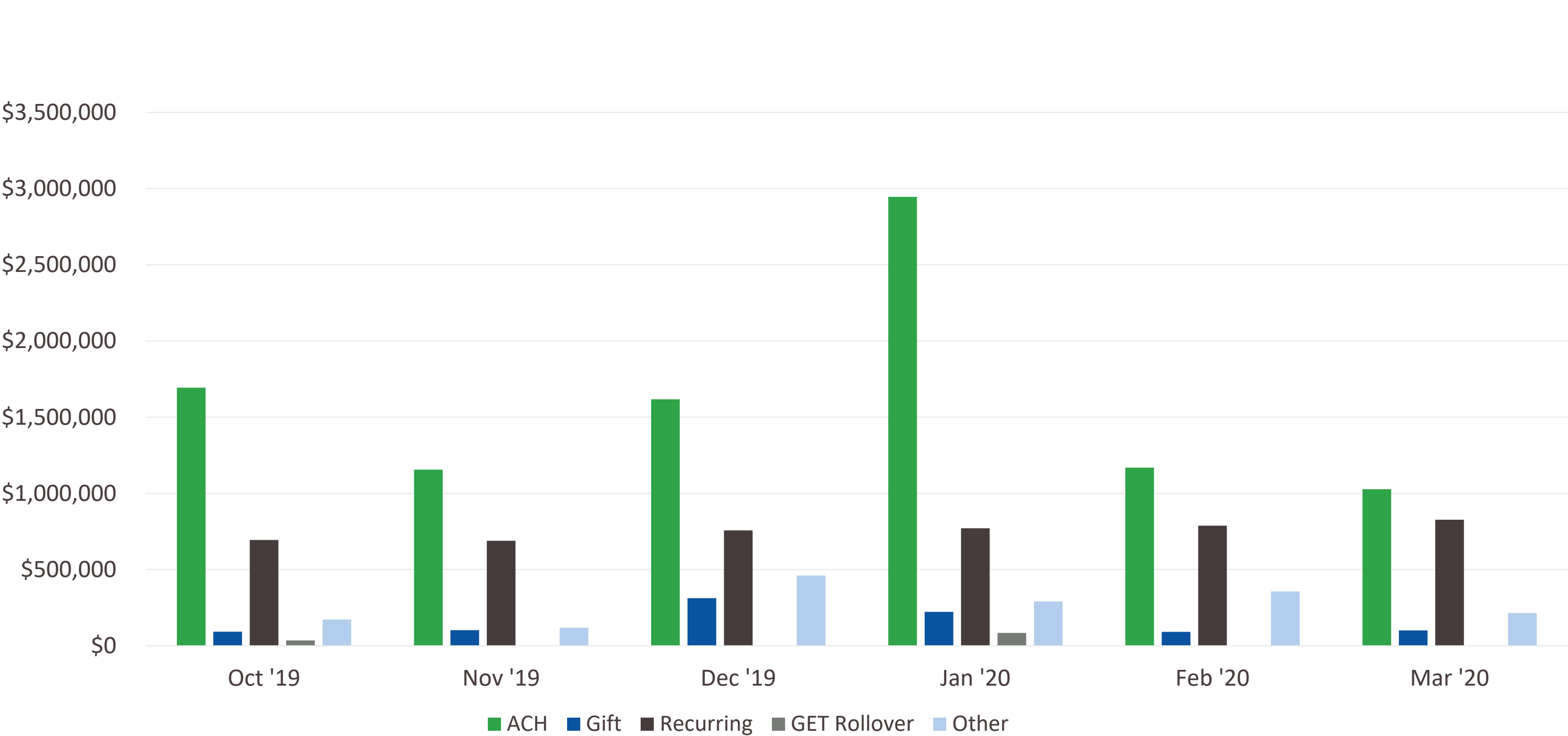
### Q1 2020’s most common customer inquiries to the Call Center:

- Assistance with accessing/establishing account online
- Tax form inquiries
- Assistance completing transactions

\* The April ASA has been adjusted to remove abnormally high call volume that occurred on April 2.

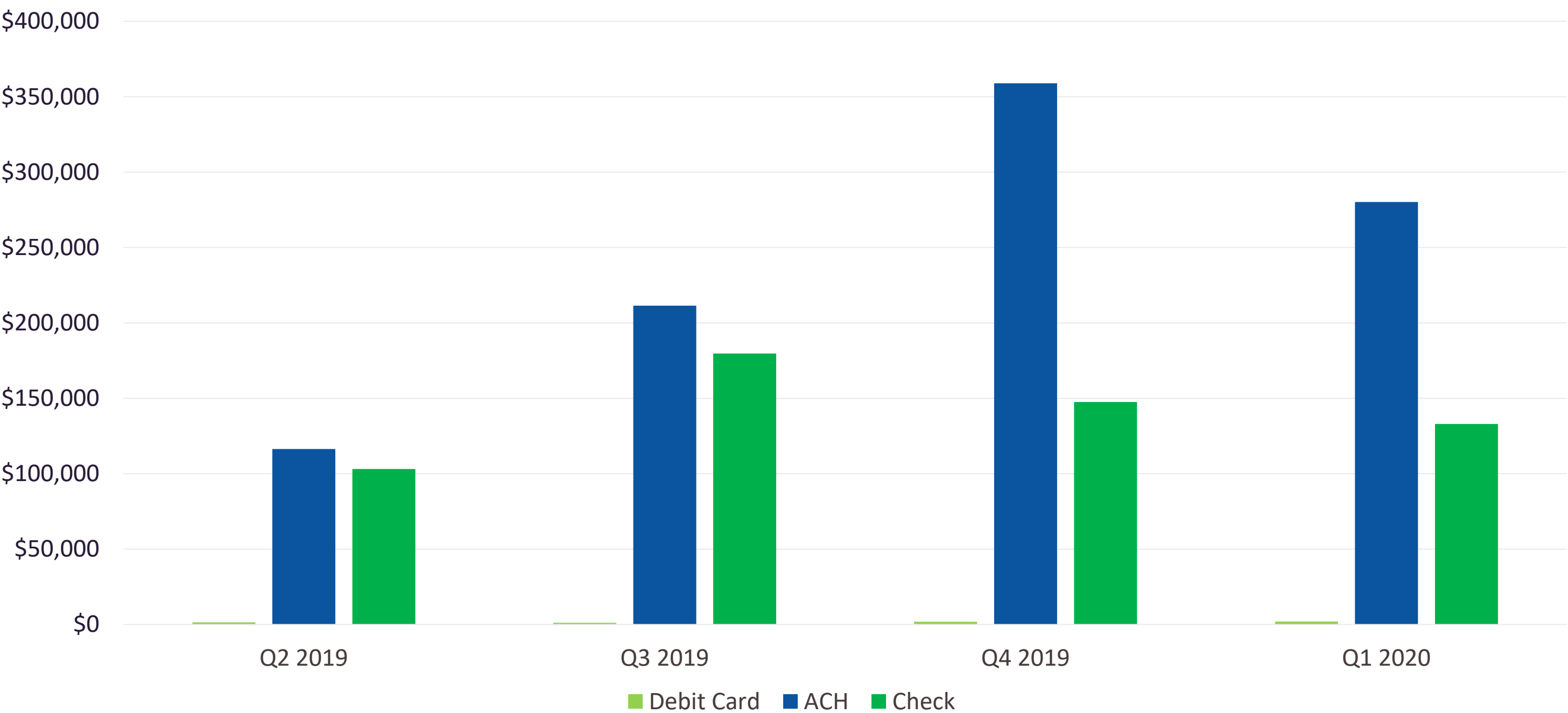
# APPENDIX

# Contributions by Source Q1 2020

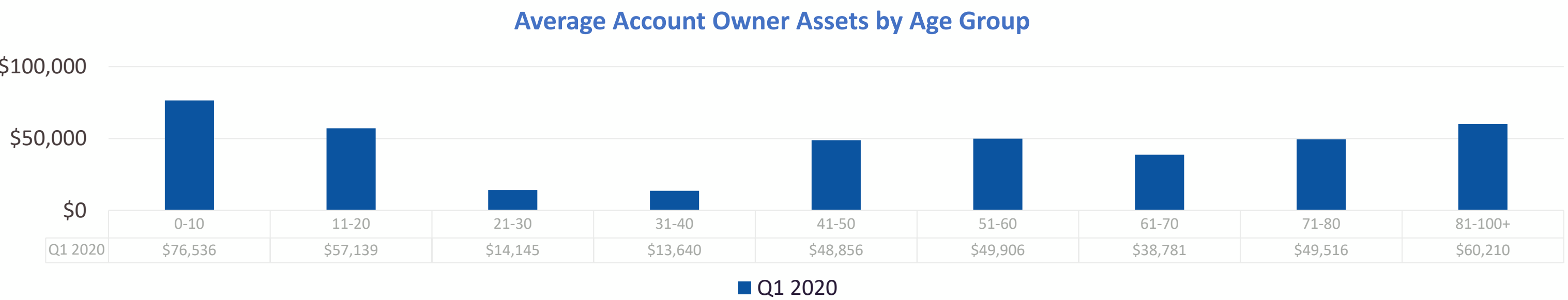
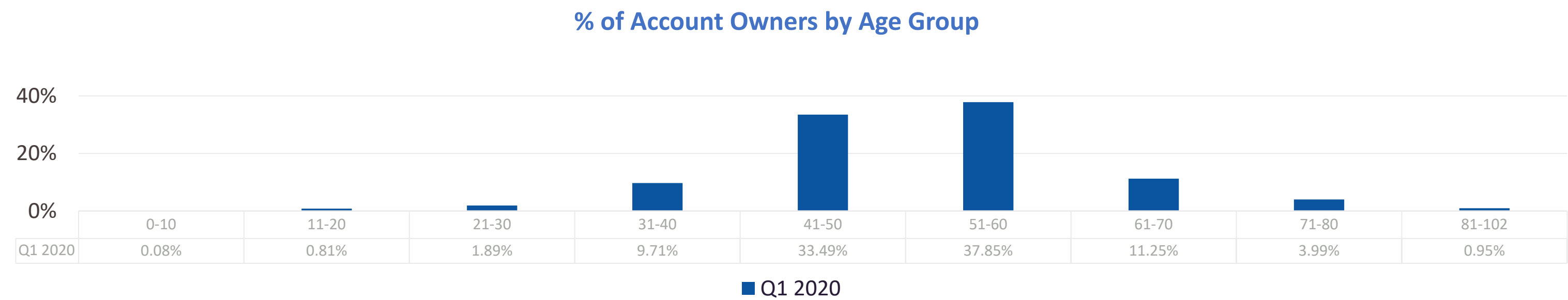


\* Contribution sources are mutually exclusive  
\* "Other" represents Checks, Non-GET Rollovers and Payroll Deductions

# Giftg Activity – Contributions by Transaction Type Q1 2020

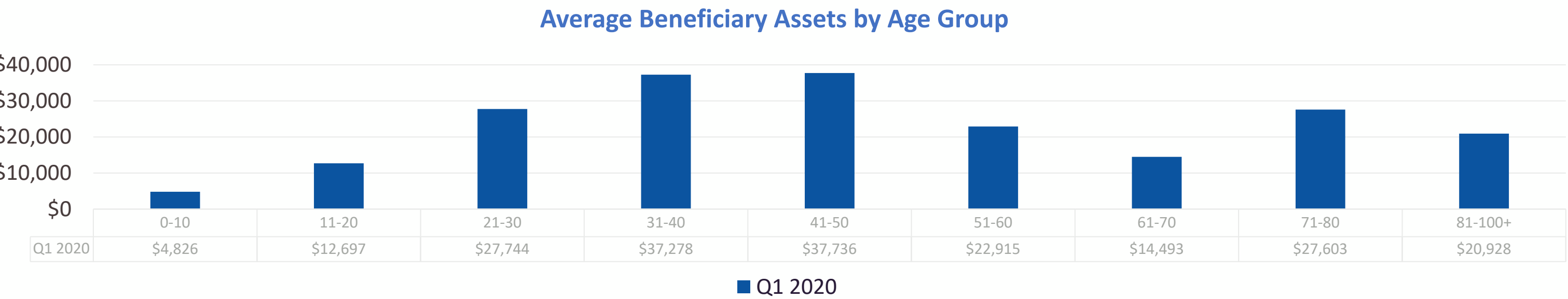
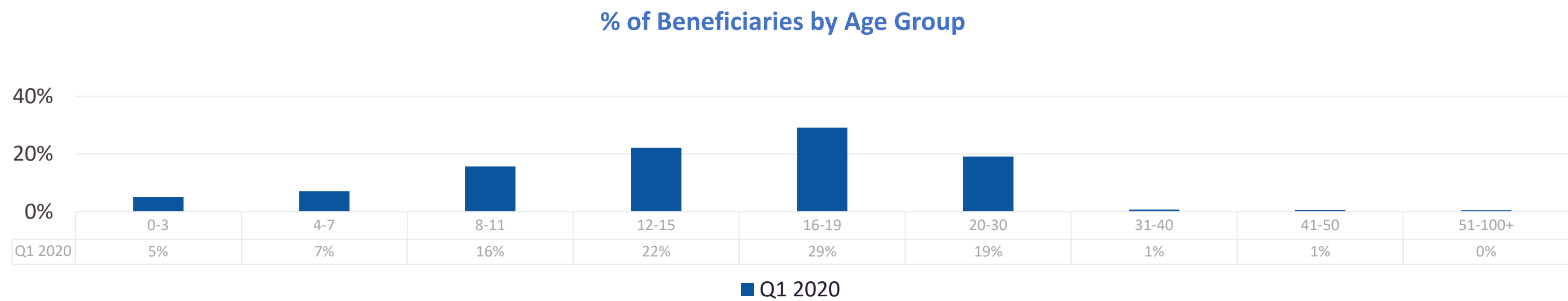


# Account Owner Demographics Q1 2020





# Beneficiary Demographics Q1 2020



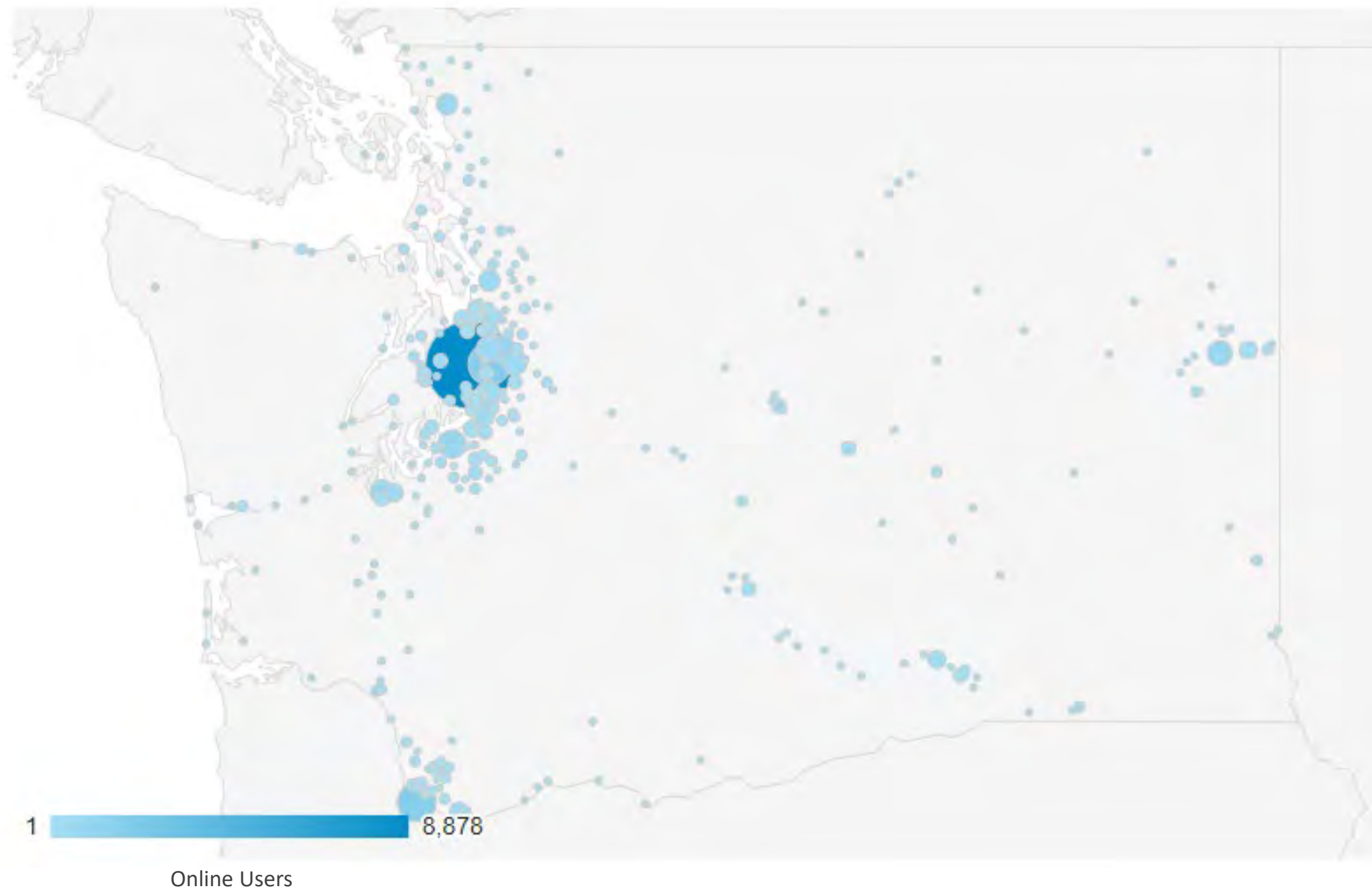
# Google Analytics Q1 2020

User activity ranked by city

City ?	Acquisition			Behavior			Conversions <span>Goal 1: Register ▾</span>		
	Users ? ↓	New Users ?	Sessions ?	Bounce Rate ?	Pages / Session ?	Avg. Session Duration ?	Register (Goal 1 Conversion Rate) ?	Register (Goal 1 Completions) ?	Register (Goal 1 Value) ?
	27,574 % of Total: 12.62% (218,518)	21,548 % of Total: 10.83% (199,014)	58,174 % of Total: 14.55% (399,836)	12.56% Avg for View: 14.75% (-14.82%)	10.28 Avg for View: 8.59 (19.72%)	00:05:03 Avg for View: 00:03:37 (39.22%)	0.91% Avg for View: 0.64% (42.03%)	529 % of Total: 20.66% (2,560)	\$0.00 % of Total: 0.00% (\$0.00)
1. Seattle	8,878 (29.44%)	6,661 (30.91%)	17,176 (29.53%)	12.87%	9.45	00:04:35	0.87%	150 (28.36%)	\$0.00 (0.00%)
2. Bellevue	1,890 (6.27%)	1,297 (6.02%)	3,776 (6.49%)	13.11%	10.63	00:05:14	0.56%	21 (3.97%)	\$0.00 (0.00%)
3. Vancouver	1,787 (5.93%)	1,233 (5.72%)	3,465 (5.96%)	10.74%	9.61	00:05:04	0.66%	23 (4.35%)	\$0.00 (0.00%)
4. Redmond	851 (2.82%)	599 (2.78%)	1,586 (2.73%)	14.12%	11.33	00:05:04	1.13%	18 (3.40%)	\$0.00 (0.00%)
5. Tacoma	829 (2.75%)	603 (2.80%)	1,859 (3.20%)	9.95%	9.94	00:04:54	0.81%	15 (2.84%)	\$0.00 (0.00%)
6. Kirkland	710 (2.35%)	509 (2.36%)	1,377 (2.37%)	12.13%	11.18	00:05:21	0.58%	8 (1.51%)	\$0.00 (0.00%)
7. Spokane	678 (2.25%)	519 (2.41%)	1,327 (2.28%)	12.43%	11.19	00:05:18	1.43%	19 (3.59%)	\$0.00 (0.00%)
8. Olympia	608 (2.02%)	430 (2.00%)	1,271 (2.18%)	14.08%	10.49	00:05:17	0.87%	11 (2.08%)	\$0.00 (0.00%)
9. Renton	555 (1.84%)	393 (1.82%)	1,099 (1.89%)	24.93%	9.59	00:04:46	1.09%	12 (2.27%)	\$0.00 (0.00%)
10. Sammamish	553 (1.83%)	404 (1.87%)	1,071 (1.84%)	12.79%	11.96	00:05:21	0.28%	3 (0.57%)	\$0.00 (0.00%)

# Google Analytics Q1 2020

Site data on users activity by top locations



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## **GET Prepaid College Tuition Program**

Quarterly Report – March 31, 2020

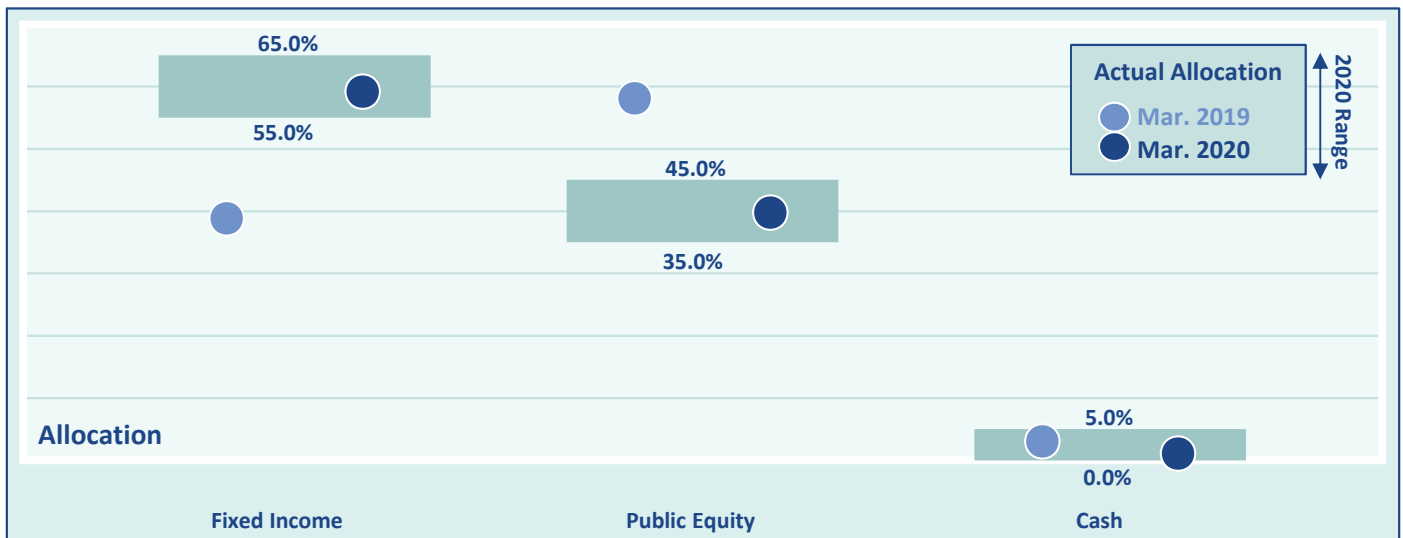
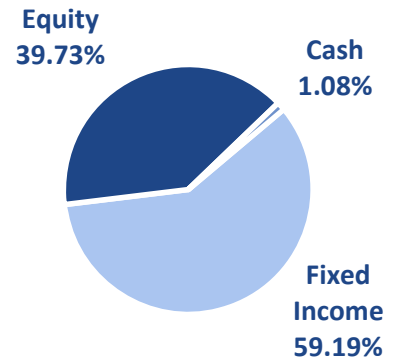
Portfolio Size, Allocation, and Assets Under Management .....	2
Performance.....	3



## Portfolio Size

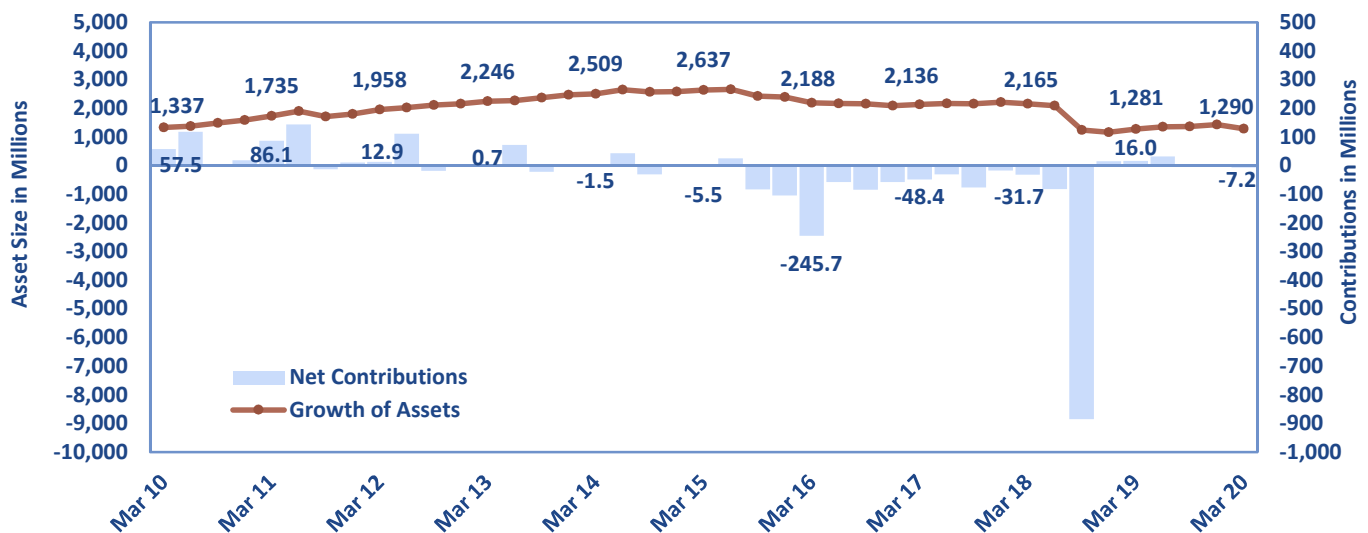
## Actual Asset Allocation

Total	\$1,290,368,695
Cash	\$13,912,841
Fixed Income	\$763,805,166
Equity	\$512,650,689



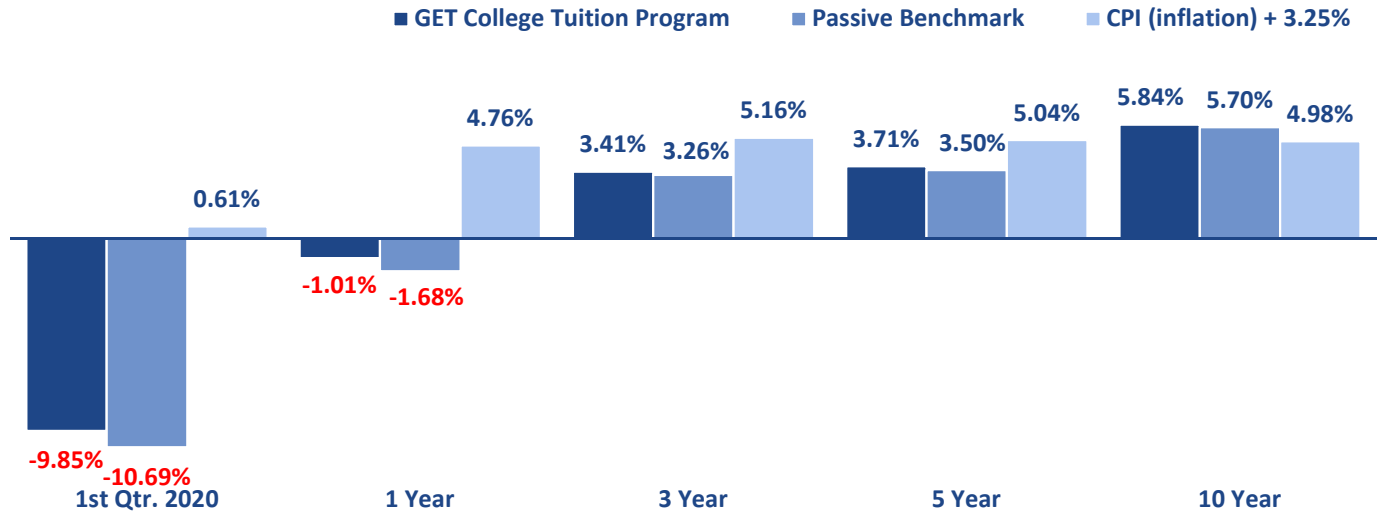
Note: Allocation changed in January 2020. It was previously 40% Fixed Income and 60% Equity and changed to 60% Fixed Income and 40% Equity

## Assets Under Management



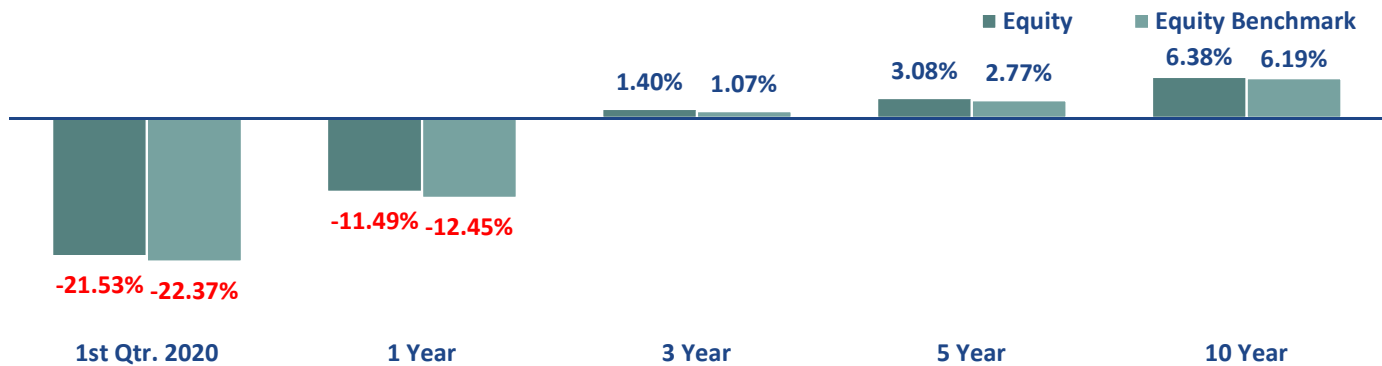


## Total Return \*



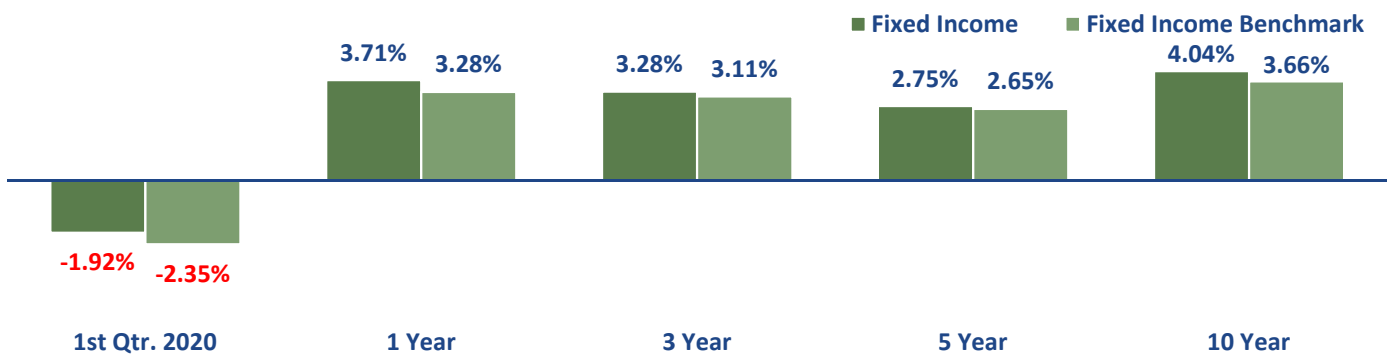
## Equity Return \*

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

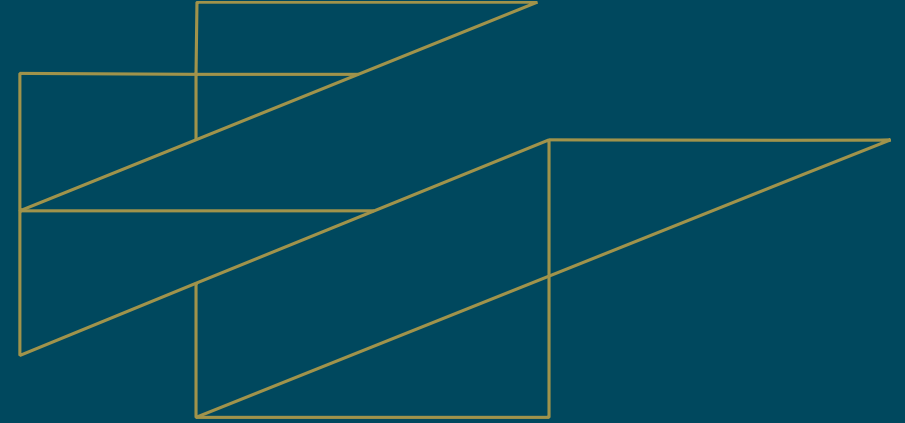


## Fixed Income Return \*

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.



# Investment Advisory Report

First Quarter 2020

Washington Student Achievement Counsel

Prepared by Lockwood Advisors, Inc.



# Broad Market Macroeconomic Highlights

## Market Overview Index Returns (%) as of March 31, 2020

Index	1st Qtr.	1 Yr.	3 Yr. ^	5 Yr. ^	2019	2018	2017	2016
S&P 500	(19.6)	(7.0)	5.1	6.7	31.5	(4.4)	21.8	12.0
MSCI USA Small Cap	(31.3)	(24.5)	(3.8)	0.4	27.4	(10.0)	17.3	19.8
MSCI EAFE (net of taxes)	(22.8)	(14.4)	(1.8)	(0.6)	22.0	(13.8)	25.0	1.0
MSCI Emerging Markets (net of taxes)	(23.6)	(17.7)	(1.6)	(0.4)	18.4	(14.6)	37.3	11.2
Bloomberg Barclays US Aggregate Bond	3.1	8.9	4.8	3.4	8.7	0.0	3.5	2.6
Bloomberg Barclays Global Aggregate ex-US	(2.7)	0.7	2.6	2.0	5.1	(2.1)	10.5	1.5
S&P GSCI Crude Oil	(66.5)	(65.9)	(26.0)	(15.5)	34.5	(24.8)	12.5	45.0
S&P GSCI Gold	4.5	22.2	7.7	5.4	18.0	(2.8)	12.8	7.7
Bloomberg Commodity	(23.3)	(22.3)	(8.6)	(7.8)	7.7	(11.2)	1.7	11.8
Bloomberg Barclays US Treasury Bill 6–9 Month	1.1	3.0	2.0	1.4	2.6	1.8	0.7	0.5
Inflation §	0.5	2.3	2.1	2.0	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 February 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.**

# Global COVID-19 Effects

- COVID-19 is the most economically disruptive pandemic event since the 20<sup>th</sup> century, surpassing the 1918 flu epidemic. It has a long way to go before becoming as deadly as many diseases from history prior to the 1918 flu.
- This is a supply and a demand shock. It is severely contractionary to economic activity.
- Many developed and emerging economies are mostly shut down, other than essential services.
- We're in the teeth of a bear market. It's possible, but unlikely, that lows in stock markets have been established.
- We are in a rapidly deflating economy and some of the initial data looks depressionary. The global economy was already slowing going into the coronavirus scare.
- The type of recession we may encounter will likely depend on the duration and timing of the virus and its effects.

# Monetary Policy Response

- While different than 2008-09, this has begun to metastasize into a financial crisis.
- Monetary policy cannot cure a global pandemic. The Federal Reserve (Fed) hopes that a liquidity crisis does not morph into a more severe solvency crisis.
- In effect, Quantitative Easing has returned and, since it's unlimited, it's bigger than ever. Moreover, the Fed can now purchase CMBS (Commercial Mortgage-Backed Securities) in addition to U.S. Treasury and agency MBS securities.
- The Fed lowered rates 150 basis points to the 0-0.25% lower bound in two successive moves on March 3 and 15.
- The Fed has been able to dust off many plans established during the Great Financial Crisis (GFC), in order to help provide liquidity to markets and financial intermediaries (banks and other asset owners) and enable markets to clear.
- The Fed has now gone beyond the programs established for the GFC and established programs to help both the primary and secondary corporate bond markets.
- The Main Street Lending Facility for small and medium-sized US businesses (<5000 employees).
- The Fed has opened swap lines and lending facilities with other major central banks, as well as non-G7 Group of Countries central banks. Some of those facilities have been closed since 2010.

# Fiscal Response

- The stimulus package includes direct assistance to middle and lower-income U.S. households.
- Consider that the size of the program is multiples (roughly 2 to 2.5 times) the size of fiscal policy initiatives designed to counter the Great Depression (1929) and the Great Financial Crisis (2008).
- Fiscal policy has kicked in swiftly. Consider that in the Great Depression, fiscal stimulus only arrived years after the stock market crash in 1929.

# DreamAhead College Investment Plan Performance Review

- All Static and Year of Enrollment portfolios have met their respective benchmarks in Q1 2020 and trailing 12 month period.
- No remedial action is necessary.
- There are no funds on the Watch List. All funds have performed as expected.

# Upcoming Year of Enrollment Portfolio Changes (July 2020)

- Year of Enrollment portfolios changes are in accordance with their respective glide slopes. There are no glide slope changes.
- Scheduled to occur in July 2020.
- Number of Year of Enrollment Portfolios affected:
  - 8 of 10 DreamAhead Year of Enrollment Conservative Portfolios
  - 8 of 10 DreamAhead Year of Enrollment Moderate Portfolios
  - 7 of 10 DreamAhead Year of Enrollment Growth Portfolios

# New DreamAhead Year of Enrollment 2038 Portfolios (July 2020)

- Every two years, introduce the newest Year of Enrollment portfolios, which is that year + 18 (e.g. in 2022, we introduce the 2040 portfolio) and align with the first step of the glide paths
- Scheduled to occur in July 2020
- No glide slope changes

# DreamAhead Year of Enrollment Terminal Portfolio Options

## Goals

- ***Ensure portfolios have an ‘expiration’ process*** by rolling all participants in ‘matured’ portfolios into a terminal state
- ***Maintain the current final asset allocation*** for each of the three risk options (i.e. ensure no changes to the investment mix or strategy for the investor)



# DreamAhead Year of Enrollment Terminal Portfolio Options

## Option 1 Timeline

- On June 30, 2020:
  - Create new College Year of Enrolled Portfolios:
    - > College Enrolled Conservative Portfolio
    - > College Enrolled Moderate Portfolio
    - > College Enrolled Growth Portfolio
  - Roll 2018 and 2020 portfolio participants into the appropriate College portfolio while retaining performance history
  - The new portfolios become the terminal portfolio for each risk option and remain at the same ending allocation as the current end of each of the three glide paths (e.g. 50% fixed income/50% cash for the conservative option)
  - ‘College’ portfolios remain open to new investments and exchanges in or out
  - Introduce 2038 portfolios, which align with the first step of the glide paths
- After June 30, 2020, on every June 30 in even numbered years:
  - Roll that year’s portfolios into the College terminal portfolios
  - Introduce the newest portfolios, which is that year + 18 (e.g. in 2022, we introduce the 2040 portfolio) and align with the first step of the glide paths

# DreamAhead Year of Enrollment Terminal Portfolio Options

## Option 2 Timeline

- On June 30, 2020:
  - Create new College Year of Enrolled Portfolios:
    - > College Enrolled Conservative Portfolio
    - > College Enrolled Moderate Portfolio
    - > College Enrolled Growth Portfolio
  - Roll 2018 portfolio participants into the appropriate College portfolio while retaining performance history
  - The new portfolios become the terminal portfolio for each risk option and remain at the same ending allocation as the current end of each of the three glide paths (e.g. 50% fixed income/50% cash for the conservative option)
  - College portfolios remain open to new investments and exchanges in or out
  - Introduce 2038 portfolios, which aligns with the first step of the glide path
- After June 30, 2020, on every June 30 in even numbered years:
  - Roll the next set of matured portfolios into the College terminal portfolios starting with the 2020 portfolios in 2022 while retaining performance history
  - Introduce the newest portfolios, which is that year + 18 (e.g. in 2022, we introduce the 2040 portfolio) and align with the first step of the glide paths

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# Investment Advisory Report

First Quarter 2020

Washington Student Achievement Council

Prepared by Lockwood Advisors, Inc.



BNY MELLON

| PERSHING

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## 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 Q1 2020 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

#### 1) Global Economic Effects

- COVID-19 will leave few areas of the world unscathed.
- For example, UNESCO (United Nations Educational, Scientific and Cultural Organization) estimates that children are out of school in 185 countries, representing 9 of 10 children worldwide.
- Many developed and emerging economies are mostly shut down, other than essential services.
- What started as a disruption to global supply chain and just-in-time inventory delivery systems due to Chinese manufacturing has changed into a much more pernicious sudden stop globally.
- Medical supplies and manufacturing are severely taxed. Additional supply chain disruptions will be chaotic, seemingly whimsical and random.
- This is a supply and a demand shock. It is severely contractionary to economic activity.
- COVID-19 is the most economically disruptive pandemic event since the 20<sup>th</sup> century, surpassing the 1918 flu epidemic. It has a long way to go before becoming as deadly as many diseases from history prior to the 1918 flu.
- The effects of massive numbers of cancellations have gone beyond initial challenges to travel, tourism, hospitality, cruise ships, airlines. Shelter-in-place provisions affect almost all businesses, for profits and non-profits.

#### 2) Monetary Policy Response

- While different than 2008-09, this has begun to metastasize into a financial crisis.
- Monetary policy cannot cure a virus. The Federal Reserve (Fed) hopes that a liquidity crisis does not morph into a more severe solvency crisis. Monetary policy is a palliative, not a cure for a global pandemic.
- In effect, Quantitative Easing has returned and, since it's unlimited, it's bigger than ever. Moreover, the Fed can now purchase CMBS (Commercial Mortgage-Backed Securities) in addition to U.S. Treasury and agency MBS securities.
- The Fed lowered rates 150 basis points to the 0-0.25% lower bound in two successive moves on March 3 and 15.
- The Fed has lowered the discount rate and extended terms at the discount window.
- The Fed has been able to dust off many plans established during the Great Financial Crisis (GFC), in order to help provide liquidity to markets and financial intermediaries (banks and other asset owners) and enable markets to clear. The Fed may also establish loans on posted collateral.
  - These include:
    - MMLF: Money Market Mutual Fund Liquidity Fund
    - PDCF: Primary Dealer Credit Facility
    - CPFF: Commercial Paper Credit Facility

- TALF: Term Asset-Backed Securities Loan Facility
- The Fed has now gone beyond the programs established for the GFC and established programs to help both the primary and secondary corporate bond markets.
  - PMCCF: Primary Market Corporate Credit Facility
  - SMCCF: Secondary Market Corporate Credit Facility. Notably, in a nod to the emergence of exchange-traded funds (ETFs) since the GFC, this facility can purchase corporate bond ETFs as well as individual corporate issuance.
- The Main Street Lending Facility for small and medium-sized US businesses (<5000 employees).
- The Fed has opened swap lines and lending facilities with other major central banks, as well as non-G7 Group of Countries central banks. Some of those facilities have been closed since 2010.

### 3) **Fiscal Response**

- The \$2 trillion stimulus package includes direct assistance to middle and lower-income U.S. households.
- Consider that the size of the program is multiples (roughly 2 to 2.5 times) the size of fiscal policy initiatives designed to counter the Great Depression (1929) and the Great Financial Crisis (2008).
- Moreover, fiscal policy has kicked in swiftly. Consider that in the Great Depression, fiscal stimulus only arrived years after the stock market crash in 1929.
- Details:
  - Additional \$250 billion for unemployment insurance.
  - Funds to backstop Federal Reserve programs; small business loans and grants; states; hospitals; veterans health programs; hospitals; airlines and cargo carriers; public transit; paid sick leave; and food assistance.
  - The Internal Revenue Service (IRS) announces a 3 month delay (from April 15<sup>th</sup> to July 15<sup>th</sup>) in tax filings.

### 4) **Capital Market Impact**

- We're in the teeth of the bear market. It's possible, but unlikely, that lows in markets have been established.
- Performance tables provided for major indices, sectors and countries provide some color on what areas have succeeded or failed so far.
- Credit spreads have widened out considerably. Energy patch credit spreads are back to some of the worst levels we have seen historically.
- Some market-derived forecasts already look too pessimistic or unrealistic. For example, bonds are forecasting actual deflation out several years.
- We are in a rapidly deflating economy and some of the initial data looks depressionary. The global economy was already slowing going into the coronavirus scare.
- The type of recession we may encounter will likely depend on the duration and timing of the virus and its effects. For now, estimates of future growth and earnings are deflating rapidly. There will be some permanent loss of output from what has already occurred.
- Analysts have been slow to cut earnings estimates. Those will come in sharply.

### 5) **Escalation Triggers**

- Substantially worse news than current expectations on global infections and death rates.
- Markets will evaluate not just the number of infections, but the first derivative velocity (infections/time) and the second derivative acceleration (infections/time-over-time). So far, these have not been very encouraging.
- The return of the virus at a later date.
- Mutation of the virus into something even more dangerous.

- Debt overhangs cause a credit cycle to escalate dramatically. High yield spreads, a measure of the difference between what investors expect from low-grade corporate paper and U.S. Treasury securities, has soared.
- Potential evolving geopolitical risk.
  1. Russia has chosen this moment to test the Saudis and the energy sector, while making an attempt to allow Vladimir Putin to remain in power indefinitely. There seems to be some thawing of relationships between Saudi Arabia and Russia. Perhaps a supply cut is in order that would normalize supply to dramatically reduced demand.
  2. Iran continues to meddle in Syria, where a conflict looks like it is rekindling.
  3. North Korea chose to test a missile in the midst of this global crisis.
  4. Lastly, and perhaps more importantly, if China has been less than forthright about the origins and development of this disease and the world comes to believe that is the case, there could be major geopolitical consequences. China should have to answer questions from the world community. See epistemology, or how do you prove what you know?

## 6) De-escalation Triggers

- The cure. Technology that can generate a vaccine would generate immediate relief. That could not only stop the suffering but could help quickly return markets and economies near to their prior growth rates. While a 'V' recovery looks unlikely, quick relief would help the economy and markets recover more swiftly. Time is important, both to slow the virus spread and as a means to potential cures and treatments.
- Better than expected news around infections and fatalities. Markets will evaluate the number of infections as well as velocity and acceleration.
- Some evidence that the dramatic shutdowns and social distancing are having an effect on "flattening the curve" of infection penetration in the U.S. and globally.
- More effective preventatives and treatment protocols.
- Global monetary and fiscal policy that mitigates the economic effect of the virus, calms investors and eases much tighter financial conditions. We expect to see additional and more surgical responses from policymakers.
- Finally, to end on a really positive note, healthy folks who stay home with their loved ones might spur a future increase in the birth rate. We need help mitigating future demographic pressures.



**Market Overview**  
**Index Returns (%) as of March 31, 2020**

Index	1st Qtr.	1 Yr.	3 Yr. ^	5 Yr. ^	2019	2018	2017	2016
S&P 500	(19.6)	(7.0)	5.1	6.7	31.5	(4.4)	21.8	12.0
MSCI USA Small Cap	(31.3)	(24.5)	(3.8)	0.4	27.4	(10.0)	17.3	19.8
MSCI EAFE (net of taxes)	(22.8)	(14.4)	(1.8)	(0.6)	22.0	(13.8)	25.0	1.0
MSCI Emerging Markets (net of taxes)	(23.6)	(17.7)	(1.6)	(0.4)	18.4	(14.6)	37.3	11.2
Bloomberg Barclays US Aggregate Bond	3.1	8.9	4.8	3.4	8.7	0.0	3.5	2.6
Bloomberg Barclays Global Aggregate ex-US	(2.7)	0.7	2.6	2.0	5.1	(2.1)	10.5	1.5
S&P GSCI Crude Oil	(66.5)	(65.9)	(26.0)	(15.5)	34.5	(24.8)	12.5	45.0
S&P GSCI Gold	4.5	22.2	7.7	5.4	18.0	(2.8)	12.8	7.7
Bloomberg Commodity	(23.3)	(22.3)	(8.6)	(7.8)	7.7	(11.2)	1.7	11.8
Bloomberg Barclays US Treasury Bill 6–9 Month	1.1	3.0	2.0	1.4	2.6	1.8	0.7	0.5
Inflation \$	0.5	2.3	2.1	2.0	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 February 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.**

## Fall from Grace

For us today, with the fastest collapse of a bull to a bear market in stock market history, the fall from prosperity feels swift, capricious, and random. This sudden stop of economic activity has happened so quickly we have barely had time to adjust in markets or in the general economy. We've been ejected from a "heavenly" state virtually overnight. Who gets infected and where outbreaks develop feels random. It heightens our suspicions that we have no degree of control over events. In short, our worldview is somewhat medieval at the moment. It is not a scientific viewpoint.

For markets today, epistemology may be as important as epidemiology. Viral epidemiology is a branch of medical science that considers the transmission and control of virus infections in humans. Epistemology is the investigation of what distinguishes belief from opinion. It is concerned with the question "How do you know what you know?"

Clearly, both are colliding now as we attempt to evaluate what we know or think we know about what is occurring and what is likely to occur next. Both epidemiology and epistemology are central questions for understanding market effects from the COVID-19 coronavirus and, now, an oil price shock and perhaps a budding financial liquidity crisis.

## Post-World War II Markets Confront Global Pandemic Virus

Markets are dealing with a global pandemic virus for the first time in modern history. Pandemics have left their scars throughout history and ancient history, but modern markets have not had to confront them. SARS (Severe Acute Respiratory Syndrome, 2003-04), MERS (Middle East Respiratory Syndrome, 2012), Ebola (various outbreaks from 1976, the most serious in 2013-16), Zika (2016), Asian flu (H1N1 viral subtype, 2009) and other recent viral outbreaks were contained rather quickly. They also might be considered regional pandemics. Asian flu in 1957 (H2N2) and Hong Kong flu in 1968 (H3N2) occurred at least 50 years ago. The 1918 flu (H1N1) was over a century ago and we did not have even basic understanding of what a virus is or does. We did not have a branch of science called viral pathology in 1918. Antibiotics, helpful in targeting secondary infections from a virus, were not discovered until 1928 and not used widely until World War II.



Our medical knowledge today is not even comparable to a century or half-century ago. That is very hopeful. Medical experts have sequenced a genome very quickly and perhaps can squash timelines to get to a vaccine in scale. The global medical community is engaged. Major medical companies and institutions are on the hunt for a vaccine. Industrial firms have shifted gears to provide manufacturing prowess. News of a vaccine or more effective treatment protocols would not only be welcome, but they may be necessary for economies and markets to begin to normalize.

COVID-19 has blown away all of these 20<sup>th</sup> century or later references to capital market impacts. Medically, this episode still has much further to go to compare with even recent pandemics, not to mention the horrors from the 19<sup>th</sup> century or the ancient world caused by versions of the plague, smallpox, typhus, influenza, cholera, hemorrhagic fevers, yellow fever, salmonella or measles. Polio, for example, once one of the most feared diseases in the U.S. in the early 1950s has largely been eradicated in the U.S. since 1979, due to widespread vaccination.

Consider, for example, that the bacterial infection (there are three) that causes plague was not identified until 1894 by French bacteriologist Alexandre Yersin and Japanese bacteriologist Shibasaburo Kitasato during the so called Third Plague Pandemic. Those suffering from the Plague of Justinian in the Byzantine Empire in the 6th century (541-542 AD), which killed an estimated 40-50% of the population of Europe at the time, had very little understanding of the infection. No wonder they turned to divine inspiration.

Looking backwards, it is now easier to identify that many of the recent global diseases were more serious than markets comprehended at the time. HIV/AIDS, for example, first identified in 1981, has been estimated to have killed 35 million people worldwide. The 2009 Asian Flu event referenced above is estimated to have caused 150,000 to 575,000 deaths globally. In neither case, nor the 1918 Spanish Flu epidemic, did we deploy mass quarantine and shelter-in-place responses.

## The 1957 Asian Flu and U.S. Recession

The 1957 Asian flu is perhaps a better modern model than any other. The flu originated in China and killed about 2 million people worldwide including approximately 116,000 Americans. It also coincided with the 1957-1958 recession, the so-called “Eisenhower Recession”, which saw a sharp decline in output and is the most serious economic decline from the post-World War II period up until 1970. It was also a period of intensifying geopolitical pressure as Russia’s launch of the Sputnik satellites in October of 1957 caused anxiety that the U.S. was falling behind the Soviets in the space race. It didn’t help that Ford launched the failed Edsel in 1958 either.

## The SARS Model

Some analysts have spent considerable effort modeling what happens to markets based on the most recent coronavirus, SARS in 2003-04. COVID-19 has now gone way beyond SARS, but there is another problem with this model for markets. The timeline beginning in early 2003, almost exactly overlaps with the anticipation of the Gulf War II, or Iraq War. Markets were most likely reacting to major geopolitical risk rather than worries about a viral outbreak at the time.

Moreover, China has grown dramatically since 2003. For example, China was 1.2% of global trade in 2003. It’s 34% today. China was 16% of Asian trade in 2000. It’s 41% today. SARS in 2003-04 has little to inform us about how markets will react to a global viral pandemic.

These grisly examples were all different threats than the coronavirus. They have giant flaws as models for what happens when modern markets confront pestilence. We also lack relevant data for markets for many historical events. This COVID-19 event is unprecedented and perhaps, in our view, the most significant risk event since the global financial crisis in 2008-09. Markets are echoing these significant concerns.

## Seasonal Influenza

Many initially dismissed the COVID-19 concern and pointed to seasonal influenza infections. The CDC (Centers for Disease Control and Prevention) estimates that, since October 1, 2019 to March 21, 2020, the U.S. has already experienced 38 million to 54 million infections from seasonal influenza as well as 24,000-62,000 influenza deaths. The difference to markets is like a comparison between a sine wave and a j curve. A sine wave peaks and troughs with a cadence. A j curve is a hockey stick chart where a variable grows higher indefinitely. Infection rates appear to be doubling every several days. Right now, we have a basic expectation that seasonal influenza begins in October and November and usually peaks between December and February. It can sometimes last until May.

We can hope that there is a seasonal component to the coronavirus, as many expect, but that expectation is merely speculative at this point. Historically, coronaviruses have not been as seasonally sensitive as influenza. The southern hemisphere will begin to cool as the northern hemisphere warms up. Given that the virus has spread globally, this raises the fear that the virus just takes a different path around the globe as opposed to actually receding.

Moreover, viruses have often abated only to return stronger and more deadly. For example, the second wave of the Spanish flu that occurred in the fall of 1918 was much more severe than the first wave earlier that year. We have very little insight into how or when the COVID-19 virus might mutate and what form it could take in the future. For markets, until we begin to experience meaningful curtailment in the infection rate, investors will likely continue to focus on that j curve rather than the sine wave. Lady Fortuna is in charge at the moment.

## Innumeracy

Discussions among friends, colleagues, and clients have elicited a wide range of responses to the dramatic government policy responses engaged in an effort to reduce the spread of the virus. We make one observation from these discussions. Many people do not understand exponential growth rates. They are infected with innumeracy.

Some of us employed in the financial markets bemoan the current state of financial literacy in the U.S. We believe that some educated investors seem to lack basic understanding of financial terminology and concepts. Certainly, our industry can produce some complicated jargon, needless buzzwords and financial advisors could often benefit from more plain speaking. But we are not only speaking of financial illiteracy, but also innumeracy.

John Allen Paulos, a Professor of Mathematics at Temple University in Philadelphia, wrote *Innumeracy: Mathematical Illiteracy and its Consequences* in 1988 and updated it in 2001. It's filled with quantitative observations and some practical advice on common mathematical and probabilistic pitfalls.

Let us give one other example of innumeracy, in addition to the difference between a j curve and a sine wave discussed above. Some have told me that COVID-19 is not a threat because many more Americans are killed on our nation's highways every year. According to the National Safety Council, an estimated 38,800 people lost their lives in the U.S. to car crashes in 2019, down from 40,231 in 2017 and 39,404 in 2018. So, there has been an actual decline in traffic fatalities over the past few years, continuing a trend from the early 1970s. Moreover, when we control for population and passenger miles, the conclusion is often that America's transportation network has gotten measurably safer. Contrast that with a global virus that is killing more people than it did yesterday since it began circulating among the human population. It is not just traffic accidents and the flu; many have made this comparison for tobacco-related deaths, cancer, heart disease, workplace accidents, etc. The same logic applies. None of these measures of fatalities in the U.S. are growing at exponential rates like COVID-19.

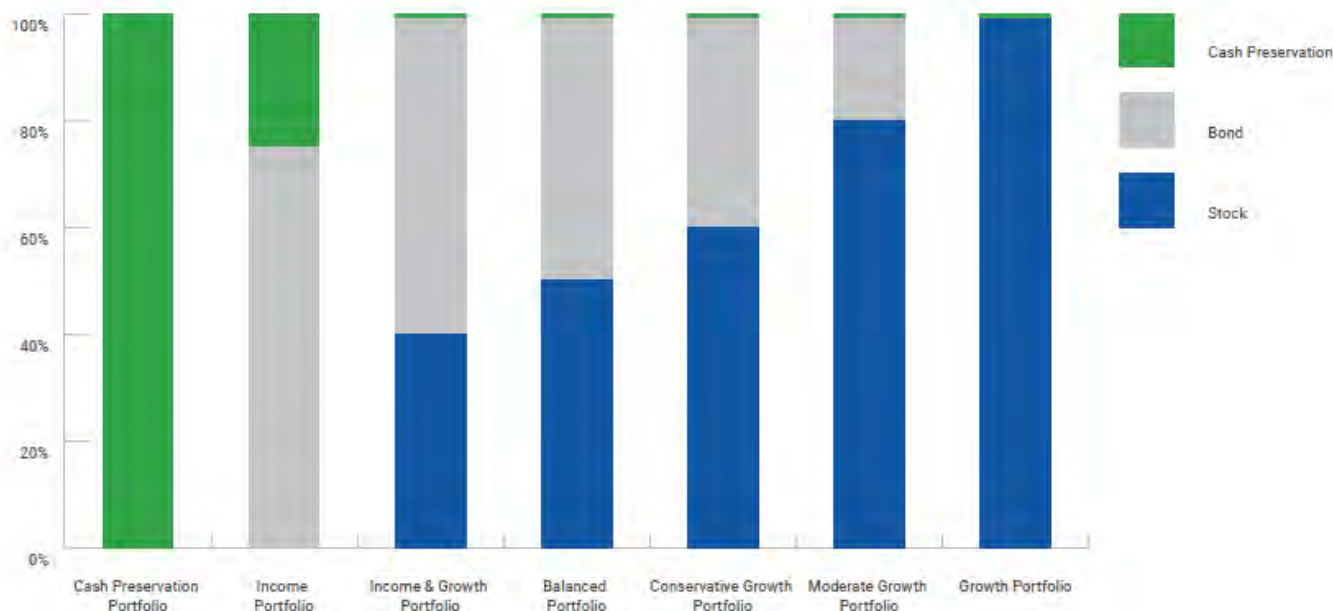
Now more than ever, when our understanding of the world, the markets and the economy is highly uncertain, we believe we should strive to see the world as clearly as possible. We also believe we should demand quantitative clarity from our policy makers, who too often fight the last war rather than the one at hand. With trillions of dollars in bailout funds at stake, quantitative clarity is the least we can expect.

## Performance Review

- All Static and Year of Enrollment portfolios have met their respective benchmarks in Q1 2020 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

Static Asset Class Allocations



Source: SumDay Administration, LLC, a BNY Mellon Company. SumDay is an affiliate of Lockwood Advisors, Inc. Portfolio allocations as of 3/31/2020

## 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	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	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 3/31/2019

Growth Portfolio	Q1 2020	1 Year
Gross of Fees Return	-21.79	-12.10
Net of All Fees Return	-21.84	-12.30
Blended Benchmark	-21.76	-12.05
Excess Return	-0.08	-0.25

Income & Growth Portfolio	Q1 2020	1 Year
Gross of Fees Return	-6.72	1.25
Net of All Fees Return	-6.77	1.03
Blended Benchmark	-7.16	0.91
Excess Return	0.39	0.12

Moderate Growth Portfolio	Q1 2020	1 Year
Gross of Fees Return	-17.19	-7.80
Net of All Fees Return	-17.24	-8.01
Blended Benchmark	-17.28	-7.84
Excess Return	0.04	-0.17

Income Portfolio	Q1 2020	1 Year
Gross of Fees Return	3.02	7.89
Net of All Fees Return	2.97	7.65
Blended Benchmark	2.89	7.86
Excess Return	0.08	-0.21

Conservative Growth Portfolio	Q1 2020	1 Year
Gross of Fees Return	-11.94	-3.13
Net of All Fees Return	-11.99	-3.34
Blended Benchmark	-12.29	-3.41
Excess Return	0.30	0.07

Cash Preservation Portfolio	Q1 2020	1 Year
Gross of Fees Return	0.32	1.86
Net of All Fees Return	0.26	1.63
Benchmark	0.47	2.08
Excess Return	-0.21	-0.45

Balanced Portfolio	Q1 2020	1 Year
Gross of Fees Return	-9.39	-1.02
Net of All Fees Return	-9.45	-1.24
Blended Benchmark	-9.82	-1.35
Excess Return	0.37	0.11

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

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.).

**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.

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 2036	YoE 2034	YoE 2032	YoE 2030	YoE 2028	YoE 2026	YoE 2024	YoE 2022	YoE 2020	YoE 2018
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	15	13	10	8	5	4	3	2	0	0
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	14	13	10	7	5	4	2	1	0	0
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	19	18	15	11	7	5	4	2	0	0
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	7	6	5	4	3	2	1	0	0	0
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	17	20	24	28	28	26	26	18	20	20
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	18	20	24	28	29	27	27	18	21	21
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	3	3	4	4	4	4	4	3	3	3
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	4	4	5	7	7	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	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	1	1	1	10	20	25	50	50	50
<b>Equity</b>			55	50	40	30	20	15	10	5	0	0
<b>Fixed Income</b>			44	49	59	69	70	65	65	45	50	50
<b>Cash</b>			1	1	1	1	10	20	25	50	50	50
<b>Total</b>			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 3/31/2020.

Conservative Year of Enrollment 2036 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-10.96	-2.34
Net of All Fees Return	-11.01	-2.55
Blended Benchmark	-11.06	-2.39
Excess Return	0.05	-0.16

Conservative Year of Enrollment 2034 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-9.33	-0.91
Net of All Fees Return	-9.38	-1.12
Blended Benchmark	-9.82	-1.35
Excess Return	0.44	0.23

Conservative Year of Enrollment 2032 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-6.66	1.39
Net of All Fees Return	-6.71	1.17
Blended Benchmark	-7.16	0.96
Excess Return	0.45	0.21

Conservative Year of Enrollment 2030 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-4.17	3.35
Net of All Fees Return	-4.23	3.13
Blended Benchmark	-4.61	3.05
Excess Return	0.38	0.08

Conservative Year of Enrollment 2028 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-1.73	5.27
Net of All Fees Return	-1.78	5.04
Blended Benchmark	-2.22	4.82
Excess Return	0.44	0.22

Conservative Year of Enrollment 2026 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-0.61	5.37
Net of All Fees Return	-0.67	5.13
Blended Benchmark	-1.13	4.92
Excess Return	0.46	0.21

Conservative Year of Enrollment 2024 Portfolio	Q1 2020	1 Year
Gross of Fees Return	0.32	5.77
Net of All Fees Return	0.26	5.53
Blended Benchmark	0.06	5.61
Excess Return	0.20	-0.08

Conservative Year of Enrollment 2022 Portfolio	Q1 2020	1 Year
Gross of Fees Return	0.73	4.83
Net of All Fees Return	0.68	4.60
Blended Benchmark	0.62	4.80
Excess Return	0.06	-0.20

Conservative Year of Enrollment 2020 Portfolio	Q1 2020	1 Year
Gross of Fees Return	1.98	5.74
Net of All Fees Return	1.93	5.51
Blended Benchmark	1.94	5.78
Excess Return	-0.01	-0.27

Conservative Year of Enrollment 2018 Portfolio	Q1 2020	1 Year
Gross of Fees Return	1.99	5.73
Net of All Fees Return	1.93	5.50
Blended Benchmark	1.94	5.78
Excess Return	-0.01	-0.28

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

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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## Moderate Year of Enrollment Portfolio Review

### Moderate Year of Enrollment Portfolio Underlying Fund Allocations

Asset Category	Fund	Ticker	YoE 2036	YoE 2034	YoE 2032	YoE 2030	YoE 2028	YoE 2026	YoE 2024	YoE 2022	YoE 2020	YoE 2018
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	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	1	1	1	1	1	5	10	20	30
<b>Equity</b>			90	90	80	70	60	50	35	20	10	0
<b>Fixed Income</b>			9	9	19	29	39	49	60	70	70	70
<b>Cash</b>			1	1	1	1	1	1	5	10	20	30
<b>Total</b>			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 3/31/2020.



Moderate Year of Enrollment 2036 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-19.46	-9.91
Net of All Fees Return	-19.50	-10.10
Blended Benchmark	-19.65	-10.00
Excess Return	0.15	-0.10

Moderate Year of Enrollment 2034 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-19.73	-10.19
Net of All Fees Return	-19.77	-10.39
Blended Benchmark	-19.65	-10.00
Excess Return	-0.12	-0.39

Moderate Year of Enrollment 2032 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-17.26	-7.75
Net of All Fees Return	-17.31	-7.96
Blended Benchmark	-17.28	-7.84
Excess Return	-0.03	-0.12

Moderate Year of Enrollment 2030 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-14.38	-5.29
Net of All Fees Return	-14.42	-5.50
Blended Benchmark	-14.76	-5.58
Excess Return	0.34	0.08

Moderate Year of Enrollment 2028 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-11.87	-3.09
Net of All Fees Return	-11.92	-3.31
Blended Benchmark	-12.29	-3.41
Excess Return	0.37	0.10

Moderate Year of Enrollment 2026 Portfolio	Q4 2019	2019
Gross of Fees Return	-9.22	-0.84
Net of All Fees Return	-9.27	-1.06
Blended Benchmark	-9.82	-1.35
Excess Return	0.55	0.29

Moderate Year of Enrollment 2024 Portfolio	Q4 2019	2019
Gross of Fees Return	-5.44	2.12
Net of All Fees Return	-5.49	1.89
Blended Benchmark	-5.97	1.71
Excess Return	0.48	0.18

Moderate Year of Enrollment 2022 Portfolio	Q4 2019	2019
Gross of Fees Return	-1.68	4.99
Net of All Fees Return	-1.74	4.76
Blended Benchmark	-2.08	4.68
Excess Return	0.34	0.08

Moderate Year of Enrollment 2020 Portfolio	Q1 2020	1 Year
Gross of Fees Return	0.61	6.31
Net of All Fees Return	0.56	6.08
Blended Benchmark	0.33	6.13
Excess Return	0.23	-0.05

Moderate Year of Enrollment 2018 Portfolio	Q1 2020	1 Year
Gross of Fees Return	2.87	7.51
Net of All Fees Return	2.81	7.28
Blended Benchmark	2.75	7.52
Excess Return	0.06	-0.24

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

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## Growth Year of Enrollment Portfolio Review

### Growth Year of Enrollment Portfolio Underlying Fund Allocations

Asset Category	Fund	Ticker	YoE 2036	YoE 2034	YoE 2032	YoE 2030	YoE 2028	YoE 2026	YoE 2024	YoE 2022	YoE 2020	YoE 2018
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	25	25	24	24	22	21	16	11	5	3
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	24	24	23	23	22	21	15	10	5	2
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	35	35	33	33	31	29	22	14	7	4
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	11	11	10	10	10	9	7	5	3	1
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	1	1	3	3	3	6	15	24	33	24
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	1	1	2	2	4	6	15	24	33	24
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	1	1	1	1	2	2	3	4	4	4
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	0	0	2	2	3	3	4	5	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	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	1	1	1	1	1	1	1	1	30
<b>Equity</b>			95	95	90	90	85	80	60	40	20	10
<b>Fixed Income</b>			4	4	9	9	14	19	39	59	79	60
<b>Cash</b>			1	1	1	1	1	1	1	1	1	30
<b>Total</b>			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 3/31/2020.

Growth Year of Enrollment 2036 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-20.95	-11.28
Net of All Fees Return	-21.00	-11.48
Blended Benchmark	-20.80	-11.06
Excess Return	-0.20	-0.42

Growth Year of Enrollment 2034 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-20.77	-11.13
Net of All Fees Return	-20.81	-11.32
Blended Benchmark	-20.80	-11.06
Excess Return	-0.01	-0.26

Growth Year of Enrollment 2032 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-19.65	-10.10
Net of All Fees Return	-19.70	-10.30
Blended Benchmark	-19.65	-10.00
Excess Return	-0.05	-0.30

Growth Year of Enrollment 2030 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-19.60	-10.02
Net of All Fees Return	-19.65	-10.22
Blended Benchmark	-19.65	-10.00
Excess Return	0.00	-0.22

Growth Year of Enrollment 2028 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-18.37	-8.89
Net of All Fees Return	-18.42	-9.09
Blended Benchmark	-18.49	-8.94
Excess Return	0.07	-0.15

Growth Year of Enrollment 2026 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-17.07	-7.68
Net of All Fees Return	-17.11	-7.88
Blended Benchmark	-17.28	-7.84
Excess Return	0.17	-0.04

Growth Year of Enrollment 2024 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-12.00	-3.09
Net of All Fees Return	-12.05	-3.31
Blended Benchmark	-12.31	-3.36
Excess Return	0.26	0.05

Growth Year of Enrollment 2022 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-6.73	1.38
Net of All Fees Return	-6.78	1.16
Blended Benchmark	-7.14	1.07
Excess Return	0.36	0.09

Growth Year of Enrollment 2020 Portfolio	Q1 2020	1 Year
Gross of Fees Return	-1.65	5.52
Net of All Fees Return	-1.70	5.29
Blended Benchmark	-1.99	5.25
Excess Return	0.29	0.04

Growth Year of Enrollment 2018 Portfolio	Q1 2020	1 Year
Gross of Fees Return	0.21	5.45
Net of All Fees Return	0.16	5.22
Blended Benchmark	-0.07	5.26
Excess Return	0.23	-0.04

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

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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## 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 3/31/2020





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/familinfo.asp>.

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.

if money market funds) 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:

*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.*

**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.

*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.*

[illegible]



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**Annualized returns 03-31-2020**

Standardized Returns (%)	7-day Yield	7-day Yield	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
	Subsidized or of date	Unsubsidized or of date										
<b>USTREAS T-Bill Auction Ave 3 Mon</b>			<b>1.82</b>	<b>1.16</b>	<b>0.62</b>	<b>—</b>	<b>02-28-1941</b>					
<b>Returns after Tax (%)</b>	On Distribution					On Distribution and Sales of Shares						
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception			
Fidelity® Emerging Markets Idx	-18.85	-1.28	—	-0.75	09-08-2011	-10.51	-0.58	—	-0.23			

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## 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.

### 12b-1 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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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.

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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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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.

**HOLDERS:** 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 HOLDER 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 for 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 HOLDER 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, HOLDERS, 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 HOLDERS 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

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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: iShares MSCI Emerging Markets 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: iShares Core S&P 500 ETF.

#### 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 Index, 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 Gyllenhaal 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 3/31/2020

\*\*\* Source: Morningstar, Inc., as of 12/9/2019

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**Fidelity® International Index (USD)**Morningstar Analyst Rating™  
**Silver**  
12-09-2019Overall Morningstar Rating™  
**★★★★**  
638 US Fund Foreign Large BlendStandard Index  
MSCI ACWI Ex  
USA NR USDCategory Index  
MSCI ACWI Ex  
USA NR USDMorningstar Cat  
US Fund Foreign Large Blend

Performance (03-31-2020)						
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %	
2018	-8.93	-1.60	1.29	-12.41	-13.52	
2019	10.01	3.70	-9.92	7.93	22.80	
2020	-23.02	—	—	—	-23.02	
Trailing Returns						
	1 Yr	3 Yr	5 Yr	10 Yr	Incept	
Load-adj Monthly	-14.83	-1.85	-0.56	—	3.86	
Std 03-31-2020	-14.83	—	-0.56	—	3.86	
Total Return	-14.83	-1.85	-0.56	2.87	3.86	
+/- Std Index	0.94	0.11	0.09	0.76	—	
+/- Cat Index	0.94	0.11	0.09	0.76	—	
% Rank Cat	38	33	32	22	—	
No. in Cat	743	638	503	369	—	

	Subscribed	Unsubscribed
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 800-635-5032 or visit [www.investor.fidelity.com](http://www.investor.fidelity.com).

**Fees and Expenses**

Sales Charges	
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	
Management Fees %	0.04
12b1 Expense %	—
Net Expense Ratio %	0.04
Gross Expense Ratio %	0.04

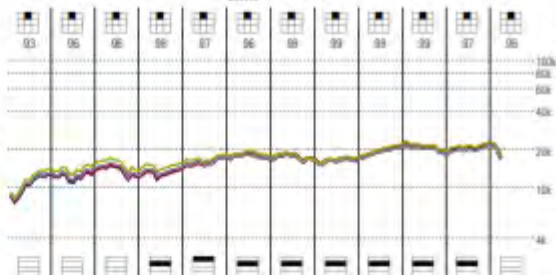
**Risk and Return Profile**

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	4★	4★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	+Avg	+Avg	+Avg
Standard Deviation	14.70	13.81	15.35
Mean	-1.85	-0.56	2.87
Sharpe Ratio	-0.17	-0.05	0.22

MPT Statistics	Standard Index	Best Fr Index
	MSCI EAFE NR USD	
Alpha	-0.05	0.00
Beta	0.96	1.00
R-Squared	98.43	98.97
12-Month Yield	—	—
Potential Cap Gains Exp	0.23%	—

**Operations**

Family:	Fidelity Investments
Manager:	Multiple
Tenure:	11.3 Years
Objective:	Foreign Stock



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	03-31
Index	28.48	7.70	-12.75	18.85	21.87	-5.31	-0.73	1.34	25.38	-13.52	22.00	-23.02	—
Standard Index	-12.86	-3.45	7.56	2.02	6.59	-1.45	4.93	-3.15	-1.81	0.67	0.49	0.33	—
Category Average	-12.86	-3.45	7.56	2.02	6.59	-1.45	4.93	-3.15	-1.81	0.67	0.49	0.33	—
% Rank Cat	—	—	—	36	25	49	41	40	47	29	43	—	—
No. of Funds in Cat	—	—	—	786	791	750	788	762	756	741	732	790	—

**Portfolio Analysis 02-25-2020**

Asset Allocation %	Net %	Long %	Short %	Share Chg	Share	Holdings -	Net Assets
Cash	3.61	3.61	0.00	01-2020	Amount	942 Total Stocks, 0 Total Fixed Income, 0% Turnover Ratio	%
US Stocks	0.93	0.93	0.00	—	—	—	—
Non-US Stocks	95.42	95.42	0.00	—	13,534	MSCI EAFE Index Future Mar 20	4.18
Bonds	0.00	0.00	0.00	—	6 mil	Nestle SA	2.12
Other/Not Classd	0.04	0.04	0.00	—	1 mil	Roche Holding AG Dividend Right Co	1.56
Total	100.00	100.00	0.00	—	4 mil	Novartis AG	1.25
				—	5 mil	Toyota Motor Corp	1.84

Equity Style	Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	15.9	1.22	1.22	—
P/B Ratio TTM	8.9	1.17	1.19	—
P/B Ratio TTM	1.5	1.13	1.19	—
Gao Avg Mkt Cap (\$mil)	33917	1.10	1.07	—

Fixed-Income Style	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	0.10
Greater Europe	82.3	1.41
Greater Asia	36.8	0.79

Sector Weightings	Stocks %	Rel Std Index
Cyclical	38.5	0.98
Basic Materials	6.5	0.94
Consumer Cyclical	10.0	0.98
Financial Services	18.4	0.96
Real Estate	3.6	1.17
Sensitive	33.2	0.93
Communication Services	6.3	0.73
Energy	4.5	0.84
Industrials	14.8	1.30
Technology	7.6	0.73
Defensive	28.4	1.13
Consumer Defensive	11.2	1.05
Healthcare	13.1	1.22
Utilities	4.1	1.12

Purchase Constraints:	A
Incept:	09-09-2011
Type:	MF
Total Assets:	\$22,281.06 mil

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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.

if money market funds) 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:

*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.*

**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.

*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.*

[illegible]

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**Annualized returns 03-31-2020**

Returns after Tax (%)	On Distribution				Inception Date	On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception		1Yr	5Yr	10Yr	Since Inception
Fidelity® International Index	-15.72	-1.44	—	2.79	09-09-2011	-8.48	-0.57	—	2.72

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## 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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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.

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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.

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#### 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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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.

**HOLDERS:** 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 HOLDER 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 for 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 HOLDER 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, HOLDERS, 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 HOLDERS 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

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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: iShares Core S&P 500 ETF.

#### 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 3/31/2020

\*\*\* Source: Morningstar, Inc., as of 3/17/2020

Release date 03-31-2020 / Note: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

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**Fidelity® Total Market Index (USD)**Morningstar Analyst Rating™  
Gold  
03-17-2020Overall Morningstar Rating™  
★★★  
1,214 US Fund Large BlendStandard Index  
S&P 500 TR USDCategory Index  
Russell 1000 TR USDMorningstar Cat  
US Fund Large Blend

Performance (03-31-2020)					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-0.60	3.69	7.10	-14.35	-5.28
2019	14.04	4.08	1.15	9.85	30.92
2020	-20.57	—	—	—	-20.57
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj. Monthly	-9.28	3.93	5.72	—	11.28
Std 03-31-2020	-9.28	—	5.72	—	11.28
Total Return	-9.28	3.93	5.72	10.12	11.28
+/- Std Index	-2.30	-1.17	-1.01	-0.41	—
+/- Cat Index	-1.25	-0.71	-0.51	-0.27	—
% Rank Cat	53	43	37	24	—
No. in Cat	1372	1214	1048	890	—

	Subscribed	Unsubscribed
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 date quoted herein. For performance data current to the most recent month-end, please call 800-835-5082 or visit [www.fidelity.com/fidelity.com](http://www.fidelity.com/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**

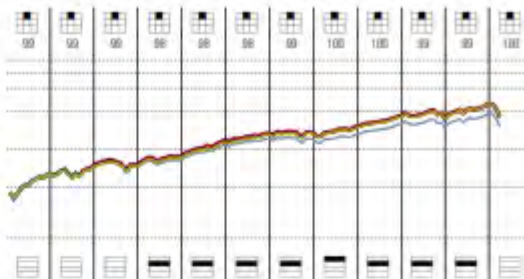
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	3★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	Avg
Standard Deviation	15.86	14.19	13.62
Mean	3.93	5.72	10.12
Sharpe Ratio	0.21	0.38	0.73

MPT Statistics	Standard Index	Best Fit Index (Russell 1000 TR USD)
Alpha	-1.19	-0.07
Beta	1.04	1.00
R-Squared	99.50	100.00

12-Month Yield	—
Potential Cap Gains Exp	38.59%

**Operations**

Family:	Fidelity Investments
Manager:	Multiple
Tenure:	11.3 Years
Objective:	Growth and Income



**Investment Style**  
Equity  
Stocks %

**Growth of \$10,000**  
Fidelity® Total Market Index  
35,743  
Category Average  
30,028  
Standard Index  
36,295

Performance Quantile (within category)	
History	
NAV/Price	—
Total Return %	—
+/- Standard Index	—
+/- Category Index	—
% Rank Cat	—
No. of Funds in Cat	—

**Portfolio Analysis 02-25-2020**

Asset Allocation %	Net %	Long %	Short %	Share Chg since 01-2020	Share Amount	Holdings - 3,324 Total Stocks, 0 Total Fixed Income, 8% Turnover Ratio	Net Assets %
Cash	0.01	0.01	0.00	—	—	—	—
US Stocks	98.72	98.72	0.00	—	—	—	4.22
Non-US Stocks	1.28	1.28	0.00	—	—	—	3.90
Bonds	0.00	0.00	0.00	—	—	—	2.88
Other/Not Classd	0.00	0.00	0.00	—	—	—	1.58
Total	100.00	100.00	0.00	—	—	—	1.38

Equity Style		Portfolio Statistics		Pct	Net	Rel	Rel																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Credit Quality Breakdown	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure	Stocks %	Rel Std Index
Americas	98.8	1.00
Greater Europe	1.1	0.82
Greater Asia	0.1	2.26

Sector Weightings	Stocks %	Rel Std Index
Cyclical	32.0	1.12
Basic Materials	2.2	1.07
Consumer Cyclical	10.1	1.06
Financial Services	15.2	1.10
Real Estate	4.4	1.47
Sensitive	43.7	0.99
Communication Services	9.8	0.92
Energy	3.3	1.25
Industrials	9.9	1.13
Technology	20.7	0.93
Defensive	24.3	0.89
Consumer Defensive	6.9	0.84
Healthcare	14.2	0.91
Utilities	3.3	0.93

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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.

if money market funds) 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:

*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.*

**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.

*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.*

[illegible]

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**Annualized returns 03-31-2020**

Standardized Returns (%)	7-day Yield	7-day Yield	1Yr	5Yr	10Yr	Since	Inception	Max Front	Max Back	Net Exp	Gross Exp	Max
	Subsidized	Unsubsidized				Inception	Date	Load %	Load %	Ratio %	Ratio %	Redemption %
	as of date	as of date										
<b>USTREAS T-Bill Auction Ave 3 Mon</b>			<b>1.82</b>	<b>1.16</b>	<b>0.62</b>	<b>—</b>	<b>02-28-1941</b>					
<b>Returns after Tax (%)</b>	On Distribution					On Distribution and Sales of Shares						
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception			
Fidelity® Total Market Index	-9.99	4.77	—	10.36	09-08-2011	-5.37	4.06	—	8.82			

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## 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.

### 12b-1 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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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.

**HOLDERS:** 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 HOLDER 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 for 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 HOLDER 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, HOLDERS, 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 HOLDERS 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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#### **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: iShares Core S&P 500 ETF.

#### **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 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 limits 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 3/31/2020

\*\*\* Source: Morningstar, Inc., as of 4/1/2020

Release date 03-31-2020 / Note: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

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**Fidelity® US Bond Index (USD)****Performance (03-31-2020)**

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	2.57	2.27	0.06	8.48
2020	3.66	—	—	—	3.66

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Monthly	9.23	4.88	3.39	—	3.61
Std 03-31-2020	9.23	—	3.39	—	3.61
Total Return	9.23	4.88	3.39	3.87	3.61

+/- Std Index	0.29	0.06	0.03	-0.07	—
+/- Cat Index	0.29	0.06	0.03	-0.07	—
% Rank Cat	7	6	8	32	—
No. in Cat	429	384	331	253	—

**7-day Yield**

Substandard

Unsubstandard

30-day SEC Yield

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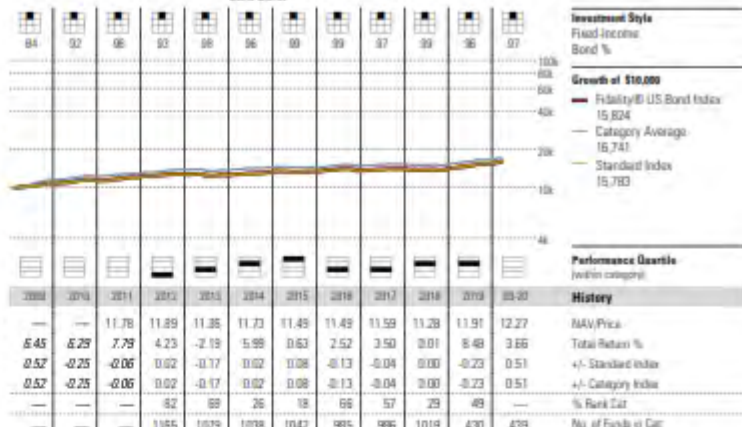
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Morningstar Analyst Rating™  
Gold  
04-01-2020Overall Morningstar Rating™  
★★★★★  
384 US Fund Intermediate  
Cons BondStandard Index  
BBB/Baa: US Agg  
Bond TR USDCategory Index  
BBB/Baa: US Agg  
Bond TR USDMorningstar Cat  
US Fund Intermediate  
Cons Bond**Portfolio Analysis 02-29-2020**

Asset Allocation %	Net %	Long %	Short %	Share Chg since 01-2020	Share Amount	Holdings - 0 Total Stocks, 2,879 Total Fixed-Income, 35% Turnover Ratio	Net Assets %
Cash	2.57	2.57	0.00	—	—	—	—
US Stocks	0.00	0.00	0.00	—	—	—	—
Non-US Stocks	0.00	0.00	0.00	—	—	—	—
Bonds	96.83	96.83	0.00	—	—	—	—
Other/Not Classd	0.60	0.60	0.00	—	—	—	—
Total	100.00	100.00	0.00	—	—	—	—

Equity Style	Portfolio Statistics	Port Avg	Rel Index	Rel Cat
Value	P/E Ratio TTM	—	—	—
Blended	P/B Ratio TTM	—	—	—
Growth	P/B Ratio TTM	—	—	—
Mid-Cap	Gao Avg Mkt Cap (\$mil)	—	—	—

Fixed-Income Style	Portfolio Statistics	Port Avg	Rel Index	Rel Cat
Value	Avg Eff Maturity	—	—	—
Blended	Avg Eff Duration	—	—	—
Growth	Avg Wtd Coupon	—	—	—
Mid-Cap	Avg Wtd Price	—	—	—

**Credit Quality Breakdown 02-29-2020**

Credit Quality	Bond %
AAA	75.42
AA	3.79
A	11.98
BBB	8.74
BB	0.03
B	0.00
Below B	0.00
NR	0.04

**Regional Exposure**

Region	Stocks %	Rel Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

**Sector Weightings**

% Cyclical	Stocks %	Rel Std Index
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:	5.9 Years	ISIN:	US3161483563	Type:	MF
Objective:	Multisector Bond	Minimum Initial Purchase:	\$0	Total Assets:	\$48,729.61 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 03-31-2020

Standardized Returns (%)	7-day Yield Subsidized as of date	7-day Yield Unsubsidized as of date	1Yr	5Yr	10Yr	Since Inception	Expiration Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
Fidelity® US Bond Index	—	—	9.23	3.39	—	3.61	05-04-2011	NA	NA	0.03	0.03	NA
BBGBarc US Agg Bond TR USD			8.93	3.36	3.88	—	01-03-1990					
MSCI EAFE NR USD			-14.38	-0.62	2.72	—	03-31-1986					
S&P 500 TR USD			-6.98	6.73	10.53	—	09-11-1989					
USTREAS T-Bill Auction Ave 3 Mon			1.82	1.16	0.62	—	02-28-1941					

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**Annualized returns 03-31-2020**

Return after Tax (%)	On Distribution				Inception Date	On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception		1Yr	5Yr	10Yr	Since Inception
Fidelity® US Bond Index	8.08	2.25	—	2.47	05-04-2011	5.45	2.08	—	2.29

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## 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.

### 12b-1 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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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.

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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>

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#### 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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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 for 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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#### **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: iShares Core S&P 500 ETF.

#### **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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## JPMorgan U.S. Government Money Market Fund Capital Shares (OGVXX)

### Firm Background\*

JPMorgan Chase & Co. (JPMorgan Chase or JPM) was founded in New York in 1871 as Drexel, Morgan & Co. by J. Pierpont Morgan and Anthony Drexel. JPMorgan Chase is an amalgamation of more than 1,200 predecessor institutions including: The Chase Manhattan Corp. with which JPM merged in 2000; Bank One Corporation which merged with JPM in 2004; and The Bear Stearns Companies Inc., which JPM acquired in 2008. JPMorgan Chase, which is listed on the New York Stock Exchange (Ticker: JPM), is segmented into the following business lines: J.P. Morgan Corporate & Investment Bank, Asset Management, Commercial Banking, and Chase Consumer & Community Banking.

J.P. Morgan Asset Management, Inc. (JPMAM) is the brand name for the asset management business of JPMorgan Chase. JPMAM is segmented into Global Wealth Management (The Private Bank, Private Wealth Management and J.P. Morgan Securities) and Global Investment Management (Institutional, Retail, Defined Contribution, Endowments and Foundations, and Insurance).

J.P. Morgan Investment Management, Inc. (JPMIM or the Firm) was incorporated in February 1984. The Firm is an indirect, wholly-owned subsidiary of JPMorgan Chase and operates as an SEC-registered investment adviser under JPMAM. JPMIM has autonomous investment platforms segmented into three asset classes: its fixed income platforms (opportunistic, global top/down-bottom/up, and global Cash), its equity platform (quantitative and fundamental capabilities spanning regions, styles and market capitalizations), and the alternative platform (hedge funds, real estate & infrastructure, and private equity). JPMIM's solutions team, the Global Multi-Asset Group, also oversees a portion of the Firm's assets.

### Organization: Satisfactory\*

JPMAM is an amalgamation of internally developed and externally acquired investment teams. The Firm provides plentiful support resources to strategies in terms of capital, technology, and investment and client service personnel. It is also diversified by asset class as well as by client base. The track record of business leadership and strategic decisions at the various divisions within JPMAM is mixed. Regarding equity and alternatives strategies, the Firm has a history of successfully integrating acquired teams and rationalizing products, launching innovative products, and allowing investment teams to maintain a significant level of autonomy. Also positive, leadership compensates portfolio managers by fund performance rather than asset levels, and allows portfolio managers to close strategies that reach capacity. Conversely, we are concerned with a series of meaningful changes within the fixed income division in recent years. Most notably, JPMAM has integrated its previously autonomous and philosophically different fixed income platforms (Columbus and New York) under one investment leadership, paving the way for further functional integrations, possibly in research and trading. We believe these changes may compromise the very distinct investment approach of the Columbus-based team. They could also erode the culture and stability of that team.

### Strategy\*\*

The JPMorgan U.S. Government Money Market Fund seeks high current income with liquidity and stability of principal.

The Fund invests exclusively in high-quality, short-term securities that are issued or guaranteed by the U.S. government or by U.S. government agencies and instrumentalities.

Some of the securities purchased by the Fund may be subject to repurchase agreements.



The Fund will comply with SEC rules applicable to all money market funds, including Rule 2a-7 under the Investment Company Act of 1940.

### **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: J.P. Morgan Asset Management, as of 3/31/2020

NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE

# JPMorgan U.S. Government Money Market Fund

Data as of March 31, 2020

Share Class: Capital (OGVXX)

## RATINGS

S&P Rating**	AAAm
Moody's Rating**	Aaa-mf
Fitch Rating**	AAAmf

## FUND OBJECTIVE AND STRATEGY

### Investment objective

The Fund seeks high current income with liquidity and stability of principal.

### Permissible investments

- The Fund invests exclusively in high-quality, short-term securities that are issued or guaranteed by the U.S. government or by U.S. government agencies and instrumentalities.
- Some of the securities purchased by the Fund may be subject to repurchase agreements.
- The Fund will comply with SEC rules applicable to all money market funds, including Rule 2a-7 under the Investment Company Act of 1940.

### Fund highlights

- The Fund is designed for temporary or medium-term cash investments, seasonal operating cash, automated cash sweeps and the liquidity components of investment portfolios.
- The Fund aims to preserve capital, maintain liquidity and produce a competitive yield.

## FUND INFORMATION

### Annual expenses<sup>1</sup>

Gross expenses (%)	0.20
Net expense (%)	0.18

### Fund basics

Fund inception date	6/14/1993
Class inception date	6/14/1993
Fund number	3664
CUSIP	4812C0670
Fund assets (in billions)	\$199.11
Investment minimum	\$50M
Dealing deadline	5:00 PM EST
Daily liquid assets (%)	47.67
Weekly liquid assets (%)	54.86

## PERFORMANCE

### Performance (%) - 30 day average yield

Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
2.31	2.28	2.25	2.24	2.02	1.99	1.75	1.56	1.49	1.48	1.48	0.79

As of March 31, 2020, the 7-day SEC yield was 0.32% and 7-day unsubsidized SEC yield was 0.30%.

The performance quoted is past performance and is not a guarantee of future results. Current performance may be higher or lower than the performance data shown. For performance current to the most recent month-end please call 1-800-766-7722 (institutional investors) or 1-800-480-4111 (retail investors).

## COMPOSITION

### Weighted average maturity in days

Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
16	20	23	20	22	28	38	42	42	34	27	30

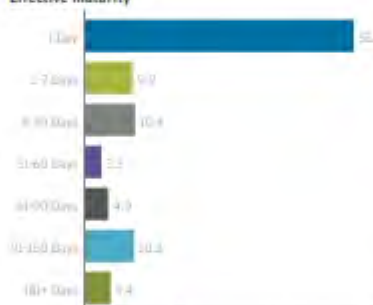
**Weighted Average Maturity:** The calculation takes into account the period remaining until the date on which, in accordance with the terms of the security, the principal amount must unconditionally be paid, or in the case of a security called for redemption, the date on which the redemption payments must be made and may utilize the interest rate reset date for variable or floating rate securities.

### Weighted average life in days

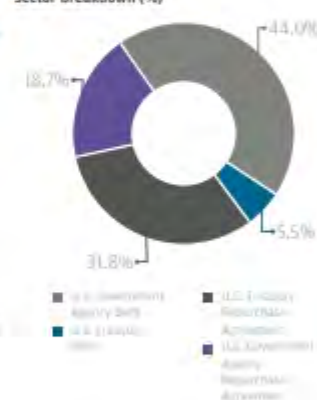
Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
103	109	106	107	117	113	117	114	110	108	91	101

**Weighted Average Life:** The calculation takes into account the period remaining until the date on which, in accordance with the terms of the security, the principal amount must unconditionally be paid, or in the case of a security called for redemption, the date on which the redemption payments must be made.

### Effective maturity\*



### Sector breakdown (%)\*



<sup>1</sup>Due to rounding, values may not total 100%.

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. Performance may reflect the waiver of a portion of the fund's fees and/or reimbursement of certain expenses. If fees had not been waived and certain expenses were not reimbursed the performance would have been lower.

PLEASE REFER TO THE BACK FOR IMPORTANT DISCLOSURE INFORMATION

**J.P.Morgan**  
Asset Management



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Must be preceded or accompanied by a prospectus.

Call 1-800-766-7722 (institutional investors) or 1-800-480-4111 (retail investors) for a fund prospectus. You can also visit us online at [www.jpmorganfunds.com](http://www.jpmorganfunds.com). Investors should carefully consider the investment objectives and risk as well as charges and expenses of the mutual fund before investing. The prospectus contains this and other information about the mutual fund. Read the prospectus carefully before investing.

#### RATINGS:

\*\*\* Moody's defines Money Market Funds with an 'Aaa-mf' rating as having a very strong ability to meet the dual objectives of providing liquidity and preserving capital. S&P defines Money Market Funds that have an 'AAAmf' rating as demonstrating extremely strong capacity to maintain principal stability and to limit exposure to credit risk. Fitch defines Money Market Funds with an 'AAAmf' rating as having extremely strong capacity to achieve fund's investment objective of preserving principal and providing shareholder liquidity through limiting credit, market and liquidity risk. The ratings do not eliminate the risks associated with investing in the Fund. For information on rating methodologies, please visit the agency websites at <http://www.moody's.com/>; <http://www.standardandpoors.com/ratings/en/us/> and <http://www.fitchratings.com>.

#### ANNUAL EXPENSES:

The Fund's adviser and/or its affiliates have contractually agreed to waive fees and/or reimburse expenses to the extent Total Annual Fund Operating Expenses (excluding acquired fund fees and expenses, dividend and interest expenses related to short sales, interest, taxes, expenses related to litigation and potential litigation and extraordinary expenses) exceed 0.18% of the average daily net assets. The Fund may invest in one or more money market funds advised by the adviser or its affiliates (affiliated money market funds). The Fund's adviser has contractually agreed to waive fees and/or reimburse expenses in an amount sufficient to offset the fees and expenses of the affiliated money market funds incurred by the Fund because of the Fund's investment in such money market funds. This waiver is in effect through 6/30/2020, at which time the adviser and/or its affiliates will determine whether to renew or revise it. The difference between net and gross fees includes all applicable fee waivers and expense reimbursements.

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FS-USGMM-CAP-0320

**J.P.Morgan**  
Asset Management

## Schwab Total Stock Market Index Fund<sup>®</sup> (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. 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. CSIM is headquartered in San Francisco, CA, with operations also residing in Colorado and California. The Firm has more than 500 employees, including approximately 80 investment professionals. Jonathan de St. Paer currently serves as the Firm's President (since October 1, 2018) and CEO (since April 1, 2019). 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.

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.

### Organization: Satisfactory\*

In our view, CSIM has grown into one of the larger asset management companies in the U.S. 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.

### 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<sup>SM</sup>. 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\*\*\*

Schwab Total Stock Market Index 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.

### **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 2019

\*\* Source: Charles Schwab Investment Management, Inc. (CSIM), as of 3/31/2020

\*\*\* Source: Morningstar, Inc., as of 3/19/2020

Release date 03-31-2020

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# Schwab Total Stock Market Index (USD)

Morningstar Analyst Rating™  
Gold  
03-19-2020

Overall Morningstar Rating™  
★★★★  
1,214 US Fund Large Blend

Standard Index  
S&P 500 TR USD

Category Index  
Russell 1000 TR  
USD

Morningstar Cat  
US Fund Large Blend

## Performance 03-31-2020

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	—	—	—	-20.98
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception
Load-adj Monthly	-9.31	3.88	5.67	10.10	5.68
Std 03-31-2020	-9.31	—	5.67	10.10	5.68
Total Return	-9.31	3.88	5.67	10.10	5.68
+/- Std Index	-2.33	-1.23	-1.06	-0.43	—
+/- Cat Index	-1.28	-0.76	-0.50	-0.29	—
% Rank Cat	54	45	38	25	—
No. in Cat	1372	1214	1048	880	—

## 7-day Yield

Subordinated Unsubordinated

30-day SEC Yield

## Performance Disclosure

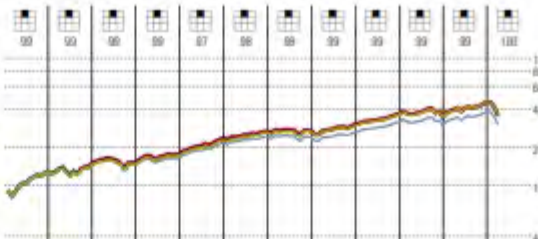
The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics. The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value 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](http://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	5 Yr	10 Yr
Morningstar Rating™	3★	3★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	Avg
Standard Deviation	15.86	14.17	13.77
Mean	3.88	5.67	10.10
Sharpe Ratio	0.21	0.38	0.73
MPT Statistics	Standard Index	Best Fit Index	Best Fit Index
Alpha	-1.25	-0.12	—
Beta	1.04	1.00	—
R-Squared	98.49	100.00	—
12-Month Yield	—	—	—
Potential Cap Gains Exp	41.81%	—	—



Investment Style	Equity	Stocks %
Growth of \$10,000		
Schwab Total Stock Market Index	35,605	
Category Average	30,028	
Standard Index	36,265	

<div>Performance Quantile</div> <div>(within category)</div>														
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	History
19.75	22.75	22.62	25.75	33.67	36.98	36.11	39.74	47.25	43.58	55.95	44.22	NAV/Price		
28.29	17.23	1.32	16.30	39.36	12.38	0.41	12.58	21.06	-5.30	30.88	-20.98	Total Return %		
1.83	2.16	-0.79	0.30	0.98	-1.29	-0.98	0.62	-0.77	-0.92	-0.60	-1.38	+/- Standard Index		
-0.14	1.13	0.18	-0.12	0.25	-0.84	-0.51	0.53	-0.63	-0.52	-0.54	-0.76	+/- Category Index		
42	12	28	29	32	39	37	21	48	44	38	—	% Rank Cat		
2007	2010	1786	1886	1559	1568	1606	1409	1396	1402	1387	1440	No. of Funds in Cat		

## Portfolio Analysis 03-31-2020

Asset Allocation %	Net %	Long %	Short %	Share Chg since 03-2020	Share Amount	Holdings - 3,053 Total Stocks, 0 Total Fixed Income, 3% Turnover Ratio	Net Assets %
Cash	0.31	0.31	0.00	—	—	—	—
US Stocks	98.42	98.42	0.00	—	—	—	4.75
Non-US Stocks	1.27	1.27	0.00	—	—	—	4.19
Bonds	0.00	0.00	0.00	—	—	—	3.20
Other/Not Classd	0.00	0.00	0.00	—	—	—	1.58
Total	100.00	100.00	0.00	—	—	—	1.41

Equity Style	Portfolio Statistics	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	17.3	0.97	1.06	—
P/C Ratio TTM	11.1	0.85	1.07	—
P/B Ratio TTM	2.5	0.82	0.91	—
Geo Avg Min Cap (\$mil)	67950	0.61	0.46	—
Fixed-Income Style	Avg Eff Maturity	Avg Eff Duration	Avg Wtd Coupon	Avg Wtd Price
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—

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Operations					
Family:	Schwab Funds	Base Currency:	USD	Purchase Constraints:	—
Manager:	Multiple	Ticker:	SWTSX	Incept:	06-01-1999
Tenure:	7.2 Years	ISIN:	US9095097561	Type:	MF
Objective:	Growth and Income	Minimum Initial Purchase:	\$0	Total Assets:	\$9,689.77 mil

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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/familinfo.asp>.

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.

if money market funds) 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:

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.

**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.

*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.*

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**Annualized returns 03-31-2020**

Standardized Returns (%)	7-day Yield	7-day Yield	1Yr	5Yr	10Yr	Since	Inception	Max Front	Max Back	Net Exp	Gross Exp	Max
	Subsidized	Unsubsidized				Inception	Date	Load %	Load %	Ratio %	Ratio %	Redemption %
	as of date	as of date										
<b>USTREAS T-Bill Auction Ave 3 Mon</b>			<b>1.82</b>	<b>1.16</b>	<b>0.62</b>	<b>—</b>	<b>02-28-1941</b>					
<b>Returns after Tax (%)</b>	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	-9.97	4.74	9.25	5.03	08-01-1999	-5.36	4.03	7.92	4.39			

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## 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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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>

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#### 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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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.

**HOLDERS:** 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 HOLDER 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 for 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 HOLDER 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, HOLDERS, 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 HOLDERS 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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#### **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: iShares Core S&P 500 ETF.

#### **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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## Schwab<sup>®</sup> 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. 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. CSIM is headquartered in San Francisco, CA, with operations also residing in Colorado and California. The Firm has more than 500 employees, including approximately 80 investment professionals. Jonathan de St. Paer currently serves as the Firm's President (since October 1, 2018) and CEO (since April 1, 2019). 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.

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.

### Organization: Satisfactory\*

In our view, CSIM has grown into one of the larger asset management companies in the U.S. 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.

### 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)SM. 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 2019

\*\* Source: Charles Schwab Investment Management, Inc. (CSIM), as of 3/31/2020



Release date: 03-31-2020

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# Schwab® Treasury Inflation Protected Secs Idx (USD)

Performance 03-31-2020

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	2.87	1.31	0.77	8.38
2020	1.89	—	—	—	1.89
Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	8.79	3.43	2.55	3.25	3.74
Std 03-31-2020	8.79	—	2.55	3.25	3.74
Total Return	8.79	3.43	2.55	3.25	3.74
+/- Std Index	-2.14	-1.40	-0.81	-0.63	—
+/- Cat Index	-0.06	-0.09	-0.12	-0.22	—
% Rank Cat	20	21	22	26	—
No. in Cat	218	196	173	115	—

7-day Yield: Substantiated 4.43  
30-day SEC Yield 04-17-20: 3.82

## Performance Disclosure

The Daily 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 800-407-0206 or visit www.schwab.com.

## Fees and Expenses

### Sales Charges

Front-End Load %: NA  
Deferred Load %: NA

### Fund Expenses

Management Fees %: 0.05  
12b(1) Expense %: NA  
Net Expense Ratio %: 0.05  
Gross Expense Ratio %: 0.05

## Risk and Return Profile

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	4★	4★	4★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	Avg	Avg
Standard Deviation	3.43	3.36	4.39
Mean	3.43	2.55	3.25
Sharpe Ratio	0.50	0.43	0.61

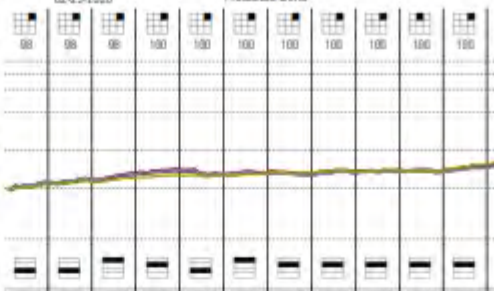
MPT Statistics: Standard Index, Best Fr Index, Treasury US TIPS TR USD

	3 Yr	5 Yr	10 Yr
Alpha	-1.17	-0.03	—
Beta	0.94	1.00	—
R-Squared	77.35	99.77	—
12-Month Yield	—	2.17%	—
Potential Cap Gains Exp	—	-0.92%	—

## Operations

Family: Schwab Funds  
Manager: Multiple  
Tenure: 14.1 Years  
Objective: Income

Morningstar Quantitative Rating™  
Silver  
02-25-2020



Overall Morningstar Rating™  
★★★★  
196 US Fund Inflation-Protected Bond

Standard Index  
BBB+ US Agg Bond TR USD

Category Index  
BBB+ US Treasury US TIPS TR USD

Morningstar Cat  
US Fund Inflation-Protected Bond

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	03-31
10.43	10.73	11.59	12.09	10.87	10.98	10.89	10.97	11.07	10.62	11.26	11.45	11.45	NA/Price
9.24	5.82	12.80	6.59	-8.83	3.48	-1.51	4.47	2.94	-1.32	8.38	1.69	1.69	Total Return %
3.31	-0.72	4.96	2.38	-6.80	-2.49	-2.76	1.82	-0.60	-1.34	-0.34	-1.46	-1.46	+/- Standard Index
-2.17	-0.49	-0.76	-0.39	-0.22	-0.16	-0.17	-0.21	-0.06	-0.06	-0.05	-0.01	-0.01	+/- 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	219	219	No. of Funds in Cat

## Portfolio Analysis 03-31-2020

Asset Allocation %	Net %	Long %	Short %	Shares Chg since 03-31-2020	Shares Amount	Holdings: 0 Total Stocks, 42 Total Fixed-Income, 25% Turnover Ratio	Net Assets %
Cash	0.05	0.05	0.00	—	—	—	—
US Stocks	0.00	0.00	0.00	—	—	—	—
Non-US Stocks	0.00	0.00	0.00	—	—	38 mil United States Treasury Notes 0.38%	3.55
Bonds	99.95	99.95	0.00	—	—	38 mil United States Treasury Notes 0.62%	3.55
Other/Not Classd	0.00	0.00	0.00	—	—	38 mil United States Treasury Notes 0.12%	3.48
Total	100.00	100.00	0.00	—	—	38 mil United States Treasury Notes 0.12%	3.47

## Equity Style

Value	Style	Percent	Index	Net Assets %
—	P/E Ratio TTM	—	—	—
—	P/B Ratio TTM	—	—	—
—	P/S Ratio TTM	—	—	—
—	Govt Avg Mkt Cap (\$mil)	—	—	—
—	Avg Eff Maturity	8.39	—	—
—	Avg Eff Duration	7.74	—	—
—	Avg Wtd Coupon	0.76	—	—
—	Avg Wtd Price	107.05	—	—

## Fixed-Income Style

Value	Style	Percent	Index	Net Assets %
—	Avg Eff Maturity	8.39	—	—
—	Avg Eff Duration	7.74	—	—
—	Avg Wtd Coupon	0.76	—	—
—	Avg Wtd Price	107.05	—	—

## Credit Quality Breakdown 03-31-2020

Rating	Percent	Net Assets %
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

Region	Percent	Net Assets %
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

## Sector Weightings

Sector	Percent	Net Assets %
Cyclical	—	—
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
Sensitive	—	—
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
Defensive	—	—
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

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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/familinfo.asp>.

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.

if money market funds) 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:

*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.*

**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.

*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.*

[illegible]

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**Annualized returns 03-31-2020**

Returns after Tax (%)	On Distribution					On Distribution and Sales of Shares				
	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception	
Schwab® Treasury Intl Protected Secs Ltd.	5.84	1.72	2.34	2.71	03-31-2006	4.01	1.58	2.15	2.51	

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## Mutual Fund Detail Report Disclosure Statement

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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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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.

**HOLDERS:** 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 HOLDER 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 for 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 HOLDER 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, HOLDERS, 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 HOLDERS 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

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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: iShares Core S&P 500 ETF.

#### 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 3/31/2020

Release date 03-31-2020 | Notes: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

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## Vanguard Emerging Mkts Govt Bd Idx Instl (USD)

### Performance 03-31-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-1.71	-2.82	1.76	-0.20	-2.80
2019	5.80	4.14	1.48	2.18	14.02
2020	-12.51	—	—	—	-12.51
Trailing Returns	1-yr	3-yr	5-yr	10-yr	Incept
Load-adj Mthly	-5.64	0.47	2.76	—	3.09
Std 03-31-2020	-5.64	—	2.76	—	3.09
Total Return	-5.64	0.47	2.76	—	3.09
+/- Std Index	-14.57	-4.35	-0.60	—	—
+/- Cat Index	1.20	0.05	-0.06	—	—
% Rank Cat	24	20	9	—	—
No. in Cat	275	231	179	—	—

7-day Yield	Subsidized	Unsubsidized
30-day SEC Yield 03-31-20	5.52	5.52

### Performance Disclosure

The DataVest 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; that 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 date quoted herein. For performance data current to the most recent month-end, please call 800-749-7447 or visit [www.vanguard.com](http://www.vanguard.com).

### Fees and Expenses

#### Sales Charges

Front-End Load %	NA
Deferred Load %	NA

#### Fund Expenses

Management Fees %	0.22
12b-1 Expense %	NA
Net Expense Ratio %	0.23
Gross Expense Ratio %	0.23

### Risk and Return Profile

	3-yr	5-yr	10-yr
Morningstar Rating™	231 funds	179 funds	57 funds
Morningstar Risk	4★	5★	—
Morningstar Return	4★	High	—
Standard Deviation	8.63	7.62	—
Mean	0.47	2.76	—
Sharpe Ratio	-0.10	0.24	—

MPT Statistics	Standard Index	Best Fr Index JPM EMB Global Diversified TR USD
Alpha	-3.61	-0.08
Beta	0.91	0.92
R-Squared	10.56	96.90
12-Month Yield	5.48%	—
Potential Cap Gains Exp	2.69%	—

### Operations

Family:	Vanguard
Manager:	Joshua Barrickman
Tenure:	0.9 Years
Objective:	Government Bond - General

Morningstar Quantitative  
Rating™  
Gold  
02-25-2020

Overall Morningstar Rating™  
★★★★  
231 US Fund Emerging Markets Bond

Standard Index  
BBG Barcl US Agg  
Bond TR USD

Category Index  
JPM EMB Global  
Diversified TR USD

Morningstar Cat  
US Fund Emerging  
Markets Bond



### Portfolio Analysis 03-31-2020

Asset Allocation %	Real %	Long %	Short %	Share Class	Share Amount	Holdings	Real Assets %
Cash	0.53	0.53	0.00	03-2020	—	0 Total Stock, 99% Total Fixed Income, 48% Turnover Ratio	—
US Stocks	0.00	0.00	0.00	—	11 mil	Qatar St 5.1%	0.79
Non-US Stocks	0.00	0.00	0.00	—	11 mil	Qatar St 4.82%	0.72
Bonds	99.24	99.24	0.00	—	12 mil	Saudi Arabia (Kingdom Of) 4.5%	0.72
Other/Not Clsd	0.23	0.23	0.00	—	10 mil	Russia Fedn Ministry Fin 5.25%	0.67
Total	100.00	100.00	0.00	—	15 mil	Petroleos Mexicanos 7.69%	0.60

### Equity Style

Value	Style	Rank
P/E Ratio TTM	—	—
P/C Ratio TTM	—	—
P/B Ratio TTM	—	—
Gao Avg Mkt Cap \$mil	—	—

### Fixed-Income Style

Value	Style	Rank
Avg Eff Maturity	12.90	—
Avg Eff Duration	7.66	—
Avg Wtd Coupon	5.38	—
Avg Wtd Price	—	—

### Credit Quality Breakdown 12-31-2019

	Bond %
AAA	-0.46
AA	7.88
A	19.25
BBB	31.14
BB	0.00
B	0.00
Below B	42.19
NR	0.00

### Regional Exposure

	Stock %	Real Std Index
Americas	—	—
Greater Europe	—	—
Greater Asia	—	—

### Sector Weights

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

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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 03-31-2020

Standardized Returns (%)	7-day Yield Subsequent as of date	7-day Yield Unadjusted as of date	1Y*	5Y*	10Y*	Since Inception	Expiration Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
Vanguard Emerging Mkts Govt Bd Intl Instl	—	—	-5.64	2.76	—	3.09	02-11-2015	NA	NA	0.23	0.23	NA
BBGBarc US Agg Bond TR USD			8.93	3.36	3.88	—	01-03-1990					
JPM EMBI Global Diversified TR USD			-6.84	2.82	4.94	—	07-30-1999					
MSCI EAFE NR USD			-14.38	-0.62	2.72	—	03-31-1986					
S&P 500 TR USD			-6.98	6.73	10.53	—	09-11-1989					
USTREAS T-Bill Auction Ave 3 Mon			1.82	1.16	0.62	—	02-28-1941					

\*Data is for the period 03-31-2020. Annualized returns are based on the period 03-31-2020. You may see this report only in the country in which the original document is issued. The information, data, analysis and opinions contained herein are confidential and proprietary information of Morningstar. They include, a list of fund names, account information provided to you through various sales channels, and other information. (1) may not be copied or redistributed. (2) do not constitute investment advice offered by Morningstar. (3) are provided solely for informational purposes and therefore are not an offer to buy or sell a security, and (4) are not warranted to be correct, complete or accurate. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, changes or other losses resulting from or related to, the information, data, analysis or opinions in this table. Options represent any of the data (either and are subject to change without notice. (5) Morningstar is not a provider of, or a substitute for, Morningstar, Inc. (including any one of its subsidiaries, Morningstar Research Services LLC, registered with the U.S. Securities and Exchange Commission. This report is confidential sales literature. It is not to be used, in part or in whole, as a prospectus, or a sales aid, or a disclosure document. Please see important disclosures at the end of this report.





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**Annualized returns 03-31-2020**

Return after Tax (%)	On Distribution				Inception Date	On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception		1Yr	5Yr	10Yr	Since Inception
Vanguard Emerging Mkts Govt Bd Ide Instl	-7.47	0.75	—	1.06	02-11-2015	-3.22	1.26	—	1.50

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## 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.

### 12b-1 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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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.

**HOLDERS:** 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 HOLDER 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 for 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 HOLDER 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, HOLDERS, 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 HOLDERS 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.

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#### **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: iShares Core S&P 500 ETF.

#### **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 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 3/31/2020

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## Vanguard Long-Term Treasury Idx Instl (USD)

Performance 03-31-2020

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2018	-3.49	0.44	-2.83	4.43	-1.83
2019	4.67	5.67	8.12	-4.42	14.30
2020	20.86	—	—	—	20.86

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Monthly	31.98	13.29	7.29	8.84	7.99
Std 03-31-2020	31.98	—	7.29	8.84	7.99
Total Return	31.98	13.29	7.29	8.84	7.99

+/- Std Index	23.05	8.46	3.93	4.96	—
+/- Cat Index	-0.30	-0.01	-0.03	-0.05	—
% Rank Cat	57	46	31	40	—
No. in Cat	33	29	27	23	—

7-day Yield	Unleveraged	Leveraged
30-day SEC Yield 04-17-20	1.25	1.38

### 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 date quoted herein. For performance data current to the most recent month-end, please call 800-882-7447 or visit [www.vanguard.com](http://www.vanguard.com).

### Fees and Expenses

<b>Sales Charges</b>	
Front-End Load %	NA
Deferred Load %	NA
<b>Fund Expenses</b>	
Management Fees %	0.04
12b1 Expense %	NA
<b>Net Expense Ratio %</b>	<b>0.05</b>
<b>Gross Expense Ratio %</b>	<b>0.05</b>

### Risk and Return Profile

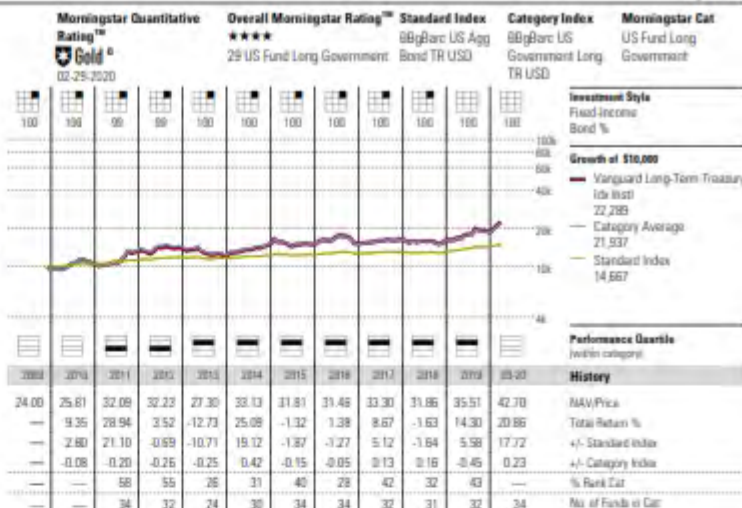
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	4★	3★
Morningstar Risk	Avg	Avg	Avg
Morningstar Return	Avg	+Avg	Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation	11.86	11.45	11.77
Mean	13.29	7.29	8.84
Sharpe Ratio	0.97	0.57	0.73

MPT Statistics	Standard Index	Best Fr Index
Alpha	1.73	-0.16
Beta	3.22	1.02
R-Squared	73.81	99.61
12-Month Yield	—	2.01%
Potential Cap Gains Exp	—	-5.95%

<b>Operations</b>	
Family:	Vanguard
Manager:	Joshua Barrickman
Tenure:	7.2 Years
Objective:	Government Bond - General



### Portfolio Analysis 03-31-2020

Asset Allocation %	Net %	Long %	Short %	Share Chg since 03-2020	Share Amount	Holdings - 0 Total Stocks, 51 Total Fixed-Income, 16% Turnover Ratio	Net Assets %
Cash	0.47	0.47	0.00	—	—	—	—
US Stocks	0.00	0.00	0.00	—	—	—	—
Non-US Stocks	0.00	0.00	0.00	—	169 mil	United States Treasury Bonds 2%	4.28
Bonds	99.53	99.53	0.00	—	112 mil	United States Treasury Bonds 3%	3.36
Other/Not Classd	0.00	0.00	0.00	—	122 mil	United States Treasury Bonds 2.38%	3.31
Total	100.00	100.00	0.00	—	98 mil	United States Treasury Bonds 3.36%	3.15
				—	99 mil	United States Treasury Bonds 3.12%	3.03
				—	114 mil	United States Treasury Bonds 2.25%	3.00
				—	98 mil	United States Treasury Bonds 2.5%	2.91
				—	99 mil	United States Treasury Bonds 2.88%	2.87
				—	99 mil	United States Treasury Bonds 3%	2.87
				—	99 mil	United States Treasury Bonds 2.75%	2.83
				—	94 mil	United States Treasury Bonds 3%	2.83
				—	95 mil	United States Treasury Bonds 3.12%	2.81
				—	87 mil	United States Treasury Bonds 3.62%	2.77
				—	90 mil	United States Treasury Bonds 3.38%	2.75
				—	85 mil	United States Treasury Bonds 3.75%	2.74

Credit Quality Breakdown 12-31-2019	Bond %
AAA	99.95
AA	0.00
A	0.00
BBB	0.05
BB	0.00
B	0.00
Below B	0.00
NR	0.00

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

Sector Weightings	Stocks %	Net Std Index
<b>Cyclical</b>	—	—
Basic Materials	—	—
Consumer Cyclical	—	—
Financial Services	—	—
Real Estate	—	—
<b>Sensitive</b>	—	—
Communication Services	—	—
Energy	—	—
Industrials	—	—
Technology	—	—
<b>Defensive</b>	—	—
Consumer Defensive	—	—
Healthcare	—	—
Utilities	—	—

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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 03-31-2020

Standardized Returns (%)	7-day Yield Subsidized as of date	7-day Yield Unsubsidized as of date	1Yr	5Yr	10Yr	Since Inception	Expiration Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
Vanguard Long-Term Treasury Idx Instl	—	—	31.99	7.29	8.84	7.89	11-19-2009	NA	NA	0.05	0.05	NA
BBGBarc US Agg Bond TR USD			8.93	3.36	3.88	—	01-03-1990					
BBGBarc US Government Long TR USD			32.28	7.32	8.89	—	05-01-1991					
MSCI EAFE NR USD			-14.38	-8.62	2.72	—	03-31-1986					
S&P 500 TR USD			-6.98	6.73	10.53	—	09-11-1989					
USTREAS T-Bill Auction Ave 3 Mon			1.82	1.16	0.62	—	02-28-1941					

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**Annualized returns 03-31-2020**

Returns 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 (dx Instl)	30.73	6.11	—	6.65	11-19-2009	18.82	5.08	—	5.89

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## 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.

### 12b-1 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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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.

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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>

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#### 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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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.

**HOLDERS:** 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 HOLDER 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 for 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 HOLDER 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, HOLDERS, 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 HOLDERS 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

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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: iShares Core S&P 500 ETF.

#### **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 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 solid, low-cost core investment-grade bond fund. It takes less credit risk than most of its actively managed counterparts and enjoys a sizable cost-advantage, supporting a Morningstar Analyst Rating of Silver.

The fund tracks the market-value-weighted Bloomberg Barclays U.S. Aggregate Float-Adjusted Index, which includes U.S.-dollar-denominated bonds with at least one year to maturity. Market-value weighting lets the fund harness the market's collective wisdom about each holding's relative value. It also keeps transaction costs low by mitigating turnover and tilting the portfolio toward the largest debt issues, which tend to be cheapest to trade. The float adjustment excludes the value of bonds held by the Federal Reserve from the weighting calculations, which should slightly lower the portfolio's exposure to mortgage-backed securities, but this adjustment usually doesn't have a big impact.

The portfolio favors high-quality government Treasuries and agency MBS, which jointly account for around two thirds of the portfolio. This should help the fund hold up better than most of its peers when credit spreads widen, which typically occurs in tough economic environments. However, it may not keep pace with funds that overweight lower-quality issuers when credit risk pays off. Like most intermediate-term investment-grade funds, most of this portfolio's risk comes from its sensitivity to interest rates.

This index fund's bias toward high-quality debt could make it a low hurdle for active managers, but that does not diminish the case for owning this index portfolio. Bonds' risk and return are closely linked. Funds that regularly earn higher returns are likely taking more risk. This is one of the cheapest intermediate-term bond funds available, which should give it a durable edge. Over the trailing 10 years through June 2019, the fund slightly lagged the intermediate-core bond Morningstar Category average, largely owing to its greater exposure to Treasuries.

### Performance: Neutral\*\*\*

Over the long term, the fund has posted decent, though not stellar performance. It warrants a Neutral Performance Pillar rating. Over the trailing 15 years through June 2019, the fund beat the intermediate core bond Morningstar Category average, largely owing to its cost advantage. However, that return ranked in the category's middle third.

The fund's category-relative performance is largely determined by the payoff to credit and interest-rate risk. This portfolio has tended to take less credit risk than most of its peers because of its heavy exposure to Treasuries. So, it tends to lag in credit rallies. However, the fund has also tended to have slightly greater exposure to interest-rate risk than the category average, which helps when that factor pays off. Consequently, the fund held up better than most of its peers during the global financial crisis from October 2007 through March 2009. But it tended to underperform in market downturns over the past decade, many of which were triggered by rising interest rates. Still, this is a fairly conservative portfolio that had a smaller maximum loss over its life than the category average.

Effective index sampling has kept index tracking error low. Tracking error tends to appear higher than it really is because the index is calculated with prices at 3:00 p.m., while the fund's NAV is struck at 4:00 p.m.

**Price: Positive\*\*\***

This is one of the cheapest options in the category, supporting a Positive Price Pillar rating.

**Process: Positive\*\*\***

This broad, market-value-weighted portfolio reflects the composition of the U.S.-dollar-denominated investment-grade bond market, harnessing the market's collective wisdom. It tilts toward high-credit-quality issuers, providing good downside protection, mitigates transaction costs, and avoids key-person risk, supporting a Positive Process Pillar rating.

The fund employs representative sampling to track the Bloomberg Barclays U.S. Aggregate Float Adjusted Index. This index includes investment-grade corporate, government, securitized debt denominated in U.S. dollars with at least one year to maturity and a face value of at least \$300 million. The index weights its holdings by market value and is rebalanced monthly. However, it excludes the value of Treasury-, agency-, and mortgage-backed securities held by the Federal Reserve from its weighting calculations. The standard version of the aggregate bond index also excludes Treasuries the Fed holds, so this adjustment principally decreases the fund's exposure to MBS, though the impact is usually small. If the fund unwinds its positions in these holdings, it could increase the fund's exposure to them.

The fund does not hold every security in the benchmark but instead carefully replicates the index's key characteristics. This sampling approach helps reduce transaction costs. Effective management has kept tracking error low.

While it may seem undesirable to assign larger weightings to larger debt issuers, this approach does not lead to high credit risk in this portfolio. On the contrary, about 68% of the portfolio is currently invested in bonds rated AAA. The U.S. government is the largest borrower in the U.S. dollar market, giving the fund considerable exposure to low-credit-risk U.S. Treasuries. Agency MBS also account for a sizable chunk of the portfolio. These securities aren't legally backed by the U.S. government, though their perceived credit risk is low because they are backed by quality collateral (homes) and many investors believe the government will step up to back them in an emergency. And while corporate bonds only represent a fraction of the portfolio, larger corporate issuers tend to have greater resources available to service their debt.

This gives the fund conservative credit risk and should help it weather market downturns better than most peers. However, it also limits the fund's return potential. The average yield to maturity of the fund's holdings is currently only 2.7%. While some of the fund's peers may be able to boost returns by taking greater credit risk, such risk doesn't always pay off.

Interest-rate risk is the primary driver of the fund's returns. The average duration of its holdings is currently around six years, but that can change with bond issuing activity.

**People: Positive\*\*\***

An experienced, well-equipped team manages all of Vanguard's fixed-income strategies, supporting the Positive People Pillar rating.

Joshua Barrickman has managed this portfolio since February 2013. He is the head of Vanguard's fixed-income index team for the Americas and has served as a portfolio manager at Vanguard since 2005. While Barrickman is the only named manager on this portfolio, he isn't the only one who touches this portfolio. He



leads Vanguard's fixed-income portfolio management team for the Americas, which includes over a dozen portfolio managers in the U.S.

The team relies on robust technology platforms, like Aladdin and Bloomberg, to determine how to sample from the index to mitigate tracking error and transaction costs. The managers, as well as a separate risk-management team, assess both expected tracking error risk and realized tracking error, and proactively takes corrective action, where needed.

The team's performance is primarily measured on index tracking error volatility, but Vanguard also takes index-relative performance into account, giving managers an incentive to mitigate transaction costs and look for relative value trades that can add a few basis points. Team index performance influences the bonus pool, but not individual bonus payouts, since portfolio management at Vanguard is a team effort.

\* Source: BNY Mellon Manager Research Group, as of December 2019

\*\* Source: Vanguard Group, Inc., as of 3/31/2020

\*\*\* Source: Morningstar, Inc., as of 7/15/2019

Release date 03-31-2020 / Note: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

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# Vanguard Total Bond Market Idx InstlPIs (USD)

Morningstar Analyst Rating™  
Silver  
07-15-2019

Overall Morningstar Rating™  
★★★★  
384 US Fund Intermediate  
Cons Bond

Standard Index  
BBB/Baa: US Agg  
Bond TR USD

Category Index  
BBB/Baa: US Agg  
Bond TR USD

Morningstar Cat  
US Fund Intermediate  
Cons Bond

## Performance 03-31-2020

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	—	—	—	3.28

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Monthly	9.09	4.85	3.35	3.87	3.81
Std 03-31-2020	9.09	—	3.35	3.87	3.81
Total Return	9.09	4.85	3.35	3.87	3.81

+/- Std Index	0.15	0.02	-0.01	-0.01	—
+/- Cat Index	0.15	0.02	-0.01	-0.01	—
% Rank Cat	10	7	11	32	—
No. in Cat	429	384	331	253	—

7-day Yield  
30-day SEC Yield 04-17-20

Subscribed  
Unsubscribed

## 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 800-882-7447 or visit [www.vanguard.com](http://www.vanguard.com).

## Fees and Expenses

### Sales Charges

Front-End Load %  
Deferred Load %

NA  
NA

### Fund Expenses

Management Fees %  
12b1 Expense %

0.03  
NA

Net Expense Ratio %  
Gross Expense Ratio %

0.03  
0.03

## Risk and Return Profile

Morningstar Rating™  
Morningstar Risk  
Morningstar Return

5★  
Avg  
High

4★  
Avg  
+Avg

3★  
Avg  
+Avg

Standard Deviation  
Mean  
Sharpe Ratio

3.25  
4.85  
0.95

3 Yr  
3.21  
0.69

10 Yr  
3.06  
1.06

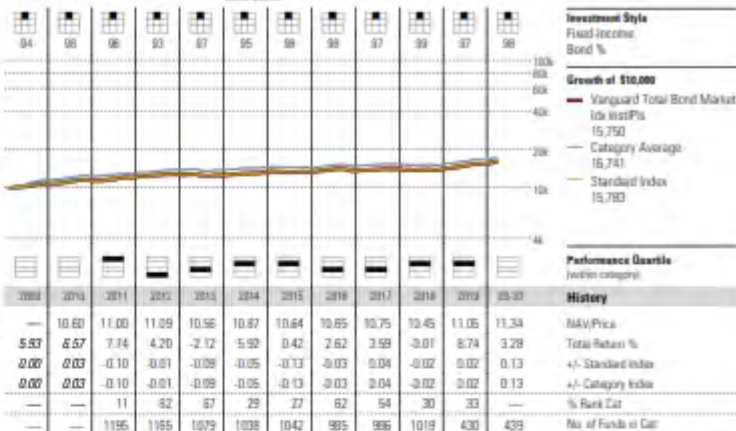
MPT Statistics  
Standard Index

Alpha  
Beta  
R-Squared

-0.01  
1.01  
98.22

12-Month Yield  
Potential Cap Gains Exp

2.64%  
1.02%



## Portfolio Analysis 03-31-2020

Asset Allocation %	Net %	Long %	Short %	Share Chg since 03-2020	Share Amount	Holdings - 0 Total Stocks, 15,204 Total Fixed Income, 0% Turnover Ratio	Net Assets %
Cash	1.24	1.24	0.00	—	—	—	—
US Stocks	0.00	0.00	0.00	—	—	—	—
Non-US Stocks	0.00	0.00	0.00	—	—	—	—
Bonds	98.09	98.12	0.03	—	—	—	—
Other/Not Classd	0.66	0.66	0.00	—	—	—	—
Total	100.00	100.03	0.03	—	—	—	—

## Equity Style

Equity Style	Portfolio Statistics	Port Avg	Rel Index	Rel Cat	Holdings	Net Assets %
P/E Ratio TTM	—	—	—	—	1,184 mil	0.47
P/C Ratio TTM	—	—	—	—	1,040 mil	0.47
P/B Ratio TTM	—	—	—	—	1,111 mil	0.46
Govt Avg Mkt Cap (\$mil)	—	—	—	—	1,082 mil	0.45
Fixed-Income Style	—	—	—	—	1,100 mil	0.44
Avg Eff Maturity	8.30	—	—	—	1,083 mil	0.43
Avg Eff Duration	6.22	—	—	—	1,025 mil	0.42
Avg Wtd Coupon	3.13	—	—	—	975 mil	0.40
Avg Wtd Price	109.57	—	—	—	867 mil	0.40
Credit Quality Breakdown 12-31-2019	—	—	—	—	962 mil	0.39
AAA	87.55	—	—	—	964 mil	0.38
AA	3.43	—	—	—	717 mil	0.37
A	11.37	—	—	—	777 mil	0.37
BBB	17.85	—	—	—	908 mil	0.36
BB	0.00	—	—	—	715 mil	0.36
B	0.00	—	—	—	—	—
Below B	0.00	—	—	—	—	—
NR	0.00	—	—	—	—	—

## Credit Quality Breakdown 12-31-2019

Credit Quality Breakdown 12-31-2019	Bond %	Holdings	Net Assets %
AAA	87.55	964 mil	0.38
AA	3.43	717 mil	0.37
A	11.37	777 mil	0.37
BBB	17.85	908 mil	0.36
BB	0.00	715 mil	0.36
B	0.00	—	—
Below B	0.00	—	—
NR	0.00	—	—

## Regional Exposure

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

## Sector Weightings

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	—	—

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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 03-31-2020

Standardized Returns (%)	7-day Yield Subsidized as of date	7-day Yield Unsubsidized as of date	1Y*	5Y*	10Y*	Since Inception	Expiration Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
Vanguard Total Bond Market Idr Instl Ps	—	—	9.09	9.35	9.87	3.61	02-05-2010	NA	NA	0.63	0.63	NA
BBGBarc US Agg Bond TR USD			8.93	9.36	9.88	—	01-03-1990					
MSCI EAFE NR USD			-14.38	-0.62	2.72	—	03-31-1986					
S&P 500 TR USD			-6.98	6.73	10.53	—	09-11-1989					
USTREAS T-Bill Auction Ave 3 Mon			1.62	1.16	0.62	—	02-28-1941					

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**Annualized returns 03-31-2020**

Returns after Tax (%)	On Distribution				Inception Date	On Distribution and Sales of Shares			
	1Yr	5Yr	10Yr	Since Inception		1Yr	5Yr	10Yr	Since Inception
Vanguard Total Bond Market Idx InstPls	7.89	2.21	2.68	2.61	02-05-2010	5.35	2.05	2.49	2.44

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## 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.

### 12b-1 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 others 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 least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to [global.morningstar.com/managerdisclosures/](http://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/managedisclosures](http://global.morningstar.com/managedisclosures)

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 (-Avg), 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 MCB's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB 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 experienced 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 for 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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#### **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: iShares Core S&P 500 ETF.

#### **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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## Upcoming Year of Enrollment Portfolio Changes (July 2020)

### DreamAhead Year of Enrollment Conservative Portfolios

Fund	Ticker	Current	Jul-2020	Current	Jul-2020	Current	Jul-2020	Current	Jul-2020	Current	Jul-2020
		YoE 2036	YoE 2036	YoE 2034	YoE 2034	YoE 2032	YoE 2032	YoE 2030	YoE 2030	YoE 2028	YoE 2028
Fidelity® Total Market Index Fund	FSKAX	15	13	13	12	10	9	8	7	5	4
Schwab Total Stock Market Index Fund®	SWTSX	14	13	13	11	10	9	7	6	5	4
Fidelity® International Index Fund	FSPSX	19	18	18	16	15	12	11	8	7	5
Fidelity® Emerging Markets Index Fund	FPADX	7	6	6	6	5	5	4	4	3	2
Fidelity® U.S. Bond Index Fund	FXNAX	17	20	20	21	24	26	28	29	28	26
Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	18	20	20	22	24	26	28	30	29	27
Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	3	3	3	4	4	4	4	5	4	4
Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	4	4	4	5	5	6	7	8	7	6
Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	2	2	2	2	2	2	2	2	2	2
JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	1	1	1	1	1	1	1	10	20
	Equity	55	50	50	45	40	35	30	25	20	15
	Fixed Income	44	49	49	54	59	64	69	74	70	65
	Cash	1	1	1	1	1	1	1	1	10	20
	Total	100	100	100	100	100	100	100	100	100	100

Fund	Ticker	Current	Jul-2020	Current	Jul-2020	Current	Jul-2020	Current	Jul-2020	Current	Jul-2020
		YoE 2026	YoE 2026	YoE 2024	YoE 2024	YoE 2022	YoE 2022	YoE 2020	YoE 2020	YoE 2018	YoE 2018
Fidelity® Total Market Index Fund	FSKAX	4	3	3	2	2	0	0	0	0	0
Schwab Total Stock Market Index Fund®	SWTSX	4	2	2	1	1	0	0	0	0	0
Fidelity® International Index Fund	FSPSX	5	4	4	2	2	0	0	0	0	0
Fidelity® Emerging Markets Index Fund	FPADX	2	1	1	0	0	0	0	0	0	0
Fidelity® U.S. Bond Index Fund	FXNAX	26	26	26	18	18	20	20	20	20	20
Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	27	27	27	18	18	21	21	21	21	21
Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	4	4	4	3	3	3	3	3	3	3
Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	6	6	6	4	4	4	4	4	4	4
Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	2	2	2	2	2	2	2	2	2	2
JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	20	25	25	50	50	50	50	50	50	50
	Equity	15	10	10	5	5	0	0	0	0	0
	Fixed Income	65	65	65	45	45	50	50	50	50	50
	Cash	20	25	25	50	50	50	50	50	50	50
	Total	100	100	100	100	100	100	100	100	100	100

Columns highlighted in blue are current allocations. Portfolio changes occurring in July 2020 are highlighted in green. Portfolios not highlighted have no allocation changes occurring in July.

## DreamAhead Year of Enrollment Moderate Portfolios

Asset Category	Fund	Ticker	Current		Jul-2020		Current		Jul-2020		Current		Jul-2020		Current		Jul-2020		Current		Jul-2020	
			YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE
			2036	2036	2036	2036	2034	2034	2034	2034	2032	2032	2032	2032	2030	2030	2030	2030	2028	2028	2028	2028
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	24	24	24	24	21	21	21	21	18	18	18	18	16	16	16	16	16	16	13	13
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	23	23	23	23	21	21	21	21	18	18	18	18	16	16	16	16	16	16	13	13
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	33	33	33	33	29	29	29	29	26	26	26	26	21	21	21	21	21	21	18	18
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	10	10	10	10	9	9	9	9	8	8	8	8	7	7	7	7	7	7	6	6
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	3	3	3	3	6	6	6	6	10	10	10	10	15	15	15	15	15	15	20	20
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	2	2	2	2	6	6	6	6	10	10	10	10	15	15	15	15	15	15	20	20
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	2	2	2	2	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Cash	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Equity			90	90	90	90	80	80	80	80	70	70	70	70	60	60	60	60	60	60	50	50
Fixed Income			9	9	9	9	19	19	19	19	29	29	29	29	39	39	39	39	39	39	49	49
Cash			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total			100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Asset Category	Fund	Ticker	Current		Jul-2020		Current		Jul-2020		Current		Jul-2020		Current		Jul-2020		Current		Jul-2020	
			YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE	YoE
			2026	2026	2026	2026	2024	2024	2024	2024	2022	2022	2022	2022	2020	2020	2020	2020	2018	2018	2018	2018
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	13	9	9	9	5	5	5	5	3	3	3	3	0	0	0	0	0	0	0	0
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	13	9	9	9	5	5	5	5	2	2	2	2	0	0	0	0	0	0	0	0
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	18	12	12	12	7	7	7	7	4	4	4	4	0	0	0	0	0	0	0	0
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	6	5	5	5	3	3	3	3	1	1	1	1	0	0	0	0	0	0	0	0
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	20	24	24	24	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	20	25	25	25	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	3	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	4	5	5	5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Cash	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	5	5	5	10	10	10	10	20	20	20	20	30	30	30	30	30	30	30	30
Equity			50	35	35	35	20	20	20	20	10	10	10	10	0	0	0	0	0	0	0	0
Fixed Income			49	60	60	60	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Cash			1	5	5	5	10	10	10	10	20	20	20	20	30	30	30	30	30	30	30	30
Total			100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Columns highlighted in blue are current allocations. Portfolio changes occurring in July 2020 are highlighted in green. Portfolios not highlighted have no allocation changes occurring in July.

## DreamAhead Year of Enrollment Growth Portfolios

Asset Category	Fund	Ticker	Current		Jul-2020		Current		Jul-2020		Current		Jul-2020		Current		Jul-2020	
			YoE 2036	YoE 2036	YoE 2036	YoE 2036	YoE 2034	YoE 2034	YoE 2034	YoE 2034	YoE 2032	YoE 2032	YoE 2032	YoE 2032	YoE 2030	YoE 2030	YoE 2030	YoE 2030
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	25	25	25	24	25	24	24	24	24	24	24	22	24	22	22	21
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	24	24	24	23	24	23	23	23	23	23	22	22	23	22	22	21
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	35	35	35	33	35	33	33	33	33	33	31	31	33	31	31	29
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	11	11	11	10	11	10	10	10	10	10	10	10	10	10	10	9
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	1	1	1	3	1	3	3	3	3	3	3	3	3	3	3	6
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	1	1	1	2	1	2	2	2	2	2	4	4	2	4	4	6
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	1	1	1	1	1	1	1	1	1	1	2	2	1	2	2	2
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	0	0	0	2	0	2	2	2	2	2	3	3	2	3	3	3
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	1	1	1	1	1	1	1	1	1	1	2	2	1	2	2	2
Cash	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Equity			95	95	95	90	95	90	90	90	90	90	85	85	90	85	85	80
Fixed Income			4	4	4	9	4	9	9	9	9	9	14	14	9	14	14	19
Cash			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total			100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Asset Category	Fund	Ticker	Current		Jul-2020		Current		Jul-2020		Current		Jul-2020		Current		Jul-2020	
			YoE 2026	YoE 2026	YoE 2026	YoE 2026	YoE 2024	YoE 2024	YoE 2024	YoE 2024	YoE 2022	YoE 2022	YoE 2022	YoE 2022	YoE 2020	YoE 2020	YoE 2018	YoE 2018
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	21	18	21	13	16	13	11	8	11	8	5	3	5	3	3	3
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	21	18	21	13	15	13	10	7	10	7	5	2	5	2	2	2
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	29	26	29	18	22	18	14	11	14	11	7	4	7	4	4	4
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	9	8	9	6	7	6	5	4	5	4	3	1	3	1	1	1
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	6	10	6	20	15	20	24	28	24	28	33	24	33	24	24	24
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	6	10	6	20	15	20	24	28	24	28	33	24	33	24	24	24
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	2	3	2	3	3	3	4	4	4	4	4	4	4	4	4	4
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	3	4	3	4	4	4	5	7	5	7	7	6	7	6	6	6
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Cash	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	1	1	1	1	1	1	1	1	1	1	30	1	30	30	30
Equity			80	70	80	50	60	50	40	30	40	30	20	10	20	10	10	10
Fixed Income			19	29	19	49	39	49	59	69	59	69	79	60	79	60	60	60
Cash			1	1	1	1	1	1	1	1	1	1	1	30	1	30	30	30
Total			100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Columns highlighted in blue are current allocations. Portfolio changes occurring in July 2020 are highlighted in green. Portfolios not highlighted have no allocation changes occurring in July.



## New DreamAhead Year of Enrollment 2038 Portfolios

			Conservative Year of Enrollment 2038 Portfolio	Moderate Year of Enrollment 2038 Portfolio	Growth Year of Enrollment 2038 Portfolio	
Asset Category	Fund	Ticker				
U.S. Large Cap Blend	Fidelity® Total Market Index Fund	FSKAX	15	24	25	
U.S. Large Cap Blend	Schwab Total Stock Market Index Fund®	SWTSX	14	23	24	
Foreign Large Blend	Fidelity® International Index Fund	FSPSX	19	33	35	
Diversified Emerging Mkts	Fidelity® Emerging Markets Index Fund	FPADX	7	10	11	
Intermediate-Term Bond	Fidelity® U.S. Bond Index Fund	FXNAX	17	3	1	
Intermediate-Term Bond	Vanguard Total Bond Market Index Fund Institutional Plus Shares	VBMPX	18	2	1	
Long Government	Vanguard Long-Term Treasury Index Fund Institutional Shares	VLGIX	3	1	1	
Inflation-Protected Bond	Schwab® Treasury Inflation Protected Securities Index Fund	SWRSX	4	2	0	
Emerging Markets Bond	Vanguard Emerging Markets Government Bond Index Fund Institutional Shares	VGIVX	2	1	1	
Cash	JPMorgan U.S. Government Money Market Fund Capital Shares	OGVXX	1	1	1	
			Equity	55	90	95
			Fixed Income	44	9	4
			Cash	1	1	1
			Total	100	100	100

## DreamAhead Year of Enrollment Terminal Portfolio Options

### Goals

- **Ensure portfolios have an 'expiration' process** by rolling all participants in 'matured' portfolios into a terminal state
- **Maintain the current final asset allocation** for each of the three risk options (i.e. ensure no changes to the investment mix or strategy for the investor)

### Option 1 Timeline

- On June 30, 2020:
  - Create new College Year of Enrolled Portfolios:
    - College Enrolled Conservative Portfolio
    - College Enrolled Moderate Portfolio
    - College Enrolled Growth Portfolio
  - Roll 2018 and 2020 portfolio participants into the appropriate 'College' portfolio while retaining performance history
  - The new portfolios become the terminal portfolio for each risk option and remain at the same ending allocation as the current end of each of the three glide paths (e.g. 50% fixed income/50% cash for the conservative option)
  - 'College' portfolios remain open to new investments and exchanges in or out
  - Introduce 2038 portfolios, which align with the first step of the glide paths
- After June 30, 2020, on every June 30 in even numbered years:
  - Roll that year's portfolios into the 'College' terminal portfolios
  - Introduce the newest portfolios, which is that year + 18 (e.g. in 2022, we introduce the 2040 portfolio) and align with the first step of the glide paths

### Option 2 Timeline

- On June 30, 2020:
  - Create new College Year of Enrolled Portfolios:
    - College Enrolled Conservative Portfolio
    - College Enrolled Moderate Portfolio
    - College Enrolled Growth Portfolio
  - Roll 2018 portfolio participants into the appropriate 'College' portfolio while retaining performance history
  - The new portfolios become the terminal portfolio for each risk option and remain at the same ending allocation as the current end of each of the three glide paths (e.g. 50% fixed income/50% cash for the conservative option)
  - 'College' portfolios remain open to new investments and exchanges in or out
  - Introduce 2038 portfolios, which aligns with the first step of the glide path
- After June 30, 2020, on every June 30 in even numbered years:
  - Roll the next set of 'matured' portfolios into the 'College' terminal portfolios starting with the 2020 portfolios in 2022 while retaining performance history
  - Introduce the newest portfolios, which is that year + 18 (e.g. in 2022, we introduce the 2040 portfolio) and align with the first step of the glide paths

## Important Disclosures

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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 related 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.

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**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,

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### **Blended Benchmark Definitions**

As of March 31, 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 2036 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 2034 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 2032 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

#### **Conservative Year of Enrollment 2030 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

#### **Conservative Year of Enrollment 2028 Portfolio**

10% Dow Jones US Total Stock Market TR USD, 7% MSCI EAFE NR USD, 3% MSCI EM NR USD, 57% 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, 10% Bloomberg Barclays US Treasury Bill 1-3 Mon TR USD

#### **Conservative Year of Enrollment 2026 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 2024 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 2022 Portfolio**

3% Dow Jones US Total Stock Market TR USD, 2% MSCI EAFE 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 2020 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 2018 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 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**

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 2032 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 2030 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 2028 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 2026 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 2024 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 2022 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 2020 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 2018 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 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**

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 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**

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 2028 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 2026 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 2024 Portfolio**

31% Dow Jones US Total Stock Market TR USD, 22% 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

#### **Growth Year of Enrollment 2022 Portfolio**

21% Dow Jones US Total Stock Market TR USD, 14% 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

#### **Growth Year of Enrollment 2020 Portfolio**

10% Dow Jones US Total Stock Market TR USD, 7% MSCI EAFE NR USD, 3% MSCI EM NR USD, 66% 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 2018 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

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