

Notice of Meeting

UNIVERSITY OF HAWAI'I

BOARD OF REGENTS COMMITTEE ON BUDGET AND FINANCE

Members: Regent Higaki (Chair), Regent Kudo (Vice-Chair), and Regents Acoba, Doctor Sparks, McEnerney, Shinsato, and Tagorda

Date: Thursday, January 11, 2018
Time: 12:00 p.m.
Place: University of Hawai'i at Mānoa
Information Technology Building
1st Floor Conference Room 105A/B
2520 Correa Road
Honolulu, Hawai'i 96822

AGENDA

- I. Call Meeting to Order**
- II. Approval of Minutes of the November 1, 2017 Meeting**
- III. Public Comment Period for Agenda Items:** All written testimony on agenda items received after posting of this agenda and up to 24 hours in advance of the meeting will be distributed to the board. Late testimony on agenda items will be distributed to the board within 24 hours of receipt. Written testimony may be submitted via US mail, email at bor@hawaii.edu, or facsimile at 956-5156. Individuals submitting written testimony are not automatically signed up for oral testimony. Registration for oral testimony on agenda items will be provided at the meeting location 15 minutes prior to the meeting and closed once the meeting begins. Oral testimony is limited to three (3) minutes. All written testimony submitted are public documents. Therefore, any testimony that is submitted verbally or in writing, electronically or in person, for use in the public meeting process is public information.
- IV. Agenda Items**
 - A. For Information
 1. FY18 Q1 UBS Legacy Endowment Fund Investment Performance Report
 2. University of Hawai'i Revenue Bond Post-Issuance Compliance Update
 3. FY18 UH Revenue Bond Transaction Recap
 4. FY19 University of Hawai'i Supplemental Budget Update
- V. Adjournment**

DTJ 10664-81

Kalbert K. Young
Vice President for Budget and Finance
Chief Financial Officer



UNIVERSITY
of HAWAI'I
SYSTEM

UNIVERSITY OF HAWAII
BOARD OF REGENTS

18 JAN -5 10:23

RECEIVED

January 4, 2018

'18 JAN -5 10:09

UNIVERSITY OF HAWAII
PRESIDENT'S OFFICE

TO: Jan Naoe Sullivan
Chairperson, Board of Regents

Wayne Higaki
Chair, Committee on Budget and Finance, Board of Regents

VIA: David Lassner
President

FROM: Kalbert K. Young
Vice President for Budget and Finance/Chief Financial Officer

SUBJECT: FY18 Q1 UBS INVESTMENT REPORT

Attached is a report on investment performance of the Legacy Endowment Fund provided by UBS for the first quarter of the current fiscal year ending September 30, 2017. The report highlights performance of the overall portfolio and the specific funds or investment products that comprise the Legacy Endowment Fund portfolio. This report is an information item for discussion at the Budget and Finance Committee meeting on January 11, 2018.

Ms. Lori Hamano, UBS Portfolio Manager, and other representatives from UBS will be presenting this item to the Budget and Finance Committee. They are also expecting to answer any questions the Regents may have on the report or on the portfolio in general.

Attachment

c: University Budget Office (w/o Attachment)
University Controller (w/o Attachment)



Branch office:
 733 Bishop Street
 Suite 1600
 Honolulu, HI 968134068

Financial Advisor:
 Foundational Wealth Management
 808-536-4511

UBS Client Review

as of September 30, 2017

Prepared for

University of Hawaii

Accounts included in this review

Account	Name	Type
JX XX518	• University of Hawaii	• Portfolio Management Program
Risk profile:	Moderate	
Return Objective:	Current Income and Capital Appreciation	

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Performance review

as of September 30, 2017

Sources of portfolio value

\$ Millions



Portfolio value and investment returns

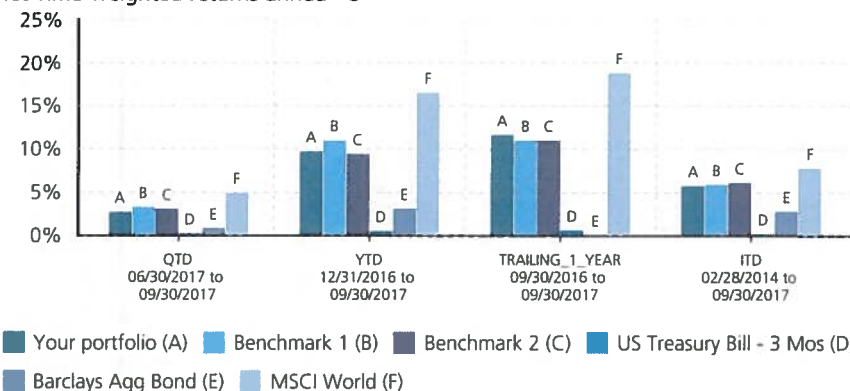
Performance returns (annualized > 1 year)

	QTD 06/30/2017 to 09/30/2017	YTD 12/31/2016 to 09/30/2017	1 Year 09/30/2016 to 09/30/2017	ITD 02/28/2014 to 09/30/2017
Opening value	69,053,495.94	64,661,398.99	65,627,875.97	65,577,366.93
Net deposits/withdrawals	-696,032.71	-761,146.42	-2,883,570.66	-9,019,207.51
Div./interest income	349,788.40	1,165,516.59	1,621,948.67	6,514,209.08
Change in accr. interest	0.00	0.00	0.00	0.00
Change in value	1,587,892.27	5,229,374.74	5,928,889.92	7,222,775.40
Closing value	70,295,143.90	70,295,143.90	70,295,143.90	70,295,143.90
Net Time-weighted ROR	2.76	9.74	11.64	5.81

Net deposits and withdrawals include program and account fees.

Portfolio and selected benchmark returns

Net Time-weighted returns annualized



Time weighted rates of return (net of fees)

Performance returns (annualized > 1 year)

	QTD 06/30/2017 to 09/30/2017	YTD 12/31/2016 to 09/30/2017	1 Year 09/30/2016 to 09/30/2017	ITD 02/28/2014 to 09/30/2017
Your portfolio(%)	2.76	9.74	11.64	5.81
Benchmark 1	3.31	11.01	11.00	5.93
Benchmark 2	3.11	9.42	10.99	6.15
US Treasury Bill - 3 Mos	0.25	0.56	0.63	0.24
Barclays Agg Bond	0.85	3.14	0.07	2.84
MSCI World	4.96	16.53	18.83	7.82



Asset class performance

as of September 30, 2017

	Value on 09/30/2017	% of portfolio	Net time-weighted returns (annualized > 1 year)				Start date to 09/30/2017	Start date
			QTD 06/30/2017 to 09/30/2017	YTD 12/31/2016 to 09/30/2017	1 Year 09/30/2016 to 09/30/2017	ITD		
Cash	146,571.36	0.21	N/A	N/A	N/A	N/A	Feb 28, 2014	
<i>US Treasury Bill - 3 Mos</i>			<i>0.25</i>	<i>0.56</i>	<i>0.63</i>	<i>0.24</i>	<i>Feb 28, 2014</i>	
Cash	146,571.36	0.21	N/A	N/A	N/A	N/A	Feb 28, 2014	
Fixed Income	27,501,183.39	39.12	1.05	4.38	4.01	2.49	Mar 10, 2014	
<i>Barclays Agg Bond</i>			<i>0.85</i>	<i>3.14</i>	<i>0.07</i>	<i>3.02</i>	<i>Mar 10, 2014</i>	
US	13,208,033.84	18.79	0.50	2.34	2.77	2.27	Mar 10, 2014	
Global	14,293,149.55	20.33	1.62	6.41	5.18	2.76	Mar 11, 2014	
Equity	42,647,389.15	60.67	4.04	13.99	17.84	8.76	Mar 11, 2014	
<i>MSCI AC World - NR</i>			<i>5.18</i>	<i>17.25</i>	<i>18.65</i>	<i>7.20</i>	<i>Mar 11, 2014</i>	
US	38,385,371.87	54.61	4.00	13.71	17.64	9.90	Mar 11, 2014	
International	4,262,017.28	6.06	4.41	16.70	19.63	4.65	Mar 11, 2014	
Total portfolio	\$70,295,143.90	100%	2.76%	9.74%	11.64%	5.81%	Feb 28, 2014	

	QTD 06/30/2017 to 09/30/2017	YTD 12/31/2016 to 09/30/2017	1 Year 09/30/2016 to 09/30/2017	ITD Start date to 09/30/2017
Benchmarks - Time weighted returns				
Benchmark 1	3.31	11.01	11.00	5.93
Benchmark 2	3.11	9.42	10.99	6.15
US Treasury Bill - 3 Mos	0.25	0.56	0.63	0.24
Barclays Agg Bond	0.85	3.14	0.07	2.84
MSCI World	4.96	16.53	18.83	7.82

Past performance does not guarantee future results and current performance may be lower/higher than past data presented.



Security performance

as of September 30, 2017

Prepared for University of Hawaii
 JX XX518 • University of Hawaii • Portfolio Management Program
 Risk profile: Moderate
 Return Objective: Current Income and Capital Appreciation

	Value on 09/30/2017	% of portfolio	Gross time-weighted returns (annualized > 1 year)				Start date to 09/30/2017	Start date
			QTD 06/30/2017 to 09/30/2017	YTD 12/31/2016 to 09/30/2017	1 Year 09/30/2016 to 09/30/2017	ITD		
BLACKROCK STRATEGIC INCOME**	6,522,844.34	9.28	1.23	3.72	4.89	2.64	Mar 11, 2014	
DEUTSCHE X-TRACKERS MSCIEAFE HEDGED EQUITY ETF	2,153,419.94	3.06	3.36	12.65	19.96	7.73	Dec 23, 2014	
ISHARES CORE U.S. AGGREGATE BOND ETF	4,379,764.35	6.23	0.70	3.03	-0.18	1.01	Jun 21, 2016	
ISHARES MBS ETF	936,910.80	1.33	-0.51*	-0.51*	-0.51*	-0.51	Sep 05, 2017	
ISHARES US TREASURY BONDETF	745,842.00	1.06	-1.16*	-1.16*	-1.16*	-1.16	Sep 05, 2017	
PIMCO INCOME FUND CLASS P	4,077,858.71	5.80	1.62	6.87	8.33	8.67	Dec 29, 2015	
POWERSHARES TAXABLE MUNICIPAL BOND PORTFOLIO ETF	928,564.70	1.32	-1.11*	-1.11*	-1.11*	-1.11	Sep 05, 2017	
PRUDENTIAL GLOBAL TOTAL RETURN FUND INC**	3,692,446.50	5.25	2.34	10.99	2.40	2.74	Sep 11, 2014	
SCHWAB INTERMEDIATE-TERMUS TREAS ETF	1,582,390.24	2.25	-1.17*	-1.17*	-1.17*	-1.17	Sep 05, 2017	
SCHWAB SHORT TERM US TREAS ETF	892,231.20	1.27	-0.26*	-0.26*	-0.26*	-0.26	Sep 05, 2017	
SPDR S&P 500 FOSSIL FUELFREE ETF	8,500,134.15	12.09	4.24	15.46	19.28	17.83	Mar 24, 2016	
TOUCHSTONE ULTRA SHORT DURATION FIXED INCOME FUND CLASS Y	2,617,483.19	3.72	0.34	1.19	1.38	1.11	Jul 14, 2014	
UBS BANK USA BUSINESS ACCOUNT	146,571.36	0.21	0.00	0.00	0.00	0.00	Dec 30, 2014	
VANGUARD FTSE DEVELOPED MKT ETF	2,108,597.34	3.00	5.49	21.15	19.30	4.72	Mar 11, 2014	
VANGUARD MID-CAP ETF	9,679,509.00	13.77	3.13	12.40	14.87	8.97	Mar 11, 2014	
VANGUARD MORTGAGE BACKEDSECURITIES ETF	1,124,847.36	1.60	-0.57*	-0.57*	-0.57*	-0.57	Sep 05, 2017	
VANGUARD S&P 500 ETF	15,290,619.12	21.75	4.51	14.08	18.56	11.12	Mar 11, 2014	
VANGUARD SMALL-CAP ETF	4,915,109.60	6.99	4.66	10.57	17.38	7.96	Mar 11, 2014	
Total portfolio	\$70,295,143.90	100%	2.81%	9.90%	11.86%	6.01%	Feb 28, 2014	

Past performance does not guarantee future results and current performance may be lower/higher than past data presented.

*Performance is partially available for the selected time period and is based on the performance start date.

**Please note, performance is inclusive of multiple securities.



Security performance - as of September 30, 2017 (continued)

	QTD	YTD	1 Year	ITD
Benchmarks - Annualized time-weighted returns	06/30/2017 to 09/30/2017	12/31/2016 to 09/30/2017	09/30/2016 to 09/30/2017	Start date to 09/30/2017
Benchmark 1	3.31	11.01	11.00	5.93
Benchmark 2	3.11	9.42	10.99	6.15
US Treasury Bill - 3 Mos	0.25	0.56	0.63	0.24
Barclays Agg Bond	0.85	3.14	0.07	2.84
MSCI World	4.96	16.53	18.83	7.82

Past performance does not guarantee future results and current performance may be lower/higher than past data presented.



Additional information about your performance

as of September 30, 2017

Benchmark composition

Consolidated

Benchmark 1

Start - 03/03/2014: 60% MSCI World; 40% Barclays Agg Bond

03/03/2014 - Current: 60% MSCI World; 40% Barclays Agg Bond

Benchmark 2

Start - Current: 10% US Treasury Bill - 3 Mos; 24% S&P 500; 12% Russell 2000; 12% Russell Mid Cap; 12% MSCI EAFE-NR; 30% Barclays Agg Bond



Disclosures applicable to accounts at UBS Financial Services Inc.

This section contains important disclosures regarding the information and valuations presented here. This report presents information since December 31, 2002. This report does not include complete account activity or performance of your accounts before this date. All information presented is subject to change at any time and is provided only as of the date indicated. The information in this report is for informational purposes only and should not be relied upon as the basis of an investment or liquidation decision. UBS FS accounts statements and official tax documents are the only official record of your accounts and are not replaced, amended or superseded by any of the information presented in these reports.

UBS FS offers a number of investment advisory programs to clients, acting in our capacity as an investment adviser, including fee-based financial planning, discretionary account management, non-discretionary investment advisory programs, and advice on the selection of investment managers and mutual funds offered through our investment advisory programs. When we act as your investment adviser, we will have a written agreement with you expressly acknowledging our investment advisory relationship with you and describing our obligations to you. At the beginning of our advisory relationship, we will give you our Form ADV brochure(s) for the program(s) you selected that provides detailed information about, among other things, the advisory services we provide, our fees, our personnel, our other business activities and financial industry affiliations and conflicts between our interests and your interests.

Please review the report content carefully and contact your Financial Advisor with any questions.

The account listing may or may not include all of your accounts with UBS FS. The accounts included in this report are listed under the "Accounts included in this review" shown on the first page or listed at the top of each page.

Client Accounts: This report includes all assets in the accounts listed and may include eligible and ineligible assets in a fee-based program. Since ineligible assets are not considered fee-based program assets, the inclusion of such securities will distort the actual performance of your accounts and does not reflect the performance of your accounts in the fee-based program. **As a result, the performance reflected in this report can vary substantially from the individual account performance reflected in the performance reports provided to you as part of those programs.** For fee-based programs, fees are charged on the market value of eligible assets in the accounts and assessed quarterly in advance, prorated according to the number of calendar days in the billing period. When shown on a report, the risk profile and return objectives describe your overall goals for these accounts. For each account you maintain, you choose one return objective and a primary risk profile. If you have questions regarding

these objectives or wish to change them, please contact your Financial Advisor to update your accounts records.

Performance: This report presents accounts activity and performance starting 12/31/02. For accounts opened prior to 12/31/02, this report does not include the complete account activity or performance of your accounts prior to that date. For consolidated reports, the Performance Start Date will be the earliest performance start date of any of the individual accounts selected for the consolidation time period. If an individual account's performance information is not available for a full reporting time period (month to date, quarter to date, year to date or performance to date), the individual's net of fee time weighted return will not be displayed. For consolidated accounts that include different account Performance Start Dates, the consolidated Additions/Withdrawals, Income Earned and Investment Appreciation/ Depreciation will include all activity that occurred during the consolidated reporting time period. Accounts that hold or held insurance products will be reported on from the month end date of when insurance and annuity activity could be obtained from the carrier.

Past performance does not guarantee future results and current performance may be lower/higher than past data presented.

Time-weighted Returns (prior to 10/31/2010): The report displays a time weighted rate of return (TWR) that is calculated using the Modified Dietz Method. This calculation uses the beginning and ending portfolio values for the month and weighs each contribution/withdrawal based upon the day the cashflow occurred. Periods greater than one month are calculated by linking the monthly returns. The TWR gives equal weighting to every return regardless of amount of money invested, so it is an effective measure for returns on a fee based account. All periods shown which are greater than 12 months are annualized.

Time-weighted Returns (after 10/31/2010): The report displays a time weighted rate of return (TWR) that is calculated by dividing the portfolio's daily gain/loss by the previous day's closing market value. All cash flows are posted at end of day. The TWR gives equal weighting to every return regardless of amount of money invested, so it is an effective measure for returns on a fee based account. Periods greater than one day are calculated by linking the daily returns. All periods shown which are greater than 12 months are annualized.

Money-weighted returns: Money-weighted return (MWR) is a measure of the rate of return for an asset or portfolio of assets. It is calculated by finding the daily Internal Rate of Return (IRR) for the period and then compounding this return by the number of days in the period being measured. The MWR incorporates the size and timing of cash flows, so it is an effective measure returns on a portfolio.

Annualized Performance: All performance periods greater than one year are calculated (unless otherwise stated) on an annualized basis, which represents the return on an investment multiplied or divided to give a comparable one year return.

Cumulative Performance: A cumulative return is the aggregate amount that an investment has gained or lost over time, independent of the period of time involved.

Net of Fees and Gross of Fees Performance: Performance is presented on a "net of fees" and "gross of fees" basis, where indicated. Net returns do not reflect Program and wrap fees prior to 10/31/10 for accounts that are billed separately via invoice through a separate account billing arrangement. Gross returns do not reflect the deduction of fees, commissions or other charges. The payment of actual fees and expenses will reduce a client's return. The compound effect of such fees and expenses should be considered when reviewing returns. For example, the net effect of the deduction of fees on annualized performance, including the compounded effect over time, is determined by the relative size of the fee and the account's investment performance.

Asset Class Performance: If you selected the Manager Roll-up option, even though the asset manager may invest in more than one asset class, the asset manager will be included in an asset class based upon the asset manager's investment style/category. The Manager Roll-up option is not available in the Asset Allocation section of the report. All assets in the Asset Allocation are classified at the security level. Therefore, the values/percentages of asset classes presented within this report may not match if you selected the Manager Roll-up option.

Benchmark/Major Indices: The past performance of an index is not a guarantee of future results. Any benchmark is shown for informational purposes only and relates to historical performance of market indices and not the performance of actual investments. The benchmark is not managed and does not reflect the deduction of any fees and expenses, which will lower results. Indices are not actively managed and investors cannot directly invest in indices. The portfolio's investment strategy is not restricted to securities in the benchmark. Further, there is no guarantee that an investor's account will meet or exceed the stated benchmark. Index performance information has been obtained from third parties deemed to be reliable. We have not independently verified this information, nor do we make any representations or warranties to the accuracy or completeness of this information.

Custom Time Periods: If represented on this report, the performance start date and the performance end date have been selected by your Financial Advisor in order to provide performance and account activity information for your account for the specified period of time only. As a result only a portion of your account's activity and

performance information is presented in the performance report, and, therefore, presents a distorted representation of your account's activity and performance.

Net Deposits/Withdrawals: When shown on a report, this information represents the net value of all cash and securities contributions and withdrawals, program fees (including wrap fees) and other fees added to or subtracted from your accounts from the first day to the last day of the period. When fees are shown separately, net deposits / withdrawals does not include program fees (including wrap fees). When investment return is displayed net deposits / withdrawals does not include program fees (including wrap fees). For security contributions and withdrawals, securities are calculated using the end of day UBS FS price on the day securities are delivered in or out of the accounts. Wrap fees will be included in this calculation except when paid via an invoice or through a separate accounts billing arrangement. When shown on Client summary and/or Portfolio review report, program fees (including wrap fees) may not be included in net deposits/withdrawals.

Dividends/Interest: Dividend and interest earned, when shown on a report, does not reflect your account's tax status or reporting requirements. Use only official tax reporting documents (i.e. 1099) for tax reporting purposes. The classification of private investment distributions can only be determined by referring to the official year-end tax-reporting document provided by the issuer.

Change in Accrued Interest: When shown on a report, this information represents the difference between the accrued interest at the beginning of the period from the accrued interest at the end of the period.

Change in Value: Represents the change in value of the portfolio during the reporting period, excluding additions/withdrawals, dividend and interest income earned and accrued interest. Change in Value may include program fees (including wrap fees) and other fees.

Fees: Fees represented in this report include program and wrap fees. Program and wrap fees prior to October 1, 2010 for accounts that are billed separately via invoice through a separate account billing arrangement are not included in this report. Commissions are not included in the fees calculation.

Net of fees: When indicated, the information is shown net of fees and commission charges to your accounts for the time period shown. For example, if your accounts are charged an asset based fee during the month the report is produced, net of fees performance information would reflect the deduction of those fees. Please see your program documents regarding fee schedules.

Performance Start Date Changes: The Performance Start Date for accounts marked with a 'A' have changed.



Disclosures applicable to accounts at UBS Financial Services Inc. (continued)

Performance figures of an account with a changed Performance Start Date may not include the entire history of the account. The new Performance Start Date will generate performance returns and activity information for a shorter period than is available at UBS FS. As a result, the overall performance of these accounts may generate better performance than the period of time that would be included if the report used the inception date of the account. UBS FS recommends reviewing performance reports that use the inception date of the account because reports with longer time frames are usually more helpful when evaluating investment programs and strategies. Performance reports may include accounts with inception dates that precede the new Performance Start Date and will show performance and activity information from the earliest available inception date.

The change in Performance Start Date may be the result of a performance gap due to a zero-balance that prevents the calculation of continuous returns from the inception of the account. The Performance Start Date may also change if an account has failed one of our performance data integrity tests. In such instances, the account will be labeled as 'Review Required' and performance prior to that failure will be restricted. Finally, the Performance Start Date will change if you have explicitly requested a performance restart. Please contact your Financial Advisor for additional details regarding your new Performance Start Date.

Closed Account Performance: Accounts that have been closed may be included in the consolidated performance report. When closed accounts are included in the consolidated report, the performance report will only include information for the time period the account was active during the consolidated performance reporting time period.

Portfolio: For purposes of this report "portfolio" is defined as all of the accounts presented on the cover page or the header of this report and does not necessarily include all of the client's accounts held at UBS FS or elsewhere.

Pricing: All securities are priced using the closing price reported on the last business day preceding the date of this report. Every reasonable attempt has been made to accurately price securities; however, we make no warranty with respect to any security's price. Please refer to the back of the first page of your UBS FS accounts statement for important information regarding the pricing used for certain types of securities, the sources of pricing data and other qualifications concerning the pricing of securities. To determine the value of securities in your account, we generally rely on third party quotation services. If a price is unavailable or believed to be unreliable, we may determine the price in good faith and may use other sources such as the last recorded transaction. When securities are held at another custodian or if you hold illiquid or restricted securities for which there is no published price, we will generally rely on the value provided by the custodian or issuer of that

security.

Cash: Cash on deposit at UBS Bank USA is protected by the Federal Deposit Insurance Corporation (FDIC) up to \$250,000 in principal and accrued interest per depositor for each ownership type. Deposits made in an individual's own name, joint name, or individual retirement account are each held in a separate type of ownership. Such deposits are not guaranteed by UBS FS. More information is available upon request.

Equity Style: The Growth, Value and Core labels are determined by Standard and Poor's using a price-to-book ratio methodology. The Growth, Value and Core labels are based on how a company's price-to-book ratio compares to the median price-to-book ratio for its industry based on the company's assigned Industry Sector. If the company's ratio is greater than or equal to the industry median, it is classified as a growth stock. If the company's ratio is less than the industry median, it is classified as a value stock. If a security includes both growth and value attributes, it is classified as a core stock. If price-to-book is not available or the industry's median is not available, this item will be Unclassified.

Equity Capitalization: Market Capitalization is defined as the number of shares outstanding times the market value. Equity securities are classified as Large Cap if they have a capitalization of 8 billion or above. Securities with capitalization between 1.8 and 7.9 billion are classified as Mid Cap. Securities with capitalization below 1.79 billion are classified as Small Cap. Unclassified securities are those for which no capitalization is available or applicable.

Variable Annuity Asset Allocation: If the option to unbundle a variable annuity is selected and if a variable annuity's holdings data is available, variable annuities will be classified by the asset class, subclass, and style breakdown for their underlying holdings. Where a variable annuity contains equity holdings from multiple equity sectors, this report will proportionately allocate the underlying holdings of the variable annuity to those sectors measured as a percentage of the total variable annuity's asset value as of the date shown.

This information is supplied by Morningstar, Inc. on a weekly basis to UBS FS based on data supplied by the variable annuity which may not be current. Portfolio holdings of variable annuities change on a regular (often daily) basis. Accordingly, any analysis that includes variable annuities may not accurately reflect the current composition of these variable annuities. If a variable annuity's underlying holding data is not available, it will remain classified as an annuity. All data is as of the date indicated in the report.

Account changes: At UBS, we are committed to helping you work toward your financial goals. So that we may continue providing you with financial advice that is consistent with your investment objectives, please

consider the following two questions:

- 1) Have there been any changes to your financial situation or investment objectives?
 - 2) Would you like to implement or modify any restrictions regarding the management of your account?
- If the answer to either question is "yes," it is important that you contact your Financial Advisor as soon as possible to discuss these changes. For MAC advisory accounts, please contact your investment manager directly if you would like to impose or change any investment restrictions on your account.

ADV disclosure: A complimentary copy of our current Form ADV Disclosure Brochure that describes the advisory program and related fees is available through your Financial Advisor. Please contact your Financial Advisor if you have any questions.

Important information for former Piper Jaffray and McDonald Investments clients: As an accommodation to former Piper Jaffray and McDonald Investments clients, these reports include performance history for their Piper Jaffray accounts prior to August 12, 2006 and McDonald Investments accounts prior to February 9, 2007, the date the respective accounts were converted to UBS FS. UBS FS has not independently verified this information nor do we make any representations or warranties as to the accuracy or completeness of that information and will not be liable to you if any such information is unavailable, delayed or inaccurate.

For insurance, annuities, and 529 Plans, UBS FS relies on information obtained from third party services it believes to be reliable. UBS FS does not independently verify or guarantee the accuracy or validity of any information provided by third parties. Information for insurance, annuities, and 529 Plans that has been provided by a third party service may not reflect the quantity and market value as of the previous business day. When available, an "as of" date is included in the description.

Investors outside the U.S. are subject to securities and tax regulations within their applicable jurisdiction that are not addressed in this report. Nothing in this report shall be construed to be a solicitation to buy or offer to sell any security, product or service to any non-U.S. investor, nor shall any such security, product or service be solicited, offered or sold in any jurisdiction where such activity would be contrary to the securities laws or other local laws and regulations or would subject UBS to any registration requirement within such jurisdiction.

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University of Hawaii Performance Fund

Review of Holdings Compared to Three-Year Benchmark Returns

As of September 30, 2017

Equity

Type	Fund Name	Morningstar Benchmark	Benchmark 3 Year Return ²	Fund 3 Year Return ³	Difference From Benchmark
ETF	Deutsche X-Trackers MSCI Hedged Equity	MSCI ACWI Ex US	4.69%	7.94%	3.25%
ETF	SPDR S&P500 Fossil Fuel Free	Russell 1000	N/A ¹	N/A ¹	N/A ¹
ETF	Vanguard FTSE Developed Market	MSCI ACWI Ex US	4.74%	5.92%	1.18%
ETF	Vanguard S&P500	Russell 1000	10.63%	10.77%	0.14%
ETF	Vanguard Mid-Cap	Russell Mid-Cap	9.53%	9.71%	0.18%
ETF	Vanguard Small-Cap	Russell 2000	12.20%	10.47%	-1.73%

Fixed Income

Type	Fund Name	Morningstar Benchmark	Benchmark 3 Year Return ²	Fund 3 Year Return ³	Difference From Benchmark
Mutual Fund	Blackrock Strategic Income	Three Month USD LIBOR	0.59%	2.63%	2.04%
ETF	iShares Core US Aggregate Bond	Bloomberg Barclays US Aggregate Bond	2.67%	2.63%	-0.04%
Mutual Fund	Pimco Income	Bloomberg Barclays US Universal	3.11%	6.09%	2.98%
Mutual Fund	Prudential Global Total Return	Citi World Government Bond Index	0.47%	3.33%	2.86%
Mutual Fund	Touchstone Ultra Short Duration	Bloomberg Barclays Govt/Corp 1 Year	0.65%	1.24%	0.59%
ETF	Powershares Taxable Muni Bond Portfolio	Bloomberg Barclays US Aggregate Bond	5.36%	5.26%	-0.10%
ETF	iShares US Treasury Bond	Bloomberg Barclays US Government	1.99%	1.91%	-0.08%
ETF	iShares MBS	Bloomberg Barclays US Aggregate Bond	2.68%	2.20%	-0.48%
ETF	Schwab Short Term US Treas	Bloomberg Barclays Government 1-5 Yr	1.17%	0.68%	-0.49%
ETF	Schwab Intermediate-Term US Treas	Bloomberg Barclays US Government	1.99%	2.15%	0.16%
ETF	Vanguard Mortgage Backed Securities	Bloomberg Barclays US Government	1.97%	2.23%	0.26%

Source: Morningstar

1) The SPDR S&P500 Fossil Fuel Free fund does not have a three year track record as of September 30, 2017

2) The Benchmark 3 Year Return values are sourced directly from the internal UBS Portfolio Managing Reporting (PMR) System.

3) The Fund 3 Year Return values are sourced directly from the individual Fact Cards for each Fund listed below.

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University of Hawaii Endowment Fund

**Report of Energy Allocation, Net Expense Ratio and Historical Quarterly Fees
As of September 30, 2017**

Class/Sector	Description	Symbol	Market Value \$ a/o 09/30/2017	Current Allocation %	% in Energy	Weighted Energy Position	Net Expense Ratio	Weighted Net Expense Ratio
CASH	Cash		146,571	0%	0.00%	0.00%	0.00%	0.00%
FIXED INCOME								
Short Term Bond	Touchstone Ultra Short Duration	TSYYX	\$2,617,483	4%	N/A ¹	N/A ¹	0.44%	0.02%
Intermediate Term Bond	iShares Core US Aggregate	AGG	\$4,379,764	6%	0.00%	0.00%	0.05%	0.00%
Flexible Fixed	BlackRock Strategic Income Opps	BSIIX	\$6,522,844	9%	N/A ¹	N/A ¹	0.75%	0.07%
Flexible Fixed	Prudential Global Total Return	PZTRX	\$3,692,446	5%	N/A ¹	N/A ¹	0.63%	0.03%
Flexible Fixed	PIMCO Income Fund	PONPX	\$4,077,859	6%	N/A ¹	N/A ¹	0.63%	0.04%
Intermediate Term Bond	iShares MBS ETF	MBB	\$936,911	1%	0.00%	0.00%	0.12%	0.00%
Intermediate Governmen	iShare US Treasury Bond	GOVT	\$745,842	1%	0.00%	0.00%	0.15%	0.00%
Long Term Bond	Powershares Taxable Muncipal	BAB	\$928,565	1%	0.00%	0.00%	0.28%	0.00%
Intermediate Governmen	Schwab Intermediate	SCHR	\$1,582,390	2%	0.00%	0.00%	0.06%	0.00%
Short Term Govt	Schwab US Treasury	SCHO	\$892,231	1%	0.00%	0.00%	0.06%	0.00%
Intermediate Governmen	Vanguard Mortgage Backed Sec	VMBS	\$1,124,847	2%	0.00%	0.00%	0.07%	0.00%
EQUITIES								
Large Cap Blend	Vanguard S&P 500 ETF	VOO	\$15,290,619	22%	6.10%	1.33%	0.04%	0.01%
Large Cap Blend	SPDR S&P 500 Fossil Fuel Free ETF	SPYX	\$8,500,134	12%	0.00%	0.00%	0.20%	0.02%
Mid Cap Blend	Vanguard Mid Cap ETF	VO	\$9,679,509	14%	4.30%	0.59%	0.06%	0.01%
Small Cap Blend	Vanguard Small Cap ETF	VB	\$4,915,110	7%	4.70%	0.33%	0.06%	0.00%
Developed Markets	Vanguard FTSE Developed Markets ETF	VEA	\$2,108,597	3%	0.00%	0.00%	0.07%	0.00%
Developed Markets	Deutsche X-Trackers MSCI EAFE Hedged	DBEF	\$2,153,420	3%	4.82%	0.15%	0.35%	0.01%
			70,295,144	100%		2.40%		0.23%
						Minimum	Maximum	
						Cash	0%	40%
						Fixed Income	39%	70%
						Equities	61%	70%
							100%	

Historical Quarterly Fees: (calculation based on prior quarter end balance times fee rate of 20 bps. Divided by # of days in year times # of days in current quarter)

1Q 2015	\$32,795	1Q 2016	\$31,813	1Q 2017	\$31,577
2Q 2015	\$32,998	2Q 2016	\$30,828	2Q 2017	\$33,537
3Q 2015	\$33,015	3Q 2016	\$31,874	3Q 2017	\$34,773
4Q 2015	\$31,360	4Q 2016	\$32,954		

Approximately 2% of the entire portfolio is invested in Energy stocks.

Weighted Net Expense Ratio is 23 bps.

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Footnotes:

1) The Energy Exposure for these funds is not available.

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Morningstar Fund Fact Sheets

University of Hawaii

Presented by:
Foundational Wealth Management
UBS Financial Services Inc.

September 30, 2017





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Release date 09-30-2017

BlackRock Strategic Income Opps Instl (USD)

Morningstar Analyst Rating™ Overall **Morningstar Rating™** **Standard Index** **Category Index** **Morningstar Cat**
Silver ★★★ **BBgBarc US Agg** **BofAML USD** **US Fund**
 03-21-2017 264 US Fund Nontraditional **Bond TR USD** **LIBOR 3 Mon CM** **Nontraditional Bond**

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	1.57	-0.78	-0.97	-0.10	-0.30
2016	-0.55	1.36	1.63	1.13	3.61
2017	1.45	1.00	1.50	—	4.00

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	5.17	2.63	3.29	—	4.41
Std 09-30-2017	5.17	—	3.29	—	4.41
Total Return	5.17	2.63	3.29	—	4.41
+/- Std Index	5.10	-0.09	1.23	—	—
+/- Cat Index	4.15	2.04	2.83	—	—
% Rank Cat	41	44	15	—	—
No. in Cat	349	264	160	—	—

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 08-31-2017	3.29	3.29

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.

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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-441-7762 or visit www.blackrock.com

Fees and Expenses

Sales Charges	
Front-End Load %	NA
Deferred Load %	NA

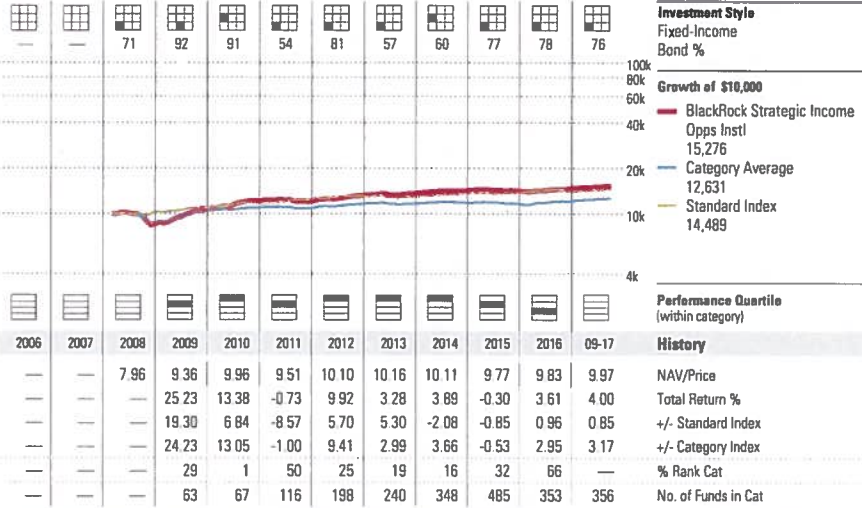
Fund Expenses	
Management Fees %	0.46
12b1 Expense %	NA
Gross Expense Ratio %	0.76

Risk and Return Profile

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

	3 Yr	5 Yr	10 Yr
Standard Deviation	1.59	1.86	—
Mean	2.63	3.29	—
Sharpe Ratio	1.45	1.64	—

MPT Statistics	Standard Index	Best Fit Index BofAML US HY Master II TR USD
Alpha	1.97	1.17
Beta	0.12	0.20
R-Squared	4.86	54.16
12-Month Yield	—	3.30%
Potential Cap Gains Exp	—	-1.07%



Portfolio Analysis 08-31-2017

Asset Allocation %	Net %	Long %	Short %	Share Chg since 07-2017	Share Amount	Holdings 816 Total Stocks, 5,423 Total Fixed-Income, 1541% Turnover Ratio	Net Assets %
Cash	14.69	26.85	12.16	—	—	—	—
US Stocks	1.36	1.36	0.00	⊕	3,717 mil	Fed Natl Mort Assc 4%	-13.07
Non-US Stocks	0.24	0.27	0.03	⊕	2,753 mil	US Treasury Note	9.17
Bonds	76.36	115.35	38.99	⊖	2,085 mil	Fed Natl Mort Assc 4%	-7.32
Other/Not Clsfd	7.35	7.90	0.56	⊖	1,734 mil	Fannie Mae Single Family TBA 2.5%	5.85
Total	100.00	151.74	51.74	⊖	1,616 mil	Fed Natl Mort Assc 3%	-5.55

Equity Style

Value	Blend	Growth	Port Avg	Rel Index	Rel Cat
Value	Blend	Growth	15.2	—	1.00
P/E Ratio TTM	—	—	9.5	—	1.17
P/C Ratio TTM	—	—	1.7	—	0.96
P/B Ratio TTM	—	—	51322	—	9.03
Geo Avg Mkt Cap \$mil	—	—	9.09	—	—
Avg Eff Maturity	—	—	1.99	—	—
Avg Eff Duration	—	—	3.90	—	—
Avg Wtd Coupon	—	—	103.68	—	—
Avg Wtd Price	—	—	—	—	—

Fixed-Income Style

Val	Mod	Ext	Rel Std Index
Val	Mod	Ext	—

Credit Quality Breakdown 06-30-2017

	Bond %
AAA	23.86
AA	5.88
A	8.35
BBB	24.38
BB	13.88
B	9.45
Below B	4.95
NR	9.24

Regional Exposure

	Stocks %	Rel Std Index
Americas	84.5	—
Greater Europe	5.4	—
Greater Asia	10.1	—

Sector Weightings

	Stocks %	Rel Std Index
Cyclical	55.6	—
Basic Materials	1.3	—
Consumer Cyclical	7.9	—
Financial Services	44.4	—
Real Estate	1.9	—
Sensitive	39.8	—
Communication Services	3.2	—
Energy	16.6	—
Industrials	7.9	—
Technology	12.1	—
Defensive	4.7	—
Consumer Defensive	0.8	—
Healthcare	3.6	—
Utilities	0.3	—

Operations

Family:	BlackRock	Base Currency:	USD	Incept:	02-05-2008
Manager:	Multiple	Ticker:	BSIIX	Type:	MF
Tenure:	7.2 Years	Minimum Initial Purchase:	\$2 mil	Total Assets:	\$30,663.56 mil
Objective:	Income	Purchase Constraints:	A		

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iShares Core US Aggregate Bond ETF (USD)

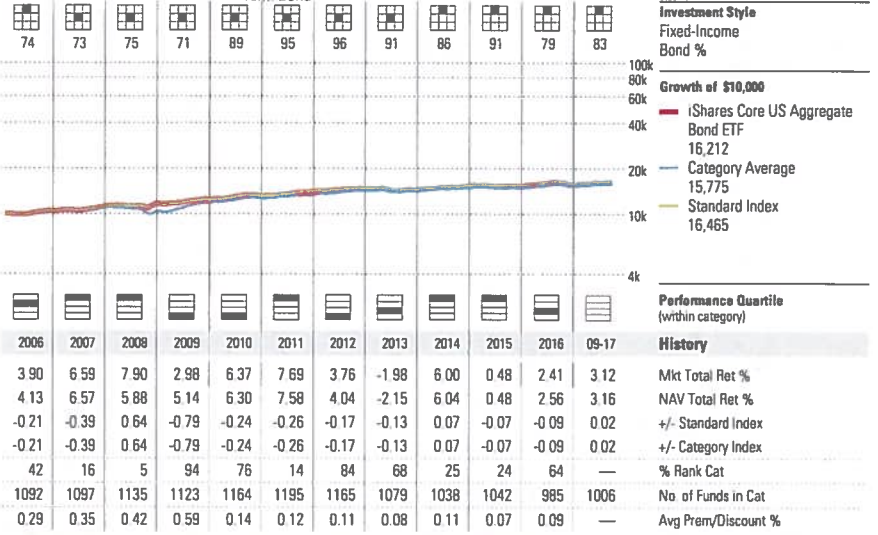
Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
 ★★★ 852 US Fund Intermediate-Term Bond BBgBarc US Agg Bond TR USD BBgBarc US Agg Bond TR USD US Fund Intermediate-Term Bond

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	1.63	-1.72	1.22	-0.61	0.48
2016	3.02	2.21	0.42	-3.00	2.56
2017	0.82	1.47	0.84	—	3.16

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	-0.10	—	1.97	4.12	4.06
Std NAV 09-30-17	0.06	—	2.02	4.17	4.07

Mkt Total Ret	NAV Total Ret	+/- Std Index	+/- Cat Index	% Rank Cat	No. in Cat
-0.10	2.63	1.97	4.12	4.06	—
0.06	2.68	2.02	4.17	4.07	—
-0.01	-0.04	-0.04	-0.10	—	—
-0.01	-0.04	-0.04	-0.10	—	—
71	41	55	62	—	—
985	852	773	546	—	—



30-day SEC Yield Subsidized Unsubsidized

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Fees and Expenses

Fund Expenses	
Management Fees %	0.05
Expense Ratio %	0.06
12b1 Expense %	NA

Risk and Return Profile

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

	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	2.88	2.88	3.33
Standard Deviation MKT	2.97	2.98	3.92
Mean NAV	2.68	2.02	4.17
Mean MKT	2.63	1.97	4.12
Sharpe Ratio	0.81	0.63	1.13

MPT Statistics

	Standard Index	Best Fit Index
NAV	—	BBgBarc US Agg Bond TR USD
Alpha	-0.06	-0.06
Beta	1.01	1.01
R-Squared	99.97	99.97

12-Month Yield —
 Potential Cap Gains Exp —
 Leveraged No
 Leverage Type —
 Leverage % 100.00
 Primary Prospectus Benchmark BBgBarc US Agg Bond TR USD

Portfolio Analysis 10-04-2017

Asset Allocation % 09-27-2017

	Net %	Long %	Short %
Cash	4.10	15.41	11.32
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	95.90	95.90	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	111.32	11.32

Equity Style

Value	Blend	Growth
—	—	—

Portfolio Statistics

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

Fixed-Income Style

Lat	Med	Ext
—	—	—

Credit Quality Breakdown —

	Bond %
AAA	72.24
AA	3.34
A	10.54
BBB	13.87
BB	0.00
B	0.01
Below B	0.00
NR	0.00

Regional Exposure

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

Top Holdings 09-27-2017

Share Chg since 10-2017	Share Amount	Holdings	0 Total Stocks, 6,301 Total Fixed-Income, 242% Turnover Ratio	Net Assets %
1,022 mil		Fed Natl Mort Assc	3%	2.04
887 mil		Govt Natl Mtg Asso	3%	1.79
553 mil		Govt Natl Mtg Asso	3.5%	1.15
462 mil		US Treasury Note	3.625%	0.98
460 mil		Gnma2 30yr 2017 Production		0.95
449 mil		Fgld 30yr 2017 Production		0.92
346 mil		US Treasury Note	2.125%	0.70
333 mil		Fnma 30yr 2015 Production		0.68
333 mil		Fed Natl Mort Assc	2.5%	0.67
235 mil		US Treasury Bond	4.25%	0.59
263 mil		Gnma2 30yr		0.56
284 mil		US Treasury Note	1.375%	0.55
255 mil		US Treasury Note	2.125%	0.52
271 mil		US Treasury Note	1.5%	0.51
230 mil		Gnma2 30yr 2017 Production		0.48

Sector Weightings

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

Operations

Family:	iShares	Ticker:	AGG	Prem/Discount:	0.00
Manager:	Multiple	Incept:	09-22-2003	Mkt Price:	109.59
Tenure:	7.3 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$50,213.4 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	459.80 mil	NAV:	109.59	Backing Bank:	BlackRock Fund Advisors

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iShares MBS ETF (USD)

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	1.09	-0.82	1.23	-0.21	1.28
2016	1.91	1.06	0.49	-2.14	1.28
2017	0.43	0.90	0.95	—	2.30

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	0.03	—	1.69	3.77	3.76
Std NAV 09-30-17	0.11	—	1.72	3.79	3.75

Mkt Total Ret	0.03	2.20	1.69	3.77	3.76
NAV Total Ret	0.11	2.23	1.72	3.79	3.75

+/- Std Index	0.04	-0.48	-0.34	-0.48	—
+/- Cat Index	0.04	-0.48	-0.34	-0.48	—

% Rank Cat	70	69	74	77	—
No. in Cat	985	852	773	546	—

30-day SEC Yield

Performance Disclosure

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Fees and Expenses

Fund Expenses	Subsidized	Unsubsidized
Management Fees %	0.09	—
Expense Ratio %	0.12	—
12b1 Expense %	NA	—

Risk and Return Profile

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	2★	2★
Morningstar Risk	Low	-Avg	Low
Morningstar Return	-Avg	-Avg	-Avg

	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	1.93	2.26	2.59
Standard Deviation MKT	2.01	2.41	2.76
Mean NAV	2.23	1.72	3.79
Mean MKT	2.20	1.69	3.77
Sharpe Ratio	0.97	0.67	1.30

MPT Statistics

	Standard Index	Best Fit Index
NAV	—	—
Alpha	0.40	-0.29
Beta	0.62	1.04
R-Squared	84.79	99.58

12-Month Yield

—

Potential Cap Gains Exp

—

Leveraged

No

Leverage Type

—

Leverage %

100.00

Primary Prospectus Benchmark

BBgBarc US MBS TR USD

Operations

Family: iShares

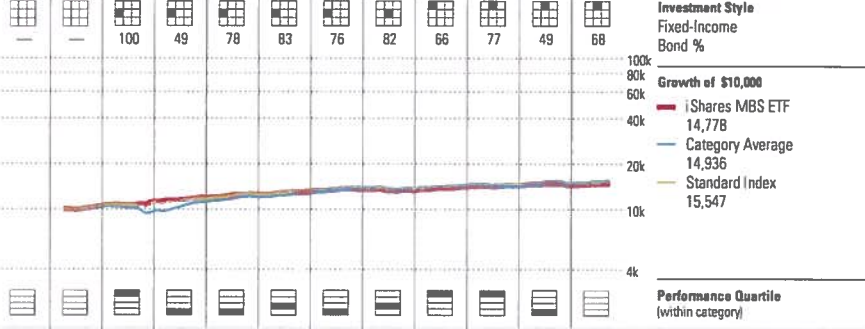
Manager: Multiple

Tenure: 7.3 Years

Total Assets: \$11,113.1 mil

Shares Outstanding: 104.10 mil

Overall Morningstar Rating™ **★★** Standard Index **BBgBarc US Agg Bond TR USD** Category Index **BBgBarc US Agg Bond TR USD** Morningstar Cat **US Fund Intermediate-Term Bond**



Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	09-17
Mkt Total Ret %	—	—	7.74	4.69	5.58	5.87	1.98	-1.95	6.38	1.14	1.27	2.35
NAV Total Ret %	—	—	7.36	5.29	5.44	5.88	2.23	-1.92	6.16	1.28	1.28	2.30
+/- Standard Index	—	—	2.12	-0.64	-1.11	-1.96	-1.98	0.11	0.19	0.73	-1.37	-0.84
+/- Category Index	—	—	2.12	-0.64	-1.11	-1.96	-1.98	0.11	0.19	0.73	-1.37	-0.84
% Rank Cat	—	—	2	93	90	60	98	59	22	8	95	—
No of Funds in Cat	—	—	1135	1123	1164	1195	1165	1079	1038	1042	985	1006
Avg Prem/Discount %	—	—	0.15	0.22	0.09	0.05	0.10	0.04	0.04	0.01	0.01	—

Portfolio Analysis 10-03-2017

Asset Allocation % 09-25-2017	Net %	Long %	Short %
Cash	32.69	32.69	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	67.31	67.31	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	100.00	0.00

Equity Style	Portfolio Statistics	Port Avg	Rel Index	Rel Cat
Value Blend Growth	P/E Ratio TTM	—	—	—
	P/C Ratio TTM	—	—	—
	P/B Ratio TTM	—	—	—
	Geo Avg Mkt Cap \$mil	—	—	—
Fixed-Income Style	Avg Eff Maturity	—	5.89	—
	Avg Eff Duration	—	3.92	—
	Avg Wtd Coupon	—	—	—
	Avg Wtd Price	—	103.96	—

Credit Quality Breakdown —	Bond %
AAA	100.00
AA	0.00
A	0.00
BBB	0.00
BB	0.00
B	0.00
Below B	0.00
NR	0.00

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

Top Holdings 09-25-2017

Share Chg since 10-2017	Share Amount	Holdings	0 Total Stocks, 947 Total Fixed-Income, 748% Turnover Ratio	Net Assets %
—	689 mil	Fed Natl Mort Assc	3%	4.78
—	571 mil	Govt Natl Mtg Asso	3%	3.99
—	406 mil	Govt Natl Mtg Asso	3.5%	2.91
—	305 mil	FHLMC	3.5%	2.18
—	272 mil	FNMA	3.5%	1.94
—	226 mil	GNMA	3.5%	1.62
—	144 mil	FHLMC	3.5%	1.03
—	145 mil	Fed Natl Mort Assc	2.5%	1.01
—	117 mil	GNMA	3.5%	0.84
—	116 mil	Fed Natl Mort Assc	3%	0.82
—	115 mil	GNMA	3%	0.81
—	109 mil	GNMA	4%	0.79
—	101 mil	FNMA	4%	0.73
—	101 mil	GNMA	4%	0.73
—	101 mil	GNMA	3.5%	0.73

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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iShares US Treasury Bond ETF (USD)

Overall Morningstar Rating™ Standard Index **Category Index** **Morningstar Cat**
 ★★★ **BBgBarc: US Agg** **BBgBarc: US** **US Fund Intermediate**
 243 US Fund Intermediate **Bond TR USD** **Government TR** **Government**

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	1.60	-1.59	1.73	-0.93	0.76
2016	3.19	2.07	-0.31	-3.89	0.92
2017	0.65	1.19	0.33	—	2.18

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	-1.82	—	1.16	—	1.47
Std NAV 09-30-17	-1.79	—	1.15	—	1.40
Mkt Total Ret	-1.82	1.91	1.16	—	1.47
NAV Total Ret	-1.79	1.93	1.15	—	1.40
+/- Std Index	-1.86	-0.79	-0.92	—	—
+/- Cat Index	-0.23	-0.08	-0.11	—	—
% Rank Cat	82	39	50	—	—
No. in Cat	262	243	233	—	—

30-day SEC Yield 10-06-2017 Subsidized 1.74 Unsubsidized —

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 800-474-2737 or visit www.ishares.com.

Fees and Expenses

Fund Expenses	
Management Fees %	0.15
Expense Ratio %	0.15
12b1 Expense %	NA

Risk and Return Profile

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

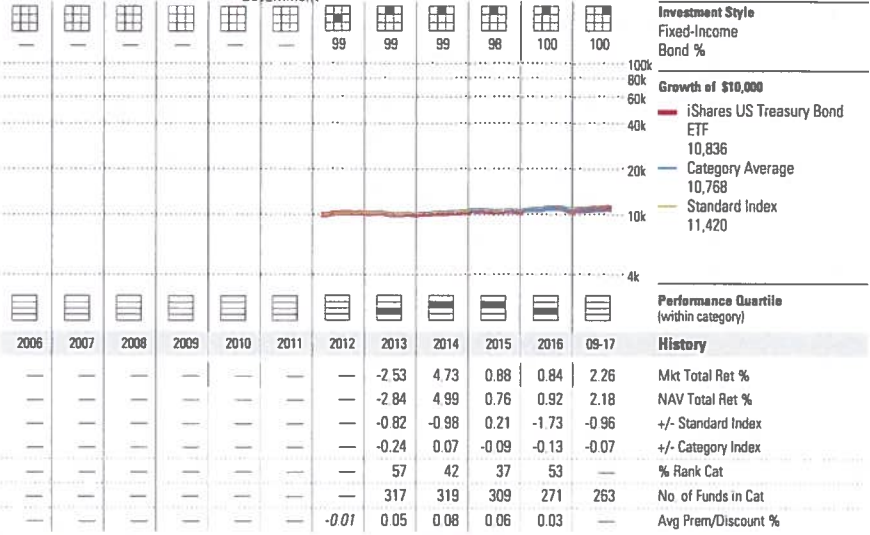
	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	3.46	3.13	—
Standard Deviation MKT	3.72	3.29	—
Mean NAV	1.93	1.15	—
Mean MKT	1.91	1.16	—
Sharpe Ratio	0.47	0.31	—

MPT Statistics

	Standard Index	Best Fit Index
NAV	—	Morningstar US Lng Gov Bd TR USD
Alpha	-1.15	-0.07
Beta	1.17	0.41
R-Squared	92.53	95.99
12-Month Yield	—	1.43%
Potential Cap Gains Exp	—	—
Leveraged	No	—
Leverage Type	—	—
Leverage %	—	100.00
Primary Prospectus Benchmark	—	ICE U.S. Treasury Core Bond TR USD

Operations

Family:	iShares	Ticker:	GOVT	Prem/Discount:	0.04
Manager:	Multiple	Incept:	02-14-2012	Mkt Price:	25.24
Tenure:	5.7 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$5,412.6 mil	Exchange:	BATS Z-EXCHANGE	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	215.30 mil	NAV:	25.23	Backing Bank:	BlackRock Fund Advisors



Portfolio Analysis 10-05-2017

Asset Allocation % 09-28-2017	Net %	Long %	Short %
Cash	0.17	0.44	0.27
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	99.83	99.83	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	100.27	0.27

Equity Style	Value	Blend	Growth
Value	—	—	—
Blend	—	—	—
Growth	—	—	—

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

Fixed-Income Style	Int	Mod	Ext
Int	—	—	—
Mod	—	—	—
Ext	—	—	—

Credit Quality Breakdown	Bond %
AAA	100.00
AA	0.00
A	0.00
BBB	0.00
BB	0.00
B	0.00
Below B	0.00
NR	0.00

Top Holdings 09-28-2017

Share Chg since 10-2017	Share Amount	Holdings	0 Total Stocks, 121 Total Fixed-Income, 48% Turnover Ratio	Net Assets %
—	493 mil	US Treasury Note 1.25%	—	9.14
+	249 mil	US Treasury Note 2.375%	—	4.70
+	193 mil	US Treasury Note 2%	—	3.53
+	148 mil	US Treasury Note 2.25%	—	2.81
+	147 mil	US Treasury Note 1.625%	—	2.73
+	138 mil	US Treasury Note 2.25%	—	2.60
+	131 mil	US Treasury Note 3.5%	—	2.57
+	129 mil	US Treasury Note 2.625%	—	2.49
+	101 mil	US Treasury Bond 7.125%	—	2.38
+	125 mil	US Treasury Note 2%	—	2.34
+	108 mil	US Treasury Note 1.75%	—	2.00
+	108 mil	US Treasury Note 0.875%	—	1.97
+	105 mil	US Treasury Note 1.875%	—	1.95
+	97 mil	US Treasury Note 1.5%	—	1.79
+	94 mil	US Treasury Note 2.125%	—	1.77

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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PIMCO Income P (USD)

Morningstar Analyst Rating™ Overall Morningstar Rating™ **Standard Index** **Category Index** **Morningstar Cat**
Silver ★★★★★ **BBgBarc US Agg** **BBgBarc US** **US Fund Multisector**
 05-31-2017 246 US Fund Multisector Bond **Bond TR USD** **Universal TR USD** **Bond**

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	1.90	0.99	-0.87	0.51	2.53
2016	1.75	2.42	2.82	1.36	8.61
2017	2.86	2.24	2.06	—	7.34

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	8.80	6.09	6.84	—	9.39
Std 09-30-2017	8.80	—	6.84	—	9.39
Total Return	8.80	6.09	6.84	9.24	9.39
+/- Std Index	8.73	3.38	4.78	4.97	—
+/- Cat Index	7.84	2.98	4.31	4.68	—

% Rank Cat	5	6	1	1
No. in Cat	325	246	197	111

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

Performance Disclosure
 The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.
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 Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 888-877-4626 or visit www.pimco.com

Fees and Expenses

Sales Charges

Front-End Load % NA
Deferred Load % NA

Fund Expenses

Management Fees %	0.60
12b1 Expense %	NA
Gross Expense Ratio %	0.63

Risk and Return Profile

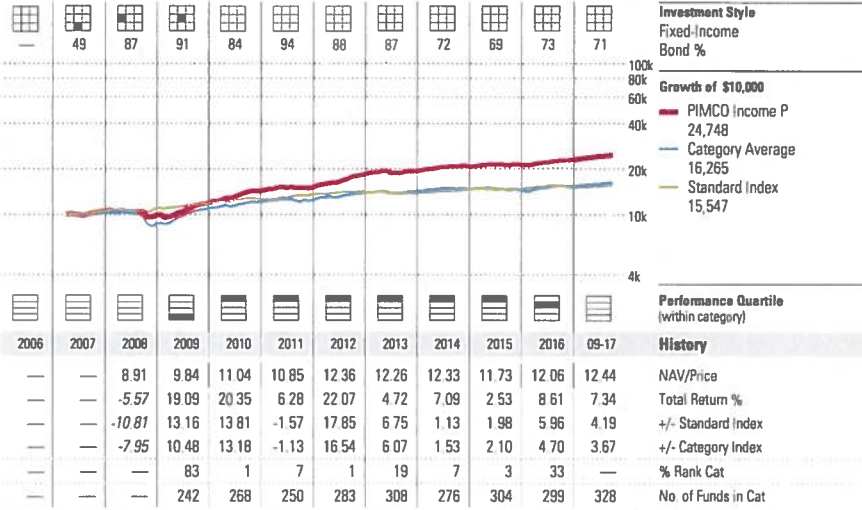
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	246 funds	197 funds	111 funds
Morningstar Risk	5★	5★	5★
Morningstar Return	-Avg	Avg	-Avg
	High	High	High

	3 Yr	5 Yr	10 Yr
Standard Deviation	2.42	3.08	4.70
Mean	6.09	6.84	9.24
Sharpe Ratio	2.34	2.10	1.81

MPT Statistics

	Standard Index	Best Fit Index
Alpha	5.26	3.72
Beta	0.15	0.34
R-Squared	3.02	68.05

12-Month Yield	—
Potential Cap Gains Exp	2.94%



Portfolio Analysis 06-30-2017

Asset Allocation %

	Net %	Long %	Short %
Cash	-47.94	79.37	127.31
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	146.77	200.59	53.82
Other/Not Clsfd	1.17	1.17	0.00
Total	100.00	281.14	181.14

Share Chg since 03-2017

Share Amount	Holdings	Net Assets %
10,620 mil	IRS USD 2.25000 12/20/17-5Y CME_Pay	-12.01
8,000 mil	CIRS USD 5.25Y MAT 2.28% 7/2017 MY	8.97
7,573 mil	IRS JPY 0.45000 03/20/19-10Y LCH_P	-8.54
5,704 mil	IRS USD 2.25000 12/20/17-5Y LCH_Pay	-6.45
5,000 mil	CIRS USD 5.33Y MAT 2.30% 8/2017 MY	5.61
5,000 mil	CIRS USD 5.33Y MAT 2.30% 8/2017 MY	5.61
5,000 mil	CIRS USD 5.25Y MAT 2.10% 9/2017 MY	5.60
5,000 mil	CIRS USD 5.25Y MAT 2.08% 9/2017 MY	5.60
5,000 mil	CIRS USD 5.25Y MAT 2.07% 9/2017 MY	5.59
3,868 mil	IRS USD 2.50000 12/20/17-10Y LCH_P	-4.40
3,475 mil	IRS USD 2.25000 12/20/17-3Y CME_Pay	-3.94
2,874 mil	US Treasury Note 2.25%	3.25
2,900 mil	IRS USD 1.43500 06/21/16-8Y CME_Re	3.10
2,520 mil	Cdx Hy25 5y Ice	3.03
2,436 mil	IRS AUD 4.00000 03/15/13-10Y CME_R	2.94

Equity Style

Value	Share	Growth
P/E Ratio TTM	—	—
P/C Ratio TTM	—	—
P/B Ratio TTM	—	—
Geo Avg Mkt Cap \$mil	—	—

Fixed-Income Style

Lib	Med	Ext
Avg Eff Maturity	—	6.07
Avg Eff Duration	—	2.13
Avg Wid Coupon	—	—
Avg Wid Price	—	—

Credit Quality Breakdown

	Bond %
AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure

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

Sector Weightings

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

Operations

Family:	Pimco	Base Currency:	USD	Incept:	04-30-2008
Manager:	Multiple	Ticker:	PONPX	Type:	MF
Tenure:	10.6 Years	Minimum Initial Purchase:	\$1 mil	Total Assets:	\$99,017.50 mil
Objective:	Multisector Bond	Purchase Constraints:	A		

PowerShares Taxable Municipal Bond ETF (USD)

Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
 **** 18 US Fund Long-Term Bond BbgBarc US Agg Bond TR USD BbgBarc US Govt/Credit Long TR USD US Fund Long-Term Bond

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	1.94	-3.58	1.84	0.82	0.92
2016	4.56	5.14	0.77	-4.97	5.28
2017	1.13	2.73	2.17	—	6.15

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	0.80	—	4.86	—	7.58
Std NAV 09-30-17	0.87	—	4.77	—	7.60

Mkt Total Ret	0.80	5.26	4.86	—	7.58
NAV Total Ret	0.87	5.35	4.77	—	7.60
+/- Std Index	0.80	2.64	2.70	—	—
+/- Cat Index	1.66	-0.10	0.82	—	—

% Rank Cat	44	55	22	—	—
No. in Cat	23	18	18	—	—

30-day SEC Yield 08-31-2017 **3.34**¹ 4.10
 1 Contractual waiver; Expires 08-31-2018

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.
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 Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-983-0903 or visit www.invescopowershares.com.

Fees and Expenses

Fund Expenses	
Management Fees %	0.28
Expense Ratio %	0.29
12b1 Expense %	NA

Risk and Return Profile

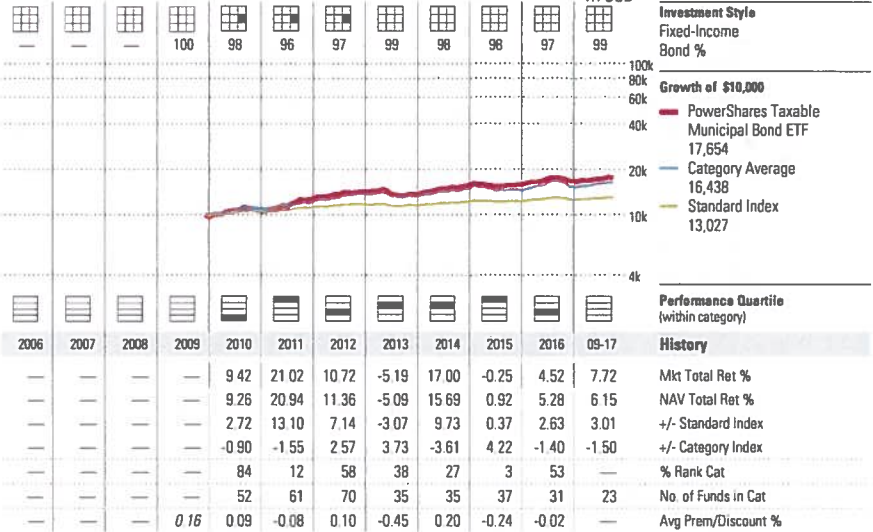
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	4★	—
Morningstar Risk	-Avg	-Avg	—
Morningstar Return	Avg	+Avg	—

	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	4.75	5.41	—
Standard Deviation MKT	5.81	6.22	—
Mean NAV	5.35	4.77	—
Mean MKT	5.26	4.86	—
Sharpe Ratio	1.05	0.85	—

MPT Statistics

	Standard Index	Best Fit Index BbgBarc US Government Long TR USD
NAV	1.35	2.88
Alpha	1.53	0.43
Beta	85.27	91.52
R-Squared	—	—

12-Month Yield	3.99%
Potential Cap Gains Exp	—
Leveraged	No
Leverage Type	—
Leverage %	100.00
Primary Prospectus Benchmark	BofAML US taxable Muni Sec Plus TR USD



Portfolio Analysis 10-05-2017

Asset Allocation % 09-28-2017

	Net %	Long %	Short %
Cash	0.38	0.38	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	99.62	99.62	0.00
Other/Not Clsfd	0.00	0.00	0.00
Total	100.00	100.00	0.00

Equity Style

Value	Blend	Growth
—	—	—

Portfolio Statistics

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

Fixed-Income Style

Ltd	Mod	Ext
—	—	—

Credit Quality Breakdown

	Bond %
AAA	15.98
AA	58.24
A	15.41
BBB	9.48
BB	0.21
B	0.68
Below B	0.00
NR	0.00

Top Holdings 09-28-2017

Share Chg since 10-2017	Share Amount	Holdings	0 Total Stocks, 318 Total Fixed-Income, 0% Turnover Ratio	Net Assets %
—	23 mil	California St Go Bds	7.95%	2.70
—	18 mil	California St Go Bds	7.5%	2.68
—	13 mil	California St Go Bds	7.6%	2.11
—	15 mil	California St Go Bds	6.509%	1.79
—	11 mil	California St Go Bds	7.55%	1.75
—	15 mil	Utah St G O Bds	3.539%	1.70
—	15 mil	Illinois St Go Bds	5.563%	1.65
—	14 mil	Florida Hurricane Catastrophe Rev	—	1.46
—	12 mil	Texas Transm Commn St Hwy Fd R Re	—	1.46
—	11 mil	Univ Calif Revs For Prev Rev Bds 5	—	1.45
—	10 mil	New York N Y City Mun Wtr Fin Rev	—	1.38
—	8 mil	Amer Mun Pwr Ohio Inc Rev Rev Bds	—	1.33
—	10 mil	Missouri Jt Mun Elec Util Comm Pwr	—	1.33
—	9 mil	California St Go Bds 7.35%	—	1.31
—	10 mil	Texas St G O Bds 5.517%	—	1.30

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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Release date 09-30-2017

Operations

Family:	PowerShares	Ticker:	BAB	Prem/Discount:	0.26
Manager:	Multiple	Incept:	11-17-2009	Mkt Price:	30.38
Tenure:	7.9 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$966.0 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	31.95 mil	NAV:	30.30	Backing Bank:	Invesco PowerShares Capital Mgmt LLC

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Release date 09-30-2017

Prudential Global Total Return Z (USD)

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	-1.18	-2.64	1.75	-0.91	-2.99
2016	5.61	3.66	1.80	-7.73	2.83
2017	3.92	4.36	2.66	—	11.33

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	2.73	3.33	2.91	5.83	5.29
Std 09-30-2017	2.73	—	2.91	5.83	5.29
Total Return	2.73	3.33	2.91	5.83	5.29

	+/- Std Index	+/- Cat Index	% Rank Cat	No. in Cat
	2.65	0.61	0.84	1.55
	5.87	2.86	3.98	3.16
	35	17	20	5
	315	285	251	128

	Subsidized	Unsubsidized
7-day Yield	—	—
30-day SEC Yield 08-31-2017	1.86 ¹	1.71

¹ Contractual waiver, Expires 02-28-2018

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 800-225-1852 or visit www.prudentialfunds.com.

Fees and Expenses

Sales Charges

Front-End Load % **NA**

Deferred Load % **NA**

Fund Expenses

Management Fees % 0.50

12b1 Expense % NA

Gross Expense Ratio % 0.80

Risk and Return Profile

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

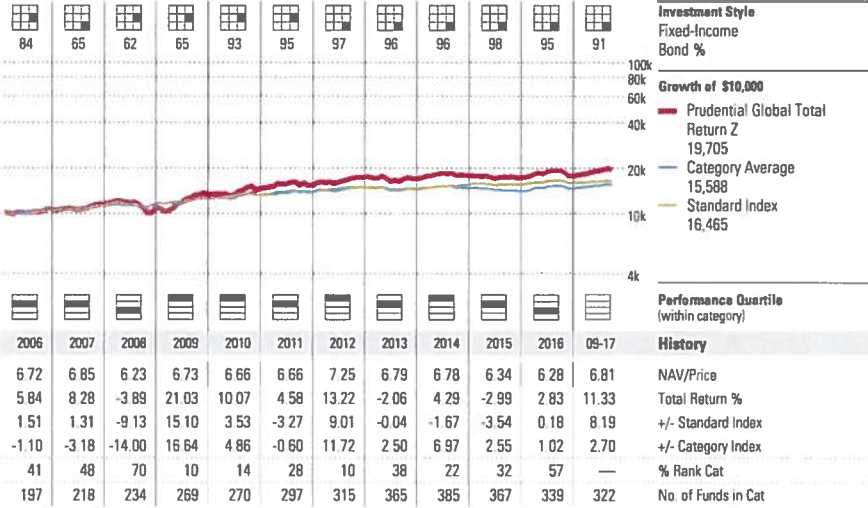
	3 Yr	5 Yr	10 Yr
Standard Deviation	5.93	6.39	8.76
Mean	3.33	2.91	5.83
Sharpe Ratio	0.53	0.45	0.65

MPT Statistics	Standard Index	Best Fit Index
	Citi WGBI NonUSD	USD
Alpha	-0.47	2.82
Beta	1.51	0.69
R-Squared	53.01	80.22
12-Month Yield		3.45%
Potential Cap Gains Exp		1.98%

Operations

Family:	Prudential Funds (PGIM Investments)
Manager:	Multiple
Tenure:	15.1 Years
Objective:	Worldwide Bond

Morningstar Analyst Rating™ **Silver** Overall Morningstar Rating™ **★★★★** Standard Index **BBgBarc US Agg Bond TR USD** Category Index **Citi WGBI NonUSD USD** Morningstar Cat **US Fund World Bond**
05-23-2017 285 US Fund World Bond



Portfolio Analysis 08-31-2017

Asset Allocation %	Net %	Long %	Short %	Share Chg since 07-2017	Share Amount	Holdings	Net Assets %
Cash	-0.57	8.02	8.58			1 Total Stocks, 1,104 Total Fixed-Income, 86% Turnover Ratio	
US Stocks	0.00	0.00	0.00		1,077	US 5 Year Note (CBT) Dec17	11.21
Non-US Stocks	0.00	0.00	0.00		583	2 Year US Treasury Note Future Dec	-11.07
Bonds	97.33	131.77	34.44		571	Us Ultra Bond Cbt Dec17	8.48
Other/Not Clsfd	3.23	4.49	1.26		380	US 10 Year Note (CBT) Dec17	4.24
Total	100.00	144.28	44.28		259	Euro BOBL Future Sept17	-3.60

Equity Style

Value	Blend	Growth
Value	Blend	Growth

Portfolio Statistics

P/E Ratio TTM	—	—	—
P/C Ratio TTM	40.0	—	—
P/B Ratio TTM	1.0	—	—
Geo Avg Mkt Cap \$mil	1506	—	—
Avg Eff Maturity	—	—	—
Avg Eff Duration	—	8.73	—
Avg Wtd Coupon	—	3.43	—
Avg Wtd Price	—	—	—

Credit Quality Breakdown 06-30-2017

	Bond %
AAA	28.92
AA	10.37
A	19.63
BBB	20.30
BB	8.98
B	6.30
Below B	0.55
NR	4.95

Regional Exposure

	Stocks %	Rel Std Index
Americas	100.0	—
Greater Europe	0.0	—
Greater Asia	0.0	—

Sector Weightings

	Stocks %	Rel Std Index
Cyclical	0.0	—
Basic Materials	0.0	—
Consumer Cyclical	0.0	—
Financial Services	0.0	—
Real Estate	0.0	—
Sensitive	100.0	—
Communication Services	0.0	—
Energy	100.0	—
Industrials	0.0	—
Technology	0.0	—
Defensive	0.0	—
Consumer Defensive	0.0	—
Healthcare	0.0	—
Utilities	0.0	—

Purchase Constraints:	A
Incept:	03-17-1997
Type:	MF
Total Assets:	\$1,018.64 mil

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Schwab Intermediate-Term US Trs ETF™ (USD)

Overall Morningstar Rating™ **★★★★** Standard Index
 243 US Fund Intermediate Government BgBarc: US Agg Bond TR USD
 BgBarc US Government TR USD Morningstar Cat US Fund Intermediate Government

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	1.91	-1.00	1.93	-1.18	1.62
2016	3.29	1.75	-0.40	-3.36	1.16
2017	0.70	0.95	0.40	—	2.05

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	-1.46	—	1.21	—	2.45
Std NAV 09-30-17	-1.37	—	1.21	—	2.49

Mkt Total Ret	1 Yr	3 Yr	5 Yr	10 Yr	Incept
NAV Total Ret	-1.46	2.15	1.21	—	2.45
+/- Std Index	-1.44	-0.54	-0.85	—	—
+/- Cat Index	0.18	0.16	-0.04	—	—

% Rank Cat	72	18	40	—	—
No. in Cat	262	243	233	—	—

30-day SEC Yield 07-31-2017	Subsidized	Unsubsidized
	1.86	1.76

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 800-435-4000 or visit www.csifunds.com.

Fees and Expenses

Fund Expenses	
Management Fees %	0.06
Expense Ratio %	0.06
12b1 Expense %	NA

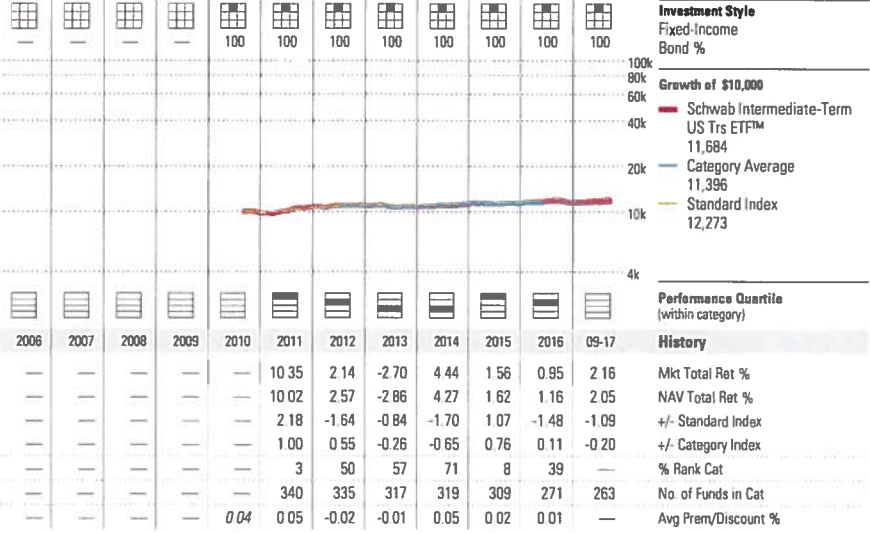
Risk and Return Profile

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

	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	3.39	3.25	—
Standard Deviation MKT	3.40	3.30	—
Mean NAV	2.17	1.21	—
Mean MKT	2.15	1.21	—
Sharpe Ratio	0.55	0.32	—

MPT Statistics

	Standard Index	Best Fit Index
NAV		BBgBarc US Government TR USD
Alpha	-0.80	0.01
Beta	1.12	1.47
R-Squared	88.29	99.48
12-Month Yield		1.53%
Potential Cap Gains Exp		—
Leveraged		No
Leverage Type		—
Leverage %		100.00
Primary Prospectus Benchmark		BBgBarc US Treasury 3-10 Yr TR USD



Portfolio Analysis 10-06-2017

Asset Allocation %	Net %	Long %	Short %
Cash	0.00	0.00	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	99.97	99.97	0.00
Other/Not Clsfd	0.03	0.03	0.00
Total	100.00	100.00	0.00

Equity Style

Value	Blend	Growth
—	—	—

Portfolio Statistics

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

Fixed-Income Style

Value	Mod	Ext
—	—	—

Fixed-Income Statistics

	Port Avg	Rel Index	Rel Cat
Avg Eff Maturity	—	5.57	—
Avg Eff Duration	—	5.17	—
Avg Wtd Coupon	—	2.09	—
Avg Wtd Price	—	100.34	—

Credit Quality Breakdown

	Bond %
AAA	100.00
AA	0.00
A	0.00
BBB	0.00
BB	0.00
B	0.00
Below B	0.00
NR	0.00

Regional Exposure

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

Top Holdings 09-29-2017

Share Chg since 10-2017	Share Amount	Holdings	0 Total Stocks, 116 Total Fixed-Income, 30% Turnover Ratio	Net Assets %
	20 mil	US Treasury Note 2%		1.79
	19 mil	US Treasury Note 2.125%		1.78
	19 mil	US Treasury Note 2.5%		1.75
	20 mil	US Treasury Note 1.625%		1.73
	19 mil	US Treasury Note 2.25%		1.71
	18 mil	US Treasury Note 2.25%		1.69
	18 mil	US Treasury Note 2.375%		1.68
	18 mil	US Treasury Note 2%		1.66
	17 mil	US Treasury Note 2.75%		1.66
	18 mil	US Treasury Note 2.375%		1.66
	18 mil	US Treasury Note 2%		1.64
	19 mil	US Treasury Note 1.625%		1.63
	18 mil	US Treasury Note 2.25%		1.62
	17 mil	US Treasury Note 2%		1.60
	18 mil	US Treasury Note 1.5%		1.58

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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Release date 09-30-2017

Operations

Family:	Schwab ETFs	Ticker:	SCHR	Prem/Discount:	-0.02
Manager:	Multiple	Incept:	08-05-2010	Mkt Price:	53.92
Tenure:	7.2 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$1,110.1 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	20.65 mil	NAV:	53.93	Backing Bank:	Charles Schwab Investment Management Inc

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Schwab Short-Term US Treasury ETF™ (USD)

Overall Morningstar Rating™ **★★★★** Standard Index BgBarc US Agg Bond TR USD Category Index BgBarc Government 1-5 Yr TR USD Morningstar Cat US Fund Short Government

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	0.50	0.13	0.29	-0.47	0.44
2016	0.89	0.49	-0.11	-0.48	0.78
2017	0.25	0.16	0.22	—	0.63

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	0.19	—	0.56	—	0.64
Std NAV 09-30-17	0.15	—	0.54	—	0.65

Mkt Total Ret	0.19	0.68	0.56	—	0.64
NAV Total Ret	0.15	0.68	0.54	—	0.65
+/- Std Index	0.08	-2.03	-1.52	—	—
+/- Cat Index	0.21	-0.49	-0.29	—	—
% Rank Cat	35	47	37	—	—
No. in Cat	108	104	94	—	—

30-day SEC Yield 07-31-2017 Subsidized 1.32 Unsubsidized 1.28

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 800-435-4000 or visit www.csimfunds.com.

Fees and Expenses

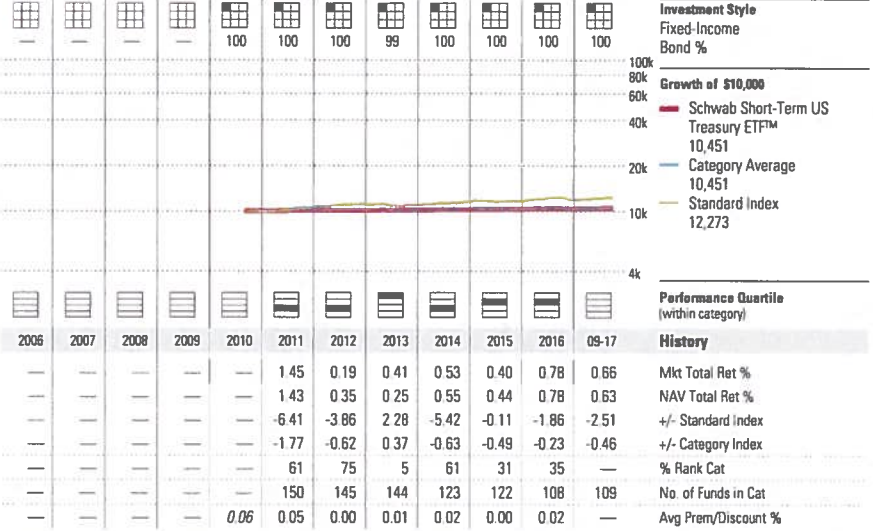
Fund Expenses	Value	Blend	Growth
Management Fees %	0.06	—	—
Expense Ratio %	0.06	—	—
12b1 Expense %	NA	—	—

Risk and Return Profile

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	3★	3★	—
Morningstar Risk	-Avg	-Avg	—
Morningstar Return	Avg	Avg	—
Standard Deviation NAV	0.78	0.64	—
Standard Deviation MKT	0.75	0.62	—
Mean NAV	0.68	0.54	—
Mean MKT	0.68	0.56	—
Sharpe Ratio	0.42	0.48	—

MFT Statistics

	Standard Index	Best Fit Index
NAV	—	—
Alpha	-0.20	-0.37
Beta	0.23	2.41
R-Squared	67.14	94.75
12-Month Yield	—	0.96%
Potential Cap Gains Exp	—	—
Leveraged	—	No
Leverage Type	—	—
Leverage %	—	100.00
Primary Prospectus Benchmark	—	BgBarc US Treasury 1-3 Yr TR USD



Portfolio Analysis 10-06-2017

Asset Allocation %

	Net %	Long %	Short %
Cash	0.00	0.00	0.00
US Stocks	0.00	0.00	0.00
Non-US Stocks	0.00	0.00	0.00
Bonds	99.96	99.96	0.00
Other/Not Clsfd	0.04	0.04	0.00
Total	100.00	100.00	0.00

Equity Style

Value	Blend	Growth
—	—	—
—	—	—
—	—	—
—	—	—

Portfolio Statistics

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

Fixed-Income Style

Mid	Mod	Ext
—	—	—
—	—	—
—	—	—
—	—	—

Credit Quality Breakdown

	Bond %
AAA	100.00
AA	0.00
A	0.00
BBB	0.00
BB	0.00
B	0.00
Below B	0.00
NR	0.00

Regional Exposure

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

Top Holdings 09-29-2017

Share Chg since 10-2017	Share Amount	Holdings	95 Total Fixed-Income, 66% Turnover Ratio	Net Assets %
+	47 mil	US Treasury Note	0.875%	2.32
+	40 mil	US Treasury Note	1.5%	1.97
+	37 mil	US Treasury Note	3.625%	1.93
+	37 mil	US Treasury Note	1.5%	1.84
+	36 mil	US Treasury Note	3.125%	1.83
+	36 mil	US Treasury Note	1.625%	1.77
+	35 mil	US Treasury Note	1.375%	1.73
+	34 mil	US Treasury Note	1.375%	1.69
+	29 mil	US Treasury Note	3.375%	1.50
+	30 mil	US Treasury Note	1.25%	1.49
+	30 mil	US Treasury Note	1.625%	1.48
+	30 mil	US Treasury Note	1.75%	1.47
+	30 mil	US Treasury Note	1.375%	1.46
+	30 mil	US Treasury Note	1.375%	1.45
+	29 mil	US Treasury Note	1.625%	1.45

Sector Weightings

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

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Release date 09-30-2017

Operations

Family:	Schwab ETFs	Ticker:	SCHO	Prem/Discount:	0.04
Manager:	Multiple	Incept:	08-05-2010	Mkt Price:	50.40
Tenure:	7.2 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$2,080.2 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	41.35 mil	NAV:	50.38	Backing Bank:	Charles Schwab Investment Management Inc

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Release date 09-30-2017

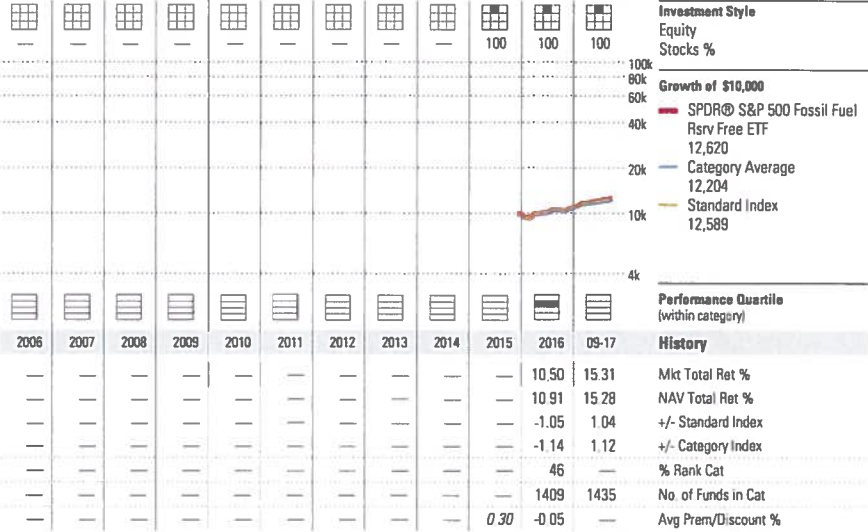
SPDR® S&P 500 Fossil Fuel Rsrv Free ETF (USD)

Overall Morningstar Rating™ Standard Index
 S&P 500 TR USD
 1,218 US Fund Large Blend
 Category Index
 Russell 1000 TR
 Moringstar Cat
 US Fund Large Blend

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	—	—	—	—	—
2016	0.99	1.80	4.07	3.66	10.91
2017	6.76	3.51	4.32	—	15.28

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	19.15	—	—	—	13.32
Std NAV 09-30-17	19.50	—	—	—	13.53
Mkt Total Ret	19.15	—	—	—	13.32
NAV Total Ret	19.50	—	—	—	13.53
+/- Std Index	0.89	—	—	—	—
+/- Cat Index	0.96	—	—	—	—
% Rank Cat	23	—	—	—	—
No. in Cat	1,396	—	—	—	—



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 866-787-2257 or visit www.spdrs.com.

Fees and Expenses

Fund Expenses	
Management Fees %	0.25
12b1 Expense %	0.00
Expense Ratio %	0.25

Risk and Return Profile

	3 Yr	5 Yr	10 Yr
Morningstar Rating™	—	—	—
Morningstar Risk	—	—	—
Morningstar Return	—	—	—
Standard Deviation NAV	—	—	—
Standard Deviation MKT	—	—	—
Mean NAV	—	—	—
Mean MKT	—	—	—
Sharpe Ratio	—	—	—

MPT Statistics	Standard Index	Best Fit Index
NAV	—	—
Alpha	—	—
Beta	—	—
R-Squared	—	—
12-Month Yield	—	—
Potential Cap Gains Exp	—	—
Leveraged	No	—
Leverage Type	—	—
Leverage %	100.00	—
Primary Prospectus Benchmark	S&P 500 Fossil Fuel Free NR USD	—

Portfolio Analysis 10-06-2017

Asset Allocation %	Net %	Long %	Short %
Cash	0.00	0.00	0.00
US Stocks	99.00	99.00	0.00
Non-US Stocks	0.91	0.91	0.00
Bonds	0.00	0.00	0.00
Other/Not Clsfd	0.09	0.09	0.00
Total	100.00	100.00	0.00

Equity Style

Value	Blend	Growth
—	—	—

Portfolio Statistics

	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	21.7	0.99	1.03
P/C Ratio TTM	14.0	1.02	1.01
P/B Ratio TTM	3.2	1.03	0.96
Geo Avg Mkt Cap \$mil	89514	1.00	0.80

Fixed-Income Style

Ltd	Mod	Ext
—	—	—

Credit Quality Breakdown

	AAA	AA	A	BBB	BB	B	Below B	NR
AAA	—	—	—	—	—	—	—	—
AA	—	—	—	—	—	—	—	—
A	—	—	—	—	—	—	—	—
BBB	—	—	—	—	—	—	—	—
BB	—	—	—	—	—	—	—	—
B	—	—	—	—	—	—	—	—
Below B	—	—	—	—	—	—	—	—
NR	—	—	—	—	—	—	—	—

Regional Exposure

	Stocks %	Rel Std Index
Americas	99.1	1.00
Greater Europe	0.4	1.05
Greater Asia	0.5	1.05

Top Holdings 09-29-2017

Share Chg since 10-2017	Share Amount	Holdings	478 Total Stocks, 0 Total Fixed-Income, 4% Turnover Ratio	Net Assets %
—	42,933	Apple Inc	—	3.88
—	64,043	Microsoft Corp	—	2.80
—	19,717	Facebook Inc A	—	1.98
—	3,324	Amazon com Inc	—	1.87
—	15,930	Berkshire Hathaway Inc B	—	1.71
—	22,313	Johnson & Johnson	—	1.70
—	29,191	JPMorgan Chase & Co	—	1.64
—	2,483	Alphabet Inc A	—	1.42
—	2,494	Alphabet Inc C	—	1.40
—	81,493	Bank of America Corporation	—	1.21
—	37,064	Wells Fargo & Co	—	1.20
—	50,989	AT&T Inc	—	1.17
—	21,135	Procter & Gamble Co	—	1.13
—	49,553	Pfizer Inc	—	1.04
—	71,859	General Electric Co	—	1.02

Sector Weightings

	Stocks %	Rel Std Index
Cyclical	34.4	1.06
Basic Materials	3.1	1.03
Consumer Cyclical	11.4	1.07
Financial Services	17.6	1.06
Real Estate	2.4	1.03
Sensitive	38.6	0.93
Communication Services	4.0	1.01
Energy	1.7	0.27
Industrials	11.1	1.06
Technology	21.8	1.05
Defensive	27.0	1.03
Consumer Defensive	8.7	1.04
Healthcare	15.5	1.05
Utilities	2.8	0.91

Operations

Family:	SPDR State Street Global	Ticker:	SPYX	Prem/Discount:	-0.04
Manager:	Advisors Multiple	Incept:	11-30-2015	Mkt Price:	60.93
Tenure:	1.9 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$172.9 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	2.80 mil	NAV:	60.95	Backing Bank:	SSGA Funds Management Inc

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Release date 09-30-2017 | Note: Portions of the analysis are based on pre-inception returns. Please read disclosure for more information.

Touchstone Ultra Short Dur F/I Y (USD)

Morningstar Analyst Rating™ Neutral
06-28-2017

Overall Morningstar Rating™ ★★ ★★
135 US Fund Ultrashort Bond

Standard Index BBgBarc US Agg Bond TR USD

Category Index BBgBarc Govt/Corp 1 Yr Duration TR USD

Morningstar Cat US Fund Ultrashort Bond

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	0.25	0.26	0.03	0.11	0.65
2016	0.50	0.61	0.37	0.18	1.67
2017	0.50	0.34	0.52	—	1.37

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Load-adj Mthly	1.55	1.24	1.12	—	1.20
Std 09-30-2017	1.55	—	1.12	—	1.20
Total Return	1.55	1.24	1.12	1.52	1.20
+/- Std Index	1.48	-1.48	-0.94	-2.75	—
+/- Cat Index	0.86	0.59	0.59	0.31	—
% Rank Cat	28	21	22	25	—
No. in Cat	165	135	101	55	—

7-day Yield	Subsidized	Unsubsidized
30-day SEC Yield 08-31-2017	1.89 ¹	1.62

¹ Contractual waiver, Expires 01-29-2018

Performance Disclosure
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Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800-543-0407 or visit www.touchstoneinvestments.com.

Fees and Expenses

Sales Charges	NA
Front-End Load %	NA
Deferred Load %	NA
Fund Expenses	
Management Fees %	0.25
12b1 Expense %	NA
Gross Expense Ratio %	0.53

Risk and Return Profile

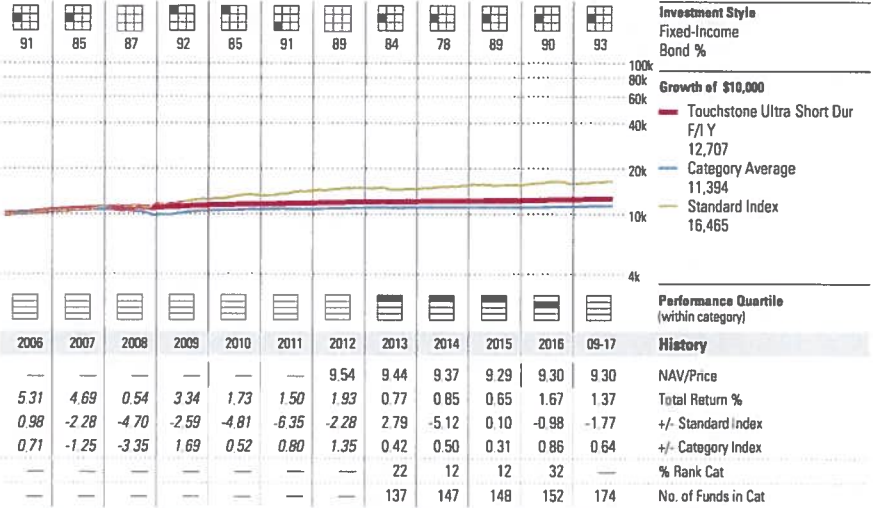
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	4★	4★	4★
Morningstar Risk	Avg	Avg	-Avg
Morningstar Return	+Avg	+Avg	+Avg
Standard Deviation	0.35	0.32	0.91
Mean	1.24	1.12	1.52
Sharpe Ratio	2.68	2.93	1.21

MPT Statistics

	Standard Index	Best Fit Index
Alpha	0.75	0.67
Beta	0.06	0.72
R-Squared	23.29	48.02
12-Month Yield	—	1.76%
Potential Cap Gains Exp	—	-3.60%

Operations

Family:	Touchstone	Ticker:	TSYYX	Incept:	04-16-2012
Manager:	Multiple	Minimum Initial Purchase:	\$2,500	Type:	MF
Tenure:	9.0 Years	Min Auto Investment Plan:	\$100	Total Assets:	\$751.97 mil
Objective:	Multisector Bond	Minimum IRA Purchase:	\$1,000		
Base Currency:	USD	Purchase Constraints:	—		



Portfolio Analysis 06-30-2017

Asset Allocation %	Net %	Long %	Short %	Share Chg since 03-2017	Share Amount	Holdings	Net Assets %
Cash	6.98	6.98	0.00			0 Total Stocks, 348 Total Fixed-Income, 169% Turnover Ratio	
US Stocks	0.00	0.00	0.00				
Non-US Stocks	0.00	0.00	0.00	✖	11 mil	United Auto Cr Sec Tr 2017-1	1.89%
Bonds	92.75	92.75	0.00	✖	10 mil	Transcanada Pipelines	1.625%
Other/Not Clsfd	0.27	0.27	0.00		9 mil	Santander Drive Auto 2014-1	3.92%
Total	100.00	100.00	0.00	✖	9 mil	Exeter Auto Recv Tr 2013-2	6.81%
					9 mil	Mountain Agy 5 31%	
					8 mil	Chrysler Cap Auto Recv 2013-B	2.89%
				⊕	8 mil	Navitas Equip Recv 2016-1	2.2%
				✖	8 mil	Hospitly 2017-Hit Mtg Tr CMO	
					8 mil	Carfinance Cap Auto Tr 2013-2	5.93%
					8 mil	Kingsland Iv Ltd 2007-4 FRN	
					8 mil	Amer Cr Accept Recv Tr 2014-3	0.27
					8 mil	Dignity Health 2 637%	
				✖	8 mil	Dt Auto Owner Tr 2014-3	4.47%
				✖	7 mil	Erac Usa Fin 144A 6.375%	
					7 mil	Santander Drive Auto 2013-5	2.73%
					7 mil	Santander Drive Auto 2013-5	2.73%

Equity Style

Value	Bond	Growth
Value	Value	Value
Bond	Bond	Bond
Growth	Growth	Growth

Portfolio Statistics

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

Fixed-Income Style

Ltd	Mod	Ext
Ltd	Ltd	Ltd
Mod	Mod	Mod
Ext	Ext	Ext

Credit Quality Breakdown 06-30-2017

Bond %	
AAA	34.93
AA	15.93
A	21.79
BBB	22.31
BB	0.00
B	0.03
Below B	0.15
NR	4.85

Regional Exposure

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

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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Vanguard FTSE Developed Markets ETF (USD)

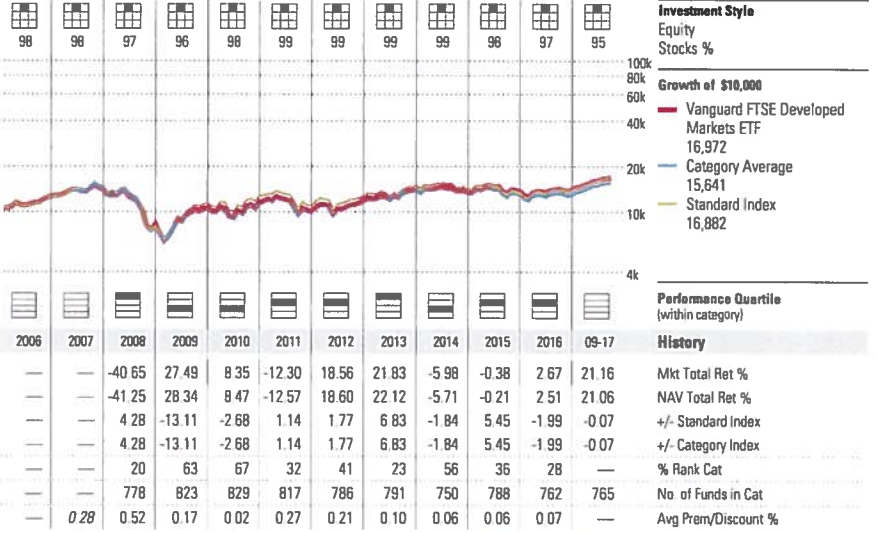
Overall Morningstar Rating™ Standard Index **Category Index** **Morningstar Cat**
 ★★★★★ 598 US Fund Foreign Large Blend MSCI ACWI Ex USA NR USD MSCI ACWI Ex USA NR USD US Fund Foreign Large Blend

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	5.54	1.03	-9.94	3.92	-0.21
2016	-1.99	-0.24	6.38	-1.44	2.51
2017	7.81	6.39	5.55	—	21.06

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	19.31	—	8.96	1.68	1.63
Std NAV 09-30-17	19.32	—	8.92	1.70	1.68
Mkt Total Ret	19.31	5.92	8.96	1.68	1.63
NAV Total Ret	19.32	5.88	8.92	1.70	1.68

+/- Std Index	+/- Cat Index	% Rank Cat	No. in Cat
-0.29	1.18	19	31
-0.29	1.18	34	736



30-day SEC Yield Subsidized Unsubsidized

Performance Disclosure
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Fees and Expenses

Fund Expenses	
Management Fees %	0.05
Expense Ratio %	0.07
12b1 Expense %	NA

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

	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	11.45	11.33	18.89
Standard Deviation MKT	11.42	11.41	19.13
Mean NAV	5.88	8.92	1.70
Mean MKT	5.92	8.96	1.68
Sharpe Ratio	0.53	0.79	0.16

MPT Statistics

	Standard Index	Best Fit Index
NAV	MSCI EAFE NR USD	
Alpha	1.46	1.15
Beta	0.91	0.92
R-Squared	95.57	96.75

12-Month Yield Potential Cap Gains Exp Leveraged Leverage Type Leverage % Primary Prospectus Benchmark

12-Month Yield: —
 Potential Cap Gains Exp: —
 Leveraged: No
 Leverage Type: —
 Leverage %: 100.00
 Primary Prospectus Benchmark: FTSE Dvlp ex US All Cap(US RIC)NR USD

Portfolio Analysis 09-31-2017

Asset Allocation %	Net %	Long %	Short %	Share Chg since 07-2017	Share Amount	Holdings	3,649 Total Stocks, 0 Total Fixed-Income, 11% Turnover Ratio	Net Assets %
Cash	2.01	2.01	0.00					
US Stocks	1.09	1.09	0.00	⊕	16 mil	Nestle SA		1.39
Non-US Stocks	94.19	94.19	0.00	⊕	12 mil	Novartis AG		1.04
Bonds	0.00	0.00	0.00	⊕	102 mil	HSBC Holdings PLC		1.03
Other/Not Clsfd	2.70	2.70	0.00	⊕	446,951	Samsung Electronics Co Ltd		0.96
Total	100.00	100.00	0.00	⊕	4 mil	Roche Holding AG Dividend Right Ce		0.93

Equity Style	Portfolio Statistics	Port Avg	Rel Index	Rel Cat
Value Blend Growth	P/E Ratio TTM	16.7	1.00	0.93
	P/C Ratio TTM	8.6	0.99	0.91
	P/B Ratio TTM	1.6	0.95	2.96
	Geo Avg Mkt Cap \$mil	23431	0.67	0.57

Fixed-Income Style	Avg Eff Maturity	Avg Eff Duration	Avg Wtd Coupon	Avg Wtd Price
Let Med Ext	—	—	—	—
	—	—	—	—
	—	—	—	—
	—	—	—	—

Credit Quality Breakdown — Bond %

AAA	—
AA	—
A	—
BBB	—
BB	—
B	—
Below B	—
NR	—

Regional Exposure

	Stocks %	Rel Std Index
Americas	9.6	0.91
Greater Europe	54.1	1.13
Greater Asia	36.3	0.87

Sector Weightings

	Stocks %	Rel Std Index
Cyclical	45.1	0.98
Basic Materials	9.3	1.12
Consumer Cyclical	11.3	1.01
Financial Services	20.5	0.89
Real Estate	4.0	1.17
Sensitive	32.4	0.96
Communication Services	3.9	0.88
Energy	5.9	0.89
Industrials	13.8	1.25
Technology	8.8	0.76
Defensive	22.5	1.10
Consumer Defensive	10.6	1.08
Healthcare	9.1	1.21
Utilities	2.8	0.92

Operations

Family:	Vanguard	Ticker:	VEA	Prem/Discount:	0.16
Manager:	Multiple	Incept:	07-20-2007	Mkt Price:	43.41
Tenure:	47 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$63,765.4 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	1,471.96 mil	NAV:	43.34	Backing Bank:	Vanguard Group Inc

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Vanguard Mid-Cap ETF (USD)

Overall Morningstar Rating™ Standard Index
 ★★★★★ S&P 500 TR USD
 354 US Fund Mid-Cap Blend Russell Mid Cap TR USD US Fund Mid-Cap Blend

Performance 09-30-2017					
Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	4.29	-1.18	-7.45	3.44	-1.34
2016	1.17	2.34	5.18	2.14	11.23
2017	6.18	2.78	3.44	—	12.88
Trailing Returns					
	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	15.28	—	14.39	7.96	9.64
Std NAV 09-30-17	15.30	—	14.39	7.94	9.65
Mkt Total Ret					
NAV Total Ret	15.28	9.71	14.39	7.96	9.64
NAV Total Ret	15.30	9.72	14.39	7.94	9.65
+/- Std Index					
+/- Cat Index	-3.31	-1.09	0.16	0.51	—
+/- Cat Index					
	-0.02	0.18	0.13	-0.14	—
% Rank Cat					
	59	34	18	34	—
No. in Cat					
	433	354	321	215	—

30-day SEC Yield 10-06-2017	Subsidized	Unsubsidized
	1.52	—

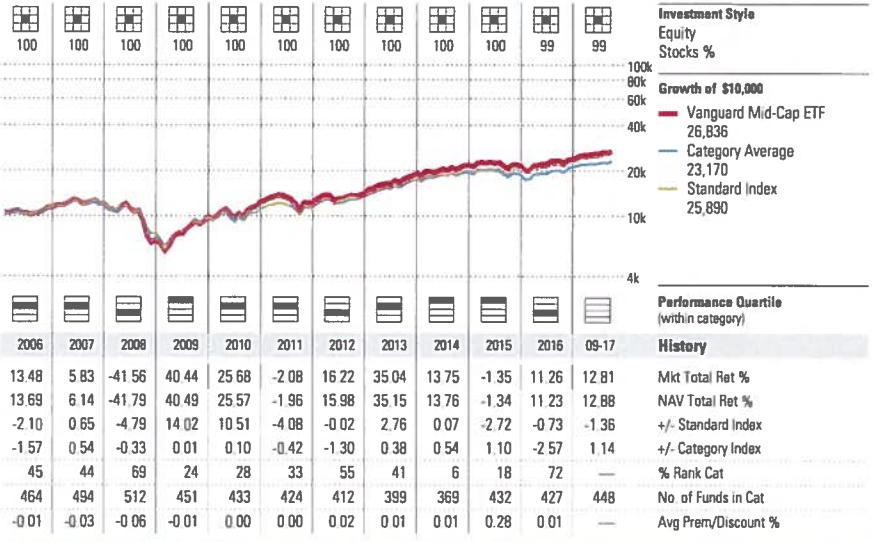
Performance Disclosure
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Fees and Expenses	
Fund Expenses	
Management Fees %	0.05
Expense Ratio %	0.06
12b1 Expense %	NA

Risk and Return Profile				
	3 Yr	5 Yr	10 Yr	
Morningstar Rating™	4★	4★	3★	354 funds
Morningstar Risk	-Avg	-Avg	Avg	321 funds
Morningstar Return	Avg	+Avg	Avg	215 funds
Standard Deviation NAV	10.66	10.44	17.79	
Standard Deviation MKT	11.07	10.70	17.88	
Mean NAV	9.72	14.39	7.94	
Mean MKT	9.71	14.39	7.96	
Sharpe Ratio	0.89	1.32	0.50	

MPT Statistics		
	Standard Index	Best Fit Index
NAV		Morningstar US Mid Cap TR USD
Alpha	-0.94	-0.33
Beta	1.00	1.00
R-Squared	89.15	98.77
12-Month Yield		1.42%
Potential Cap Gains Exp		—
Leveraged	No	—
Leverage Type	—	—
Leverage %	100.00	—
Primary Prospectus Benchmark	CRSP US Mid Cap TR USD	—

Operations	
Family:	Vanguard
Manager:	Multiple
Tenure:	19.4 Years
Total Assets:	\$20,529.5 mil
Shares Outstanding:	138.18 mil
Ticker:	VO
Incept:	01-26-2004
Expiration Date:	—
Exchange:	NYSE ARCA
NAV:	147.01



Portfolio Analysis 08-31-2017										
Asset Allocation %	Net %	Long %	Short %	Share Chg since 07-2017	Share Amount	Holdings	339 Total Stocks, 15% Turnover Ratio	1 Total Fixed-Income	Net Assets %	
Cash	0.90	0.90	0.00	—	—	—	—	—	—	—
US Stocks	98.43	98.43	0.00	—	4 mil	Lam Research Corp	—	—	0.75	
Non-US Stocks	0.66	0.66	0.00	—	5 mil	Fiserv Inc	—	—	0.74	
Bonds	0.01	0.01	0.00	—	7 mil	Western Digital Corp	—	—	0.72	
Other/Not Clsfd	0.00	0.00	0.00	—	7 mil	Amphenol Corp Class A	—	—	0.69	
Total	100.00	100.00	0.00	—	5 mil	Autodesk Inc	—	—	0.67	

Equity Style		Portfolio Statistics			Port Avg	Rel Index	Rel Cat
Value	Blend	P/E Ratio TTM	21.9	0.99	1.02	—	—
Growth	—	P/C Ratio TTM	12.0	0.88	1.11	—	—
—	—	P/B Ratio TTM	2.6	0.84	1.13	—	—
—	—	Geo Avg Mkt Cap \$mil	13188	0.15	1.88	—	—
—	—	Avg Eff Maturity	—	—	—	—	—
—	—	Avg Eff Duration	—	—	—	—	—
—	—	Avg Wtd Coupon	—	—	—	—	—
—	—	Avg Wtd Price	99.50	—	—	—	—

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

Regional Exposure			Stocks %	Rel Std Index
Americas	99.3	—	1.00	—
Greater Europe	0.2	—	0.58	—
Greater Asia	0.5	—	0.91	—

Sector Weightings			Stocks %	Rel Std Index
Cyclical	43.7	—	1.34	—
Basic Materials	5.3	—	1.79	—
Consumer Cyclical	16.6	—	1.55	—
Financial Services	14.5	—	0.88	—
Real Estate	7.2	—	3.17	—
Sensitive	36.0	—	0.87	—
Communication Services	1.7	—	0.42	—
Energy	4.2	—	0.69	—
Industrials	13.6	—	1.29	—
Technology	16.6	—	0.80	—
Defensive	20.3	—	0.77	—
Consumer Defensive	5.6	—	0.67	—
Healthcare	9.3	—	0.63	—
Utilities	5.4	—	1.74	—

Prem/Discount:	-0.01
Mkt Price:	147.00
Base Currency:	USD
Legal Structure:	Open Ended Investment Company
Backing Bank:	Vanguard Group Inc

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Vanguard Mortgage-Backed Secs ETF (USD)

Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
 ★★★★★ 243 US Fund Intermediate Government BgBarc US Agg Bond TR USD BgBarc US Government TR USD US Fund Intermediate Government

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	1.04	-0.72	1.22	-0.11	1.43
2016	1.77	1.11	0.59	-2.00	1.43
2017	0.50	0.84	0.93	—	2.29

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	0.04	—	1.77	—	—
Std NAV 09-30-17	0.25	—	1.82	—	2.86

Mkt Total Ret	0.04	2.23	1.77	—	—
NAV Total Ret	0.25	2.27	1.82	—	2.86
+/- Std Index	0.17	-0.45	-0.24	—	—
+/- Cat Index	1.80	0.26	0.57	—	—
% Rank Cat	6	13	7	—	—
No. in Cat	262	243	233	—	—

30-day SEC Yield 10-06-2017 Subsidized 2.19 Unsubsidized —

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 866-499-8473 or visit www.vanguard.com.

Fees and Expenses

Fund Expenses	
Management Fees %	0.05
Expense Ratio %	0.07
12b1 Expense %	NA

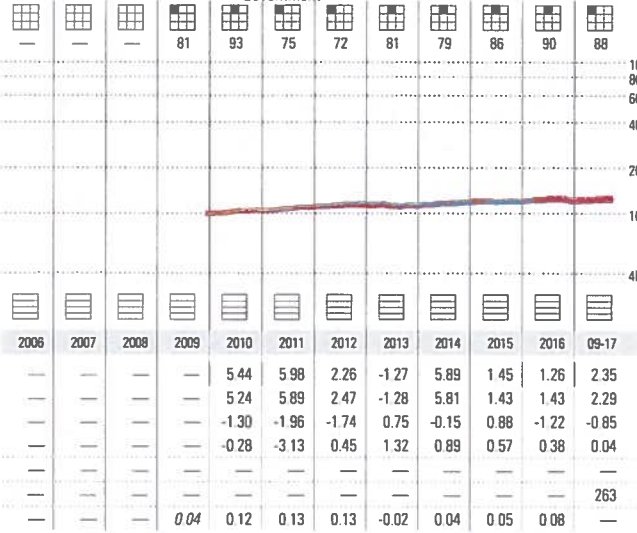
Risk and Return Profile

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

	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	1.83	2.11	—
Standard Deviation MKT	1.91	2.18	—
Mean NAV	2.27	1.82	—
Mean MKT	2.23	1.77	—
Sharpe Ratio	1.04	0.76	—

MPT Statistics

	Standard Index	Best Fit Index
NAV	—	—
Alpha	0.53	-0.13
Beta	0.58	0.98
R-Squared	82.07	98.76
12-Month Yield	—	1.93%
Potential Cap Gains Exp	—	—
Leveraged	—	No
Leverage Type	—	—
Leverage %	—	100.00
Primary Prospectus Benchmark	BgBarc US MBS Float Adjusted TR USD	—



Portfolio Analysis 08-31-2017

Asset Allocation %	Net %	Long %	Short %	Share Chg since 07-2017	Share Amount	Holdings	0 Total Stocks	2,489 Total Fixed-Income	390% Turnover Ratio	Net Assets %
Cash	12.07	12.07	0.00	—	—	—	—	—	—	—
US Stocks	0.00	0.00	0.00	⊕	75 mil	Govt Natl Mtg Assc	3.5%	—	—	1.43
Non-US Stocks	0.00	0.00	0.00	⊕	72 mil	FHLMC	3.5%	—	—	1.36
Bonds	87.93	87.93	0.00	⊖	73 mil	FNMA	3%	—	—	1.35
Other/Not Clsfd	0.00	0.00	0.00	⊖	73 mil	FHLMC	3%	—	—	1.34
Total	100.00	100.00	0.00	⊕	66 mil	GNMA	—	—	—	1.28

Equity Style

Value	Blend	Growth
—	—	—

Portfolio Statistics

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

Fixed-Income Style

Int	Mod	Ext
—	—	—

	Avg Eff Maturity	6.40
Avg Eff Duration	4.13	—
Avg Wtd Coupon	3.58	—
Avg Wtd Price	104.52	—

Credit Quality Breakdown

	Bond %
AAA	100.00
AA	0.00
A	0.00
BBB	0.00
BB	0.00
B	0.00
Below B	0.00
NR	0.00

Regional Exposure

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

Sector Weightings

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

Operations

Family:	Vanguard	Ticker:	VMBS	Prem/Discount:	-0.04
Manager:	Multiple	Incept:	11-19-2009	Mkt Price:	52.78
Tenure:	7.9 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$4,446.7 mil	Exchange:	NASDAQ	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	84.43 mil	NAV:	52.80	Backing Bank:	Vanguard Group Inc

Vanguard S&P 500 ETF (USD)

Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
 ★★★★★ S&P 500 TR USD Russell 1000 TR US Fund Large Blend

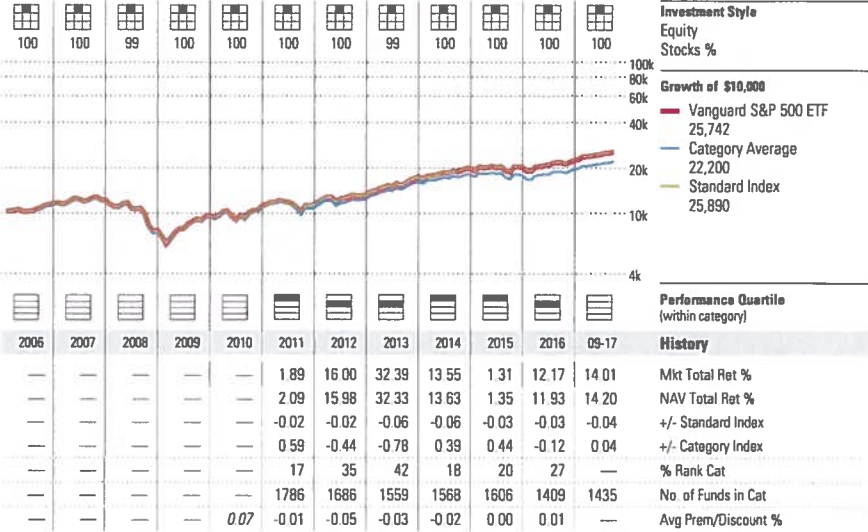
Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	0.94	0.28	-6.46	7.03	1.35
2016	1.34	2.44	3.85	3.82	11.93
2017	6.05	3.07	4.47	—	14.20

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	18.54	—	14.17	—	14.75
Std NAV 09-30-17	18.57	—	14.18	7.40	14.94

Mkt Total Ret	18.54	10.77	14.17	—	14.75
NAV Total Ret	18.57	10.77	14.18	7.40	14.94
+/- Std Index	-0.04	-0.04	-0.04	-0.04	—
+/- Cat Index	0.03	0.14	-0.09	-0.15	—

% Rank Cat	37	14	18	22
No. in Cat	1,396	1,218	1,083	799



30-day SEC Yield 10-06-2017

Subsidized	Unsubsidized
1.94	—

Performance Disclosure
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Fees and Expenses

Fund Expenses	
Management Fees %	0.03
Expense Ratio %	0.04
12b1 Expense %	NA

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

	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	10.07	9.55	15.14
Standard Deviation MKT	10.07	9.60	—
Mean NAV	10.77	14.18	7.40
Mean MKT	10.77	14.17	—
Sharpe Ratio	1.04	1.42	0.52

MPT Statistics

	Standard Index	Best Fit Index
NAV	S&P 500 TR USD	S&P 500 TR USD
Alpha	-0.04	-0.04
Beta	1.00	1.00
R-Squared	100.00	100.00
12-Month Yield	—	1.94%
Potential Cap Gains Exp	—	—

Leveraged

Leverage Type	Leverage %
—	100.00
Primary Prospectus Benchmark	S&P 500 TR USD

Operations

Family:	Vanguard	Ticker:	VOO	Prem/Discount:	-0.02
Manager:	Multiple	Incept:	09-07-2010	Mkt Price:	230.76
Tenure:	1.5 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$75,230.7 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	321.94 mil	NAV:	230.80	Backing Bank:	Vanguard Group Inc

Portfolio Analysis 08-31-2017

Asset Allocation %	Net %	Long %	Short %	Share Chg since 07-2017	Share Amount	Holdings 510 Total Stocks, 4% Turnover Ratio	Net Assets %
Cash	0.42	0.42	0.00	—	—	—	—
US Stocks	98.69	98.69	0.00	—	84 mil	Apple Inc	4.02
Non-US Stocks	0.89	0.89	0.00	+	124 mil	Microsoft Corp	2.71
Bonds	0.00	0.00	0.00	+	38 mil	Facebook Inc A	1.91
Other/Not Clsfd	0.00	0.00	0.00	+	6 mil	Amazon com Inc	1.83
Total	100.00	100.00	0.00	+	43 mil	Johnson & Johnson	1.68

Equity Style

Value	Blend	Growth	Port Avg	Rel Index	Rel Cat
Value	Blend	Growth	21.5	0.97	1.02
P/E Ratio TTM	13.5	0.98	0.98	—	—
P/C Ratio TTM	3.0	0.98	0.86	—	—
P/B Ratio TTM	91170	1.02	0.81	—	—
Geo Avg Mkt Cap \$mil	—	—	—	—	—

Fixed-Income Style

Ltd	Med	Ext	Avg Eff Maturity	Avg Eff Duration	Avg Wtd Coupon	Avg Wtd Price
Ltd	Med	Ext	—	—	—	99.67

Credit Quality Breakdown

AAA	AA	A	BBB	BB	B	Below B	NR
—	—	—	—	—	—	—	—

Regional Exposure

Americas	Greater Europe	Greater Asia
99.1	0.4	0.5

Sector Weightings

Sector	Stocks %	Rel Std Index
Cyclical	32.1	0.99
Basic Materials	2.9	0.97
Consumer Cyclical	10.8	1.01
Financial Services	16.2	0.98
Real Estate	2.3	1.01
Sensitive	41.1	1.00
Communication Services	4.1	1.04
Energy	5.7	0.93
Industrials	10.4	0.99
Technology	21.0	1.01
Defensive	26.7	1.02
Consumer Defensive	8.6	1.03
Healthcare	14.9	1.01
Utilities	3.3	1.05

Vanguard Small-Cap ETF (USD)

Overall Morningstar Rating™ Standard Index Category Index Morningstar Cat
 **** S&P 500 TR USD Russell 2000 TR US Fund Small Blend

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	4.80	-0.56	-10.32	3.10	-3.65
2016	1.01	3.98	6.16	6.11	18.31
2017	3.74	1.94	4.59	—	10.61

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	17.39	—	13.94	8.60	9.32
Std NAV 09-30-17	17.37	—	13.94	8.59	9.32

Mkt Total Ret	17.39	10.47	13.94	8.60	9.32
NAV Total Ret	17.37	10.44	13.94	8.59	9.32

+/- Std Index	-1.24	-0.37	-0.29	1.15	—
+/- Cat Index	-3.38	-1.73	0.14	0.74	—

% Rank Cat	69	54	36	18	—
No. in Cat	794	653	554	393	—

30-day SEC Yield 10-06-2017	Subsidized	Unsubsidized
	1.41	—

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.
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 Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 866-499-8473 or visit www.vanguard.com.

Fees and Expenses

Fund Expenses	
Management Fees %	0.05
Expense Ratio %	0.06
12b1 Expense %	NA

Risk and Return Profile

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

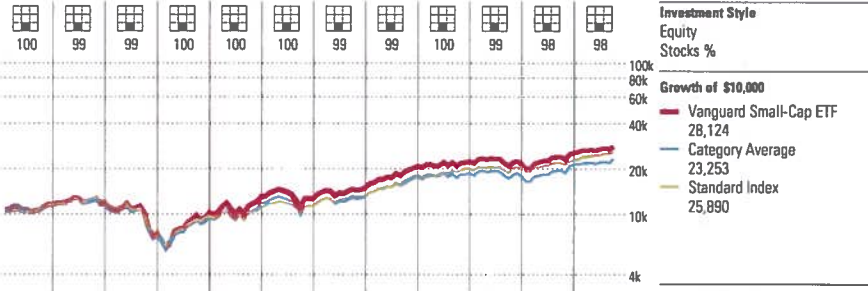
	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	12.33	12.23	19.74
Standard Deviation MKT	12.32	12.25	19.81
Mean NAV	10.44	13.94	8.59
Mean MKT	10.47	13.94	8.60
Sharpe Ratio	0.84	1.11	0.50

MPT Statistics

	Standard Index	Best Fit Index
NAV		Morningstar US Small Cap TR USD
Alpha	-0.64	0.51
Beta	1.05	0.92
R-Squared	73.74	98.86
12-Month Yield		1.39%
Potential Cap Gains Exp		—
Leveraged		No
Leverage Type		—
Leverage %		100.00
Primary Prospectus Benchmark	CRSP US Small Cap TR USD	

Operations

Family:	Vanguard	Ticker:	VB	Prem/Discount:	0.02
Manager:	Multiple	Incept:	01-26-2004	Mkt Price:	141.32
Tenure:	1.5 Years	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$20,028.2 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	140.04 mil	NAV:	141.29	Backing Bank:	Vanguard Group Inc



Performance Quartile (within category)

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	09-17	History
Mkt Total Ret %	15.77	1.35	-35.88	35.92	28.11	-2.78	18.29	37.70	7.63	-3.76	18.44	10.58	Mkt Total Ret %
NAV Total Ret %	15.79	1.27	-35.99	36.31	27.89	-2.68	18.22	37.80	7.51	-3.65	18.31	10.61	NAV Total Ret %
+/- Standard Index	0.00	-4.22	1.00	9.85	12.83	-4.79	2.22	5.42	-6.18	-5.04	6.35	-3.63	+/- Standard Index
+/- Category Index	-2.57	2.84	-2.21	9.14	1.03	1.50	1.87	-1.02	2.62	0.76	-3.00	-0.33	+/- Category Index
% Rank Cat	41	29	52	25	23	42	21	46	13	35	70	—	% Rank Cat
No. of Funds in Cat	608	645	670	649	649	650	662	681	737	780	750	809	No. of Funds in Cat
Avg Prem/Discount %	-0.11	-0.07	0.05	0.06	-0.05	-0.02	-0.02	-0.03	-0.02	0.02	0.00	—	Avg Prem/Discount %

Portfolio Analysis 08-31-2017

Asset Allocation %	Net %	Long %	Short %	Share Chg since 07-2017	Share Amount	Holdings 1,424 Total Stocks, 0 Total Fixed-Income, 14% Turnover Ratio	Net Assets %
Cash	2.09	2.09	0.00	—	—	—	—
US Stocks	97.30	97.30	0.00	—	3 mil	CBIO Holdings Inc	0.34
Non-US Stocks	0.60	0.60	0.00	—	6 mil	Cadence Design Systems Inc	0.33
Bonds	0.00	0.00	0.00	—	2 mil	Packaging Corp of America	0.32
Other/Not Clsfd	0.01	0.01	0.00	—	2 mil	Take-Two Interactive Software Inc	0.30
Total	100.00	100.00	0.00	—	4 mil	CDW Corp	0.30

Equity Style	Portfolio Statistics	Port Avg	Rel Index	Rel Cat	Holdings	Net Assets %	
Value Blend Growth	P/E Ratio TTM	19.3	0.88	0.94	1 mil	Teleflex Inc	0.28
	P/C Ratio TTM	10.8	0.79	0.86	759,879	CoStar Group Inc	0.28
	P/B Ratio TTM	2.3	0.74	5.29	2 mil	Atmos Energy Corp	0.28
	Geo Avg Mkt Cap \$mil	3616	0.04	1.18	3 mil	Broadridge Financial Solutions Inc	0.27
					928,373	Vail Resorts Inc	0.27
					4 mil	The Chemours Co	0.27
					2 mil	IDEX Corp	0.27
					3 mil	Spirit AeroSystems Holdings Inc	0.27
					2 mil	Cognex Corp	0.27
					2 mil	Diamondback Energy Inc	0.27

Credit Quality Breakdown

	Bond %	Rel Std Index
AAA	—	—
AA	—	—
A	—	—
BBB	—	—
BB	—	—
B	—	—
Below B	—	—
NR	—	—

Regional Exposure

	Stocks %	Rel Std Index
Americas	99.6	1.00
Greater Europe	0.3	0.76
Greater Asia	0.1	0.25

Sector Weightings

	Stocks %	Rel Std Index
Cyclical	44.1	1.36
Basic Materials	5.7	1.94
Consumer Cyclical	12.6	1.18
Financial Services	13.3	0.80
Real Estate	12.5	5.49
Sensitive	36.8	0.89
Communication Services	0.7	0.18
Energy	4.1	0.67
Industrials	15.7	1.49
Technology	16.3	0.79
Defensive	19.1	0.73
Consumer Defensive	3.8	0.45
Healthcare	11.3	0.76
Utilities	4.0	1.30

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Xtrackers MSCI EAFE Hedged Equity ETF (USD)

Overall Morningstar Rating™ Standard Index
★★★★★
 598 US Fund Foreign Large Blend

Category Index
 MSCI ACWI Ex USA NR USD
 MSCI ACWI Ex USA NR USD

Morningstar Cat
 US Fund Foreign Large Blend

Performance 09-30-2017

Quarterly Returns	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total %
2015	10.48	-2.10	-9.00	6.18	4.50
2016	-6.32	-0.71	6.21	7.04	5.75
2017	4.97	3.11	3.64	—	12.18

Trailing Returns	1 Yr	3 Yr	5 Yr	10 Yr	Incept
Std Mkt 09-30-17	19.96	—	12.03	—	8.68
Std NAV 09-30-17	20.07	—	12.03	—	8.87
Mkt Total Ret	19.96	7.94	12.03	—	8.68
NAV Total Ret	20.07	7.96	12.03	—	8.87

	Std Index	Cat Index		
+/- Std Index	0.47	3.25	5.06	—
+/- Cat Index	0.47	3.25	5.06	—
% Rank Cat	24	7	3	—
No. in Cat	736	598	533	—

30-day SEC Yield

Performance Disclosure

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Fees and Expenses

Fund Expenses	
Management Fees %	0.35
Expense Ratio %	0.35
12b1 Expense %	NA

Risk and Return Profile

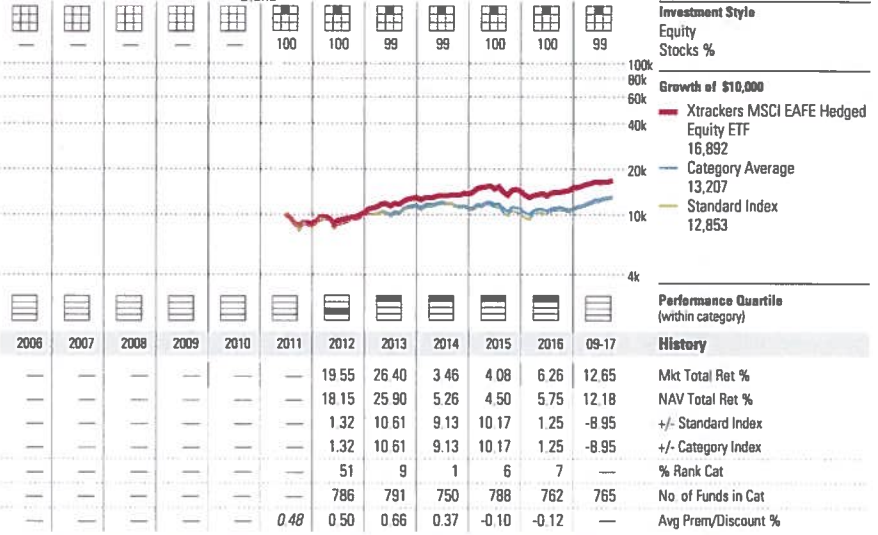
	3 Yr	5 Yr	10 Yr
Morningstar Rating™	5★	5★	—
Morningstar Risk	Avg	-Avg	—
Morningstar Return	High	High	—

	3 Yr	5 Yr	10 Yr
Standard Deviation NAV	11.46	10.29	—
Standard Deviation MKT	11.05	11.26	—
Mean NAV	7.96	12.03	—
Mean MKT	7.94	12.03	—
Sharpe Ratio	0.70	1.14	—

MPT Statistics	Standard Index	Best Fit Index
NAV	—	—
Alpha	4.34	3.70
Beta	0.73	0.81
R-Squared	60.63	73.98

	12-Month Yield	Potential Cap Gains Exp
	—	—

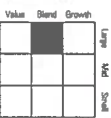
	Leveraged
Leverage Type	No
Leverage %	—
Primary Prospectus Benchmark	MSCI EAFE 100% Hedged NR USD



Portfolio Analysis 08-31-2017

Asset Allocation %	Net %	Long %	Short %	Share Chg since 07-2017	Share Amount	Holdings 913 Total Stocks, 0 Total Fixed-Income, 14% Turnover Ratio	Net Assets %
Cash	-0.20	0.00	0.20	—	—	—	—
US Stocks	0.99	0.99	0.00	—	1 mil	Nestle SA	1.83
Non-US Stocks	98.40	98.40	0.00	—	10 mil	HSBC Holdings PLC	1.35
Bonds	0.00	0.00	0.00	—	1 mil	Novartis AG	1.30
Other/Not Clsfd	0.81	0.81	0.00	—	337,863	Roche Holding AG Dividend Right Ce	1.24
Total	100.00	100.20	0.20	—	1 mil	Toyota Motor Corp	1.02

Equity Style



Portfolio Statistics

	Port Avg	Rel Index	Rel Cat
P/E Ratio TTM	17.3	1.03	0.96
P/C Ratio TTM	8.7	1.01	0.93
P/B Ratio TTM	1.7	0.97	3.02
Geo Avg Mkt Cap \$mil	35854	1.03	0.88

Fixed-Income Style



Fixed-Income Style

	Port Avg	Rel Index	Rel Cat
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	1.2	0.11
Greater Europe	63.4	1.33
Greater Asia	35.4	0.85

Share Chg since 07-2017	Share Amount	Holdings 913 Total Stocks, 0 Total Fixed-Income, 14% Turnover Ratio	Net Assets %
—	1 mil	Nestle SA	1.83
—	10 mil	HSBC Holdings PLC	1.35
—	1 mil	Novartis AG	1.30
—	337,863	Roche Holding AG Dividend Right Ce	1.24
—	1 mil	Toyota Motor Corp	1.02
—	1 mil	British American Tobacco PLC	1.00
—	2 mil	Royal Dutch Shell PLC Class A	0.85
—	1 mil	Total SA	0.85
—	9 mil	BP PLC	0.78
—	545,408	Sanofi SA	0.76
—	353	TOPIX Index Future Sept17	0.75
—	397,598	Bayer AG	0.73
—	2 mil	Royal Dutch Shell PLC B	0.73
—	8 mil	Banco Santander SA	0.72
—	827,879	Commonwealth Bank of Australia	0.72

Sector Weights

	Stocks %	Rel Std Index
Cyclical	44.9	0.98
Basic Materials	8.5	1.02
Consumer Cyclical	11.4	1.02
Financial Services	21.3	0.93
Real Estate	3.7	1.07
Sensitive	29.8	0.89
Communication Services	4.5	1.02
Energy	4.9	0.75
Industrials	13.4	1.21
Technology	7.0	0.61
Defensive	25.3	1.24
Consumer Defensive	11.7	1.19
Healthcare	10.1	1.34
Utilities	3.5	1.13

Operations

Family:	Deutsche Asset Management	Ticker:	DBEF	Prem/Discount:	0.10
Manager:	Multiple	Incept:	06-09-2011	Mkt Price:	31.03
Tenure:	0.8 Year	Expiration Date:	—	Base Currency:	USD
Total Assets:	\$6,973.8 mil	Exchange:	NYSE ARCA	Legal Structure:	Open Ended Investment Company
Shares Outstanding:	222.95 mil	NAV:	31.00	Backing Bank:	DBX Advisors LLC

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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.

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

Money Market Fund Disclosures

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

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

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

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

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

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

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

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

Annualized returns 09-30-2017

Standardized Returns (%)	7-day Yield Subsidized as of date	7-day Yield Unsubsidized as of date	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Redemption %	Max
BlackRock Strategic Income Opps Instl	—	—	5.17	3.29	—	4.41	02-05-2008	NA	NA	0.62 ¹	0.76	NA	NA
iShares Core US Aggregate Bond ETF-NAV	—	—	0.06	2.02	4.17	4.07	09-22-2003	NA	NA	0.05 ²	0.06	NA	NA
iShares Core US Aggregate Bond ETF- Market	—	—	-0.10	1.97	4.12	4.06	09-22-2003	NA	NA	0.05 ²	0.06	NA	NA
iShares MBS ETF-NAV	—	—	0.11	1.72	3.79	3.75	03-13-2007	NA	NA	0.09 ³	0.12	NA	NA
iShares MBS ETF-Market	—	—	0.03	1.69	3.77	3.76	03-13-2007	NA	NA	0.09 ³	0.12	NA	NA
iShares US Treasury Bond ETF-NAV	—	—	-1.79	1.15	—	1.40	02-14-2012	NA	NA	0.15	0.15	NA	NA

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Annualized returns 09-30-2017

Standardized Returns (%)	7-day Yield Subsidized as of date	7-day Yield Unsubsidized as of date	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
iShares US Treasury Bond ETF-Market	—	—	-1.82	1.16	—	1.47	02-14-2012	NA	NA	0.15	0.15	NA
PIMCO Income P	—	—	8.80	6.84	—	9.39	04-30-2008	NA	NA	0.60	0.63	NA
PowerShares Taxable Municipal Bond ETF-NAV	—	—	0.87	4.77	—	7.60	11-17-2009	NA	NA	0.28 ⁴	0.29	NA
PowerShares Taxable Municipal Bond ETF-Market	—	—	0.80	4.86	—	7.58	11-17-2009	NA	NA	0.28 ⁴	0.29	NA
Prudential Global Total Return Z	—	—	2.73	2.91	5.83	5.29	03-17-1997	NA	NA	0.63 ⁵	0.80	NA
Schwab Intermediate-Term US Trs ETF TM -NAV	—	—	-1.37	1.21	—	2.49	08-05-2010	NA	NA	0.06	0.06	NA
Schwab Intermediate-Term US Trs ETF TM -Market	—	—	-1.46	1.21	—	2.45	08-05-2010	NA	NA	0.06	0.06	NA
Schwab Short-Term US Treasury ETF TM -NAV	—	—	0.15	0.54	—	0.65	08-05-2010	NA	NA	0.06	0.06	NA
Schwab Short-Term US Treasury ETF TM -Market	—	—	0.19	0.56	—	0.64	08-05-2010	NA	NA	0.06	0.06	NA
SPDR [®] S&P 500 Fossil Fuel Rsrsv Free ETF-NAV	—	—	19.50	—	—	13.53	11-30-2015	NA	NA	0.20 ⁶	0.25	NA
SPDR [®] S&P 500 Fossil Fuel Rsrsv Free ETF-Market	—	—	19.15	—	—	13.32	11-30-2015	NA	NA	0.20 ⁶	0.25	NA
Touchstone Ultra Short Dur F/I Y	—	—	1.55	1.12	—	1.20	04-16-2012	NA	NA	0.44 ⁷	0.53	NA
Vanguard FTSE Developed Markets ETF-NAV	—	—	19.32	8.92	1.70	1.68	07-20-2007	NA	NA	0.07	0.07	NA
Vanguard FTSE Developed Markets ETF-Market	—	—	19.31	8.96	1.68	1.63	07-20-2007	NA	NA	0.07	0.07	NA
Vanguard Mid-Cap ETF-NAV	—	—	15.30	14.39	7.94	9.65	01-26-2004	NA	NA	0.06	0.06	NA
Vanguard Mid-Cap ETF-Market	—	—	15.28	14.39	7.96	9.64	01-26-2004	NA	NA	0.06	0.06	NA
Vanguard Mortgage-Backed Secs ETF-NAV	—	—	0.25	1.82	—	2.86	11-19-2009	NA	NA	0.07	0.07	NA
Vanguard Mortgage-Backed Secs ETF-Market	—	—	0.04	1.77	—	—	11-19-2009	NA	NA	0.07	0.07	NA
Vanguard S&P 500 ETF-NAV	—	—	18.57	14.18	7.40	14.94	09-07-2010	NA	NA	0.04	0.04	NA
Vanguard S&P 500 ETF-Market	—	—	18.54	14.17	—	14.75	09-07-2010	NA	NA	0.04	0.04	NA
Vanguard Small-Cap ETF-NAV	—	—	17.37	13.94	8.59	9.32	01-26-2004	NA	NA	0.06	0.06	NA
Vanguard Small-Cap ETF-Market	—	—	17.39	13.94	8.60	9.32	01-26-2004	NA	NA	0.06	0.06	NA
Xtrackers MSCI EAFE Hedged Equity ETF-NAV	—	—	20.07	12.03	—	8.87	06-09-2011	NA	NA	0.35	0.35	NA
Xtrackers MSCI EAFE Hedged Equity ETF-Market	—	—	19.96	12.03	—	8.68	06-09-2011	NA	NA	0.35	0.35	NA
BBgBarc Government 1-5 Yr TR USD			-0.06	0.83	2.38	—	—					
BBgBarc Govt/Corp 1 Yr Duration TR USD			0.69	0.53	1.21	—	—					
BBgBarc Intermediate Treasury TR USD			-0.73	1.00	3.15	—	—					
BBgBarc US Agg Bond TR USD			0.07	2.06	4.27	—	—					
BBgBarc US Government Long TR USD			-6.14	2.87	6.83	—	—					
BBgBarc US Government TR USD			-1.56	1.25	3.61	—	—					
BBgBarc US Govt/Credit Long TR USD			-0.79	3.94	7.37	—	—					
BBgBarc US MBS TR USD			0.30	1.96	4.13	—	—					
BBgBarc US Universal TR USD			0.96	2.53	4.56	—	—					
BofAML US HY Master II TR USD			9.06	6.38	7.72	—	—					
BofAML USD LIBOR 3 Mon CM			1.03	0.47	0.95	—	—					
Citi WGBI NonUSD USD			-3.14	-1.07	2.67	—	—					
Morningstar US Lng Gov Bd TR USD			-4.91	2.45	6.21	—	—					
Morningstar US Mid Cap TR USD			16.25	14.81	8.34	—	—					
Morningstar US Small Cap TR USD			17.41	13.66	8.52	—	—					
MSCI ACWI Ex USA NR USD			19.61	6.97	1.28	—	—					
MSCI EAFE NR USD			19.10	8.38	1.34	—	—					
Russell 1000 TR USD			18.54	14.27	7.55	—	—					
Russell 2000 TR USD			20.74	13.79	7.85	—	—					
Russell Mid Cap TR USD			15.32	14.26	8.08	—	—					
S&P 500 TR USD			18.61	14.22	7.44	—	09-11-1989					
USTREAS T-Bill Auction Ave 3 Mon			0.77	0.23	0.40	—	—					

1. Contractual waiver; Expires 04-30-2018; Interest expense 0.13%

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Annualized returns 09-30-2017

Standardized Returns (%)	7-day Yield Subsidized as of date	7-day Yield Unsubsidized as of date	1Yr	5Yr	10Yr	Since Inception	Inception Date	Max Front Load %	Max Back Load %	Net Exp Ratio %	Gross Exp Ratio %	Max Redemption %
2. Contractual waiver; Expires 06-30-2026												
3. Contractual waiver; Expires 02-28-2023												
4. Contractual waiver; Expires 08-31-2018												
5. Contractual waiver; Expires 02-28-2018												
6. Contractual waiver; Expires 10-31-2017												
7. Contractual waiver; Expires 01-29-2018												

	Return after Tax (%)					On Distribution and Sales of Shares				
	On Distribution	1Yr	5Yr	10Yr	Since Inception	Inception Date	1Yr	5Yr	10Yr	Since Inception
BlackRock Strategic Income Opps Instl	3.67	1.87	—	—	2.71	02-05-2008	2.91	1.87	—	2.70
iShares Core US Aggregate Bond ETF-NAV	-1.00	0.96	2.94	2.77	09-22-2003	0.02	1.06	2.74	2.65	
iShares MBS ETF-NAV	-1.04	0.84	2.61	2.55	03-13-2007	0.10	0.92	2.47	2.44	
iShares US Treasury Bond ETF-NAV	-2.40	0.62	—	0.90	02-14-2012	-1.01	0.64	—	0.85	
PIMCO Income P	6.31	4.05	—	6.63	04-30-2008	4.93	3.97	—	6.18	
PowerShares Taxable Municipal Bond ETF-NAV	-0.89	2.75	—	5.56	11-17-2009	0.46	2.71	—	5.06	
Prudential Global Total Return Z	1.15	1.16	3.58	2.91	03-17-1997	1.50	1.41	3.58	3.04	
Schwab Intermediate-Term US Trs ETF TM -NAV	-2.02	0.62	—	1.92	08-05-2010	-0.78	0.66	—	1.68	
Schwab Short-Term US Treasury ETF TM -NAV	-0.27	0.28	—	0.43	08-05-2010	0.08	0.30	—	0.40	
SPDR [®] S&P 500 Fossil Fuel Rsrsv Free ETF-NAV	18.54	—	—	12.61	11-30-2015	11.00	—	—	9.97	
Touchstone Ultra Short Dur F/I Y	0.78	0.40	—	0.48	04-16-2012	0.87	0.53	—	0.60	
Vanguard FTSE Developed Markets ETF-NAV	18.41	7.92	0.87	0.86	07-20-2007	11.36	6.70	1.08	1.07	
Vanguard Mid-Cap ETF-NAV	14.87	13.86	7.45	9.19	01-26-2004	8.94	11.39	6.23	7.91	
Vanguard Mortgage-Backed Secs ETF-NAV	-0.73	1.05	—	2.01	11-19-2009	0.13	1.04	—	1.85	
Vanguard S&P 500 ETF-NAV	17.99	13.51	—	14.34	09-07-2010	10.93	11.18	—	12.14	
Vanguard Small-Cap ETF-NAV	16.87	13.32	8.04	8.83	01-26-2004	10.05	10.95	6.75	7.58	
Xtrackers MSCI EAFE Hedged Equity ETF-NAV	19.08	10.27	—	7.12	06-09-2011	11.37	8.91	—	6.32	

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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 Medicare surcharge. As of 2016, this rate is 39.6% plus 0.9% Medicare surcharge, or 40.5%, this has been unchanged since 2013. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns

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

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

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

12b1 Expense %

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

Alpha

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

Asset Allocation

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

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

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

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

Average Effective Duration

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

Average Effective Maturity

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

Average Weighted Coupon

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

Average Weighted Price

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

or discount securities respectively.)

Best Fit Index

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

Beta

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

Credit Quality Breakdown

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

Deferred Load %

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

Expense Ratio %

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

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/.

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 Category

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

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest

(or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end 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 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. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

Morningstar Return

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

Morningstar Risk

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

Morningstar Style Box™

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

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

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest-rate sensitivity as

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

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

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

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

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

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

P/B Ratio TTM

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative

book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

P/C Ratio TTM

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

P/E Ratio TTM

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

Percentile Rank in Category

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

Performance Quartile

Performance Quartile reflects a fund's Morningstar Rank.

Potential Capital Gains Exposure

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

Quarterly Returns

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

R-Squared

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

Regional Exposure

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

Sector Weightings

Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the

stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Share Change

Share 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.

ETF Detail Report

Disclosure Statement

The Exchange-Traded Fund (ETF) 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 ETF Detail Report. Morningstar is not itself a FINRA-member firm. All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

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

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

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

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

Comparison of Fund Types

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

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

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

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

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

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

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

and the sales proceeds are paid to the investor. Typically, a UIT investment is rolled over into successive trusts as part of a long-term strategy. A rollover fee may be charged for the exercise of rollover purchases. There are tax consequences associated with rolling over an investment from one trust to the next.

Performance

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

The market price noted on the ETF Detail Report is the price of the fund as of the close of trading on the last business day at month-end. This date is listed at the top of the ETF Detail Report.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the Medicare surcharge. As of 2016, this rate is 39.6% plus 0.9% Medicare surcharge, or 40.5%, this has been unchanged since 2013. This rate changes periodically in accordance with changes in federal law.

12 Month Yield

12 Month Yield is derived by summing the trailing 12-months' income distributions and dividing the sum by the last month's ending NAV, plus any capital gains distributed over the same period. Income refers only to interest payments from fixed-income securities and dividend payoffs from common stocks.

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.

30-Day SEC Yield

The 30-day SEC Yield is a calculation based on a 30-day period ending on the last day of the previous month. It is computed by dividing the net investment income per share earned during the period by the maximum offering price per share on the last day of the period. The figure listed lags by one month. When a dash appears, the yield available is more than 30 days old. This information is taken from fund surveys.

Alpha

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

Asset Allocation

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

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio

statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

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

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

Average Effective Duration

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

Average Effective Maturity

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

Average Weighted Coupon

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

Average Weighted Price

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

Best Fit Index

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

Beta

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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.

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, includes interest and dividends on borrowed securities but does not reflect any fee waivers in effect during the time period.

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™

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/.

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 Category

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

Morningstar Rank

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

Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end 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 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. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

Morningstar Return

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

Morningstar Risk

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

Morningstar Style Box™

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

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

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

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

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low," "medium," or "high" based on their average credit quality. Funds with a "low" credit quality are those whose weighted-average credit quality is determined to be less than

"BBB-"; "medium" are those less than "AA-", but greater or equal to "BBB-"; and "high" are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index, which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of 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.

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 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 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 (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

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

Long-Short: Due to the strategies used by long-short funds, which may include

but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

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

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

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

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

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

Benchmark Disclosure

BBgBarc Government 1-5 Yr TR USD

Comprised of both the Treasury Bond index (all public obligations of the U.S. Treasury, excluding flower bonds and foreign-targeted issues) and the Agency Bond Index (all publicly issued debt of U.S. Government agencies and quasi-federal corporations and corporate-debt guaranteed by the U.S. Government). These bonds also must have maturities of one to five years. The returns we publish for the index are total returns, which include reinvestment of dividends. The constituents displayed for this index are from the following proxy: Vanguard Short-Term Bond Index Fund.

BBgBarc Govt/Corp 1 Yr Duration TR USD

Description unavailable.

BBgBarc Intermediate Treasury TR USD

This index includes treasury bonds with maturates of at least one year and up to 10 years with an outstanding par value of at least 100 million. They include fixed-rate debt issues, rated investment grade or higher by Moody's Investor Services, Standard & Poor's Corporation, or Fitch Investor's Service (in that order). Treasuries include all public obligations of the U.S. Treasury, excluding flower bonds and foreign-targeted issues. The returns we publish for the index are total returns, which include reinvestment of dividends. For more information, visit the BarCap indexes web site. The constituents displayed for this index are from the following proxy: SPDR® Blmbg Barclays Interm Term Trs ETF.

BBgBarc US Agg Bond TR USD

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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.

BBgBarc US Government TR USD

Tracks the returns of U.S. Treasuries, agency bonds, and one- to three-year U.S. government obligations.

BBgBarc US Govt/Credit Long TR USD

Includes the BarCap Government and BarCap Corporate Bond indices that have maturities of 10 years or longer. The returns we publish for the index are total returns, which include reinvestment of dividends. The constituents displayed for this index are from the following proxy: Vanguard Long-Term Bond Index Fund.

BBgBarc US MBS TR USD

Includes 15- and 30-year fixed-rate securities backed by mortgage pools of the Government National Mortgage Association (GNMA). The constituents displayed for this index are from the following proxy: iShares MBS ETF.

BBgBarc US Universal TR USD

BarCap U.S. Universal Bond Index: The U.S. Universal Index mirrors the increasingly popular "Core Plus" choice set used by many U.S.-dollar investors. It is the union of the U.S. Aggregate Index, the U.S. High Yield Corporate Index, the 144A Index, the Eurodollar Index, the Emerging Markets Index, the non-ERISA portion of the CMBS Index, and the CMBS High Yield Index. Municipal debt, private placements, and non-dollar-denominated issues are excluded from the Universal Index. The constituents displayed for this index are from the following proxy: iShares Core Total USD Bond Market ETF.

BofAML US HY Master II TR USD

The US High Yield Master II Index tracks the performance of below investment grade US dollar-denominated corporate bonds publicly issued in the US domestic market. "Yankee" bonds are included in the Index provided the issuer is domiciled in a country having an investment grade foreign currency long-term debt rating. 144a issues are not included in the index until they are exchanged for registered securities. Qualifying bonds must have at least one year remaining term to maturity, a fixed coupon schedule and a minimum amount outstanding of USD 100 million.

BofAML USD LIBOR 3 Mon CM

The BofA Merrill Lynch USD LIBOR 3 Month Constant Maturity Index represents the London intrabank offered rate (LIBOR) with a constant 3-month average maturity. LIBOR is a composite of the rates of interest at which banks borrow from one another in the London market.

Citi WGBI NonUSD USD

A market-capitalization weighted index consisting of the government bond markets of the following countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, Switzerland, and United Kingdom. Country eligibility is determined based upon market capitalization and investability criteria. The index includes all fixed-rate bonds with a remaining maturity of one year or longer and with amounts outstanding of at least the equivalent of US\$25 million. Government securities typically exclude floating or variable rate bonds.

Morningstar US Lng Gov Bd TR USD

The Morningstar Long-Term US Government Bond Index includes US Treasury and US Government Agency bonds with maturities of seven years or longer.

Morningstar US Mid Cap TR USD

The Morningstar Mid Cap Index tracks the performance of U.S. mid-cap stocks. These stocks fall between the 70th and 90th percentile in market capitalization of the investable universe. In aggregate, the Mid-Cap Index represents 20 percent of the investable universe.

Morningstar US Small Cap TR USD

The Morningstar Small Cap Index tracks the performance of U.S. small-cap stocks. These stocks fall between the 90th and 97th percentile in market capitalization of the investable universe. In aggregate, the Small Cap Index represents 7 percent of the investable universe.

MSCI ACWI Ex USA NR USD

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

MSCI EAFE NR USD

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

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

Russell 1000 TR USD

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

Russell 2000 TR USD

Consists of the 2000 smallest companies in the Russell 3000 Index. The constituents displayed for this index are from the following proxy: iShares Russell 2000 ETF.

Russell Mid Cap TR USD

Measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 25% of the total market capitalization of the Russell 1000 Index. The constituents displayed for this index are from the following proxy: iShares Russell Mid-Cap 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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UNIVERSITY OF HAWAII BOARD OF REGENTS

Kalbert K. Young Vice President for Budget and Finance Chief Financial Officer

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October 23, 2017

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UNIVERSITY OF HAWAII PRESIDENT'S OFFICE

TO: Jan N. Sullivan Chairperson, Board of Regents

Wayne Higaki Chair, Committee on Budget and Finance, Board of Regents

VIA: David Lassner President

FROM: Kalbert K. Young Vice President for Budget and Finance/Chief Financial Officer

SUBJECT: FY16 Bond Post-Issuance Compliance Update

The Administration hereby submits for the information of the Board of Regents and its Committee on Budget & Finance a report and presentation entitled "University of Hawai'i Post-Issuance Compliance Update." Since FY2013, a review has been undertaken annually to monitor a number of post-issuance compliance issues related to outstanding University of Hawai'i revenue bonds – including, the amount of private activity occurring on or within facilities financed with UH revenue bonds. The attached report covers compliance review through FY16.

This report is to be discussed as an information item at the Committee on Budget & Finance meeting on November 1, 2017.

Attachment

Presentation: "University of Hawai'i Post-Issuance Compliance Update"

c: University Controller (w/o Attachment)



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Financial Management Office

University of Hawai'i Post-Issuance Compliance Update

UH Board of Regents

Committee on Budget & Finance

November 1, 2017

POST-ISSUANCE COMPLIANCE UPDATE

- I. Compliance Requirements
- II. Process to Determine Private Use
- III. Private Use Analysis Results
- IV. Moving Forward

COMPLIANCE REQUIREMENTS

Governmental Bond Requirements

- At least 90% of the proceeds of the bond issue must be used for governmental purposes
- No more than 10% of the proceeds of the bond issue can be used for a “private business use”
- Private business use is determined over the life of the bond issue

COMPLIANCE REQUIREMENTS

- *Basic Tax Analysis in Governmental Bond Financings*
 - Are the bond financed assets used by members of the general public?
 - Does a party other than a State or Local Government agency or department have a “special legal entitlement” to use the bond financed assets?
 - Private business use can arise under a management contract even if the assets serve the general public
 - Use of governmental bond financed assets by a charitable organization (e.g., a Section 501(c)(3) organization) will generally give rise to private business use
 - Contracts with the federal government will generally give rise to private business use

COMPLIANCE REQUIREMENTS

Contracts that may give rise to private business use include:

- Management Contracts
 - Bookstore Contracts
 - Physician Contracts
 - Concession Contracts
 - Cafeteria Contracts
- Research Contracts
 - Federal
 - Business Sponsored (including non-profit)

COMPLIANCE REQUIREMENTS

Contracts that will generally give rise to private business use:

- Leases
 - Cafeteria Contracts; Pharmacies; Physician Office Spaces; Gift Shops; Corporate Events
 - Many so-called “management contracts” are in fact leases (even though it might be called something else)
- If someone is paying rent or splitting profits from an operation in bond financed space, that person is not treated as a manager under the tax rules, and would be considered a nonqualified user

INCIDENTAL CONTRACTS

- Contracts for services that are solely incidental to the primary function of the financed facility are not subject to IRS rules.

Examples:

- Janitorial contracts
- Routine maintenance contracts
- Hospital billing contracts
- Landscaping contracts

QUESTION TO ASK TO DETERMINE PRIVATE USE

Why Do Some Management And Research Contracts Give Rise To Private Business Use?

- They represent a transfer of control or economic benefit from the University to a private party
- They provide a “special legal entitlement” (e.g. lease) to use the University’s bond financed property
- Private party benefits from use of the University’s bond financed facility and college/university research “know-how” in connection with a scientific endeavor

MANAGEMENT CONTRACT –REVENUE PROCEDURE CHANGES

- *Revenue Procedure 97-13 and IRS Notice 2014-67*
 - Based on mechanical rules
 - Provided for range of contract structures based on term and compensation
- *Revenue Procedure 2016-44 -- released August 22, 2016*
 - Replaced mechanical approach of Rev Proc 97-13 with a principle-based approach
- *Revenue Procedure 2017-13 -- released January 17, 2017 (details on slide 10 & 11)*
 - Supersedes Rev Proc 2016-44
 - Addresses concerns raised by Rev Proc 2016-44, most notably confirming that certain Rev Proc 97-13 compliant contracts will not cause private business use under the new rules
 - Applies to contracts entered into on or after January 17, 2017

MANAGEMENT CONTRACT - REVENUE PROCEDURES 2017-13

- Applies principle-based concepts of control, risk, and who derives the benefits and burdens of bond-financed property
- Rules to be applied:
 - Compensation must be reasonable
 - ✓ Payments to reimburse actual and direct expenses and related administrative overhead expenses
 - Timing and payment of compensation
 - ✓ At least paid annually; payment would include interest charges and late payment fees, etc.
 - Service provider may not receive a share of net profits from managed property
 - No bearing of net loss to the manager
 - Term of the contract
 - ✓ Must not exceed the lesser of 30 years or 80% of the weighted average expected economic life of managed property
 - Control over the use of managed property
 - No risk of loss to the manager
 - No inconsistent tax positions
 - ✓ The manager is not entitled to, will not take, any tax position inconsistent with the bond-finance property (e.g. depreciation of the property)
 - Owner's exercise of rights

SPONSORED RESEARCH AGREEMENTS - REVENUE PROCEDURES 2007-47

- Permits certain types of sponsored research to be conducted within bond financed space without research being treated as private business use
 - Applies only to “basic research” – any original investigation for the advancement of science not having a commercial objective

PROCESS TO DETERMINE PRIVATE USE

Management and Lease Contracts

- Reviewed all active contracts during fiscal year 2016
- Obtained square footages allocated for the services provided by these contracts
- Calculated the private use percentage

PROCESS TO DETERMINE PRIVATE USE

Sponsored Program Contracts

- Involved Office of Research Services, BLX Group (compliance consultant), and Orrick (tax law attorney) to determine if UH standard agreement terms with sponsors meet the Safe Harbor requirements:
 - **Qualified Sponsored Agreements**
 - UH federal contracts governed by the Bayh-Dole rules meet the requirements of 2007-47 and don't give rise to private business use
 - Public universities, State and Local government agreements don't give rise to private business use.
 - **Non-qualified Sponsored Agreements**
 - Any research undertaken on behalf of section 501(c)(3) organizations (**including UH Foundation**) and for-profit and foreign organizations are treated as private business use unless the requirements of 2007-47 are met. This is the rule under the tax-exempt bond regulations, even if the research is undertaken for a public interest
 - **Private use is generally measured based on non-qualified research dollars/total research dollars (Revenue Method). That measurement is based on a "bond issue by bond issue" basis**

PROCESS TO DETERMINE PRIVATE USE

Example: Private Use Calculation for sponsored programs - Fiscal Year 2016 Sponsored Program Revenue Data

	<u>JABSOM</u>	<u>Cancer Center</u>	<u>CMORE</u>
Non-Qualified Research (NQR) Revenue			
UH Foundation	175,310.69	270,261.48	103,190.10
Non-CT, Non-MTA, Non-UHF			
501(c)(3)	529,261.90	432,352.71	57,418.93
Business	71,779.00		
Foreign		65,795.75	61,633.20
STTR/SBIR2			
Total	776,351.59	768,409.94	222,242.23
Qualified Research Revenue			
UH Foundation Qualified Revenue			2,953,352.09
Material Transfer			
Non-CT, Non-MTA, Non-UHF			
Federal	17,961,126.53	19,432,019.71	2,632,380.35
Public University	(3,089.20)	-	82,188.30
State	-	-	-
State/Local	-	-	-
Total	17,958,037.33	19,432,019.71	5,667,920.74
Grand Total	18,734,388.92	20,200,429.65	5,890,162.97
NQR Revenue % of Grand Total	4.14%	3.80%	3.77%

PRIVATE USE ANALYSIS RESULTS

Series 2006A Refunding (compliant)

- Refund Series 2002A only (no new money)
- Series 2002A financed Biomedical Sciences Building Renovations 1 and 2, Cancer Center design and planning, and various JABSOM buildings including a central plant, cooling system, and emergency generators
- Research was applicable to all three Series 2002A financed projects
- Private use associated with JABSOM, Cancer Center, and Biomedical Sciences Renovation 1 due to nonqualified sponsored research
- Series 2015E(R) defeased portions of Series 2006 A Refunding principal in fiscal year 2016
 - ✓ *2013 Fiscal Year private use percentage: 2.24%*
 - ✓ *2014 Fiscal Year private use percentage: 3.46%*
 - ✓ *2015 Fiscal Year private use percentage: 2.89%*
 - ✓ *2016 Fiscal Year private use percentage: 2.39%*

PRIVATE USE ANALYSIS RESULTS

Series 2006A (compliant)

- Financed student housing (Frear Hall and Hilo and Manoa R&R) and the Gateway Cafeteria
- No corporate sponsored research conducted in any facilities financed by 2006A Bonds
- Series 2015B(R) defeased portions of Series 2006 A principal in fiscal 2016
- Private use due to short term non-UH student uses in excess of 50 days in Frear Hall and Manoa Student Housing
 - ✓ *2013 Fiscal Year private use percentage: 0.00%*
 - ✓ *2014 Fiscal Year private use percentage: 0.18%*
 - ✓ *2015 Fiscal Year private use percentage: 2.02%*
 - ✓ *2016 Fiscal Year private use percentage: 2.11%*

PRIVATE USE ANALYSIS RESULTS

Series 2009A (compliant)

- Financed the following projects: Ching Field, Hawaii CC Palamanui Campus, Hilo Bookstore Campus Center addition, UH Hilo College of Pharmacy, UH Hilo Student Housing, UH Manoa Student Housing, UHM Biomedical Sciences Building addition (C-MORE), Waianae Education Center, and UH West O'ahu campus development
- Refunded Housing Finance and Development Corporation Series 1995 Bonds that financed the Kau'iokahaloa Nui faculty housing project
- Private use associated with
 - ❖ West O'ahu Campus Development – UH Federal Credit Union lease and the Da Spot Food, LLC lease
 - ❖ Hale Aloha Student Housing - short term uses in excess of 50 days
 - ❖ Kau'iokahaloa Nui - laundry lease with Touchstone Properties, LLC, of which was replaced by Wash Multimedia Laundry Systems, LLC
 - ❖ C-MORE Addition - high levels of **nonqualified sponsored research** from UH Foundation in fiscal year 2014 & 2015 and significant drop in fiscal year 2016
- ✓ *2013 Fiscal Year private use percentage: 0.45%*
- ✓ *2014 Fiscal Year private use percentage: 6.09%*
- ✓ *2015 Fiscal Year private use percentage: 11.44%*
- ✓ *2016 Fiscal Year private use percentage: 2.60%*

(Private use compliance is determined over the life of the bond issue. Exceeding the allowable percentage in one year doesn't put us out of compliance.)

PRIVATE USE ANALYSIS RESULTS

Series 2010A-1 and 2010A-2 (compliant)

- Financed construction of Cancer Center
- Private use due to nonqualified sponsored research
 - ✓ *Series 2010A-1 & 2010A-2 2013 Fiscal Year private use percentage: 7.89%*
 - ✓ *Series 2010A-1 & 2010A-2 2014 Fiscal Year private use percentage: 9.73%*
 - ✓ *Series 2010A-1 & 2010A-2 2015 Fiscal Year private use percentage: 5.04%*
 - ✓ *Series 2010 A-1 & 2010 A-2 2016 Fiscal Year private use percentage: 3.80%*

PRIVATE USE ANALYSIS RESULTS

Series 2010 B-1 and 2010 B-2 (compliant)

- Financed Campus Center – UH Manoa Campus Center, CC Energy Conservation Project, Culinary Institute of the Pacific, ITC building, Pan-STARRS facility, Sinclair Library Basement Renovation, Waianae Education Center, and UH West O'ahu campus development
- Not all facilities were placed in service as of the end of fiscal 2016
- Private use associated with
 - ❖ UH Manoa Campus Center –American Savings Bank, Subway, and UH Federal Credit Union leased space receiving utility from the Water Cooled Chiller
 - ❖ West O'ahu Campus Development - Federal Credit Union lease and the Da Spot Food, LLC lease
 - ❖ Community Colleges Energy Conservation Project – lease of space affected by the energy efficiency improvements at HCC, KCC, and LCC
- ✓ *Series 2010B-1 & 2010B-2 2013 private use percentage: 0.66%*
- ✓ *Series 2010B-1 & 2010B-2 2014 private use percentage: 0.17% and .13%, respectively*
- ✓ *Series 2010B-1 & 2010B-2 2015 private use percentage: 2.62% and 1.95%, respectively*
- ✓ *Series 2010 B-1 & 2010 B-2 2016 Fiscal Year private use percentage: 2.83% and 2.10%, respectively*

PRIVATE USE ANALYSIS RESULTS

Series 2012A (compliant)

- Refunding the Series 2001B Bonds which refunded the Series 1992 and 1994 Bonds
 - Series 1992 financed a telecommunications system
 - Series 1994 financed elevator upgrades (Gateway, Hale Aloha Towers, Hale Wainani, & Hale Noleani), bathroom renovations (Laulima, Kahawai, Hale Aloha Ilima, & Mokihana Towers), and lounge conversions (Gateway, Laulima, & Kahawai)
 - Private use associated with
 - ❖ Telecommunications system – private use of 431 out of 12,000 line capacity in fiscal 2013, 408 in fiscal 2014, 401 in fiscal 2015, and 413 in fiscal 2016
 - ❖ Hale Aloha – the elevator upgrades due to short term uses in excess of 50 days
- ✓ *2013 Fiscal Year private use percentage: 2.19%*
 - ✓ *2014 Fiscal Year private use percentage: 2.05%*
 - ✓ *2015 Fiscal Year private use percentage: 2.01%*
 - ✓ *2016 Fiscal Year private use percentage: 2.09%*

PRIVATE USE ANALYSIS RESULTS

Series 2015B (R) (compliant)

- Partial refund Series 2006 A (no new money)
 - Series 2006 A financed student housing (Frear Hall, Hilo and Manoa R&R) and the Gateway Cafeteria
 - No corporate sponsored research conducted in any facilities financed by Series 2006 A
 - Series 2015B(R) private use mitigated by Taxable Bond proceeds
 - Private use due to short term uses in excess of 50 days in Frear Hall and Manoa Student Housing
- ✓ *2016 Fiscal Year private use percentage: 0.48%*

PRIVATE USE ANALYSIS RESULTS

Series 2015E(R) (compliant)

- Partial refund of Series 2006A Refunding Bonds (no new money)
 - Series 2006A Refunding Bonds refunded Series 2002 A (no new money)
 - Series 2002A financed Biomedical Sciences Building Renovations 1 and 2, Cancer Center design and planning, and various JABSOM buildings including a central plant, cooling system, and emergency generators
 - Research is applicable to all three Series 2002A financed projects
 - Series 2015E(R) private use mitigated by Taxable Bond proceeds
 - Private use associated with JABSOM, Cancer Center, and Biomedical Sciences Renovation 1 due to nonqualified sponsored research
- ✓ *2016 Fiscal Year private use percentage: 1.92%*

PRIVATE USE ANALYSIS RESULTS

Research Facilities - JABSOM, Cancer Center, BioMed, C-MORE

Research revenue data and contract summaries:

- Complexion of research activity remained relatively consistent from fiscal year 2013 to fiscal year 2016
- Private use rose for some bond issues due to research facilities being placed in service with non-qualified research activity in fiscal 2014 and 2015
- Fiscal 2016 private use drop for bond issues due to the changes made to the UH Foundation contract template and legal review of certain UH Foundation research contracts

PRIVATE USE ANALYSIS RESULTS

Research Analyses - JABSOM, Cancer Center, BioMed, C-MORE

- IRS-sanctioned revenue methodology:
 - Revenue method continues for the fiscal 2016 analyses, as it has been for the fiscal 2013, 2014 and 2015 analyses
 - University of Hawaii Foundation (“UHF”) research was found, by virtue of certain wording in its research contract template, to not convincingly meet the safe harbor requirements of Rev. Proc. 2007-47, and thus all revenue from UHF research has been considered to cause private use
 - UH has revised the UHF research template and beginning with fiscal 2016, UHF research should no longer result in private use as long as the original research contract is funded by a Qualified Research Sponsor or has met Rev. Proc. 2007-47 safe harbor

MOVING FORWARD

- Consider to issue certain percentage of taxable revenue bonds to allow private use in future bond issuance
- Continue to monitor private business use percentages on an annual basis for all outstanding bond issues
- Consider the effects newly placed in service bond-financed projects will have on the private use percentages of certain bond issues
- UHF research contributed by far the most to non-qualified sponsored research, so new UHF research template should greatly reduce private use from research. Still, very important to continue to monitor research activity annually, to ensure continued compliance

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Kalbert K. Young
Vice President for Budget and Finance
Chief Financial Officer

18 JAN -5 A10:52

RECEIVED

January 5, 2018

'18 JAN -5 A10:54

UNIVERSITY OF HAWAII
PRESIDENT'S OFFICE

TO: Jan Naoe Sullivan
Chairperson, Board of Regents

Wayne Higaki
Chair, Committee on Budget and Finance, Board of Regents

VIA: David Lassner
President

FROM: Kalbert K. Young
Vice President for Budget and Finance/Chief Financial Officer

SUBJECT: FY18 UH REVENUE BOND TRANSACTION RECAP

This information-only item is provided as an overview to highlight the recent UH Revenue Bond transaction. The transaction included refunding over \$100 million in existing UH Revenue Bonds and the issuance of \$3.99 million in new UH Revenue Bonds. Vice President for Budget and Finance Young will speak to the attached slide deck as part of this agenda item at the January 11, 2018 Committee on Budget and Finance meeting.

Attachment

c: University Budget Office (w/o Attachment)
University Controller (w/o Attachment)

FY18 UH Revenue Bond Transaction Recap

Kalbert K. Young

Vice President for Budget & Finance / CFO

University of Hawai'i System



Transaction Recap

Transaction authorized by Board of Regents

- November 2017, Bond Resolution

Credit agency ratings and outlook re-affirmed

- Moody's - 'Aa2' (Stable)
- Fitch Rating – 'AA' (Stable)

\$110,795,000 Transaction

- Issued \$106,805,000 to refund existing UH Revenue Bonds for debt-service savings
- Issued \$3,990,000 in new UH Revenue Bonds for \$4,500,000 in capital proceeds

Needed to accelerate transaction to close before December 31, 2017 due to new federal tax regulations regarding advanced refunding of municipal debt.

Transaction Highlights

Transaction dates

- December 13 for retail sales
- December 14 for institutional sales
- Closed transaction on December 28, 2017.

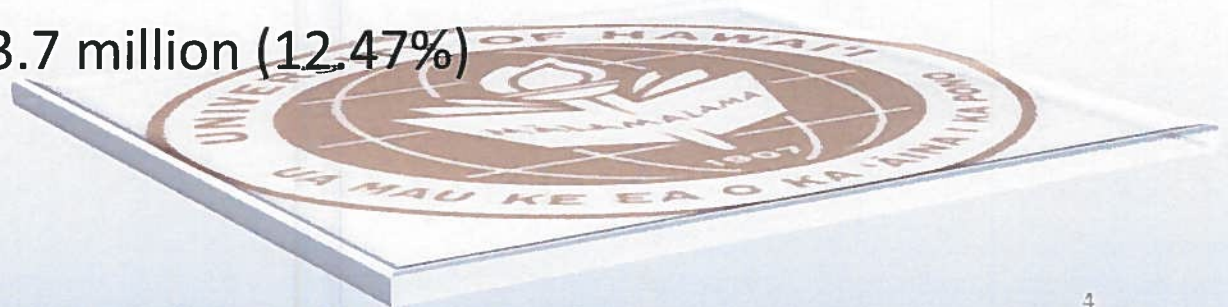
7 bond series

- Series 2017A = \$ 3,990,000*(Tax-Exempt)
- Series 2017B = \$ 12,040,000 (Tax-Exempt Refunding)
- Series 2017C = \$ 4,110,000 (Taxable Refunding)
- Series 2017D = \$13,185,000 (Tax-Exempt Refunding)
- Series 2017E = \$ 4,450,000 (Taxable Refunding)
- Series 2017F = \$ 52,275,000 (Tax-Exempt Refunding)
- Series 2017G = \$ 20,745,000 (Taxable Refunding)

* \$3,990,000 in new debt issued garnered \$4,500,000 in proceeds due to bond premium proceeds.

Financing Summary

- All-in true interest cost* for transaction of 2.72% for 2017A.
- All-in true interest cost* of 3.23% total transaction.
- Final maturity October 2038.
- Debt service savings of \$17.50 million through 2038.
- Annual debt service savings between \$689,500 to \$1,522,000 each year.
- Present value savings \$13.7 million (12.47%)



*All-in true interest cost includes fees and service costs for executing the transaction.

Debt Service Savings

	2017A	2017B	2017C	2017D	2017E	2017F	2017G	Total
Sources of Funds								
Par	\$3,990,000	\$12,040,000	\$4,110,000	\$13,185,000	\$4,450,000	\$52,275,000	\$20,745,000	\$110,795,000
Net Premium	536,411	275,428	--	128,172	--	9,667,617	--	10,607,627
Total Sources	\$4,526,411	\$12,315,428	\$4,110,000	\$13,313,172	\$4,450,000	\$61,942,617	\$20,745,000	\$121,402,627
Uses of Funds								
Project Fund	\$4,500,000	\$--	\$--	\$--	\$--	\$--	\$--	\$4,500,000
Escrow Fund	--	12,242,866	4,086,045	13,235,457	4,421,916	61,613,680	20,623,759	116,223,724
Costs of Issuance	26,411	72,562	23,955	77,714	28,084	328,937	121,241	678,903
Total Uses	\$4,526,411	\$12,315,428	\$4,110,000	\$13,313,172	\$4,450,000	\$61,942,617	\$20,745,000	\$121,402,627
Financing Results								
Average Life	8.52 Years	10.27 Years	10.27 Years	11.30 Years	11.30 Years	12.60 Years	12.00 Years	11.79 Years
Refunded Par Amount	--	\$12,030,000	\$4,015,000	\$13,110,000	\$4,380,000	\$57,240,000	\$19,160,000	\$109,935,000
All-In TIC	2.72%	2.81%	3.40%	2.96%	3.55%	3.21%	3.65%	3.23%
Cashflow Savings	--	\$706,690	-\$24,713	\$374,216	-\$178,125	\$13,377,694	\$3,245,930	\$17,501,691
Average Annual Cashflow Savings	--	\$58,891	-\$2,059	\$26,730	-\$12,723	\$608,077	\$147,542	\$795,531
PV Savings (\$)	--	\$700,435	\$25,351	\$339,977	-\$128,943	\$10,433,375	\$2,338,659	\$13,706,854
PV Savings (% of Refunded Par)	--	5.82%	0.63%	2.59%	-2.94%	18.23%	12.20%	12.47%

Conclusion



DTS 18664-B4



UNIVERSITY of HAWAI'I SYSTEM

UNIVERSITY OF HAWAII BOARD OF REGENTS

Kalbert K. Young Vice President for Budget and Finance Chief Financial Officer

18 JAN -5 AIO:23

RECEIVED

January 4, 2018

'18 JAN -5 AIO:10

UNIVERSITY OF HAWAII PRESIDENT'S OFFICE

TO: Jan Naoe Sullivan Chairperson, Board of Regents

Wayne Higaki Chair, Committee on Budget and Finance, Board of Regents

VIA: David Lassner President

FROM: Kalbert K. Young Vice President for Budget and Finance/Chief Financial Officer

SUBJECT: FY19 UH Supplemental Budget Update

This information-only presentation highlights a comparison between the Regent-approved FY19 Supplemental Budget request with that of the Governor's FY19 Executive Supplemental Budget Proposal transmitted to the Legislature. We are also including a slide deck which will highlight the key discussion points. Vice President for Budget and Finance Young will speak on the slide deck and present this as an agenda item before the committee and will be available for any questions of members.

Attachment

- c: University Budget Office (w/o Attachments) University Controller (w/o Attachments)



FY19 UH Supplemental Budget Update

January 11, 2018

Committee on Budget and Finance



Governor's Submittal

1. On December 18, 2017, the Governor submitted his supplemental budget request for Fiscal Year 2018-2019 to the Legislature.
2. For the entire state, Governor is requesting additional \$21.3 million (0.3%) in General Funds and an additional \$85.5 million (0.6%) for all Means of Financing.
3. Fixed costs for the entire state (debt service, pension accumulation, health premiums) are reduced by \$118 million for FY19.
 - In other words, approximately \$139 million in new spending for FY19 was offset by reduced fixed costs to provide the \$21.3 million net increase in GF.



State Fiscal Situation

1. State ended FY17 with General Fund balance of \$893.8 million.
2. While this amount is significant, State General Fund expenditures exceed revenues for the next five fiscal years – until FY23.
3. Council on Revenues projects 4.3% GF growth. Collections through November 2017 showed 4.7% growth over prior FY.
 - Council meets on January 8.
4. While unemployment is at a record low, there are some concerns about Hawai‘i’s economic future with uncertainty at the federal/international level and with local construction.



Board vs. Governor's Budget (Operating)

Campus	Description	UH BOR	Governor
Mānoa	Facilities Maintenance	\$4,038,848	\$1,500,000
Mānoa	Student Success Initiative - Veterans, Filipinos, Mental Health	\$575,000	\$400,000
Mānoa	Native Hawaiian Affairs Action Plan	\$700,000	\$500,000
Mānoa	Student Research & Innovation	\$535,000	\$175,000
Mānoa	Graduate Student Initiative - Phase I	\$2,850,000	\$621,397
Hilo	DKICP - Janitorial & Groundskeeping	\$120,495	\$120,495
Hilo	Native Hawaiian Development	\$260,000	\$200,000
Hilo	Student Workforce	\$200,000	
UHWO	Health & Safety / Utilities / Equipment	\$781,000	\$300,000
UHWO	Academic Affairs Restructure & Growth	\$680,000	\$400,000
UHWO	Student Affairs	\$446,364	\$200,000
CCs	Hawai'i's Promise Program	\$700,000	\$700,000
CCs	Architecture/Engineering for Facilities	\$273,600	
CCs	Additional Positions for Security	\$1,083,264	
CCs	Apprentice Lecturer Costs	\$260,000	\$260,000
CCs	Filipino Student Support	\$614,920	\$350,000
CCs	Veterans Support	\$473,108	\$473,108
CCs	Native Hawaiian Student Support	\$1,729,908	\$500,000
System	Office of Strategic Planning & Development	\$500,000	
Total		\$16,821,507	\$6,700,000



Board vs. Governor's Budget (CIP)

Project Title	UH BOR	Governor
Mānoa - Renew, Improve, Modernize (RIM) projects	139,500,000	
Mānoa - Sinclair Library Renovation	41,000,000	20,000,000
Mānoa - Keller Hall Renovations, design phase	1,500,000	
Hilo - Renew, Improve, Modernize projects	27,900,000	
Hilo - Puako Marine Educational Center, design phase	1,000,000	
West O'ahu- Renew, Improve, Modernize projects	3,000,000	
Relocation of Dental Hygiene Program from UH Mānoa to UH West O'ahu	10,000,000	
CC - Capital Renewal & Deferred Maintenance	25,000,000	12,000,000
CC - Minor Capital Improvement Projects	10,000,000	10,000,000
Hawai'i CC - Campus Development, design phase	2,000,000	2,000,000
Leeward CC - Repave Fascia & Replace Walkways Campuswide	8,800,000	
UH - Renew, Improve, Modernize (RIM) Projects		76,000,000
Total	269,700,000	120,000,000



Budget Briefings

1. The joint Senate Ways and Means and Higher Education Committees held informational briefings regarding UH operations:
 - December 27, 2017 – Community Colleges
 - December 29, 2017 – All Four-year campuses plus RCUH
2. Senate Ways and Means Budget Briefing on January 9, 2018
3. House Finance Budget Briefing on January 16, 2018



Next Steps

1. Opening Day for Legislature is January 17
2. Budget Decking (House Draft) is on March 12
 - Budget could be completed by the House earlier, but must be completed by March 12.