



**OPEB Trust Meeting**  
**Gaylord Opryland Resort and Convention Center**  
**November 18, 2023**

**AGENDA**

Call to Order 12:55 p.m.	Dr. Dale Viox, Chairman
Approval of Agenda 12:55 p.m.	Dr. Dale Viox, Chairman
Approval of the February 17, 2023 Minutes 12:55 p.m.	Dr. Dale Viox, Chairman
Acceptance of the 3-month Financial Statements - September 30, 2023 12:55 p.m.	Dr. Tammy Grissom, Trust Administrator
Report of Activities and Fiscal Condition of the Trust 12:55 p.m.	Dr. Tammy Grissom, Trust Administrator
Review OPEB Trust Bylaws 12:55 p.m.	Emily Warren, TSBA Staff Attorney
Approval of Proposed Policy Change: 1010 - Board of Trustees' Meetings 12:55 p.m.	Emily Warren, TSBA Staff Attorney
Approval of June 30, 2023 Audit 12:55 p.m.	Erica Saeger, Audit Director Crosslin CPA
Investment Report 12:55 p.m.	Chris Sigmund, Morgan Stanley
Appointment of the Following New Trustees: <ul style="list-style-type: none"><li>• David Cook, Bartlett (Term: 11/18/23 – 12/31/24)</li><li>• Tim Hobbs, Hickman County (Term: 11/18/23 – 12/31/24)</li></ul>	
12:55 p.m.	Dr. Dale Viox, Chairman

Election of 2024 Trust Officers (Chairman and Vice-Chairman)

12:55 p.m.

Dr. Dale Viox,  
Chairman

Public Comment

12:55 p.m.

Other Business

12:55 p.m.

Adjourn

12:55 p.m.



**TSBA**  
TENNESSEE SCHOOL BOARDS ASSOCIATION

# OPEB Trust Meeting

Agenda and Supporting Documents

Gaylord Opryland Resort and  
Convention Center  
Lincoln B

Saturday, November 18, 2023  
7:15 a.m. – 8:15 a.m.



**OPEB Trust Meeting**  
**Gaylord Opryland Resort and Convention Center**  
**Lincoln B**  
**November 18, 2023**

**AGENDA**

7:15 a.m.	Call to Order	Dr. Dale Viox, Chairman
7:16 a.m.	Approval of Agenda	
7:17 a.m.	Approval of February 17, 2023 Minutes	
7:18 a.m.	Acceptance of 3-month Financial Statements – September 30, 2023	Dr. Tammy Grissom, Trust Administrator
7:19 a.m.	Report of Activities and Fiscal Condition of the Trust	Dr. Tammy Grissom
7:21 a.m.	Review OPEB Trust Bylaws	Emily Warren, TSBA Staff Attorney
7:23 a.m.	Approval of Proposed Policy Change <ul style="list-style-type: none"><li>• 1010 – Board of Trustees’ Meetings</li></ul>	
7:25 a.m.	Approval of June 30, 2023 Audit	Erica Saeger, Audit Principal Crosslin CPA
7:40 a.m.	Investment Report	Chris Sigmund, Morgan Stanley
7:55 a.m.	Appointment of the Following New Trustees: <ul style="list-style-type: none"><li>• David Cook, Bartlett Term: 11/18/23 – 12/31/24</li><li>• Tim Hobbs, Hickman County Term: 11/18/23 – 12/31/24</li></ul>	Dr. Dale Viox
7:58 a.m.	Election of 2024 Trust Officers (Chairman and Vice-Chairman)	Dr. Dale Viox
8:03 a.m.	Public Comment	
8:13 a.m.	Other Business	
8:15 a.m.	Adjourn	

**Tennessee School Boards Association  
OPEB Trust Meeting  
Embassy Suites by Hilton Cool Springs  
Cool Springs Boardroom  
Friday, February 17, 2023**

The TSBA OPEB Trustees met on Friday, February 17, 2023. The following members were present: **Wright Cox**, Collierville; **Kevin Woods**, Memphis-Shelby County; **Bryan Woodruff**, Bartlett; **Chris Denson**, Millington; **Candy Morgan**, Maryville; and **Dr. Tammy Grissom**, Trust Administrator. Absent was **Dr. Dale Viox**, Arlington. TSBA staff member present was **Emily Warren**. **Lee Burklow** with Morgan Stanley was also in attendance.

Bryan Woodruff, Vice Chairman, called the meeting to order at 7:01 a.m. and welcomed everyone.

**DENSON/WOODS:** Motion to approve the agenda. MOTION CARRIED.

**GRISSOM/DENSON:** Motion to approve November 12, 2022 Minutes. MOTION CARRIED.

**GRISSOM/WOODS:** Motion to accept the 6-month Financial Statements (December 31, 2022).  
MOTION CARRIED.

Dr. Tammy Grissom, the Trust Administrator, reported on the activities and fiscal condition of the Trust. She noted that, since our last meeting, no new members had joined the OPEB Trust and that no withdrawal of funds had been made by any OPEB Trust members.

Discussion was held as to whether any changes needed to be made to the OPEB Trust's investment policy 3060. Tammy noted that the policy is reviewed annually in consultation with Morgan Stanley to ensure it aligns with the practices of the OPEB Trust. No changes were recommended.

Lee Burklow with Morgan Stanley reported on the financial stability of the OPEB Trust and the performance of the Trust's investments in the current economy. He stated that the Trust is performing within the fiduciary guidelines as set forth by the investment policy. He went into detail on the economy and the effects it would have on future investments.

The meeting adjourned at 7:44 a.m.

**Respectfully submitted,**

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**Bryan Woodruff, Vice Chairman**

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**Tammy Grissom, OPEB Trust Administrator**

**TSBA OPEB Trust**  
**Balance Sheet**  
As of September 30, 2023

	Sep 30, 23
<b>ASSETS</b>	
<b>Current Assets</b>	
<b>Checking/Savings</b>	
1000-00 · Suntrust Operating Account	5,654.35
<b>Total Checking/Savings</b>	5,654.35
<b>Other Current Assets</b>	
1300-00 · Investments	
1300-10 · Hickman County Investments	2,617,994.63
1300-20 · Johnson County Investments	1,319,225.74
1300-30 · Shelby County Investments	121,820,046.36
1300-50 · Jackson-Madison Investments	475,804.99
1300-60 · Arlington Investments	4,140,619.12
1300-70 · Bartlett Investments	6,593,763.91
1300-80 · Collierville Investments	2,455,425.61
1300-90 · Lakeland Investments	2,835,022.00
1300-91 · Millington Investments	361,361.20
<b>Total 1300-00 · Investments</b>	142,619,263.56
<b>Total Other Current Assets</b>	142,619,263.56
<b>Total Current Assets</b>	142,624,917.91
<b>TOTAL ASSETS</b>	<b>142,624,917.91</b>
<b>LIABILITIES &amp; EQUITY</b>	
<b>Equity</b>	
3200-00 · Unrestricted Net Assets	146,681,792.48
Net Income	-4,056,874.57
<b>Total Equity</b>	142,624,917.91
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>142,624,917.91</b>

**TSBA OPEB Trust**  
**Profit & Loss**  
 July through September 2023

	Jul - Sep 23
<b>Income</b>	
4300-00 · Contributions	
4300-20 · Contributions - Johnson County	25,000.00
<b>Total 4300-00 · Contributions</b>	<b>25,000.00</b>
4400-00 · Unrealized Gain/Loss	
4400-10 · Unrealized Gain/Loss - Hickman	-86,459.13
4400-20 · Unrealized Gain/Loss - Johnson	-44,038.82
4400-30 · Unrealized Gain/Loss - Shelby	-4,063,803.93
4400-50 · Unrealized Gain/Loss - JMadison	-15,700.83
4400-60 · Unrealized Gain/Loss - Arlingto	-138,481.06
4400-70 · Unrealized Gain/Loss - Bartlett	-214,654.81
4400-80 · Unrealized Gain/Loss - Collierv	-82,350.01
4400-90 · Unrealized Gain/Loss - Lakeland	-95,162.71
4400-91 · Unrealized Gain/Loss - Millingt	-11,912.15
<b>Total 4400-00 · Unrealized Gain/Loss</b>	<b>-4,752,563.45</b>
4500-00 · Interest, Dividends&Capital Gn	
4500-10 · Interest, Div., & CG - Hickman	14,386.62
4500-20 · Interest, Div., & CG - Johnson	7,261.90
4500-30 · Interest, Div., & CG - Shelby	668,743.38
4500-50 · Interest, Div., & CG - JMadison	2,622.59
4500-60 · Interest, Div., & CG - Arlingto	22,850.85
4500-70 · Interest, Div., & CG - Bartlett	35,715.46
4500-80 · Interest, Div., & CG - Collierv	13,740.28
4500-90 · Interest, Div., & CG - Lakeland	15,783.91
4500-91 · Interest, Div., & CG - Millingt	1,990.48
<b>Total 4500-00 · Interest, Dividends&amp;Capital Gn</b>	<b>783,095.47</b>
4800-00 · Interest Income	0.15
<b>Total Income</b>	<b>-3,944,467.83</b>
<b>Expense</b>	
6400-00 · Administrative Fee	
6400-10 · Administrative Fee - Hickman	1,682.39
6400-20 · Administrative Fee - Johnson	832.42
6400-30 · Administrative Fee - Shelby	37,531.53
6400-50 · Administrative Fee -J. Madison	305.75
6400-60 · Administrative Fee - Arlington	2,661.83
6400-70 · Administrative Fee - Bartlett	4,235.38
6400-80 · Administrative Fee - Colliervil	1,578.37
6400-90 · Administrative Fee - Lakeland	1,822.71
6400-91 · Administrative Fee - Millington	232.20
<b>Total 6400-00 · Administrative Fee</b>	<b>50,882.58</b>
6500-00 · Investment Advisor Fees	
6500-10 · Investment Advisor Fees - Hickm	1,117.74
6500-20 · Investment Advisor Fees - Johns	561.05
6500-30 · Investment Advisor Fees - Shelb	52,482.67
6500-50 · Investment Advisor Fees - JMadi	203.73
6500-60 · Investment Advisor Fees - Arlin	1,794.04
6500-70 · Investment Advisor Fees - Bartl	2,902.97
6500-80 · Investment Advisor Fees - Colli	1,067.66
6500-90 · Investment Advisor Fees - Lakel	1,239.70
6500-91 · Investment Advisor Fees - Milli	154.60
<b>Total 6500-00 · Investment Advisor Fees</b>	<b>61,524.16</b>
<b>Total Expense</b>	<b>112,406.74</b>
<b>Net Income</b>	<b>-4,056,874.57</b>

# Tennessee School Boards Association

## OPEB Trust

### Bylaws

#### ARTICLE I—TRUSTEES

**Section 1. Appointment of Trustees.** There shall be seven (7) Trustees. The Executive Director and President of the Tennessee School Boards Association will be voting ex-officio members of the Board of Trustees and shall remain as Trustees so long as they hold their respective positions. The remaining five (5) Trustees shall be from the governing boards of the participating members of the Trust and appointed by the TSBA OPEB Trustees. The term of these five (5) Trustees shall be three (3) years, and they may be reappointed.

**Section 2. Officers of the Trust.** The officers of the Trust shall be Chairman and Vice-Chairman. Officers shall be elected by the Trustees annually from the members of the Board of Trustees. The term of officers shall begin on January 1 of each year and terminate on the following December 31. An officer's term shall also cease upon their termination as a board member. Ex-officio members of the Board of Trustees are ineligible to hold the office of Chairman and Vice-Chairman.

**Section 3. Appointment of Successor Trustees.** Upon the death, resignation, or removal of a Trustee or upon the Trustee becoming ineligible to serve, the Board of Trustees shall appoint a new Trustee to serve the remainder of the term. Trustees and all officers of the Trust shall continue to serve until their successors are selected except for Trustees who are removed or resign. A Trustee appointed to fill a vacancy shall serve until the expiration of the term of his/her predecessor.

**Section 4. Vacancy of Officers.** Upon the death, resignation, or removal of the Chairman, the Vice-Chairman will automatically assume the office of Chairman, and a new Vice-Chairman shall be elected at the next meeting of the Trust. If the vacancy is for the office of Vice-Chairman, a new Vice-Chairman shall be elected at the next meeting of the Trust.

#### ARTICLE II—GENERAL TRUST PROVISIONS

**Section 1. Amendments.** These Bylaws may be amended by a vote of the majority of the Trustees present at any meeting of the Trust, provided that notice of such proposed amendment shall be given in writing ten (10) days in advance to all Trustees. The Administrator shall notify the participating members of any and all amendments adopted.

The Trustees will review these Bylaws annually to ensure its continued relevance and to make changes as new conditions dictate.

**Section 2. Conflicts.** In the event of any conflict between any provision of these Bylaws and any provision of any applicable law, these Bylaws shall be deemed modified to the extent necessary to comply with such law.

### ARTICLE III—MEETINGS OF TRUSTEES

**Section 1. Regular Meetings.** The Board of Trustees shall meet biannually. Any item of business may be considered at a regular meeting. The time, date, and location of meetings of the Board shall be determined by the Board. No proxy votes shall be permitted.

**Section 2. Special Meetings.** A special meeting may be called at any time by the Chairman or by any four (4) of the Trustees. An emergency meeting may be called with less than ten (10) days written notice provided that all Trustees agree to such a meeting. An agenda specifying the subject of any special meeting shall accompany such notice, and only business included on that agenda may be transacted.

**Section 3. Notice of Meetings.** All meetings of the Board shall be conducted in a manner required by law. The Administrator shall publish any schedule or notice of meeting of the Board. Such publication requirement shall be deemed met by announcement on the TSBA website.

### ARTICLE IV—NATURE AND USE OF FUNDS

**Section 1. Member Fund Withdrawal.** The Trust is specifically authorized to make payments of legitimate reimbursements to member systems requesting their other post-employment benefits (OPEB) obligations. No other withdrawals may be made by member systems.

**Section 2. Investment of Funds.** The Trust may invest such portions of the Trust reserve in any manner that is both prudent and permissible under state and federal law. The Trustees shall develop and adopt an investment policy.

**Section 3. Investment Manager Selection.** Investment managers shall be subject to all restrictions and investment guidelines within these Bylaws and the investment policy maintained by the Trustees.

**Section 4. Fees.** The Trust Administrator shall be paid a fee per the following schedule on total assets under management and an administrative fee for the biennial OPEB valuations.

Amount	Fee
0-25MM	0.25%
25MM-50MM	0.15%
50MM-75MM	0.10%
75MM +	0.05%

The Trustees are permitted to compensate the investment managers and/or consultants with such fees as may be reasonable and competitive and are not excessive and detrimental to the Trust's long-term viability. It shall be incumbent upon the investment managers and/or consultants to fully represent all costs and fees associated with the management of the Trust.

**Section 5. Asset Manager Performance Review.** The Trustees will monitor performance of the portfolio using the quarterly statements provided by the Trust's investment consultants. The investment consultants shall provide the Trustees with manager performance numbers and appropriate benchmark data with which to evaluate the managers' performance. While mindful of the specific goals of the Trust, the investment consultants shall provide data on a benchmark comprised of an appropriate mix of indices and such other benchmark data as may be requested or relevant.

A file of the written confirmations of every transaction and the quarterly statements documenting total assets, including gains and/or losses in each security since original purchase date, will be maintained by the Trust Administrator.

The Trustees will continually review the liquidity needs of the Trust and will notify the investment consultants as soon as possible of any significant changes in anticipated needs.

**Section 6. Financial Institution.** All funds received by the Trust shall be deposited in such financial institutions as the Trust may designate for that purpose.

**Section 7. Withdrawals.** All withdrawals of funds from such financial institutions shall be made only by electronic transfer or by check signed by the Treasurer of the Trust or his/her designee.

**Section 8. Bonding.** Any person, other than third parties retained to invest funds on behalf of the Trust, who is authorized to sign or who may be engaged in handling funds or securities held by the Trust shall be bonded at the expense of the Trust by a duly authorized surety company in such amount or amounts as may from time to time be required by the Trustees.

*Adopted 4/16/09*  
*Article VI, Section 5 revised 7/16/09*  
*Article VI, Section 1 revised 11/15/10*  
*Article I, Sections 1, 4, 5, 6, 7, 8, & 9 revised 09/28/12*  
*Article II, Sections 1 & 2 revised 09/28/12*  
*Article V, Section 1 revised 09/28/12*  
*Article VI, Sections 2 & 6 revised 09/28/12*  
*Article I, Sections 1, 2, 3, 5, 6 & 7 revised 11/05/12*  
*Article II, Section 1 revised 11/05/12*  
*Article III, Sections 1 & 2 revised 11/05/12*  
*Article V, Sections 1 & 3 revised 11/05/12*  
*Article VI, Sections 2 & 9 revised 11/05/12*  
*Article I, Section 1 revised 11/10/13*  
*Article IV, Section 4 revised 4/20/16*  
*Article I, Section 1 added 02/20/17*  
*Article I, Sections 2 & 3 revised 10/21/20*  
*Article II, Section 1 revised 10/21/20*  
*Article II, Section 2 added 10/21/20*  
*Article III, Sections 1, 2, & 3 revised 10/21/20*  
*Article IV, Sections 1, 2, 3, 5, 6, 7, & 8 revised 10/21/20*

# TSBA OPEB Trust

Descriptor Term:  <b>Board of Trustees' Meetings</b>	Descriptor Code:  <b>1010</b>	Revised:  <b>DRAFT</b>
	Rescinds:  <b>1010</b>	Previous Issued:  <b>02/14/22</b>

## 1 **REGULAR MEETINGS OF TRUSTEES**

2 Regular meetings of the Board of Trustees shall be held biannually. Any item of business may be  
3 considered at a regular meeting. The time, date, and location of meetings of the Board shall be  
4 determined by the Board.

## 5 **SPECIAL MEETINGS OF TRUSTEES**

6 Special meetings of the Board of Trustees may be called at any time by the Chairman or by any  
7 four (4) of the Trustees. ~~An emergency~~ **A special** meeting may be called with less than ten (10)  
8 days written notice provided that all Trustees agree to such a meeting. An agenda specifying the  
9 subject of any special meeting shall accompany such notice, and only business included on that  
10 agenda may be transacted.

## 11 **NOTICE OF MEETINGS**

12 The Trust Administrator shall publish any schedule or notice of meeting of the Board as required  
13 by law.<sup>1</sup> Such publication requirement shall be deemed met by announcement on the TSBA  
14 website.

## 15 **REQUIRED VOTE**

16 Any action by the Trustees shall be taken at a duly constituted meeting. A majority of the  
17 Trustees present at a duly constituted meeting shall be required for action.

## 18 **OPEN MEETINGS**

19 All meetings of the Board of Trustees will be held in accordance with the Tennessee Open  
20 Meetings Act.<sup>2</sup>

## 21 **ELECTRONIC ATTENDANCE<sup>3</sup>**

22 Absent Trustees may participate in a regular or special meeting by electronic means of  
23 communication. The following requirements apply to all electronic attendance:

- 1 1. A quorum of the Board shall be physically present at the meeting in order for any Trustee  
2 to attend electronically;
- 3
- 4 2. The responsibility for the connection lies with the Trustee wishing to participate  
5 electronically. No more than two (2) attempts to connect shall be made unless the Board  
6 chooses to make additional attempts;
- 7
- 8 3. The Trustee wishing to participate shall give the Chairman or the Trust Administrator at  
9 least five (5) days' notice prior to the meeting of the Trustee's desire to participate  
10 electronically; and
- 11
- 12 4. All votes taken during a meeting where a Trustee is attending electronically shall be by  
13 roll call vote.

#### 14 **PUBLIC COMMENT**<sup>4</sup>

15 The Board shall allocate up to ten (10) minutes at each meeting for public comment on matters  
16 that are germane to the items on the agenda unless time is extended by the Board. If an  
17 individual wishes to address the Board, he/she must submit his/her request seventy-two (72)  
18 hours prior to the meeting. Delegations must select only one individual to speak on their behalf.

19 Individuals speaking to the Board shall address remarks to the Chair. Each person speaking shall  
20 state his/her name and the item on the agenda that he/she is addressing. Remarks will be limited  
21 to two (2) minutes. The Chair shall have the authority to terminate the remarks of any individual  
22 who is disruptive or does not adhere to board rules.

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#### Legal References

1. TCA 8-44-103
2. TCA 8-44-101 *et seq.*
3. TCA 8-44-108
4. Public Acts of 2023, Chapter No. 300



*TSBA OPEB Trust*

*Communication with  
Board of Trustees*

*October 4, 2023*





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October 4, 2023

To the Board of Trustees  
of the TSBA OPEB Trust

Dear Trustees:

We are pleased to present our Report to the Board of Trustees on the results of our audit of the financial statements of the TSBA OPEB Trust (the "Trust") for the year ended June 30, 2023.

A direct line of communication between our Firm and the Board of Trustees is essential to the proper exercise of our respective responsibilities. Our appointment involves the responsibility on our part to call to your attention any significant matters which we believe require your consideration, either at a regularly scheduled meeting or on a more timely basis, if warranted.

The accompanying report is intended solely for the use of the Board of Trustees and Trust management, and is not intended to be or should not be used by anyone other than these specified parties. It also presents information regarding our audit and certain other information which we believe will be of assistance to you. We appreciate this opportunity to discuss the contents of this report with you and any other matters you wish to address.

We would like to take this opportunity to express our appreciation for the assistance and courtesy extended to us by your employees. We appreciate working with you, and we look forward to a continued relationship with the TSBA OPEB Trust.

Very truly yours,

CROSSLIN, PLLC

A handwritten signature in black ink that reads "Erica D. Saeger". The signature is written in a cursive, flowing style.

Erica D. Saeger  
Audit Principal



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## ***Report on Results of the June 30, 2023 Audit***

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We have audited the financial statements of the TSBA OPEB Trust (the “Trust”) as of and for the year ended June 30, 2023, and we have issued an unmodified opinion dated October 4, 2023.

The following discussion contains information related to our audit that is required by professional standards and certain other information which will be of assistance to you.

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## ***Our Responsibilities under U.S. Generally Accepted Auditing Standards and Government Auditing Standards***

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As stated in our engagement letter, our responsibility, as described by professional standards, is to express an opinion about whether the financial statements, prepared by management with your oversight are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. Our audit of the financial statements does not relieve you or management of your responsibilities.

Our responsibility, as described by professional standards, is to plan and perform our audit to obtain reasonable, but not absolute, assurance about whether the statements are free of material misstatement and are fairly presented in accordance with U.S. generally accepted accounting principles. Because an audit is designed to provide reasonable, but not absolute, assurance and because we did not perform a detailed examination of all transactions, there is a risk that material misstatements may exist and not be detected by us.

As part of our audit, we considered the internal control of the Trust. Such considerations were solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

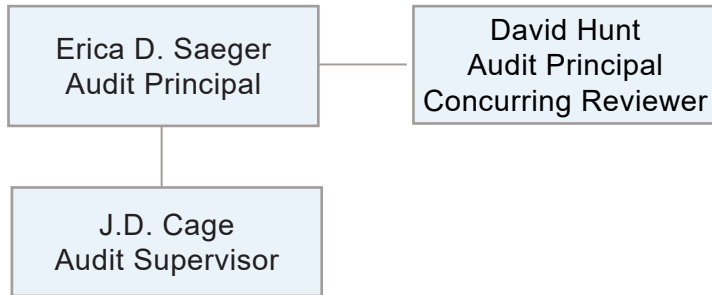
As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement and in conformity with *Government Auditing Standards*, we performed tests of the Trust’s compliance with certain provisions of laws, regulations, contracts, and grants. However, the objective of our tests was not to provide an opinion on compliance with such provisions.



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## Customer Service Team

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## Areas of Audit Significance

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During the audit, we focused on the following account balances and related transaction streams:

- Investments
- Investment income and expenses
- Employer contributions
- Financial reporting

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## Planned Scope and Timing of the Audit

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We performed the audit according to the planned scope and timing previously communicated to you.

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## Significant Accounting Policies

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Management has the responsibility to select and use appropriate accounting policies. A summary of the significant accounting policies adopted by the Trust is included in Note B to the financial statements. There have been no material changes in significant accounting policies or their application during fiscal year 2023. No matters have come to our attention that would require us, under professional standards, to inform you about (1) the methods used to account for significant unusual transactions and (2) the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus. We believe the Trust's accounting policies are appropriate and comprehensive under accounting principles generally accepted in the United States of America.



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## ***Accounting Estimates***

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Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were management's estimate of the fair value of investments. We evaluated the key factors and assumptions used to develop the estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

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## ***Difficulties Encountered in Performing the Audit***

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We encountered no significant difficulties with management in performing and completing our audit.

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## ***Corrected and Uncorrected Misstatements***

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Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. There were two significant adjusting entries made during the course of the audit. The entries were the following:

- One adjusting entry related to investments and unrealized losses to match the June 2023 settlement dates.
- One adjusting entry to record a prior year audit entry, not recorded by the Trust in order to properly roll forward net assets

Additionally, there were no unrecorded entries.

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## ***Disagreements with Management***

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For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during the course of our audits.



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## ***Management Representations***

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We requested certain representations from management that are included in the management representation letter. This letter has been included for informational purposes as Appendix A.

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## ***Fraud and Illegal Acts***

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We did not identify any material fraudulent or illegal acts during the course of our audit, nor were any disclosed to us by management or the Board.

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## ***Management Consultations with Other Independent Accountants***

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In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a “second opinion.” If a consultation involves application of an accounting principle to the entity’s financial statements or a determination of the type of auditors’ opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

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## ***Issues Discussed Prior to Our Selection as Independent Auditors***

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We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Trust’s auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

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## ***Independence***

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We are not aware of any relationships between Crosslin, PLLC, and the Trust that, in our professional judgment, may reasonably be thought to bear on our independence that have occurred during the period from July 1, 2022, through the date of this letter.

We confirm that we are independent with respect to the Trust within the meaning of Rule 101 of the Code of Professional Conduct of the American Institute of Certified Public Accountants and under *Government Audit Standards*.



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## ***Changes in Auditing and Accounting Standards***

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The government and standard-setting bodies are issuing guidance at an unprecedented pace. Crosslin, PLLC is constantly receiving, reviewing, and searching for the latest authoritative literature, in part through its involvement with the AICPA's Government Audit Quality Center and the Government Finance Officers Association ("GFOA"), including GFOA's Special Review Committee. We routinely interface with our customers to ensure proper understanding and application of pronouncements, standards, interpretations, and addenda that arise. In addition, we expect to join the Trust personnel in relevant discussions to implement all new standards as they arise.

Recent accounting pronouncements including the following. We will analyze these Statements with Trust management to ensure appropriate implementation, as applicable.

- **GASB Statement No. 91, Conduit Debt Obligations**  
Effective Date: The requirements of this Statement are effective for reporting periods beginning after December 15, 2022. Earlier application is encouraged.
  
- **GASB Statement No. 97, Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans—an amendment of GASB Statements No. 14 and No. 84, and a supersession of GASB Statement No. 32** Effective Date: The requirements of this Statement are effective as follows:
  - **Effective Dates vary, as there are multiple parts to this amendment that will be effective for fiscal year beginning after June 15, 2022.**
  
- **GASB Statement No. 99, Omnibus 2022** Effective Date: The requirements of this Statement are effective as follows:
  - **The requirements related to extension of the use of LIBOR, accounting for SNAP distributions, disclosures of nonmonetary transactions, pledges of future revenues by pledging governments, clarification of certain provisions in Statement 34, as amended, and terminology updates related to Statement 53 and Statement 63 are effective upon issuance.**
  - **The requirements related to leases, PPPs, and SBITAs are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter.**
  - **The requirements related to financial guarantees and the classification and reporting of derivative instruments within the scope of Statement 53 are effective for fiscal years beginning after June 15, 2023, and all reporting periods thereafter. Earlier application is encouraged and is permitted by topic.**



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## *Changes in Auditing and Accounting Standards - Continued*

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- **GASB Statement No. 100, Accounting Changes and Error Corrections --an amendment of GASB Statement No. 62**  
Effective Date: For fiscal years beginning after June 15, 2023, and all reporting periods thereafter. Earlier application is encouraged.
- **GASB Statement No. 101, Compensated Absences**  
Effective Date: The requirements of this Statement are effective for fiscal years beginning after December 15, 2023, and all reporting periods thereafter. Earlier application is encouraged.



October 4, 2023

Crosslin, PLLC  
The Astoria  
3803 Bedford Avenue, Suite 201  
Nashville, TN 37215

This representation letter is provided in connection with your audit of the financial statements of the TSBA OPEB Trust (the “Trust”), which comprise statement of net position as of June 30, 2023, and the respective statement of changes in net position for the year then ended, and the disclosures (collectively, the “financial statements”), for the purpose of expressing opinions as to whether the financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement. An omission or misstatement that is monetarily small in amount could be considered material as a result of qualitative factors.

We confirm, to the best of our knowledge and belief, as of October 4, 2023, the following representations made to you during your audit.

#### **Financial Statements**

- 1) We have fulfilled our responsibilities, as set out in the terms of the audit engagement letter dated September 1, 2021, including our responsibility for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP and for preparation of the supplementary information in accordance with the applicable criteria.
- 2) The financial statements referred to above are fairly presented in conformity with U.S. GAAP.
- 3) We acknowledge our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
- 4) We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.

- 5) The methods, significant assumptions, and data used in making accounting estimates and their related disclosures are appropriate to achieve recognition, measurement, or disclosure, including those measured at fair value, are reasonable in accordance with U.S. GAAP.
- 6) Related party relationships and transactions, including revenues, expenditures/expenses, loans, transfers, leasing arrangements, and guarantees, and amounts receivable from or payable to related parties have been appropriately accounted for and disclosed in accordance with U.S. GAAP.
- 7) There are no events, except as made known to you, including instances of noncompliance, have occurred subsequent to the date of the statement of net position and through the date of this letter that would require adjustment to or disclosure in the aforementioned financial statements.
- 8) We are not aware of any pending or threatened litigation, claims, or assessments or unasserted claims or assessments that are required to be accrued or disclosed in the financial statements, and we have not consulted external counsel for any material litigation, claims, or assessments through the date of this letter.
- 9) Guarantees, whether written or oral, under which the Trust is contingently liable, if any, have been properly recorded or disclosed.

#### **Information Provided**

- 10) We have provided you with:
  - a) Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements, such as records (including information obtained outside of the general and subsidiary ledgers), documentation, and other matters and all audit or relevant monitoring reports, if any, received from funding sources.
  - b) Additional information that you have requested from us for the purpose of the audit.
  - c) Unrestricted access to persons within the Trust from whom you determined it necessary to obtain audit evidence.
  - d) Minutes of the meetings of the Board of Trustees or summaries of actions of recent meetings for which minutes have not yet been prepared.
- 11) All material transactions have been recorded in the accounting records and are reflected in the financial statements.
- 12) We have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
- 13) We have no knowledge of any fraud or suspected fraud that affects the Trust and involves:

- Management,
  - Employees who have significant roles in internal control, or
  - Others where the fraud could have a material effect on the financial statements.
- 14) We have no knowledge of any allegations of fraud or suspected fraud affecting the Trust's financial statements communicated by employees, former employees, regulators, or others.
- 15) We have no knowledge of instances of noncompliance or suspected noncompliance with provisions of laws, regulations, contracts, or grant agreements, or waste or abuse, whose effects should be considered when preparing financial statements.
- 16) We are not aware of any pending or threatened litigation, claims, or assessments or unasserted claims or assessments that are required to be accrued or disclosed in the financial statements, and we have not consulted external counsel for any material litigation, claims, or assessments through the date of this letter.
- 17) We have disclosed to you the names of the Trust's related parties and all the related party relationships and transactions, including any side agreements.

**Government-specific**

- 18) There have been no communications from regulatory agencies concerning noncompliance with, or deficiencies in, financial reporting practices.
- 19) We have identified to you any previous audits, attestation engagements, and other studies related to the objectives of the audit and whether related recommendations have been implemented.
- 20) There have been no investigations or legal proceedings that have been initiated with respect to the period under audit.
- 21) The Trust has no plans or intentions that may materially affect the carrying value or classification of assets, deferred outflows of resources, liabilities, deferred inflow of resources, or net position.
- 22) We are responsible for compliance with the laws, regulations, and provisions of contracts and grant agreements applicable to us, including tax or debt limits and debt contracts, and legal and contractual provisions for reporting specific activities in separate funds.
- 23) We have appropriately disclosed all information for conduit debt obligations in accordance with provisions of laws and regulations that we believe have a material effect on the financial

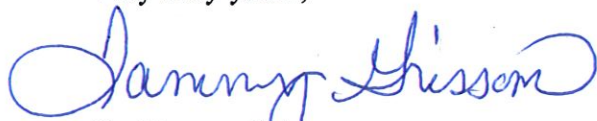
statements or other financial data significant to the audit objectives, and any other instances that warrant the attention of those charged with governance.

- 24) We have identified and disclosed to you all instances of identified and suspected fraud and noncompliance with provisions of laws, regulations, contracts, and grant agreements that we believe have a material effect on the financial statements.
- 25) There are no violations or possible violations of budget ordinances, laws and regulations (including those pertaining to adopting, approving, and amending budgets), provisions of contracts and grant agreements, tax or debt limits, and any related debt covenants whose effects should be considered for disclosure in the financial statements, or as a basis for recording a loss contingency, or for reporting on noncompliance.
- 26) As part of your audit, you assisted with the preparation of the financial statements and disclosures. We acknowledge our responsibility as it relates to those nonaudit services, including that we assume all management responsibilities; oversee the services by designating an individual, preferably within senior management, who possesses suitable skill, knowledge, or experience; evaluate the adequacy and results of the services performed; and accept responsibility for the results of the services. We have reviewed, approved, and accepted responsibility for those financial statements and disclosures.
- 27) The Trust has satisfactory title to all owned assets, and there are no liens or encumbrances on such assets nor has any asset been pledged as collateral.
- 28) The Trust has complied with all aspects of contractual agreements that would have a material effect on the financial statements in the event of noncompliance.
- 29) The financial statements properly disclose all joint ventures and other related organizations, if any.
- 30) Components of net position (restricted for other postemployment benefits) are properly classified and, if applicable, approved.
- 31) Investments are properly valued.
- 32) Expenses have been appropriately classified in the statement of changes in net position.
- 33) Revenues are appropriately classified in the statement of changes in net position.
- 34) Interfund balances have been appropriately classified and reported.
- 35) Deposits and investment securities are properly classified as to risk and are properly disclosed.
- 36) We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you

any significant assumptions and interpretations underlying the measurement and presentation of the RSI.

- 37) We have obtained a copy of the relevant SSAE 18 SOC 1 report that covers the year under audit, related to significant processes and transactions that have been outsourced to those service organizations. In connection with the SSAE 18 SOC 1 report, we have read the report, evaluated the impact of the exceptions to relevant tests, identified the complementary controls listed under the user controls section of the report, and have determined that those user controls have been designed appropriately and have been implemented.

Very truly yours,



Dr. Tammy Grissom  
Trust Administrator



Brittany Massey  
Director of Finance & Member Services



**TSBA OPEB TRUST**  
**AUDITED FINANCIAL STATEMENTS**  
**JUNE 30, 2023**

TSBA OPEB TRUST

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## **TSBA OPEB TRUST**

### **LETTER OF INTRODUCTION**

The TSBA OPEB Trust (the “Trust”) is pleased to present its Annual Financial Report for the year ended June 30, 2023.

#### **Responsibility and Controls**

The Trust is responsible for the financial statements and related information included in this report. A system of internal accounting controls is maintained to provide reasonable assurance that assets are safeguarded and that the books and records reflect only authorized transactions. Limitations exist in any system of internal controls. However, based on recognition that the cost of the system should not exceed its benefits, management believes its system of internal accounting controls maintains an appropriate cost/benefit relationship.

Management believes that its policies and procedures provide guidance and reasonable assurance that the Trust’s operations are conducted according to management’s intentions and to a high standard of business ethics. In management’s opinion, the financial statements present fairly, in all material respects, the net position of the Trust as of June 30, 2023, and the changes in its net position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

#### **Audit Assurance**

The unmodified opinion of our independent external auditors, Crosslin, PLLC, is included in this report.

**TSBA OPEB TRUST  
BOARD OF TRUSTEES**

Dr. Dale Viox, Chairman

Dr. Tammy Grissom, Trust Administrator

Chris Denson

Candy Morgan

Kevin Woods

Wright Cox



## Independent Auditor's Report

Board of Trustees  
TSBA OPEB Trust  
Nashville, Tennessee

### **Report on the Audit of the Financial Statements**

#### ***Opinion***

We have audited the accompanying financial statements of the TSBA OPEB Trust (the "Trust") as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise the Trust's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Trust as of June 30, 2023, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Trust and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Trust's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.



### ***Auditor's Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Trust's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Trust's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.



### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis information on pages 6 through 8 be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### ***Other Information***

Management is responsible for the other information, which comprises the introductory section but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated October 4, 2023, on our consideration of the Trust's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Trust's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Trust's internal control over financial reporting and compliance.

*Crosslin, PLLC*

Nashville, Tennessee  
October 4, 2023

TSBA OPEB TRUST  
MANAGEMENT'S DISCUSSION AND ANALYSIS

Management offers the following discussion and analysis as a narrative introduction to the basic financial statements and an analytical overview of the Trust's financial activities for the fiscal year ended June 30, 2023. This narrative is intended as a supplement and should be read in conjunction with the financial statements.

***Overview of the Financial Statements***

The Trust's financial statements include the following components:

- Statement of Net Position
- Statement of Changes in Net Position
- Notes to Financial Statements

The *Statement of Net Position* presents the Trust's assets, liabilities, and the resulting net position, which are held in trust for the other postemployment benefits of contributing members. This statement reflects a year-end snapshot of the Trust's investments, at fair value, along with cash.

The *Statement of Changes in Net Position* presents information showing how the Trust's net position held in trust for other postemployment benefits changed during the period. This statement includes additions for contributions by employers and investment earnings and deductions for administrative expenses.

The *Notes to Financial Statements* are an integral part of the financial statements and provide additional information that is necessary in order to gain a comprehensive understanding of data reported in the financial statements.

***Financial Highlights***

- Net position is restricted for future benefit payments of participating members. Net position at June 30, 2023 totaled approximately \$146.8 million.
- Net position increased approximately \$21.6 million, which is mainly attributable to favorable financial market conditions compared to the prior year.

***Condensed Financial Information***

In order to ensure the participating employers' ability to properly fund the payment of other postemployment benefits to their employees in future years, it is advisable for employers to accumulate funds on a regular and systematic basis. The principal sources from which the Trust derives additions are employer contributions and earnings on investments.

TSBA OPEB TRUST  
MANAGEMENT'S DISCUSSION AND ANALYSIS

Comparative summary financial statements of the Trust are presented as follows:

**NET POSITION  
JUNE 30, 2023 AND 2022**

	<u>2023</u>	<u>2022</u>
<b>ASSETS</b>		
Cash	\$ 5,654	\$ 5,654
Investments	<u>146,785,465</u>	<u>125,200,074</u>
Total assets	<u>146,791,119</u>	<u>125,205,728</u>
<b>NET POSITION RESTRICTED FOR OPEB</b>	<u>\$146,791,119</u>	<u>\$125,205,728</u>

**CHANGES IN NET POSITION  
YEARS ENDED JUNE 30, 2023 AND 2022**

	<u>2023</u>	<u>2022</u>
<b>ADDITIONS</b>		
Employer contributions	\$ 7,587,011	\$ 6,968,612
Total additions	<u>7,587,011</u>	<u>6,968,612</u>
<b>INVESTMENT RETURN (LOSS), NET</b>		
Investment return (loss), net	<u>14,185,044</u>	<u>( 19,331,404)</u>
Total investment return (loss), net	<u>14,185,044</u>	<u>( 19,331,404)</u>
<b>DEDUCTIONS</b>		
Administrative expenses	<u>186,664</u>	<u>193,326</u>
Total deductions	<u>186,664</u>	<u>193,326</u>
<b>NET CHANGE</b>	<u>21,585,391</u>	<u>( 12,556,118)</u>
<b>NET POSITION RESTRICTED FOR OPEB</b>		
Beginning of year	<u>125,205,728</u>	<u>137,761,846</u>
End of year	<u>\$146,791,119</u>	<u>\$125,205,728</u>

TSBA OPEB TRUST  
MANAGEMENT’S DISCUSSION AND ANALYSIS

***Analysis of Financial Position and Results of Operations***

The Trust’s net position was approximately \$146.8 million at June 30, 2023. During fiscal year 2023, contributions were made to five of the nine active participant accounts.

Current Trust participants and the fiscal year in which they joined the Trust are as follows:

Hickman County Board of Education (Active)	2008 - 2009
Johnson County Board of Education (Active)	2008 - 2009
Shelby County Board of Education (Active)	2008 - 2009
Claiborne County Board of Education (Non-active)	2009 - 2010
Jackson/Madison County Board of Education (Active)	2012 - 2013
Arlington Community Schools Board of Education (Active)	2014 - 2015
Bartlett City Schools Board of Education (Active)	2014 - 2015
Collierville Schools Board of Education (Active)	2014 - 2015
Lakeland City Board of Education (Active)	2014 - 2015
Millington Municipal Schools Board of Education (Active)	2015 - 2016

***Requests for Information***

This financial report is designed to provide a general overview of the Trust’s finances. If you have any questions concerning any of the information provided in this report or would like to request additional financial information, contact the Tennessee School Boards Association’s Finance Department at 525 Brick Church Park Drive, Nashville, Tennessee 37207.

TSBA OPEB TRUST  
STATEMENT OF NET POSITION  
JUNE 30, 2023

	Arlington Community Schools Plan	Bartlett City Schools Plan	Collierville Schools Plan	Hickman County Schools Plan	Jackson- Madison Schools Plan	Johnson County Schools Plan	Lakeland Schools System Plan	Millington Municipal Schools Plan	Shelby County Schools Plan	TSBA OPEB Trust Account	Total
ASSETS											
Cash	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,654	\$ 5,654
Investments, at fair value	4,263,939	6,783,756	2,528,520	2,695,085	489,797	1,333,495	2,919,787	371,977	125,399,109	-	146,785,465
Total assets	4,263,939	6,783,756	2,528,520	2,695,085	489,797	1,333,495	2,919,787	371,977	125,399,109	5,654	146,791,119
NET POSITION RESTRICTED FOR OTHER POSTEMPLOYMENT BENEFITS	<u>\$ 4,263,939</u>	<u>\$ 6,783,756</u>	<u>\$ 2,528,520</u>	<u>\$ 2,695,085</u>	<u>\$ 489,797</u>	<u>\$ 1,333,495</u>	<u>\$ 2,919,787</u>	<u>\$ 371,977</u>	<u>\$ 125,399,109</u>	<u>\$ 5,654</u>	<u>\$ 146,791,119</u>

See accompanying notes to financial statements.

TSBA OPEB TRUST  
STATEMENT OF CHANGES IN NET POSITION  
YEAR ENDED JUNE 30, 2023

	Arlington Community Schools Plan	Bartlett City Schools Plan	Collierville Schools Plan	Hickman County Schools Plan	Jackson- Madison Schools Plan	Johnson County Schools Plan	Lakeland Schools System Plan	Millington Municipal Schools Plan	Shelby County Schools Plan	TSBA OPEB Trust Account	Total
<b>ADDITIONS</b>											
Employer contributions	\$ 355,000	\$ 1,000,000	\$ 300,000	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 5,782,011	\$ -	\$ 7,587,011
Total additions	355,000	1,000,000	300,000	-	-	-	150,000	-	5,782,011	-	7,587,011
<b>INVESTMENT RETURN, NET</b>											
Net appreciation in fair value of investments	310,199	406,023	181,498	209,193	37,982	103,496	214,748	28,804	9,122,952	-	10,614,895
Interest and dividends	110,673	157,346	62,252	73,263	13,347	36,271	76,591	10,137	3,247,733	-	3,787,613
Less investment expenses	(6,332)	(9,147)	(3,603)	(4,182)	(762)	(2,071)	(4,426)	(578)	(186,363)	-	(217,464)
Total investment return, net	414,540	554,222	240,147	278,274	50,567	137,696	286,913	38,363	12,184,322	-	14,185,044
<b>DEDUCTIONS</b>											
Administrative expenses	9,112	13,159	5,222	6,120	1,112	3,029	6,286	845	141,779	-	186,664
Total deductions	9,112	13,159	5,222	6,120	1,112	3,029	6,286	845	141,779	-	186,664
<b>NET INCREASE IN NET POSITION</b>	760,428	1,541,063	534,925	272,154	49,455	134,667	430,627	37,518	17,824,554	-	21,585,391
<b>NET POSITION RESTRICTED FOR OTHER POSTEMPLOYMENT BENEFITS:</b>											
BEGINNING OF YEAR	3,503,511	5,242,693	1,993,595	2,422,931	440,342	1,198,828	2,489,160	334,459	107,574,555	5,654	125,205,728
END OF YEAR	\$ 4,263,939	\$ 6,783,756	\$ 2,528,520	\$ 2,695,085	\$ 489,797	\$ 1,333,495	\$ 2,919,787	\$ 371,977	\$ 125,399,109	\$ 5,654	\$ 146,791,119

See accompanying notes to financial statements.

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

A. DESCRIPTION OF THE TRUST

The TSBA GASB 45 Trust was established on April 16, 2009 pursuant to the provisions of the Tennessee Interlocal Cooperation Act (Tenn. Code Ann. § 12-9-101, et seq.) and the policies and bylaws from time to time promulgated by the Board of Trustees (the “Board”). Effective February 15, 2016, the name of the Trust was changed to the TSBA OPEB Trust (the “Trust”). Membership in the Trust shall be open to all members of the Tennessee School Boards Association. Non-members and other governmental entities will be considered by the Trustees on a case by case basis. The purpose of the Trust is to establish a fund through the Trust, which will allow members to pre-fund the liability associated with other postemployment benefits other than pensions. The Trust is not a component unit of another governmental entity.

The Trust’s Board of Trustees has fiduciary responsibility for the investment of monies and administration of the Trust pursuant to the Trust Agreement. The Board of Trustees is currently composed of seven members. Five of the Trustees are appointed from the governing boards of the participating members of the Trust for three-year terms and they may be reappointed. Additionally, the Executive Director and President of the Tennessee School Boards Association (“TSBA”) are ex-officio members of the Board of Trustees. All seven Trustees are voting members.

For the year ended June 30, 2023, the Trust administered Plan assets for nine defined benefit postemployment plans - Arlington Community Schools Plan, Bartlett City Schools Plan, Collierville Schools Plan, Hickman County Schools Plan, Jackson- Madison Schools Plan, Johnson County Schools Plan, Lakeland Schools Systems Plan, Millington Municipal Schools Plan, and Shelby County Schools Plan, (collectively the “Plans”). Although the assets of the Plans are commingled for investment purposes, each of the Plan’s assets are held in an irrevocable trust and may be used only for the payment of benefits to the members of the respective Plan in accordance with the terms of the Plans. The TSBA OPEB Trust Account reflects the activity related to the administration of the Trust.

The Trust does not purport to present the financial status of each of the participating employer’s postemployment benefit plans, nor do these statements contain information on accumulated plan benefits and other disclosures necessary for a fair presentation of the individual plans in accordance with accounting principles generally accepted in the United States of America.

Measurement Focus and Basis of Accounting

The financial statements of the Trust are presented as a fiduciary fund type. The economic resources measurement focus, and the accrual basis of accounting are used in the preparation of the financial statements. Employer contributions to each plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of each employer’s Plan.

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Investments

Investments are reported at fair value. Net investment return consists of realized and unrealized appreciation in the fair value of investments, interest and dividends earned, and investment expenses. In order to account for each participating member's activities, separate accounts are maintained by the Trust.

Fair Value of Financial Instruments

Assets and liabilities recorded at fair value in the statement of financial position are categorized based on the level of judgment associated with the inputs used to measure their fair value. Level inputs, are as follows:

Level 1 - Values are unadjusted quoted prices for identical assets in active markets accessible at the measurement date.

Level 2 - Inputs include quoted prices for similar assets in active markets, quoted prices from those willing to trade in markets that are not active, or other inputs that are observable or can be corroborated by market data for the term of the instrument. Such inputs include market interest rates and volatilities, spreads and yield curves.

Level 3 - Certain inputs are unobservable (supported by little or no market activity) and significant to the fair value measurement. Unobservable inputs reflect the best estimate of what hypothetical market participants would use to determine a transaction price for the asset or liability at the reporting date.

The Trust's financial instruments consist of cash and investments. Cash is recorded at fair value using Level 1 inputs. Investments are recorded at fair value using Level 1 and Level 3 inputs. See Note D.

Administrative Expenses

Each Plan is responsible for its administrative expenses.

Withdrawals

The Trust is specifically authorized to make payments of legitimate reimbursements to member systems requesting their other post-employment benefit ("OPEB") assets. No other withdrawals may be made by member systems.

Taxes

The Trust is exempt from taxation under Section 115 of the Internal Revenue Code. Accordingly, the accompanying financial statements do not include a provision for federal or state income taxes.

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities. Actual results could differ from those estimates.

C. INVESTMENTS

The Trust's investments, at June 30, 2023, consist of the following:

	<u>Fair Value/ Carrying Amount</u>	<u>Cost</u>
Cash and cash equivalents	\$ 2,332,354	\$ 2,332,354
Exchange-traded and closed-end funds	25,555,279	20,103,759
Mutual funds	107,880,953	109,109,892
Structured investments	<u>11,016,879</u>	<u>10,694,430</u>
Total	<u>\$146,785,465</u>	<u>\$142,240,435</u>

D. FAIR VALUE MEASUREMENTS

The Trust categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Trust has the following recurring fair value measurements as of June 30, 2023:

	<u>Measured at Fair Value</u>	<u>Fair Value Measurements at Reporting Date Using</u>		
		<u>(Level 1)</u>	<u>(Level 2)</u>	<u>(Level 3)</u>
Investments:				
Cash and cash equivalents	\$ 2,332,354	\$ 2,332,354	\$ -	\$ -
Exchange-traded and closed-end funds	25,555,279	25,555,279	-	-
Mutual funds	107,880,953	107,880,953	-	-
Structured investments	<u>11,016,879</u>	<u>-</u>	<u>-</u>	<u>11,016,879</u>
	<u>\$146,785,465</u>	<u>\$135,768,586</u>	<u>\$ -</u>	<u>\$11,016,879</u>

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

D. FAIR VALUE MEASUREMENTS - Continued

In determining fair value, the Trust uses various valuation approaches. The following is a description of the valuation methodologies used for instruments measured at fair value and their classification within the valuation hierarchy:

Cash and Cash Equivalents

Cash and cash equivalents are in active markets and classified within Level 1 of the valuation hierarchy.

Exchange-Traded and Closed-End Funds

Investments in exchange-traded and closed-end funds represent securities which are traded on national markets or exchanges. These investments are classified within Level 1 of the valuation hierarchy.

Mutual Funds

Investments in mutual funds represent fixed income mutual funds which are listed on national markets or exchanges. These investments are classified within Level 1 of the valuation hierarchy.

Structured Investments

Structured investments may be linked to a wide variety of underlying asset classes including equities, interest rates, commodities, and currencies. Each underlying asset will have its own unique set of risks and uncertainties. These structured investments are valued by the custodian using a proprietary pricing model and are classified within Level 3 of the valuation hierarchy.

E. RISKS AND UNCERTAINTIES

The Trust's investments include various types of investment funds, which in turn invest in any combination of stock, bonds and other investments exposed to various risks, such as interest rate, credit, and market risk. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the Trust's financial statements.

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

F. RELATED PARTY TRANSACTIONS

The Trust is administered by the Tennessee School Boards Association (“TSBA”). TSBA receives a quarterly administrative fee calculated individually for each participant on a sliding scale as a percentage of invested assets. The fee covers all administrative costs including personnel, office expense, legal, accounting, and promotion. The administrative fee during fiscal year 2023 totaled \$186,664.

G. SUBSEQUENT EVENTS

Management has evaluated subsequent events through October 4, 2023, the date the financial statements were available for issuance, and has determined there were no subsequent events requiring disclosure.



INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL  
REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT  
OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE  
WITH *GOVERNMENT AUDITING STANDARDS*

Board of Trustees  
TSBA OPEB Trust  
Nashville, Tennessee

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the TSBA OPEB Trust (the "Trust"), as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise the Trust's basic financial statements, and have issued our report thereon dated October 4, 2023.

**Report on Internal Control over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the Trust's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Trust's internal control. Accordingly, we do not express an opinion on the effectiveness of the Trust's internal control.

*A deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements, on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.



## **Report on Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the Trust's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

## **Purpose of This Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*Crosslin, PLLC*

Nashville, Tennessee  
October 4, 2023

TSBA OPEB TRUST  
SUMMARY SCHEDULE OF PRIOR AUDIT FINDINGS  
YEAR ENDED JUNE 30, 2023

The Trust had no prior audit findings.

## Custom Report

Prepared on October 17, 2023 for:  
**TSBA OPEB TRUST**

TAMMY GRISSOM TTEE  
TSBA OPEB TRUST U/T/A DTD  
11/05/2012  
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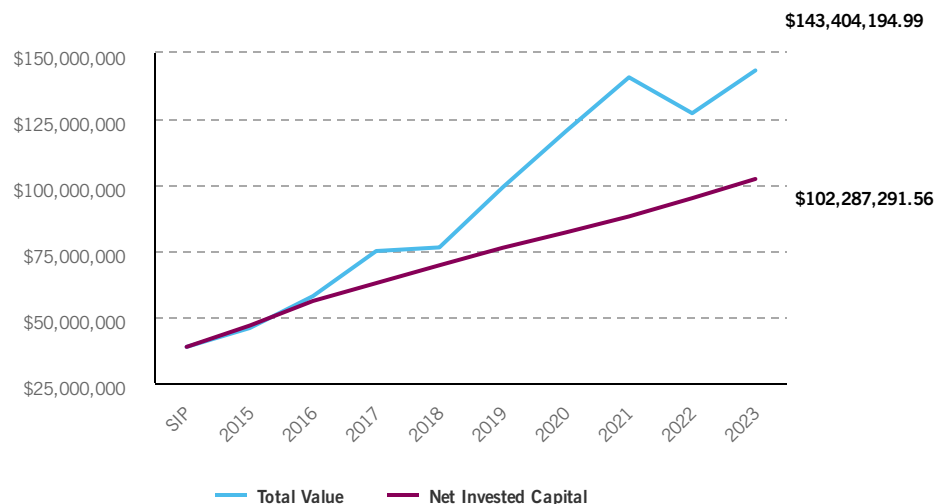
3102 WEST END AVE STE 200  
NASHVILLE, TN 37203

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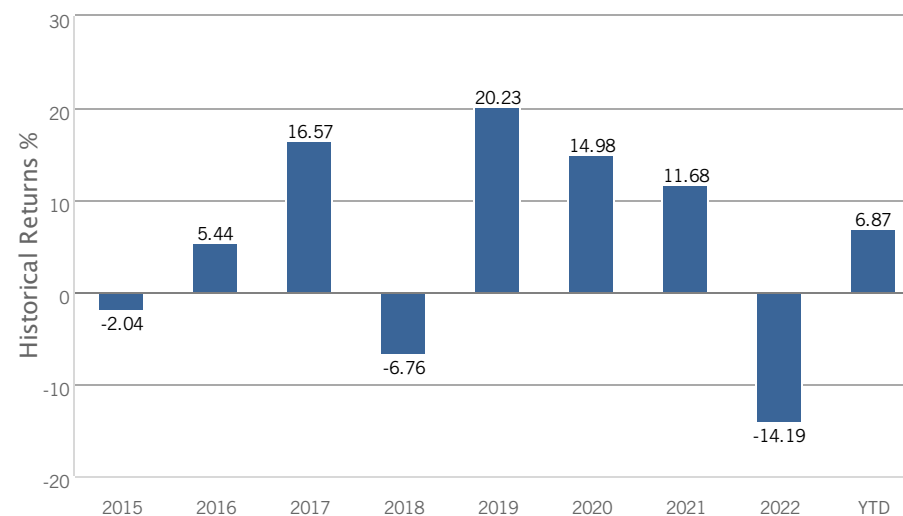
Please review the disclosures and definitions throughout this Document. For more information or questions, please contact your Financial Advisor. Various sub-sections of this Document may not contain information on all accounts/positions covered in this Document and will be denoted on the page.

## TOTAL VALUE VS. NET INVESTED CAPITAL



Does not include Performance Ineligible Assets.

## DOLLAR-WEIGHTED PERIOD RETURN % (NET OF FEES)

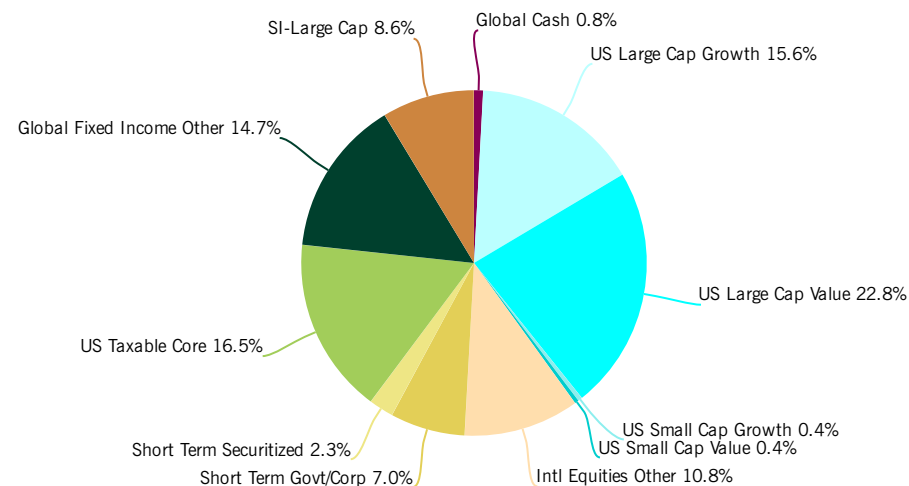


Does not include Performance Ineligible Assets.

## DOLLAR-WEIGHTED RETURN % (NET OF FEES)

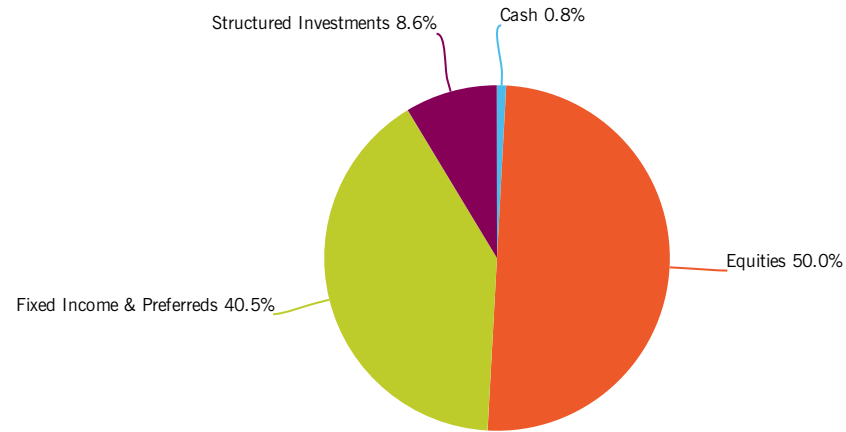
	Quarter to Date (\$) 09/30/23-10/16/23	Year to Date (\$) 12/31/22-10/16/23	Performance Inception (\$) 06/09/15-10/16/23
<b>Beginning Total Value</b>	142,807,338	127,186,040	38,680,482
Net Contributions/Withdrawals	-50,102	7,271,025	63,606,809
Investment Earnings	646,959	8,947,131	41,116,903
<b>Ending Total Value</b>	<b>143,404,195</b>	<b>143,404,195</b>	<b>143,404,195</b>
<b>DOLLAR WEIGHTED RATE OF RETURN (%)</b> (Annualized for periods over 12 months)			
Return % (Net of Fees)	0.45	6.87	5.60
90-Day T-Bills	0.24	4.05	1.36

## ASSET ALLOCATION



The investment returns shown on this page are dollar-weighted measurements which are affected by the timing and amount of your contributions and withdrawals.

ASSET ALLOCATION - ASSET CLASS



ASSET ALLOCATION

	Total Value (\$) 10/16/2023	% of Portfolio 10/16/2023
Cash	1,217,174.13	0.8
Equities	71,740,035.44	50.0
Fixed Income & Preferreds	58,054,362.31	40.5
Structured Investments	12,392,705.57	8.6
<b>TOTAL PORTFOLIO</b>	<b>143,404,277.45</b>	<b>100.0</b>

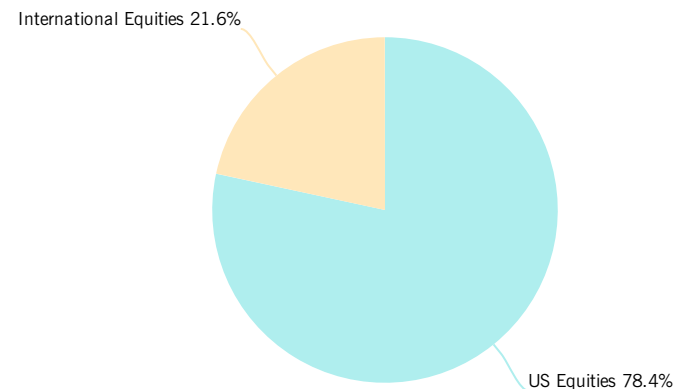
TSBA OPEB TRUST

As of October 16, 2023 | Reporting Currency: USD

## TOP EQUITY POSITIONS BASED ON TOTAL VALUE

SECURITY DESCRIPTION	Total Value (\$) 10/16/2023	% of Equities 10/16/2023
PGIM JENNISON GROWTH Z	13,130,949.47	18.3
JOHN HANCOCK DISPLND VAL INST	9,310,878.99	13.0
ISHARES CORE S&P U.S. GROWTH	9,253,974.24	12.9
BLACKROCK HIGH EQ INCOME INST	9,141,234.98	12.7
ISHARES CORE S&P U.S. VALUE	7,758,124.92	10.8
OAKMARK FUND INSTITUTIONAL	6,517,501.95	9.1
AMERICAN EUROPACIFIC GRW F2	6,462,457.81	9.0
ISHARES CORE MSCI EAFE ETF	5,212,012.80	7.3
THORNBURG INTL GROWTH I	3,838,489.82	5.4
DWS SMALL CAP CORE S	1,114,410.46	1.6
<b>Top Equity Positions</b>	<b>71,740,035.44</b>	<b>100.0</b>
<b>Other Equity Positions</b>	-	-
<b>Total Equities</b>	<b>71,740,035.44</b>	<b>100.0</b>

## ASSET ALLOCATION - EQUITIES



## ASSET ALLOCATION - EQUITIES

	% of Equities 10/16/2023	Total Value (\$) 10/16/2023	% of Portfolio 10/16/2023
<b>US Equities</b>	<b>78.4</b>	<b>56,227,075.01</b>	<b>39.2</b>
US Large Cap Growth	31.2	22,384,923.71	15.6
US Large Cap Value	45.6	32,727,740.84	22.8
US Small Cap Growth	0.8	557,205.23	0.4
US Small Cap Value	0.8	557,205.23	0.4
<b>International Equities</b>	<b>21.6</b>	<b>15,512,960.43</b>	<b>10.8</b>
Intl Equities Other	21.6	15,512,960.43	10.8
<b>TOTAL EQUITIES</b>	<b>100.0</b>	<b>71,740,035.44</b>	<b>50.0</b>

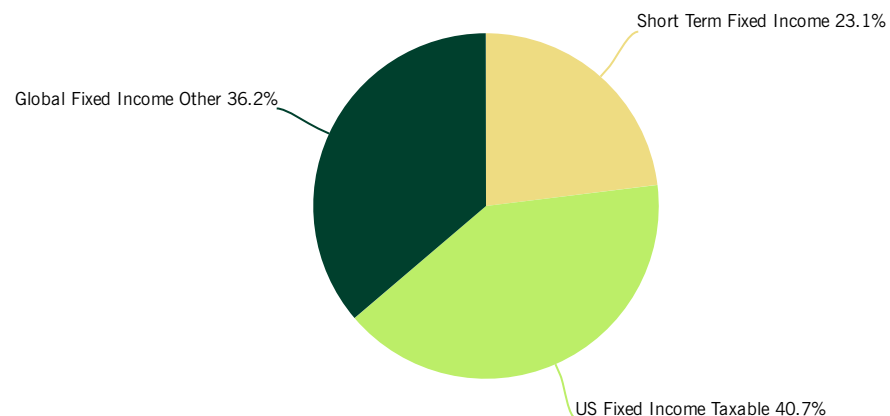
TSBA OPEB TRUST

As of October 16, 2023 | Reporting Currency: USD

## TOP FIXED INCOME &amp; PREFERRED POSITIONS BASED ON TOTAL VALUE

SECURITY DESCRIPTION	Total Value (\$) 10/16/2023	% of Fixed Income & Preferreds 10/16/2023
PGIM TOTAL RETURN BOND Z	23,630,912.69	40.7
PERFORMANCE TRUST STRAT BD I	21,034,806.16	36.2
PGIM SHORT-TERM CORP BOND Z	13,388,643.46	23.1
<b>Top Fixed Income &amp; Preferred Positions</b>	<b>58,054,362.31</b>	<b>100.0</b>
<b>Other Fixed Income &amp; Preferred Positions</b>	-	-
<b>Total Fixed Income &amp; Preferred</b>	<b>58,054,362.31</b>	<b>100.0</b>

## ASSET ALLOCATION - FIXED INCOME &amp; PREFERRED



## ASSET ALLOCATION - FIXED INCOME &amp; PREFERRED

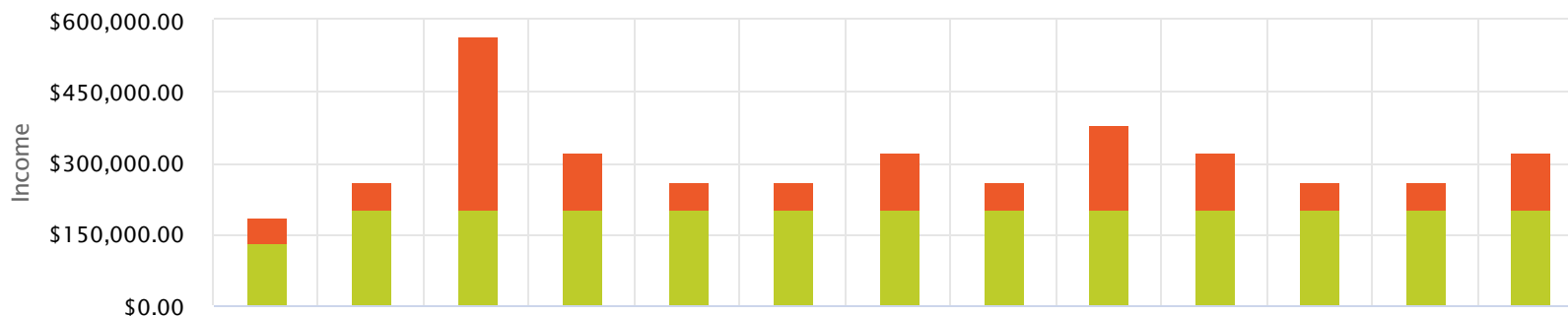
	% of Fixed Income & Preferreds 10/16/2023	Total Value (\$) 10/16/2023	% of Portfolio 10/16/2023
<b>Short Term Fixed Income</b>	<b>23.1</b>	<b>13,388,643.46</b>	<b>9.3</b>
Short Term Govt/Corp	17.3	10,041,482.60	7.0
Short Term Securitized	5.8	3,347,160.87	2.3
<b>US Fixed Income Taxable</b>	<b>40.7</b>	<b>23,630,912.69</b>	<b>16.5</b>
US Taxable Core	40.7	23,630,912.69	16.5
<b>Global Fixed Income Other</b>	<b>36.2</b>	<b>21,034,806.16</b>	<b>14.7</b>
Global Fixed Income Other	36.2	21,034,806.16	14.7
<b>TOTAL FIXED INCOME &amp; PREFERREDS</b>	<b>100.0</b>	<b>58,054,362.31</b>	<b>40.5</b>

# PROJECTED 12 MONTH INCOME SUMMARY

TSBA OPEB TRUST

As of October 16, 2023 | Reporting Currency: USD

## 12 MONTH INCOME SUMMARY

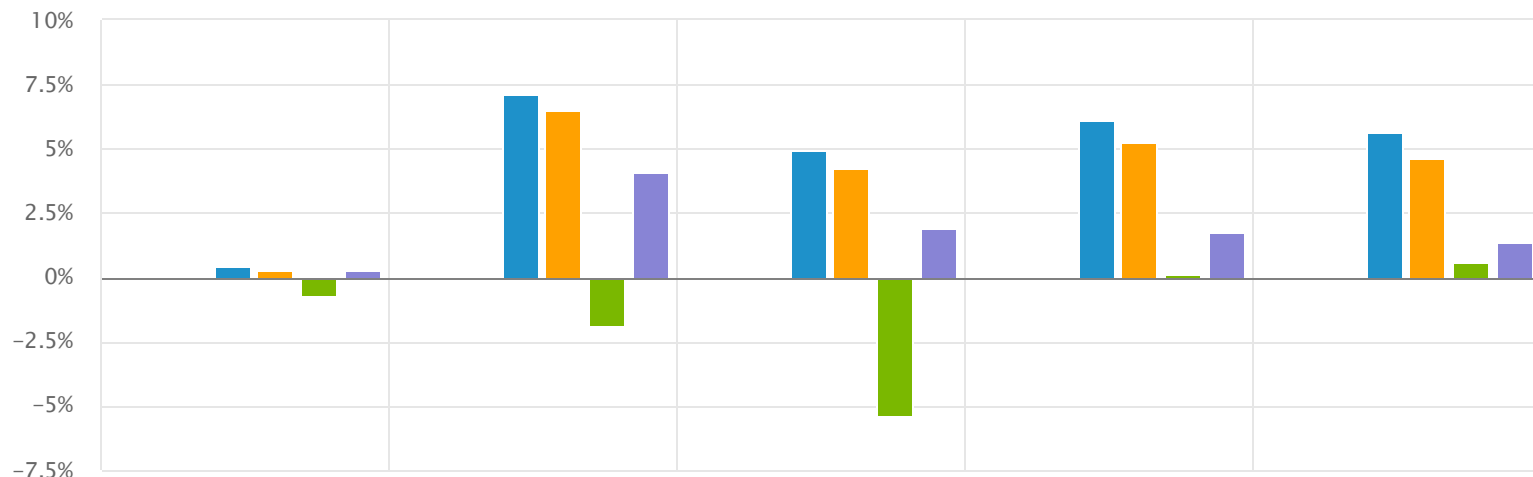


Asset Class	Total Value (\$) 10/16/2023	10/17/23 to 10/31/23 (\$)	Projected Income (\$) (11/01/23 - 10/31/24)												Total	% Yield	
			Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct			
Cash	1,217,174	152	152	152	152	152	152	152	152	152	152	152	152	152	152	1,826	0.15
Equities	71,740,035	55,612	55,612	364,102	120,192	55,612	55,612	120,192	55,612	176,033	120,192	55,612	55,612	120,192	1,384,196	1.93	
Fixed Income & Preferreds	58,054,362	131,398	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	2,450,667	4.22	
Structured Investments	12,392,706	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>143,404,277</b>	<b>187,162</b>	<b>259,987</b>	<b>568,476</b>	<b>324,566</b>	<b>259,987</b>	<b>259,987</b>	<b>324,566</b>	<b>259,987</b>	<b>380,407</b>	<b>324,566</b>	<b>259,987</b>	<b>259,987</b>	<b>324,566</b>	<b>3,836,689</b>	<b>2.68</b>	

Projected Income is calculated only for holdings where data is available.

In instances whereby payment frequency and/or last payment date is not available, income is based on the current dividend or coupon rate, and will be displayed in the Total column only.

## RETURN % (NET OF FEES) VS. BENCHMARKS (ANNUALIZED)



	Quarter to Date 09/30/23 - 10/16/23	Year to Date 12/31/22 - 10/16/23	Last 3 Years 10/31/20 - 10/16/23	Last 5 Years 10/31/18 - 10/16/23	Performance Inception 06/09/15 - 10/16/23
Beginning Total Value (\$)	142,807,337.91	127,186,039.81	106,819,002.73	79,860,328.06	38,680,482.15
Net Contributions/Withdrawals (\$)	-50,102.03	7,271,024.67	20,250,373.41	33,062,741.76	63,606,809.41
Investment Earnings (\$)	646,959.12	8,947,130.52	16,334,818.86	30,481,125.17	41,116,903.43
Ending Total Value (\$)	143,404,194.99	143,404,194.99	143,404,194.99	143,404,194.99	143,404,194.99
Return % (Net of Fees)	0.45	7.12	4.91	6.10	5.61
TN TSBA Composite (%)	0.27	6.48	4.25	5.26	4.63
Bloomberg US Aggregate (%)	-0.71	-1.91	-5.37	0.12	0.61
90-Day T-Bills (%)	0.24	4.05	1.89	1.77	1.36

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals.

## POSITIONS TIME WEIGHTED PERFORMANCE DETAIL

TSBA OPEB TRUST

As of October 16, 2023 | Reporting Currency: USD

## RETURN % (GROSS OF FEES) (ANNUALIZED)

Product/ Security Description ▲	Account Number	Performance Inception Date	Ending Total Value (\$)	Year to Date (%) 12/31/22 - 10/16/23	% of Portfolio
<b>Total Portfolio (Gross of Fees)</b>		<b>06/09/2015</b>	<b>143,404,194.99</b>	<b>7.26</b>	<b>100.00</b>
<i>TN TSBA Composite</i>				<b>6.48</b>	
<b>Stock / Options</b>					
BCS PLUS SPX 25AU05(SQHQQ)	Multiple	01/31/2023	1,388,345.97	3.70	0.97
CITI PLUS SPX 24JN05(SPIEK)	Multiple	11/16/2022	1,280,485.02	12.81	0.89
GS PLUS SPX 24FB05(SQFDJ)	Multiple	07/30/2021	1,362,436.50	14.63	0.95
GS PLUS SPX 24MY03(SQFSK)	Multiple	10/29/2021	1,439,707.58	14.32	1.00
GS PLUS SPX 25MH05(SPHQW)	Multiple	08/31/2022	1,440,082.15	14.09	1.00
MS PLUS SPX 24AU05(SQGIS)	Multiple	01/31/2022	1,344,837.50	14.54	0.94
<b>Exchange Traded/ Closed End Funds</b>					
ISHARES CORE MSCI EAFE ETF(IEFA)	Multiple	11/28/2018	5,212,012.80	6.19	3.63
ISHARES CORE S&P U.S. GROWTH(IUSG)	Multiple	11/28/2018	9,253,974.24	20.62	6.45
ISHARES CORE S&P U.S. VALUE(IUSV)	Multiple	11/28/2018	7,758,124.92	7.99	5.41
<b>Mutual Funds</b>					
AMERICAN EUROPACIFIC GRW F2(AEPFX)	Multiple	07/14/2015	6,462,457.82	5.60	4.51
BLACKROCK HIGH EQ INCOME INST(BMCIX)	Multiple	09/02/2015	9,141,234.99	0.57	6.37
DWS SMALL CAP CORE S(SSLCX)	Multiple	02/20/2018	1,114,410.46	2.70	0.78
JOHN HANCOCK DISPLND VAL INST(JVLIX)	Multiple	07/24/2018	9,310,878.98	5.89	6.49
OAKMARK FUND INSTITUTIONAL(OANMX)	Multiple	07/12/2021	6,517,501.96	16.53	4.54
PERFORMANCE TRUST STRAT BD I(PTIAX)	Multiple	01/26/2021	21,034,806.17	-0.18	14.67
PGIM JENNISON GROWTH Z(PJFZX)	Multiple	09/02/2015	13,130,949.48	36.45	9.16
PGIM SHORT-TERM CORP BOND Z(PIFZX)	Multiple	09/02/2015	13,388,643.46	2.52	9.34

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals. Position level performance detail is only available since 12/31/2014.

## POSITIONS TIME WEIGHTED PERFORMANCE DETAIL

TSBA OPEB TRUST

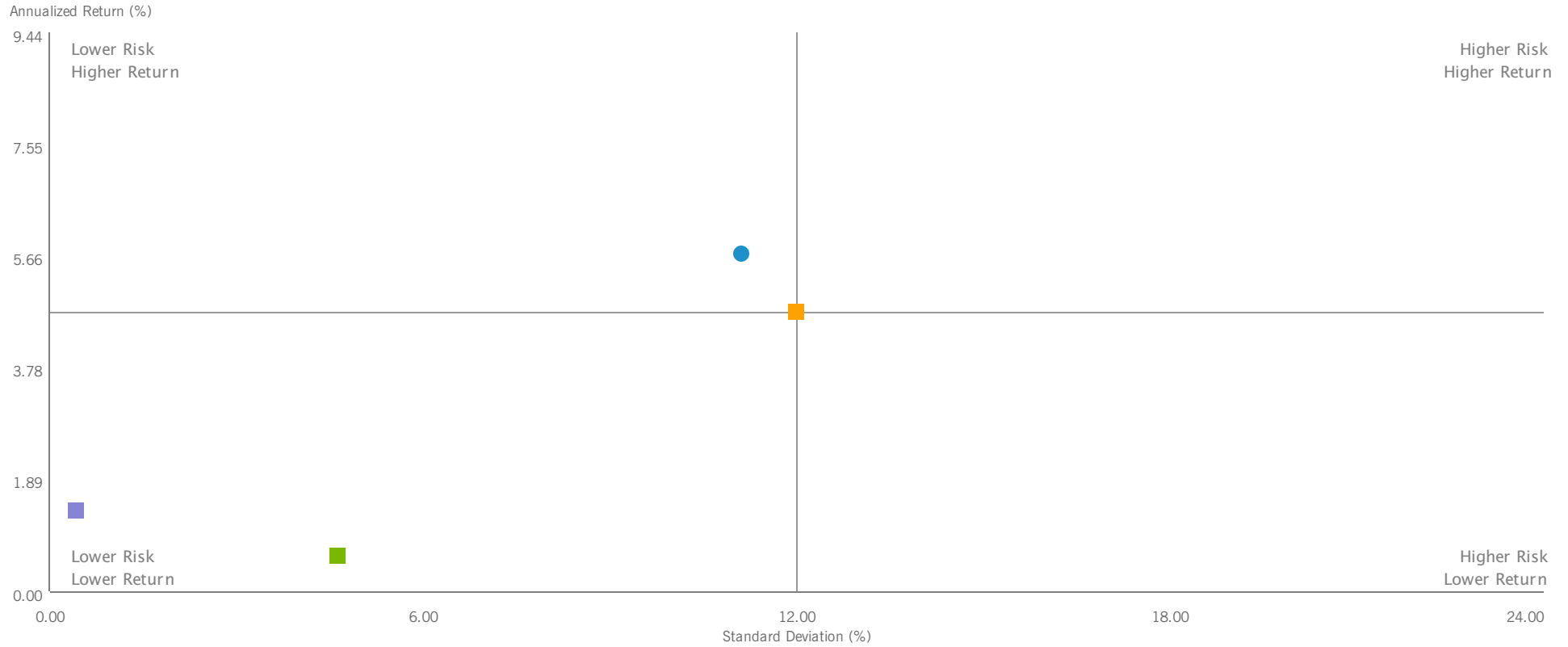
As of October 16, 2023 | Reporting Currency: USD

## RETURN % (GROSS OF FEES) (ANNUALIZED) (Continued)

Product/ Security Description ▲	Account Number	Performance Inception Date	Ending Total Value (\$)	Year to Date (%) 12/31/22 - 10/16/23	% of Portfolio
PGIM TOTAL RETURN BOND Z(PDBZX)	Multiple	04/06/2023	23,630,912.68	-4.62	16.48
THORNBURG INTL GROWTH I(TINGX)	Multiple	09/02/2015	3,838,489.82	5.74	2.68
<b>Corporate Fixed Income</b>					
GS PLUS SPX 00000 25MY05	Multiple	04/14/2023	1,312,285.84	2.04	0.92
GS PLUS SPX 00000 26AP06	Multiple	09/15/2023	1,440,504.00	-1.20	1.00
JPM PLUS SPX 00000 26JA06	Multiple	06/30/2023	1,384,021.00	-4.22	0.97
<b>Cash, MMF and Bank Deposits</b>					
BANK DEPOSIT PROGRAM(BDPS)	Multiple	06/18/2015	1,217,091.68	-	0.85

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals. Position level performance detail is only available since 12/31/2014.

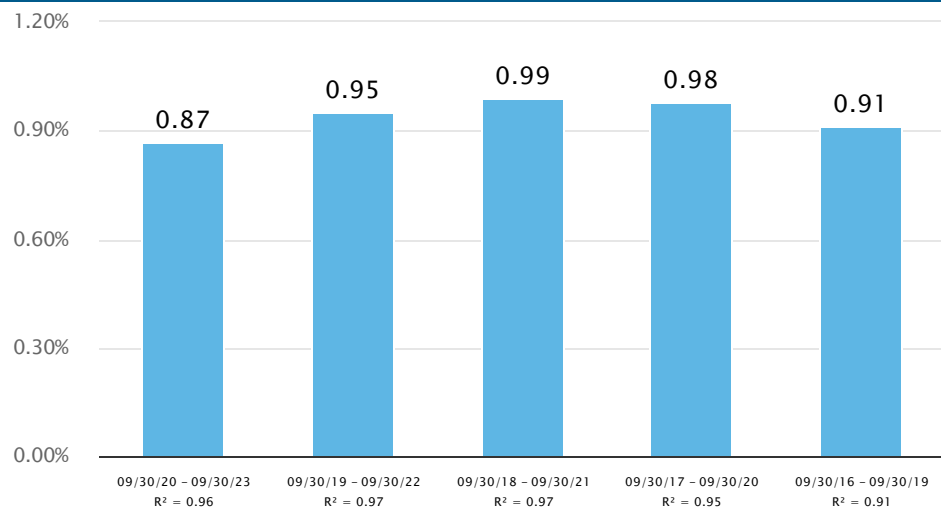
RETURN % (NET OF FEES) AND VOLATILITY VS. BENCHMARKS



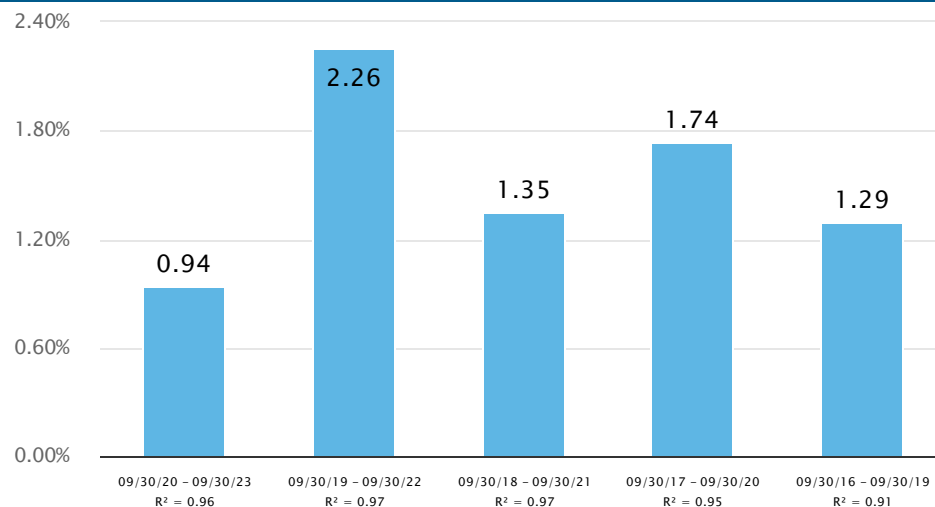
	Return % (Net of Fees) 06/30/15-10/16/23	Standard Deviation (%) 06/30/15-10/16/23
● Portfolio	5.71	11.13
■ TN TSBA Composite	4.72	12.00
■ Bloomberg US Aggregate	0.60	4.62
■ 90-Day T-Bills	1.37	0.43

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals.

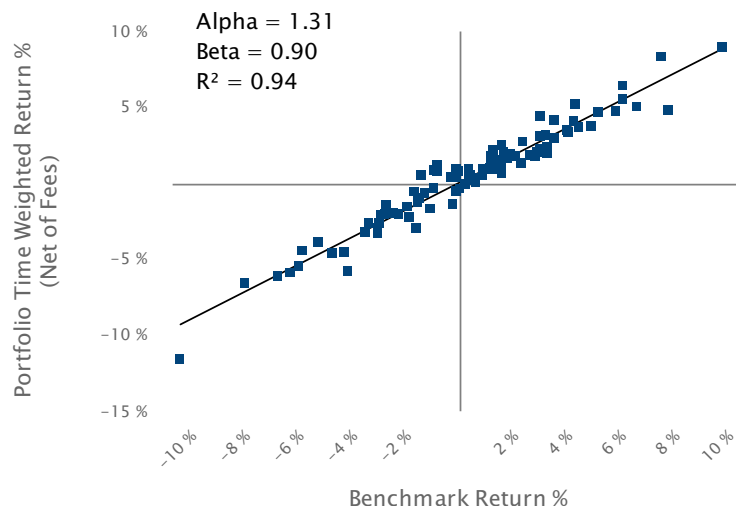
BETA - ROLLING PERIODS - TIME WEIGHTED RETURN %(NET OF FEES)



ALPHA - ROLLING PERIODS - TIME WEIGHTED RETURN %(NET OF FEES)



MONTHLY OBSERVATIONS SINCE 06/30/15 WITH SIMPLE REGRESSION LINE - TIME WEIGHTED RETURN %(NET OF FEES)



**Alpha:** Is a measure of a portfolio's time weighted net of fees return in excess of the market return, both adjusted for risk. A positive alpha indicates that the portfolio outperformed the market on a risk-adjusted basis, and a negative alpha indicates the portfolio did worse than the market.

**Beta:** Is a measure of the sensitivity of a portfolio's time weighted net of fees return against that of the market. A beta greater than 1.00 indicates volatility greater than the market.

**Modern Portfolio Theory:** Seeks to quantify the relationship between risk and return and operates under the assumption that an investor must be compensated for assuming risk.

**R<sup>2</sup>:** Is a measure that indicates the extent to which fluctuations in a portfolio's time weighted net of fees return is correlated with the return of the general market. An R<sup>2</sup> of 0.80 implies that 80% of the fluctuation of a portfolio's return is explained by the fluctuation in the market.

**Graph Notes:** Both the benchmark and portfolio returns are adjusted by the return of the 90-day Treasury Bills to illustrate the excess return above the Risk Free Rate for each period.

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals.

# Executive Summary

## Markets

- After peaking at the end of July at \$4589, the S&P 500 bear market retracement rally, which brought indices to within as much 10% of their 2022 highs, has spent the last 10 weeks stalled out. The S&P 500 has been trading between \$4250 and \$4400 as investor attention shifts from inflation and Fed policy, which has driven the rally through multiple expansion, to achievement of increasingly ambitious and rebounding earnings. Year-to-date, the S&P 500 is up about 12% while the NASDAQ is up about 26%. Equal-weighted indices and the median stock are roughly flat year-to-date.
- The most notable shift in market drivers over the last 10 weeks is the rout in the long-duration Treasury market. Over the last 10 weeks, 10-year interest rates have increased more than 130 basis points to a 16-year high of around 4.8%, with the real rate—critical to equity valuations—hitting around 2.5%, its highest level since 2008. Equally critical is that over the past three months, term premiums have turned strongly positive for the first time in about seven years. Rates are being driven by a set of new factors: excess Treasury supply, owing to US bulging debt; ratings downgrades and concerns about debt sustainability; policy uncertainty; buyer hurdles for Japan and China; and shifting global yield dynamics. Financial conditions are finally starting to tighten.

## Economy

- The US consumer and strong fiscal tailwinds to infrastructure-linked capital expenditures continue to support economic growth. Q3 GDP looks to be extremely strong, estimated at over 4%. While consumer headwinds are building, the US labor market remains resilient. Employment remains stable, close to full employment with the unemployment rate at 3.8%. The labor market is also experiencing its highest participation rate post-Covid.
- The inflation picture is also mixed with most metrics hovering around a 4% annual pace of price hikes. Goods prices are entering deflation, while services prices are still increasing well above the 2% inflation target. Additionally, labor unions are extracting aggressive wage concessions, single family home prices (and thus rents) have stabilized, and oil prices have increased roughly 25% from their spring lows. Geopolitical tensions in the Middle East are adding to supply-side uncertainty.
- Risk of recession remains at least 30%-40% in the next 12 months, based on leading economic indicators, policy lags, and the record length of yield curve inversion. A surging US dollar, hitting six-month highs, is not constructive for US multinational corporations.

## Fed Policy

- The main drivers of hawkish Fed policy have shifted from containing headline inflation to containing growth and labor market strength, which are the sources of stickier inflation. “Higher for longer” is priced into many parts of the Treasury market, but Fed Funds futures still discount four rate cuts in the coming year, versus Fed guidance of no more than two. Equity markets are still not discounting new level of rates, and the implication is an unattractive equity risk premium for the S&P 500 of about 100 basis points.

## Corporate Earnings

- 2023 earnings are now expected to be up to about \$232 per share. Revision trends have been positive, with 12-month forward estimates at \$260 per share and 2025 full-year estimates up 12%, nearing \$285/share.

## GIC Recommendations for Portfolio Positioning

- **Overall, we remain underweight global equities (including US equities), believing that risks remain skewed to the downside, with our June 2024 S&P 500 target price at \$4200. That said, we are inclined to neutralize strong factor positionings. We are balancing exposures between defensive and cyclical, growth and value, and mega-cap and small-cap.**
- **Alternatively, we are remaining overweight fixed income, believing that a “higher-for-longer” regime creates opportunities to own better risk-adjusted returns in current coupons, with the potential for capital gains if rates fade in 2024, as is forecasted. Municipals and investment grade credit remain decent holds barbelled with short-duration Treasuries.**
- **Outside the US, we prefer Japan based on improving growth, inflation dynamics, and a cheap yen. We recently reduced our overweight to emerging markets, believing that US dollar strength and slow China recovery are headwinds.**
- **We also like alternatives in hedge funds, infrastructure, commodities, residential real estate, and private credit.**
- **Remaining fully invested to your personal benchmarks is the most favorable strategy. Do not try to time the markets.**
- **Dollar-cost averaging should be extended and patient, given potential risks ahead. Long-term strategic money should always be deployed in lump sums.**

Source: Morgan Stanley Wealth Management GIC as of October 11, 2023. Equity risk premium is the excess return that an individual stock or the overall stock market provides over a risk-free rate. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

# Summary of GIC Tactical Advice: Global Equities

Tactical Allocation Reasoning as of September 22, 2023

Global Equities	Weight Relative to Model Benchmark	Rationale
US	Underweight	We remain uncertain that forward earnings estimates are accurately discounting the most recent developments of a strong US dollar, rising oil prices, maturing US fiscal stimulus and an increasingly tapped-out US consumer. Additionally, we expect that Fed actions in 2024 may result in a “higher-for-longer” rate scenario. Our preference is for defensive and secular-growth equities with quality balance sheets.
International Equities (Developed Markets)	Market-Weight	The mix of high and sticky inflation, existential risks associated with Russia/Ukraine and the European Central Bank’s position that it has limited tools to help suggest that the odds of recession are over 50%. Developed market exposure should skew toward commodities and materials exporters, especially those in the Asia Pacific region, including Japan.
Emerging Markets	Overweight	Recent softness in China, including macro uncertainty and deflationary pressures, along with growing opacity around policy direction, have caused concern for the country’s growth path. With global growth concerns potentially mounting, we have neutralized a previous overweight to emerging markets.

Source: Morgan Stanley Wealth Management GIC

**Important note regarding economic sanctions.** This report may involve the discussion of country/ies which are generally the subject of selective sanctions programs administered or enforced by the U.S. Department of the Treasury’s Office of Foreign Assets Control (“OFAC”), the European Union and/or by other countries or multi-national bodies. The content of this presentation is for informational purposes and does not represent Morgan Stanley’s view as to whether or not any of the Persons, instruments or investments discussed are or may become subject to sanctions. **Any references in this presentation to entities or instruments that may be covered by such sanctions should not be read as recommending or advising on any investment activities involving such entities or instruments.** Users of this report are solely responsible for ensuring that your investment activities in relation to any sanctioned country/ies are carried out in compliance with applicable sanctions.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Summary of GIC Tactical Advice: Global Fixed Income

Tactical Allocation Reasoning as of September 22, 2023

Global Fixed Income	Weight Relative to Model Benchmark	Rationale
US Investment Grade	Overweight	While markets had aggressively priced the Fed's hawkish rhetoric, recent bank concerns have brought in pricing of rate cuts through early 2024. We are taking a more balanced risk-reward approach and have added to large underweight positions. With continued Quantitative Tightening ahead, execution risk remains elevated, as do the risks from sticky services inflation. However, bonds still offer decent relative value and the potential for portfolio hedging. Moreover, we expect equity-fixed income correlations to decrease in the event of an earnings recession.
International Investment Grade	Market-Weight*	Central banks' hawkish pivots have prompted a material move in global nominal rates. While timing and catalysts are still hazy, negative-yielding debt has largely vanished in recent months. However, local currencies have recently weakened against a strengthening US dollar. Moreover, our benchmarks and tactical asset allocation models continue to allocate 0% to this asset class.
Inflation-Protected Securities	Market-Weight*	TIPS' real yields have moved up, as realized inflation remains near a 40-year high and geopolitical uncertainties add pricing pressures. Even with real yields now positive, valuation is not compelling in comparison to US investment grade fixed income. Moreover, our benchmarks and tactical asset allocation models continue to allocate 0% to this asset class.
High Yield	Market-Weight*	We have eliminated our exposure to the equity-like asset class to reduce equity beta of portfolios. High yield bonds rallied aggressively after the unprecedented provision of liquidity from the Fed and fiscal stimulus from Washington. However, there is currently limited upside and much downside to invest in riskier products, given the current market environment. Moreover, our benchmarks and tactical asset allocation models continue to allocate 0% to this asset class.

Source: Morgan Stanley Wealth Management GIC

\*The GIC asset allocation models' benchmarks do not include any exposure to this asset class.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

## ACCOUNT(S) INCLUDED IN THIS REPORT

TSBA OPEB TRUST

Reporting Currency: USD

## MORGAN STANLEY WEALTH MANAGEMENT

Account Name	Account Number	Account Type/ Manager Name	Date Opened/ Date Closed	Performance (%) Inception - 10/16/23	Total Value (\$) 10/16/23	% of Portfolio 10/16/23
ARLINGTON CITY - Alternative Investment	471-XXX385	AAA	02/18/20 -	1.48	355,377.27	0.25
ARLINGTON CITY BOE	471-XXX901	Consulting Group Advisor	06/17/15 -	5.72	3,806,911.95	2.66
BARTLETT CITY - Alternative Investment	471-XXX383	AAA	02/18/20 -	1.54	471,941.30	0.33
BARTLETT CITY BOE	471-XXX902	Consulting Group Advisor	06/17/15 -	5.62	6,155,357.95	4.29
Collierville City - Alternative Invest.	471-XXX396	AAA	02/18/20 -	1.59	197,734.86	0.14
COLLIERVILLE CITY BOE	471-XXX903	Consulting Group Advisor	06/17/15 -	5.56	2,270,340.05	1.58
HICKMAN CO.	471-XXX866	Consulting Group Advisor	06/03/15 -	5.76	2,389,148.59	1.67
Hickman Co. - Alternative Investment	471-XXX388	AAA	02/18/20 -	1.70	242,585.93	0.17
JACKSON-MADISON	471-XXX864	Consulting Group Advisor	06/03/15 -	5.74	434,549.01	0.30
JACKSON-MADISON - Alternative Investment	471-XXX403	AAA	02/18/20 -	1.65	43,742.82	0.03
JOHNSON CO.	471-XXX869	Consulting Group Advisor	06/03/15 -	5.75	1,205,620.83	0.84
JOHNSON CO. - Alternative Investment	471-XXX398	AAA	02/18/20 -	1.73	120,525.14	0.08
Lakeland City - Alternative Investment	471-XXX393	AAA	02/18/20 -	1.53	223,183.61	0.16
LAKELAND CITY BOE	471-XXX900	Consulting Group Advisor	06/17/15 -	5.48	2,626,434.67	1.83
MILLINGTON	471-XXX583	Consulting Group Advisor	07/05/16 -	6.54	330,338.81	0.23
MILLINGTON - Alternative Investment	471-XXX409	AAA	02/18/20 -	1.57	32,894.51	0.02
SHELBY CO.	471-XXX863	Consulting Group Advisor	06/03/15 -	5.69	111,780,679.75	77.95

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## ACCOUNT(S) INCLUDED IN THIS REPORT

TSBA OPEB TRUST

Reporting Currency: USD

## MORGAN STANLEY WEALTH MANAGEMENT (Continued)

Account Name	Account Number	Account Type/ Manager Name	Date Opened/ Date Closed	Performance (%) Inception - 10/16/23	Total Value (\$) 10/16/23	% of Portfolio 10/16/23
SHELBY CO. - Alternative Investment	471-XXX380	AAA	02/18/20 -	2.66	10,716,910.40	7.47
<b>Morgan Stanley Wealth Management Total</b>					<b>143,404,277.45</b>	<b>100.00</b>
<b>Total Portfolio</b>					<b>143,404,277.45</b>	<b>100.00</b>

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**Additional information about your Floating Rate Notes:** For floating rate securities, the estimated accrued interest and estimated annual income are based on the current floating coupon rate and may not reflect historic rates within the accrual period.

**Important Information About Auction Rate Securities:** For certain Auction Rate Securities there is no or limited liquidity. Therefore, the price(s) for these Auction Rate Securities are indicated as not available by a dash "-". There can be no assurance that a successful auction will occur or that a secondary market exists or will develop for a particular security.

**Important Pricing Information:** Prices of securities not actively traded may not be available, and are indicated by a dash "-". Account values are based on the most recent security pricing available and may be prior to the date of this material.

**Asset Classification:** We classify assets based on general characteristics such as: income generation, underlying capital structure, or exposure to certain market sectors. As many assets contain

characteristics of more than one asset class, allocations may be under or over inclusive. These classifications do not constitute a recommendation and may differ from the classification of instruments for regulatory or tax purposes. In addition, the Other asset class contains securities that are not included in the various asset class classifications. This can include, but is not limited to, non-traditional investments such as some Equity Unit Trusts, Index Options and Structured Investments issued outside of Morgan Stanley. Additionally, investments for which we are unable to procure market data to properly classify them will appear in the Other category.

**Additional information about your Structured Products:** Structured Investments are complex products and may be subject to special risks, which may include, but are not limited to: loss of initial investment; issuer credit risk and price volatility resulting from any actual or anticipated changes to issuer's and/or guarantor's credit ratings or credit spreads; limited or no appreciation and limits on participation in any appreciation of underlying asset(s); risks associated with the underlying reference asset(s); no periodic payments; call prior to maturity; early redemption fees for market linked deposits; lower interest rates and/or yield compared to conventional debt with comparable maturity; unique tax implications; limited or no secondary market; and conflicts of interest due to affiliation, compensation or other factors which could adversely affect market value or payout to investors. Investors also should consider the concentration risk of owning the related security and their total exposure to any underlying asset.

**Performance:** Performance results are annualized for time periods greater than one year and include all cash and cash equivalents, realized and unrealized capital gains and losses, dividends, interest and income. Depending on the opening or closing date of the account or position, the performance referenced may be for a portion of the time period identified. The investment results depicted herein represent historical performance. As a result of recent market activity, current performance may vary from the figures shown. Please contact your Financial Advisor for up-to-date performance information. Past performance is not a guarantee of future results. Quotations of performance appearing in this report may include performance experienced in legacy accounts which have been closed and purged, and as such are not included on the Accounts Included in This Report page.

Market values used for performance calculation do not include Performance Ineligible Assets and thus may differ from asset allocation market values. Common examples of Performance Ineligible Assets include life insurance and annuities as well as Manually Added and External accounts, assets and liabilities.

Unless otherwise indicated, performance is an aggregated composite calculation of the entire portfolio and may include brokerage and investment advisory accounts as well as assets for different accounts included in this report. The accounts included in the composite may have (or have had) different investment objectives and strategies, been subject to different restrictions, and incurred different types of fees, markups, commissions and other charges. Accordingly, performance results may blend the performance of assets and strategies that may not have been available in all of the accounts at all times during the reporting period. In addition, accounts in the composite may have changed from brokerage to advisory or vice versa. Accounts may also have moved from one advisory program to another (including from a discretionary program to a non-discretionary program).

For Morgan Stanley Smith Barney LLC accounts, performance information may cover the full history of the account(s) or just the performance of an account(s) since the inception of the current program(s). Performance results on individual accounts will vary and may differ from the composite returns. Your Financial Advisor can provide you with individual account portfolio composition and performance information. For investment advisory accounts, please see the Morgan Stanley Smith Barney LLC Form ADV Part 2 or applicable disclosure brochure. For brokerage accounts, please speak to your Financial Advisor for more information on commissions and other account fees and expenses. Performance inception date does not necessarily correspond to the account opening date. Where multiple accounts are included in performance calculations, the inception date is the oldest performance inception. Performance data may not be available for all periods as some accounts included in performance may have more recent performance inception dates. Consequently, the actual performance for a group of accounts may differ from reported performance. Please ask your Financial Advisor for the performance inception date for each account.

**Sub Account and Security Level Performance:** The performance return methodology described above and in the TWR and IRR definitions applies to both Account Level and Sub-Account (e.g. Asset Class or Security level) performance returns. The inputs consist of market values and net flows.

For example, TWR is calculated by taking the Change in Market Value (Ending MV – Beginning MV) less any net flows, divided by the beginning MV.  $TWR = (Ending\ MV - Beginning\ MV - Net\ Flows) / Beginning\ MV$

The difference lies in what is or is not included in the Market Values and Flows. For account level performance, the total account market values and all flows within the account are taken into account. For sub-account level performance, only those market values and flows associated with the specific securities included are taken into account.

Flows that are not security specific typically include account advisory fees, cash contributions or withdrawals, and any other flows that are not attributed to a specific security.

Flows that are security specific including purchases, sales, dividends, interest, partnership distributions, return of capital, fund sales charges, security transaction fees, and ongoing fund expenses are typically reflected in the security level returns.

**Gross of Fees:** The impact of program fees can be material. These program fees are deducted based on your billing cycle and may have a compounding effect on performance. As fees are deducted periodically throughout the year, the compounding effect may increase the impact of the fees by an amount directly related to the gross account performance.

**Indices:** Benchmark indices and blends included in this material are for informational purposes only, are provided solely as a comparison tool and may not reflect the underlying composition and/or

investment objective(s) associated with the account(s). In some circumstances, the benchmark index may not be an appropriate benchmark for use with the specific composite portfolio. For instance, an index may not take into consideration certain changes that may have occurred in the portfolio since the inception of the account(s), (e.g., changes from a brokerage to an advisory account or from one advisory program to another, asset class changes, or index changes for individual managers). The volatility of the index used for comparison may be materially different from that of the performance shown. Indices are unmanaged and not available for direct investment. Index returns do not take into account fees or other charges. Such fees and charges would reduce performance. Please see the Benchmark Definitions section of this material for additional information on the indices used for comparison.

**Performance Inception Month End:** Performance Inception Month End refers to performance calculated from the end of the month in which the accounts became eligible for performance. Calculating performance from the Performance Inception Month End allows for a comparison to be made to appropriate benchmarks. Performance Inception Month End does not necessarily correspond to the account opening date.

**Projected 12 Month:** Projected 12 Month Income is based upon cash income from interest, cash dividends, and partnership distributions. It is a hypothetical projection calculated using current yields. The projected income referenced is based upon certain market projections effective as at today's date only and can change at any time. Such projected income is hypothetical, do not reflect actual investment results, and is not a guarantee of future results. The projected income is referenced for illustrative purposes only. Morgan Stanley does not represent or guarantee that the projected income referenced will or can be attained. The actual income may be lower or higher than the projections based upon a variety of factors and assumptions. The projected income shown may under or over compensate for the impact of actual market conditions and other factors. We make no representation or warranty as to the reasonableness of the assumptions made, or that all assumptions used to construct this projected income information have been stated or fully considered. To the extent that the assumptions made do not reflect actual conditions, the illustrative value of the hypothetical projected income will decrease. The projected income referenced may include income from Morgan Stanley & Co. and External Accounts, where data is available. Such information was obtained from third party sources which Morgan Stanley believes to be reliable. However, we make no representation or guarantee that the information is accurate or complete. You should not rely upon this information to make any investment decision. Please refer to the official account statements and performance reports you received from your custodian and/or financial institution for information about projected income in your External Accounts. The projected income referenced does not include income from assets in Manually Added External Accounts.

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then placed on the Approved List instead of the Focus List. Investment products may move from the Focus List to the Approved List, or vice versa. GIMA may also determine that an investment product no longer meets the criteria under either process and will no longer be recommended in investment advisory programs (in which case the investment product is given a "Not Approved" status). GIMA has a "Watch" policy and may describe a Focus List or Approved List investment product as being on "Watch" if GIMA identifies specific areas that (a) merit further evaluation by GIMA and (b) may, but are not certain to, result in the investment product becoming "Not Approved." The Watch period depends on the length of time needed for GIMA to conduct its evaluation and for the investment manager or fund to address any concerns. Certain investment products on either the Focus List or Approved List may also be recommended for the **Tactical Opportunities List** based in part on tactical opportunities existing at a given time. The investment products on the Tactical Opportunities List change over time. For more information on the Focus List, Approved List, Tactical Opportunities List and Watch processes, please see the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management. Your Financial Advisor or Private Wealth Advisor can also provide upon request a copy of a publication entitled "Manager Selection Process."

The **Global Investment Committee** is a group of seasoned investment professionals who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend model portfolio weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

The GIC Asset Allocation Models are not available to be directly implemented as part of an investment advisory service and should not be regarded as a recommendation of any Morgan Stanley investment advisory service. The GIC Asset Allocation Models do not represent actual trading or any type of account or any type of investment strategies and none of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, advisory fees, fund expenses) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models which, when compounded over a period of years, would decrease returns.

**Adverse Active Alpha<sup>SM</sup> 2.0** is a patented screening and scoring process designed to help identify high-quality equity and fixed income managers with characteristics that may lead to future outperformance relative to index and peers. While highly ranked managers performed well as a group in our Adverse Active Alpha model back tests, not all of the managers will outperform. Please note that this data may be derived from back-testing, which has the benefit of hindsight. In addition, highly ranked managers can have differing risk profiles that might not be appropriate for all investors.

Our view is that Adverse Active Alpha is a good starting point and should be used in conjunction with other information. Morgan Stanley Wealth Management's qualitative and quantitative investment manager due diligence process are equally important factors for investors when considering managers for use through an investment advisory program. Factors including, but not limited to, manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors.

The proprietary **Value Score** methodology considers an active investment strategies' value proposition relative to its costs. From a historical quantitative study of several quantitative markers, Value Score measures perceived forward-looking benefit and computes (1) "fair value" expense ratios for most traditional investment managers across 40 categories and (2) managers' perceived "excess value" by comparing the fair value expense ratios to actual expense ratios. Managers are then ranked within each category by their excess value to assign a Value Score. Our analysis suggests that greater levels of excess value have historically corresponded to attractive subsequent performance.

For more information on the ranking models, please see *Adverse Active Alpha<sup>SM</sup> 2.0: Scoring Active Managers According to Potential Alpha* and *Value Score: Scoring Fee Efficiency by Comparing Managers' "Fair Value" and Actual Expense Ratios*. The whitepapers are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on AAA, please see the Adverse Active Alpha Ranking Model and Selecting Managers with Adverse Active Alpha whitepapers. The whitepaper are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

**The Global Investment Manager Analysis (GIMA) Services Only Apply to Certain Investment Advisory Programs** GIMA evaluates certain investment products for the purposes of some – but not all – of Morgan Stanley Smith Barney LLC's investment advisory programs (as described in more detail in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management). If you do not invest through one of these investment advisory programs, Morgan Stanley Wealth Management is not obligated to provide you notice of any GIMA Status changes even though it may give notice to clients in other programs.

**Strategy May Be Available as a Separately Managed Account or Mutual Fund** Strategies are sometimes available in Morgan Stanley Wealth Management investment advisory programs both in the form of a separately managed account (“SMA”) and a mutual fund. These may have different expenses and investment minimums. Your Financial Advisor or Private Wealth Advisor can provide more information on whether any particular strategy is available in more than one form in a particular investment advisory program. Generally, investment advisory accounts are subject to an annual asset-based fee (the “Fee”) which is payable monthly in advance (some account types may be billed differently). In general, the Fee covers Morgan Stanley investment advisory services, custody of securities with Morgan Stanley, trade execution with or through Morgan Stanley or its affiliates, as well as compensation to any Morgan Stanley Financial Advisor.

In addition, each account that is invested in a program that is eligible to purchase certain investment products, such as mutual funds, will also pay a Platform Fee (which is subject to a Platform Fee offset) as described in the applicable ADV brochure. Accounts invested in the Select UMA program may also pay a separate Sub-Manager fee, if applicable.

If your account is invested in mutual funds or exchange traded funds (collectively “funds”), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund’s share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV).

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley’s Separately Managed Account (“SMA”) programs may effect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instances, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: [www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf](http://www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf). For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV), or contact your Financial Advisor / Private Wealth Advisor.

**Conflicts of Interest:** GIMA’s goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients’ assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. Separately, certain strategies managed or sub-advised by us or our affiliates, including but not limited to MSIM and Eaton Vance Management (“EVM”) and its investment affiliates, may be included in your account. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA’s evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS&Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts, and managers in various advisory programs. Morgan Stanley Wealth Management, managers, MS&Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account.

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Morgan Stanley charges each fund family we offer a mutual fund support fee, also called a “revenue-sharing payment,” on client account holdings in fund families according to a tiered rate that increases along with the management fee of the fund so that lower management fee funds pay lower rates than those with higher management fees.

**Consider Your Own Investment Needs:** The model portfolios and strategies discussed in the material are formulated based on general client characteristics including risk tolerance. This material is not intended to be an analysis of whether particular investments or strategies are appropriate for you or a recommendation, or an offer to participate in any investment. Therefore, clients should not use this material as the sole basis for investment decisions. They should consider all relevant information, including their existing portfolio, investment objectives, risk tolerance, liquidity needs and investment

time horizon. Such a determination may lead to asset allocation results that are materially different from the asset allocation shown in this profile. Talk to your Financial Advisor about what would be an appropriate asset allocation for you, whether Morgan Stanley Pathway Funds is an appropriate program for you.

**No obligation to notify** – Morgan Stanley Wealth Management has no obligation to notify you when the model portfolios, strategies, or any other information, in this material changes.

*For index, indicator and survey definitions referenced in this report please visit the following: <https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions>*

**The Morgan Stanley Pathway Funds, Firm Discretionary UMA Model Portfolios**, and other asset allocation or any other model portfolios discussed in this material are available only to investors participating in Morgan Stanley Consulting Group advisory programs. For additional information on the Morgan Stanley Consulting Group advisory programs, see the applicable ADV brochure, available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV) or from your Morgan Stanley Financial Advisor or Private Wealth Advisor. To learn more about the Morgan Stanley Pathway Funds, visit the Funds' website at <https://www.morganstanley.com/wealth-investmentsolutions/cqcm>. Consulting Group is a business of Morgan Stanley.

**Morgan Stanley Pathway Program Asset Allocation Models** There are model portfolios corresponding to five risk-tolerance levels available in the Pathway program. Model 1 is the least aggressive portfolio and consists mostly of bonds. As the model numbers increase, the models have higher allocations to equities and become more aggressive. Pathway is a mutual fund asset allocation program. In constructing the Pathway Program Model Portfolios, Morgan Stanley Wealth Management uses, among other things, model asset allocations produced by Morgan Wealth Management's Global Investment Committee (the "GIC"). The Pathway Program Model Portfolios are specific to the Pathway program (based on program features and parameters, and any other requirements of Morgan Stanley Wealth Management's Consulting Group). The Pathway Program Model Portfolios may therefore differ in some respects from model portfolios available in other Morgan Stanley Wealth Management programs or from asset allocation models published by the Global Investment Committee.

The type of mutual funds and ETFs discussed in this presentation utilizes nontraditional or complex investment strategies and/or derivatives. Examples of these types of funds include those that utilize one or more of the below noted investment strategies or categories or which seek exposure to the following markets: (1) commodities (e.g., agricultural, energy and metals), currency, precious metals; (2) managed futures; (3) leveraged, inverse or inverse leveraged; (4) bear market, hedging, long-short equity, market neutral; (5) real estate; (6) volatility (seeking exposure to the CBOE VIX Index). Investors should keep in mind that while mutual funds and ETFs may, at times, utilize nontraditional investment options and strategies, they should not be equated with unregistered privately offered alternative investments. Because of regulatory limitations, mutual funds and ETFs that seek alternative-like investment exposure must utilize a more limited investment universe. As a result, investment returns and portfolio characteristics of alternative mutual funds and ETFs may vary from traditional hedge funds pursuing similar investment objectives. Moreover, traditional hedge funds have limited liquidity with long "lock-up" periods allowing them to pursue investment strategies without having to factor in the need to meet client redemptions and ETFs trade on an exchange. On the other hand, mutual funds typically must meet daily client redemptions. This differing liquidity profile can have a material impact on the investment returns generated by a mutual fund or ETF pursuing an alternative investing strategy compared with a traditional hedge fund pursuing the same strategy.

Nontraditional investment options and strategies are often employed by a portfolio manager to further a fund's investment objective and to help offset market risks. However, these features may be complex, making it more difficult to understand the fund's essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage."

***Please consider the investment objectives, risks, fees, and charges and expenses of mutual funds, ETFs, closed end funds, unit investment trusts, and variable insurance products carefully before investing. The prospectus contains this and other information about each fund. To obtain a prospectus, contact your Financial Advisor or Private Wealth Advisor or visit the Morgan Stanley website at [www.morganstanley.com](http://www.morganstanley.com). Please read it carefully before investing.***

**Money Market Funds:** You could lose money in money market funds. Although money market funds classified as government funds (i.e., money market funds that invest 99.5% of total assets in cash and/or securities backed by the U.S. government) and retail funds (i.e., money market funds open to natural person investors only) seek to preserve value at \$1.00 per share, they cannot guarantee they will do so. The price of other money market funds will fluctuate and when you sell shares they may be worth more or less than originally paid. Money market funds may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits. A money market fund investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or 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.

*Investors should carefully consider the investment objectives, risks, charges and expenses of a money market fund before investing. The prospectus contains this and other information about the money market fund. To obtain a prospectus, contact your Financial Advisor or visit the money market fund company's website. Please read the prospectus carefully before investing.*

**Exchange Funds** are private placement vehicles that enable holders of concentrated single-stock positions to exchange those stocks for a diversified portfolio. Investors may benefit from greater diversification by exchanging a concentrated stock position for fund shares without triggering a taxable event. These funds are available only to qualified investors and may only be offered by Financial Advisors who are qualified to sell alternative investments. Before investing, investors should consider the following:

- Dividends are pooled
- Investors may forfeit their stock voting rights
- Investment may be illiquid for several years
- Investments may be leveraged or contain derivatives
- Significant early redemption fees may apply
- Changes to the U.S. tax code, which could be retroactive (potentially disallowing the favorable tax treatment of exchange funds)
- Investment risk and potential loss of principal

#### KEY ASSET CLASS CONSIDERATIONS AND OTHER RISKS

Investing in the markets entails the risk of market volatility. The value of all types of investments, including stocks, mutual funds, exchange-traded funds ("ETFs"), closed-end funds, and unit investment trusts, may increase or decrease over varying time periods. To the extent the investments depicted herein represent **international securities**, you should be aware that there may be additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be magnified in **emerging markets and frontier markets**. Some funds also invest in foreign securities, which may involve currency risk. There is no assurance that the fund will achieve its investment objective. **Small- and mid-capitalization companies** may lack the financial resources, product diversification and competitive strengths of larger companies. In addition, the securities of small- and mid-capitalization companies may not trade as readily as, and be subject to higher volatility than, those of larger, more established companies. The value of **fixed income securities** will fluctuate and, upon a sale, may be worth more or less than their original cost or maturity value. Bonds are subject to interest rate risk, call risk, reinvestment risk, liquidity risk, and credit risk of the issuer. **High yield bonds** are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. In the case of **municipal bonds**, income is generally exempt from federal income taxes. Some income may be subject to state and local taxes and to the federal alternative minimum tax. Capital gains, if any, are subject to tax. **Treasury Inflation Protection Securities' (TIPS)** coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation. There is no guarantee that investors will receive par if TIPS are sold prior to maturity. The returns on a portfolio consisting primarily of **environmental, social, and governance-aware investments ("ESG")** may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein. **Options** and margin trading involve substantial risk and are not appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, **closed-end funds** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. Shares of closed-end funds frequently trade at a discount from their NAV which may increase investors' risk of loss. The risk of loss due to this discount may be greater for investors expecting to sell their shares in a relatively short period after completion of the public offering. This characteristic is a risk separate and distinct from the risk that a closed-end fund's net asset value may decrease as a result of investment activities. NAV is total assets less total liabilities divided by the number of shares outstanding. At the time an investor purchases or sells shares of a closed-end fund, shares may have a market price that is above or below NAV. Portfolios that invest a large percentage of assets in only one industry **sector** (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

**Structured Investments** are complex and not appropriate for all investors. An investment in Structures Investments involve risks. These risks can include but are not limited to: (1) Fluctuations in the price, level or yield of underlying instruments, interest rates, currency values and credit quality, (2) Substantial or total loss of principal, (3) Limits on participation in appreciation of underlying instrument, (4) Limited liquidity, (5) Issuer credit risk and (6) Conflicts of Interest. There is no assurance that a strategy of using structured product for wealth preservation, yield enhancement, and/or interest rate risk hedging will meet its objectives.

**Alternative investments** may be either traditional alternative investment vehicles, such as hedge funds, fund of hedge funds, private equity, private real estate and managed futures or, non-traditional products such as mutual funds and exchange-traded funds that also seek alternative-like exposure but have significant differences from traditional alternative investments. Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; and Risks associated with the operations, personnel, and processes of the manager. Further, opinions regarding Alternative Investments expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management.

Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing.

Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

A majority of Alternative Investment managers reviewed and selected by GIMA pay or cause to be paid an ongoing fee for distribution from their management fees to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase an interest in an Alternative Investment and in some instances pay these fees on the investments held by advisory clients. Morgan Stanley Wealth Management rebates such fees that are received and attributable to an Investment held by an advisory client and retains the fees paid in connection with investments held by brokerage clients. Morgan Stanley Wealth Management has a conflict of interest in offering alternative investments because Morgan Stanley Wealth Management or our affiliates, in most instances, earn more money in your account from your investments in alternative investments than from other investment options.

It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 260 basis points or more annually depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, "blow ups," or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. However, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial "lift" or upwards bias.

**Hedge Funds of Funds** and many funds of funds are private investment vehicles restricted to certain qualified private and institutional investors. They are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They may be highly illiquid, can engage in leverage and other speculative practices that may increase volatility and the risk of loss, and may be subject to large investment minimums and initial lockups. They involve complex tax structures, tax-inefficient investing and delays in distributing important tax information. Categorically, hedge funds and funds of funds have higher fees and expenses than traditional investments, and such fees and expenses can lower the returns achieved by investors. Funds of funds have an additional layer of fees over and above hedge fund fees that will offset returns. An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. An investment in a **target date portfolio** is subject to the risks attendant to the underlying funds in which it invests, in these portfolios the funds are the Consulting Group Capital Market funds. A target date portfolio is geared to investors who will retire and/or require income at an approximate year. The portfolio is managed to meet the investor's goals by the pre-established year or "target date." A target date portfolio will transition its invested assets from a more aggressive portfolio to a more conservative portfolio as the target date draws closer. An investment in the target date portfolio is not guaranteed at any time, including, before or after the target date is reached. **Managed futures** investments are speculative, involve a high degree of risk, use significant leverage, are generally illiquid, have substantial charges, subject investors to conflicts of interest, and are appropriate only for the risk capital portion of an investor's portfolio. Managed futures investments do not replace equities or bonds but rather may act as a complement in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors.

### Virtual Currency Products (Cryptocurrencies)

**Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and may result in a loss of the entire investment. Risks and considerations include but are not limited to:**

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. **The price of Digital Assets could decline rapidly, and investors could lose their entire investment.**
- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.
- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor's subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.
- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.
- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.
- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.
- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund's or product's ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.

- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset.
- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from "airdrops" with respect to, or "forks" in, a Digital Asset's blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a "fork" in the Digital Asset blockchain could materially decrease the price of such Digital Asset.
- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products' use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.
- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result, like other investors have, you can lose some or all of your holdings of Digital Assets.
- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.
- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human trafficking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting off entirely the ability to use or trade Digital Asset products.
- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.
- Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.
- The exchange rate of virtual currency products versus the USD historically has been very volatile and the exchange rate could drastically decline. For example, the exchange rate of certain Digital Assets versus the USD has in the past dropped more than 50% in a single day. Other Digital Assets may be affected by such volatility as well.
- Digital Asset exchanges have limited operating and performance histories and are not regulated with the same controls or customer protections available to more traditional exchanges transacting equity, debt, and other assets and securities. There is no assurance that a person/exchange who currently accepts a Digital Asset as payment will continue to do so in the future.
- The regulatory framework of Digital Assets is evolving, and in some cases is uncertain, and Digital Assets themselves may not be governed and protected by applicable securities regulators and securities laws, including, but not limited to, Securities Investor Protection Corporation coverage, or other regulatory regimes.
- Morgan Stanley Smith Barney LLC or its affiliates (collectively, "Morgan Stanley") may currently, or in the future, offer or invest in Digital Asset products, services or platforms. The proprietary interests of Morgan Stanley may conflict with your interests.
- The foregoing list of considerations and risks are not and do not purport to be a complete enumeration or explanation of the risks involved in an investment in any product or fund investing or trading in Digital Assets.

**Asset allocation and diversification** do not assure a profit or protect against loss in declining financial markets. Past performance is no guarantee of future results. Actual results may vary.

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**Rebalancing** does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

Indices are unmanaged and investors cannot directly invest in them. They are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Composite index results are shown for illustrative purposes only, generally do not represent the performance of a specific investment, may not, for a variety of reasons, be an appropriate comparison or benchmark for a particular investment and may not necessarily reflect the actual investment strategy or objective of a particular investment. Consequently, comparing an investment to a particular index may be of limited use.

To obtain **Tax-Management Services**, a client must complete the Tax-Management Form, and deliver the signed form to Morgan Stanley. For more information on Tax-Management Services,

including its features and limitations, please ask your Financial Advisor for the Tax Management Form. Review the form carefully with your tax advisor. Tax-Management Services: (a) apply only to equity investments in separate account sleeves of client accounts; (b) are not available for all accounts or clients; and (c) may adversely impact account performance. Tax-management services do not constitute tax advice or a complete tax-sensitive investment management program. There is no guarantee that tax-management services will produce the desired tax results.

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**Lifestyle Advisory Services:** Products and services are provided by third party service providers, not Morgan Stanley Smith Barney LLC ("Morgan Stanley"). Morgan Stanley may not receive a referral fee or have any input concerning such products or services. There may be additional service providers for comparative purposes. Please perform a thorough due diligence and make your own independent decision.

This material is not a financial plan and does not create an investment advisory relationship between you and your Morgan Stanley Financial Advisor. We are not your fiduciary either under the Employee Retirement Income Security Act of 1974 (ERISA) or the Internal Revenue Code of 1986, and any information in this report is not intended to be considered investment advice or a recommendation for either ERISA or Internal Revenue Code purposes and that (unless otherwise provided in a written agreement and/or as described at [www.morganstanley.com/disclosures/dol](http://www.morganstanley.com/disclosures/dol)) you remain solely responsible for your assets and all investment decisions with respect to your assets. Nevertheless, if Morgan Stanley or your Financial Advisor provides "investment advice," as that term is defined under Section 3(21) of ERISA, to you with respect to certain retirement, welfare benefit, or education savings account assets for a fee or other compensation, Morgan Stanley and/or your Financial Advisor will be providing such advice in its capacity as a fiduciary under ERISA and/or the Code. Morgan Stanley will only prepare a financial plan at your specific request using Morgan Stanley approved financial planning software.

**The Morgan Stanley Goals-Planning System (GPS)** includes a brokerage investment analysis tool. While securities held in a client's investment advisory accounts may be included in the analysis, the reports generated from the GPS Platform are not financial plans nor constitute a financial planning service. A financial plan generally seeks to address a wide spectrum of a client's long-term financial needs, and can include recommendations about insurance, savings, tax and estate planning, and investments, taking into consideration the client's goals and situation, including anticipated retirement or other employee benefits. Morgan Stanley Smith Barney LLC ("Morgan Stanley") will only prepare a financial plan at a client's specific request using Morgan Stanley approved financial planning software. Investing in financial instruments carries with it the possibility of losses and that a focus on above-market returns exposes the portfolio to above-average risk. Performance aspirations are not guaranteed and are subject to market conditions. High volatility investments may be subject to sudden and large falls in value, and there could be a large loss on realization which could be equal to the amount invested. **IMPORTANT:** The projections or other information provided by the Morgan Stanley Goals Planning System regarding the likelihood of various investment outcomes (including any assumed rates of return and income) are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Morgan Stanley does not represent or guarantee that the projected returns or income will or can be attained.

**A LifeView Financial Goal Analysis** (“Financial Goal Analysis”) or LifeView Financial Plan (“Financial Plan”) is based on the methodology, estimates, and assumptions, as described in your report, as well as personal data provided by you. It should be considered a working document that can assist you with your objectives. Morgan Stanley makes no guarantees as to future results or that an individual’s investment objectives will be achieved. The responsibility for implementing, monitoring and adjusting your Financial Goal Analysis or Financial Plan rests with you. After your Financial Advisor delivers your report to you, if you so desire, your Financial Advisor can help you implement any part that you choose; however, you are not obligated to work with your Financial Advisor or Morgan Stanley.

**Important information about your relationship with your Financial Advisor and Morgan Stanley Smith Barney LLC when using LifeView Goal Analysis or LifeView Advisor.** When your Financial Advisor prepares and delivers a Financial Goal Analysis (i.e., when using LifeView Goal Analysis), they will be acting in a *brokerage* capacity. When your Financial Advisor prepares a Financial Plan (i.e., when using LifeView Advisor), they will be acting in an *investment advisory* capacity with respect to the delivery of your Financial Plan. This Investment Advisory relationship will begin with the delivery of the Financial Plan and ends thirty days later, during which time your Financial Advisor can review the Financial Plan with you. To understand the differences between brokerage and advisory relationships, you should consult your Financial Advisor, or review our “Understanding Your Brokerage and Investment Advisory Relationships,” *brochure* available at <https://www.morganstanley.com/wealth-relationshipwithms/pdfs/understandingyourrelationship.pdf>

We may act in the capacity of a broker or that of an advisor. As your broker, we are not your fiduciary and our interests may not always be identical to yours. Please consult with your Financial Advisor or Private Wealth Advisor to discuss our obligations to disclose to you any conflicts we may from time to time have and our duty to act in your best interest. We may be paid both by you and by others who compensate us based on what you buy. Our compensation, including that of your Financial Advisor or Private Wealth Advisor, may vary by product and over time.

Investment and services offered through Morgan Stanley Smith Barney LLC, Member SIPC.

**GLOBAL INVESTMENT COMMITTEE (GIC) ASSET ALLOCATION MODELS:** The Asset Allocation Models are created by Morgan Stanley Wealth Management’s GIC.

**HYPOTHETICAL MODEL PERFORMANCE (GROSS):** Hypothetical model performance results do not reflect the investment or performance of an actual portfolio following a GIC Strategy, but simply reflect actual historical performance of selected indices on a real-time basis over the specified period of time representing the GIC’s strategic and tactical allocations as of the date of this report. The past performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation or trading strategy. Hypothetical performance results do not represent actual trading and are generally designed with the benefit of hindsight. Actual performance results of accounts vary due to, for example, market factors (such as liquidity) and client-specific factors (such as investment vehicle selection, timing of contributions and withdrawals, restrictions and rebalancing schedules). Clients would not necessarily have obtained the performance results shown here if they had invested in accordance with any GIC Asset Allocation Model for the periods indicated. Despite the limitations of hypothetical performance, these hypothetical performance results allow clients and Financial Advisors to obtain a sense of the risk/return trade-off of different asset allocation constructs. The hypothetical performance results in this report are calculated using the returns of benchmark indices for the asset classes, and not the returns of securities, fund or other investment products. Models may contain allocations to Hedge Funds, Private Equity and Private Real Estate. The benchmark indices for these asset classes are not issued on a daily basis. When calculating model performance on a day for which no benchmark index data is issued, we have assumed straight line growth between the index levels issued before and after that date.

**FEES REDUCE THE PERFORMANCE OF ACTUAL ACCOUNTS:** None of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, fees) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models. The GIC Asset Allocation Models and any model performance included in this presentation are intended as educational materials. Were a client to use these models in connection with investing, any investment decisions made would be subject to transaction and other costs which, when compounded over a period of years, would decrease returns. Information regarding Morgan Stanley’s standard advisory fees is available in the Form ADV Part 2, which is available at [www.morganstanley.com/adv](http://www.morganstanley.com/adv). The following hypothetical illustrates the compound effect fees have on investment returns: For example, if a portfolio’s annual rate of return is 15% for 5 years and the account pays 50 basis points in fees per annum, the gross cumulative five-year return would be 101.1% and the five-year return net of fees would be 96.8%. Fees and/or expenses would apply to clients who invest in investments in an account based on these asset allocations, and would reduce clients’ returns. The impact of fees and/or expenses can be material.

**Variable annuities** are long-term investments designed for retirement purposes and may be subject to market fluctuations, investment risk, and possible loss of principal. All guarantees, including optional benefits, are based on the financial strength and claims-paying ability of the issuing insurance company and do not apply to the underlying investment options. Optional riders may not be able to be purchased in combination and are available at an additional cost. Some optional riders must be elected at time of purchase. Optional riders may be subject to specific limitations, restrictions, holding periods, costs, and expenses as specified by the insurance company in the annuity contract. If you are investing in a **variable annuity** through a tax-advantaged retirement plan such as an IRA, you will get

no additional tax advantage from the variable annuity. Under these circumstances, you should only consider buying a variable annuity because of its other features, such as lifetime income payments and death benefits protection. Taxable distributions (and certain deemed distributions) are subject to ordinary income tax and, if taken prior to age 59½, may be subject to a 10% federal income tax penalty. Early withdrawals will reduce the death benefit and cash surrender value.

**Equity securities** may fluctuate in response to news on companies, industries, market conditions and general economic environment. **Ultrashort-term fixed income** asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

**Master Limited Partnerships (MLPs)** are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk. Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk. The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value. MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV, and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

**Investing in commodities** entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention. **Physical precious metals** are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor.

**REITs** investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions. Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage. Principal is returned on a monthly basis over the life of a **mortgage-backed security**. Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. **Asset-backed securities** generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.

**Yields** are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision. **Credit ratings** are subject to change. **Duration**, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. The majority of \$25 and \$1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per \$25 or \$1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price. The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk. The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield. Some \$25 or \$1000 par **preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Companies paying **dividends** can reduce or cut payouts at any time.

**Nondiversification:** For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time. Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

**Growth investing** does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. **Value investing** does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected. Any type of **continuous or periodic investment plan** does not assure a profit and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fluctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.

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In addition, each account that is invested in a program that is eligible to purchase certain investment products, such as mutual funds, will also pay a Platform Fee (which is subject to a Platform Fee offset) as described in the applicable ADV brochure. Accounts invested in the Select UMA program may also pay a separate Sub-Manager fee, if applicable.

If your account is invested in mutual funds or exchange traded funds (collectively "funds"), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund's share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV).

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may affect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instance, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: [www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf](http://www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf). For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV), or contact your Financial Advisor / Private Wealth Advisor.

## GENERAL DEFINITIONS

**Alpha:** Is a measure of a portfolio's time weighted net of fees return in excess of the market return, both adjusted for risk. A positive alpha indicates that the portfolio outperformed the market on a risk-adjusted basis, and a negative alpha indicates the portfolio did worse than the market.

**Annualized Standard Deviation:** A statistical calculation that measures the volatility of returns over time; the larger the standard deviation, the greater the volatility.

**Beta:** Is a measure of the sensitivity of a portfolio's time weighted net of fees return against that of the market. A beta greater than 1.00 indicates volatility greater than the market.

**CCY:** Represents the currency of the underlying instrument. Currency is a medium of exchange for goods and services.

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**Dollar-Weighted Return (Internal Rate of Return):** A return calculation that measures the actual performance of a portfolio over the reporting period. Since dollar weighted returns include the impact of client contributions and withdrawals, they should not be compared to market indices or used to evaluate the performance of a manager, but can be used to evaluate progress toward investment goals.

**Graph Notes:** Both the benchmark and portfolio returns are adjusted by the return of the 90-day Treasury Bills to illustrate the excess return above the Risk Free Rate for each period.

**Gross of Fees:** Performance results depicted as "gross" of fees do not reflect the deduction of any wrap fee, investment management fee, trade commissions, and/or other account fees. Your actual returns are lower after deducting these expenses. Please see the Morgan Stanley Smith Barney LLC Form ADV Part 2 Brochure for advisory accounts and/or any applicable brokerage account trade confirmation statements for a full disclosure of the applicable charges, fees and expenses. Your Financial Advisor will provide those documents to you upon request.

**Investment Earnings:** A combination of the income received and total portfolio value increase or decrease, excluding net contributions and withdrawals, over the reporting period.

**Modern Portfolio Theory:** Seeks to quantify the relationship between risk and return and operates under the assumption that an investor must be compensated for assuming risk.

**Net Contributions/Withdrawals:** The net value of cash and securities contributed to or withdrawn from the account(s) during the reporting period. Net contributions and withdrawals may include advisory fees for advisory accounts.

**Net of Fees:** Performance results depicted as "net" of fees shall mean that any wrap fee, investment management fees, trade commissions, and/or other account fees have been deducted. Any other fees or expenses associated with the account, such as third party custodian fees, may not have been deducted. Please see the Morgan Stanley Smith Barney LLC Form ADV Part 2 Brochure for advisory accounts and/or any applicable brokerage account trade confirmation statements for a full disclosure of the applicable charges, fees and expenses. Your Financial Advisor will provide those documents to you upon request.

**Performance ineligible assets:** Performance returns are not calculated for certain assets because accurate valuations and transactions for these assets are not processed or maintained by Morgan Stanley Smith Barney LLC. Common examples include life insurance and annuities as well as Manually Added and External accounts, assets and liabilities.

**R<sup>2</sup>:** Is a measure that indicates the extent to which fluctuations in a portfolio's time weighted net of fees return is correlated with the return of the general market. An R<sup>2</sup> of 0.80 implies that 80% of the fluctuation of a portfolio's return is explained by the fluctuation in the market.

**Tax-Qualified Account(s):** Accounts that qualify for favorable tax treatment under US federal tax law and may benefit from favorable tax treatment under applicable state tax law. Typically, these accounts benefit from tax deferred growth potential, meaning investment earnings (such as capital gains, dividends, and interest) are generally not subject to federal income tax while the earnings remain in the account. Capital gains rates generally do not apply. Distributions of taxable amounts are generally subject to ordinary income tax and, if made before age 59 1/2, may be subject to a 10% (25% for certain SIMPLE IRA distributions) penalty tax. Some tax-qualified accounts, such as traditional Individual Retirement Accounts ("IRA") and employer sponsored retirement plan accounts, may allow tax deductible and/or pre-tax contributions (subject to certain limitations and restrictions). Other tax-qualified accounts, such as Roth IRAs and Coverdell Education Savings Accounts, may allow income tax free distributions, but only if certain conditions are satisfied.

**Taxable Account(s):** Accounts that are not Tax-Qualified Account(s), meaning investment earnings (such as capital gains, dividends, and interest) are generally subject to current US federal income taxation when held by US taxable investors. Note, however, that this category may include specific assets that are generally not subject to US federal income tax such as municipal bonds.

**Time-Weighted Return:** A return calculation that measures the investment performance of a portfolio over the reporting period. Time weighted returns do not include the impact of client contributions and withdrawals and therefore, may not reflect the actual rate of return the client received. Time weighted returns isolate investment actions and can be compared to benchmarks and used to evaluate the performance of a manager.

**Total Cost:** The sum of all costs incurred by a firm in producing a certain level of output.

**Total Value:** "Total Value" represents the Market Value of the portfolio or Asset Class referenced and includes the accrual of interest and dividends. Total Value in the Asset Allocation view prior to January 2014, does not reflect the accrual of interest and dividends. Total Value for Morgan Stanley & Co. and External accounts also does not include accrued interest and dividends.

## BENCHMARK DEFINITIONS

**TN TSBA Composite:** The current allocation is comprised of 50.00% MSCI AC World Net, 10.00% MSCI EM Net, 15.00% MSCI EAFE Net, 25.00% Bloomberg Global Aggregate 1-3 Y.

**90-Day T-Bills:** Equal dollar amounts of three-month Treasury bills are purchased at the beginning of each of three consecutive months. As each bill matures, all proceeds are rolled over or reinvested in a new three-month bill. The income used to calculate the monthly return is derived by subtracting the original amount invested from the maturity value. The yield curve average is the basis for calculating the return on the index. The index is rebalanced monthly by market capitalization. The 90-Day Treasury Bill is a short-term obligation issued by the United States government. T-bills are purchased at a

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discount to the full face value, and the investor receives the full value when they mature. The difference of discount is the interest earned. T-bills are issued in denominations of \$10,000 auction and \$1,000 increments thereafter.

**MSCI AC World Net:** The MSCI ACWI Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 46 country indexes comprising 23 developed and 23 emerging market country indexes. The developed market country indexes included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indexes included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkiye, and United Arab Emirates (as of June 2014). Net total return indices reinvest dividends after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

**MSCI EAFE Net:** The MSCI EAFE Index -Europe, Australasia, Far East - is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US and Canada. The MSCI EAFE Index consists of the following 21 developed market country indexes: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom (as of June 2014). Net total return indices reinvest dividends after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

**MSCI EM Net:** The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 23 emerging market country indexes: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkiye, and United Arab Emirates (as of June 2014). Net total return indices reinvest dividends after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

**Bloomberg Global Aggregate 1-3 Y:** The Bloomberg Global Aggregate Index provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment grade 144A securities. This index is the 1-3 Yr component of the Global Aggregate index.

**Bloomberg US Aggregate:** The Bloomberg US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency).



**OPEB Trust Meeting**  
**Gaylord Opryland Resort and Convention Center**  
**Lincoln B**  
**November 18, 2023**

**AGENDA**

7:15 a.m.	Call to Order	Dr. Dale Viox, Chairman
7:16 a.m.	Approval of Agenda	
7:17 a.m.	Approval of February 17, 2023 Minutes	
7:18 a.m.	Acceptance of 3-month Financial Statements – September 30, 2023	Dr. Tammy Grissom, Trust Administrator
7:19 a.m.	Report of Activities and Fiscal Condition of the Trust	Dr. Tammy Grissom
7:21 a.m.	Review OPEB Trust Bylaws	Emily Warren, TSBA Staff Attorney
7:23 a.m.	Approval of Proposed Policy Change <ul style="list-style-type: none"><li>• 1010 – Board of Trustees’ Meetings</li></ul>	
7:25 a.m.	Approval of June 30, 2023 Audit	Erica Saeger, Audit Principal Crosslin CPA
7:40 a.m.	Investment Report	Chris Sigmund, Morgan Stanley
7:55 a.m.	Appointment of the Following New Trustee: <ul style="list-style-type: none"><li>• David Cook, Bartlett Term: 11/18/23 – 12/31/24</li><li>• Tim Hobbs, Hickman County Term: 11/18/23 – 12/31/24</li></ul>	Dr. Dale Viox
7:58 a.m.	Election of 2024 Trust Officers (Chairman and Vice-Chairman)	Dr. Dale Viox
8:03 a.m.	Public Comment	
8:13 a.m.	Other Business	
8:15 a.m.	Adjourn	

**Tennessee School Boards Association  
OPEB Trust Meeting  
Embassy Suites by Hilton Cool Springs  
Cool Springs Boardroom  
Friday, February 17, 2023**

The TSBA OPEB Trustees met on Friday, February 17, 2023. The following members were present: **Wright Cox**, Collierville; **Kevin Woods**, Memphis-Shelby County; **Bryan Woodruff**, Bartlett; **Chris Denson**, Millington; **Candy Morgan**, Maryville; and **Dr. Tammy Grissom**, Trust Administrator. Absent was **Dr. Dale Viox**, Arlington. TSBA staff member present was **Emily Warren**. **Lee Burklow** with Morgan Stanley was also in attendance.

Bryan Woodruff, Vice Chairman, called the meeting to order at 7:01 a.m. and welcomed everyone.

**DENSON/WOODS:** Motion to approve the agenda. MOTION CARRIED.

**GRISSOM/DENSON:** Motion to approve November 12, 2022 Minutes. MOTION CARRIED.

**GRISSOM/WOODS:** Motion to accept the 6-month Financial Statements (December 31, 2022).  
MOTION CARRIED.

Dr. Tammy Grissom, the Trust Administrator, reported on the activities and fiscal condition of the Trust. She noted that, since our last meeting, no new members had joined the OPEB Trust and that no withdrawal of funds had been made by any OPEB Trust members.

Discussion was held as to whether any changes needed to be made to the OPEB Trust's investment policy 3060. Tammy noted that the policy is reviewed annually in consultation with Morgan Stanley to ensure it aligns with the practices of the OPEB Trust. No changes were recommended.

Lee Burklow with Morgan Stanley reported on the financial stability of the OPEB Trust and the performance of the Trust's investments in the current economy. He stated that the Trust is performing within the fiduciary guidelines as set forth by the investment policy. He went into detail on the economy and the effects it would have on future investments.

The meeting adjourned at 7:44 a.m.

**Respectfully submitted,**

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**Bryan Woodruff, Vice Chairman**

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**Tammy Grissom, OPEB Trust Administrator**

**TSBA OPEB Trust**  
**Balance Sheet**  
As of September 30, 2023

	<u>Sep 30, 23</u>
<b>ASSETS</b>	
<b>Current Assets</b>	
<b>Checking/Savings</b>	
1000-00 · Suntrust Operating Account	5,654.35
<b>Total Checking/Savings</b>	<u>5,654.35</u>
<b>Other Current Assets</b>	
1300-00 · Investments	
1300-10 · Hickman County Investments	2,617,994.63
1300-20 · Johnson County Investments	1,319,225.74
1300-30 · Shelby County Investments	121,820,046.36
1300-50 · Jackson-Madison Investments	475,804.99
1300-60 · Arlington Investments	4,140,619.12
1300-70 · Bartlett Investments	6,593,763.91
1300-80 · Collierville Investments	2,455,425.61
1300-90 · Lakeland Investments	2,835,022.00
1300-91 · Millington Investments	361,361.20
<b>Total 1300-00 · Investments</b>	<u>142,619,263.56</u>
<b>Total Other Current Assets</b>	<u>142,619,263.56</u>
<b>Total Current Assets</b>	<u>142,624,917.91</u>
<b>TOTAL ASSETS</b>	<b><u>142,624,917.91</u></b>
<b>LIABILITIES &amp; EQUITY</b>	
<b>Equity</b>	
3200-00 · Unrestricted Net Assets	146,681,792.48
Net Income	-4,056,874.57
<b>Total Equity</b>	<u>142,624,917.91</u>
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b><u>142,624,917.91</u></b>

**TSBA OPEB Trust**  
**Profit & Loss**  
 July through September 2023

	Jul - Sep 23
<b>Income</b>	
4300-00 · Contributions	
4300-20 · Contributions - Johnson County	25,000.00
<b>Total 4300-00 · Contributions</b>	<b>25,000.00</b>
4400-00 · Unrealized Gain/Loss	
4400-10 · Unrealized Gain/Loss - Hickman	-86,459.13
4400-20 · Unrealized Gain/Loss - Johnson	-44,038.82
4400-30 · Unrealized Gain/Loss - Shelby	-4,063,803.93
4400-50 · Unrealized Gain/Loss - JMadison	-15,700.83
4400-60 · Unrealized Gain/Loss - Arlingto	-138,481.06
4400-70 · Unrealized Gain/Loss - Bartlett	-214,654.81
4400-80 · Unrealized Gain/Loss - Collierv	-82,350.01
4400-90 · Unrealized Gain/Loss - Lakeland	-95,162.71
4400-91 · Unrealized Gain/Loss - Millingt	-11,912.15
<b>Total 4400-00 · Unrealized Gain/Loss</b>	<b>-4,752,563.45</b>
4500-00 · Interest, Dividends&Capital Gn	
4500-10 · Interest, Div., & CG - Hickman	14,386.62
4500-20 · Interest, Div., & CG - Johnson	7,261.90
4500-30 · Interest, Div., & CG - Shelby	668,743.38
4500-50 · Interest, Div., & CG - JMadison	2,622.59
4500-60 · Interest, Div., & CG - Arlingto	22,850.85
4500-70 · Interest, Div., & CG - Bartlett	35,715.46
4500-80 · Interest, Div., & CG - Collierv	13,740.28
4500-90 · Interest, Div., & CG - Lakeland	15,783.91
4500-91 · Interest, Div., & CG - Millingt	1,990.48
<b>Total 4500-00 · Interest, Dividends&amp;Capital Gn</b>	<b>783,095.47</b>
4800-00 · Interest Income	0.15
<b>Total Income</b>	<b>-3,944,467.83</b>
<b>Expense</b>	
6400-00 · Administrative Fee	
6400-10 · Administrative Fee - Hickman	1,682.39
6400-20 · Administrative Fee - Johnson	832.42
6400-30 · Administrative Fee - Shelby	37,531.53
6400-50 · Administrative Fee -J. Madison	305.75
6400-60 · Administrative Fee - Arlington	2,661.83
6400-70 · Administrative Fee - Bartlett	4,235.38
6400-80 · Administrative Fee - Colliervil	1,578.37
6400-90 · Administrative Fee - Lakeland	1,822.71
6400-91 · Administrative Fee - Millington	232.20
<b>Total 6400-00 · Administrative Fee</b>	<b>50,882.58</b>
6500-00 · Investment Advisor Fees	
6500-10 · Investment Advisor Fees - Hickm	1,117.74
6500-20 · Investment Advisor Fees - Johns	561.05
6500-30 · Investment Advisor Fees - Shelb	52,482.67
6500-50 · Investment Advisor Fees - JMadi	203.73
6500-60 · Investment Advisor Fees - Arlin	1,794.04
6500-70 · Investment Advisor Fees - Bartl	2,902.97
6500-80 · Investment Advisor Fees - Colli	1,067.66
6500-90 · Investment Advisor Fees - Lakel	1,239.70
6500-91 · Investment Advisor Fees - Milli	154.60
<b>Total 6500-00 · Investment Advisor Fees</b>	<b>61,524.16</b>
<b>Total Expense</b>	<b>112,406.74</b>
<b>Net Income</b>	<b>-4,056,874.57</b>

# Tennessee School Boards Association

## OPEB Trust

### Bylaws

#### ARTICLE I—TRUSTEES

**Section 1. Appointment of Trustees.** There shall be seven (7) Trustees. The Executive Director and President of the Tennessee School Boards Association will be voting ex-officio members of the Board of Trustees and shall remain as Trustees so long as they hold their respective positions. The remaining five (5) Trustees shall be from the governing boards of the participating members of the Trust and appointed by the TSBA OPEB Trustees. The term of these five (5) Trustees shall be three (3) years, and they may be reappointed.

**Section 2. Officers of the Trust.** The officers of the Trust shall be Chairman and Vice-Chairman. Officers shall be elected by the Trustees annually from the members of the Board of Trustees. The term of officers shall begin on January 1 of each year and terminate on the following December 31. An officer's term shall also cease upon their termination as a board member. Ex-officio members of the Board of Trustees are ineligible to hold the office of Chairman and Vice-Chairman.

**Section 3. Appointment of Successor Trustees.** Upon the death, resignation, or removal of a Trustee or upon the Trustee becoming ineligible to serve, the Board of Trustees shall appoint a new Trustee to serve the remainder of the term. Trustees and all officers of the Trust shall continue to serve until their successors are selected except for Trustees who are removed or resign. A Trustee appointed to fill a vacancy shall serve until the expiration of the term of his/her predecessor.

**Section 4. Vacancy of Officers.** Upon the death, resignation, or removal of the Chairman, the Vice-Chairman will automatically assume the office of Chairman, and a new Vice-Chairman shall be elected at the next meeting of the Trust. If the vacancy is for the office of Vice-Chairman, a new Vice-Chairman shall be elected at the next meeting of the Trust.

#### ARTICLE II—GENERAL TRUST PROVISIONS

**Section 1. Amendments.** These Bylaws may be amended by a vote of the majority of the Trustees present at any meeting of the Trust, provided that notice of such proposed amendment shall be given in writing ten (10) days in advance to all Trustees. The Administrator shall notify the participating members of any and all amendments adopted.

The Trustees will review these Bylaws annually to ensure its continued relevance and to make changes as new conditions dictate.

**Section 2. Conflicts.** In the event of any conflict between any provision of these Bylaws and any provision of any applicable law, these Bylaws shall be deemed modified to the extent necessary to comply with such law.

### ARTICLE III—MEETINGS OF TRUSTEES

**Section 1. Regular Meetings.** The Board of Trustees shall meet biannually. Any item of business may be considered at a regular meeting. The time, date, and location of meetings of the Board shall be determined by the Board. No proxy votes shall be permitted.

**Section 2. Special Meetings.** A special meeting may be called at any time by the Chairman or by any four (4) of the Trustees. An emergency meeting may be called with less than ten (10) days written notice provided that all Trustees agree to such a meeting. An agenda specifying the subject of any special meeting shall accompany such notice, and only business included on that agenda may be transacted.

**Section 3. Notice of Meetings.** All meetings of the Board shall be conducted in a manner required by law. The Administrator shall publish any schedule or notice of meeting of the Board. Such publication requirement shall be deemed met by announcement on the TSBA website.

### ARTICLE IV—NATURE AND USE OF FUNDS

**Section 1. Member Fund Withdrawal.** The Trust is specifically authorized to make payments of legitimate reimbursements to member systems requesting their other post-employment benefits (OPEB) obligations. No other withdrawals may be made by member systems.

**Section 2. Investment of Funds.** The Trust may invest such portions of the Trust reserve in any manner that is both prudent and permissible under state and federal law. The Trustees shall develop and adopt an investment policy.

**Section 3. Investment Manager Selection.** Investment managers shall be subject to all restrictions and investment guidelines within these Bylaws and the investment policy maintained by the Trustees.

**Section 4. Fees.** The Trust Administrator shall be paid a fee per the following schedule on total assets under management and an administrative fee for the biennial OPEB valuations.

Amount	Fee
0-25MM	0.25%
25MM-50MM	0.15%
50MM-75MM	0.10%
75MM +	0.05%

The Trustees are permitted to compensate the investment managers and/or consultants with such fees as may be reasonable and competitive and are not excessive and detrimental to the Trust's long-term viability. It shall be incumbent upon the investment managers and/or consultants to fully represent all costs and fees associated with the management of the Trust.

**Section 5. Asset Manager Performance Review.** The Trustees will monitor performance of the portfolio using the quarterly statements provided by the Trust's investment consultants. The investment consultants shall provide the Trustees with manager performance numbers and appropriate benchmark data with which to evaluate the managers' performance. While mindful of the specific goals of the Trust, the investment consultants shall provide data on a benchmark comprised of an appropriate mix of indices and such other benchmark data as may be requested or relevant.

A file of the written confirmations of every transaction and the quarterly statements documenting total assets, including gains and/or losses in each security since original purchase date, will be maintained by the Trust Administrator.

The Trustees will continually review the liquidity needs of the Trust and will notify the investment consultants as soon as possible of any significant changes in anticipated needs.

**Section 6. Financial Institution.** All funds received by the Trust shall be deposited in such financial institutions as the Trust may designate for that purpose.

**Section 7. Withdrawals.** All withdrawals of funds from such financial institutions shall be made only by electronic transfer or by check signed by the Treasurer of the Trust or his/her designee.

**Section 8. Bonding.** Any person, other than third parties retained to invest funds on behalf of the Trust, who is authorized to sign or who may be engaged in handling funds or securities held by the Trust shall be bonded at the expense of the Trust by a duly authorized surety company in such amount or amounts as may from time to time be required by the Trustees.

*Adopted 4/16/09*  
*Article VI, Section 5 revised 7/16/09*  
*Article VI, Section 1 revised 11/15/10*  
*Article I, Sections 1, 4, 5, 6, 7, 8, & 9 revised 09/28/12*  
*Article II, Sections 1 & 2 revised 09/28/12*  
*Article V, Section 1 revised 09/28/12*  
*Article VI, Sections 2 & 6 revised 09/28/12*  
*Article I, Sections 1, 2, 3, 5, 6 & 7 revised 11/05/12*  
*Article II, Section 1 revised 11/05/12*  
*Article III, Sections 1 & 2 revised 11/05/12*  
*Article V, Sections 1 & 3 revised 11/05/12*  
*Article VI, Sections 2 & 9 revised 11/05/12*  
*Article I, Section 1 revised 11/10/13*  
*Article IV, Section 4 revised 4/20/16*  
*Article I, Section 1 added 02/20/17*  
*Article I, Sections 2 & 3 revised 10/21/20*  
*Article II, Section 1 revised 10/21/20*  
*Article II, Section 2 added 10/21/20*  
*Article III, Sections 1, 2, & 3 revised 10/21/20*  
*Article IV, Sections 1, 2, 3, 5, 6, 7, & 8 revised 10/21/20*

# TSBA OPEB Trust

Descriptor Term:  <b>Board of Trustees' Meetings</b>	Descriptor Code:  <b>1010</b>	Revised:  <b>DRAFT</b>
	Rescinds:  <b>1010</b>	Previous Issued:  <b>02/14/22</b>

## 1 **REGULAR MEETINGS OF TRUSTEES**

2 Regular meetings of the Board of Trustees shall be held biannually. Any item of business may be  
3 considered at a regular meeting. The time, date, and location of meetings of the Board shall be  
4 determined by the Board.

## 5 **SPECIAL MEETINGS OF TRUSTEES**

6 Special meetings of the Board of Trustees may be called at any time by the Chairman or by any  
7 four (4) of the Trustees. ~~An emergency~~ **A special** meeting may be called with less than ten (10)  
8 days written notice provided that all Trustees agree to such a meeting. An agenda specifying the  
9 subject of any special meeting shall accompany such notice, and only business included on that  
10 agenda may be transacted.

## 11 **NOTICE OF MEETINGS**

12 The Trust Administrator shall publish any schedule or notice of meeting of the Board as required  
13 by law.<sup>1</sup> Such publication requirement shall be deemed met by announcement on the TSBA  
14 website.

## 15 **REQUIRED VOTE**

16 Any action by the Trustees shall be taken at a duly constituted meeting. A majority of the  
17 Trustees present at a duly constituted meeting shall be required for action.

## 18 **OPEN MEETINGS**

19 All meetings of the Board of Trustees will be held in accordance with the Tennessee Open  
20 Meetings Act.<sup>2</sup>

## 21 **ELECTRONIC ATTENDANCE<sup>3</sup>**

22 Absent Trustees may participate in a regular or special meeting by electronic means of  
23 communication. The following requirements apply to all electronic attendance:

- 1 1. A quorum of the Board shall be physically present at the meeting in order for any Trustee  
2 to attend electronically;
- 3
- 4 2. The responsibility for the connection lies with the Trustee wishing to participate  
5 electronically. No more than two (2) attempts to connect shall be made unless the Board  
6 chooses to make additional attempts;
- 7
- 8 3. The Trustee wishing to participate shall give the Chairman or the Trust Administrator at  
9 least five (5) days' notice prior to the meeting of the Trustee's desire to participate  
10 electronically; and
- 11
- 12 4. All votes taken during a meeting where a Trustee is attending electronically shall be by  
13 roll call vote.

#### 14 **PUBLIC COMMENT<sup>4</sup>**

15 The Board shall allocate up to ten (10) minutes at each meeting for public comment on matters  
16 that are germane to the items on the agenda unless time is extended by the Board. If an  
17 individual wishes to address the Board, he/she must submit his/her request seventy-two (72)  
18 hours prior to the meeting. Delegations must select only one individual to speak on their behalf.

19 Individuals speaking to the Board shall address remarks to the Chair. Each person speaking shall  
20 state his/her name and the item on the agenda that he/she is addressing. Remarks will be limited  
21 to two (2) minutes. The Chair shall have the authority to terminate the remarks of any individual  
22 who is disruptive or does not adhere to board rules.

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#### Legal References

1. TCA 8-44-103
2. TCA 8-44-101 *et seq.*
3. TCA 8-44-108
4. Public Acts of 2023, Chapter No. 300



*TSBA OPEB Trust*

*Communication with  
Board of Trustees*

*October 4, 2023*





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October 4, 2023

To the Board of Trustees  
of the TSBA OPEB Trust

Dear Trustees:

We are pleased to present our Report to the Board of Trustees on the results of our audit of the financial statements of the TSBA OPEB Trust (the "Trust") for the year ended June 30, 2023.

A direct line of communication between our Firm and the Board of Trustees is essential to the proper exercise of our respective responsibilities. Our appointment involves the responsibility on our part to call to your attention any significant matters which we believe require your consideration, either at a regularly scheduled meeting or on a more timely basis, if warranted.

The accompanying report is intended solely for the use of the Board of Trustees and Trust management, and is not intended to be or should not be used by anyone other than these specified parties. It also presents information regarding our audit and certain other information which we believe will be of assistance to you. We appreciate this opportunity to discuss the contents of this report with you and any other matters you wish to address.

We would like to take this opportunity to express our appreciation for the assistance and courtesy extended to us by your employees. We appreciate working with you, and we look forward to a continued relationship with the TSBA OPEB Trust.

Very truly yours,

CROSSLIN, PLLC

A handwritten signature in black ink that reads "Erica D. Saeger". The signature is written in a cursive, flowing style.

Erica D. Saeger  
Audit Principal



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## ***Report on Results of the June 30, 2023 Audit***

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We have audited the financial statements of the TSBA OPEB Trust (the “Trust”) as of and for the year ended June 30, 2023, and we have issued an unmodified opinion dated October 4, 2023.

The following discussion contains information related to our audit that is required by professional standards and certain other information which will be of assistance to you.

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### ***Our Responsibilities under U.S. Generally Accepted Auditing Standards and Government Auditing Standards***

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As stated in our engagement letter, our responsibility, as described by professional standards, is to express an opinion about whether the financial statements, prepared by management with your oversight are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. Our audit of the financial statements does not relieve you or management of your responsibilities.

Our responsibility, as described by professional standards, is to plan and perform our audit to obtain reasonable, but not absolute, assurance about whether the statements are free of material misstatement and are fairly presented in accordance with U.S. generally accepted accounting principles. Because an audit is designed to provide reasonable, but not absolute, assurance and because we did not perform a detailed examination of all transactions, there is a risk that material misstatements may exist and not be detected by us.

As part of our audit, we considered the internal control of the Trust. Such considerations were solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

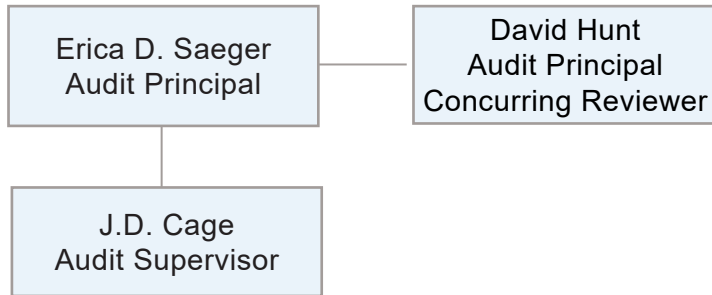
As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement and in conformity with *Government Auditing Standards*, we performed tests of the Trust’s compliance with certain provisions of laws, regulations, contracts, and grants. However, the objective of our tests was not to provide an opinion on compliance with such provisions.



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## **Customer Service Team**

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## **Areas of Audit Significance**

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During the audit, we focused on the following account balances and related transaction streams:

- Investments
- Investment income and expenses
- Employer contributions
- Financial reporting

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## **Planned Scope and Timing of the Audit**

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We performed the audit according to the planned scope and timing previously communicated to you.

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## **Significant Accounting Policies**

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Management has the responsibility to select and use appropriate accounting policies. A summary of the significant accounting policies adopted by the Trust is included in Note B to the financial statements. There have been no material changes in significant accounting policies or their application during fiscal year 2023. No matters have come to our attention that would require us, under professional standards, to inform you about (1) the methods used to account for significant unusual transactions and (2) the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus. We believe the Trust's accounting policies are appropriate and comprehensive under accounting principles generally accepted in the United States of America.



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## ***Accounting Estimates***

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Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were management's estimate of the fair value of investments. We evaluated the key factors and assumptions used to develop the estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

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## ***Difficulties Encountered in Performing the Audit***

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We encountered no significant difficulties with management in performing and completing our audit.

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## ***Corrected and Uncorrected Misstatements***

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Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. There were two significant adjusting entries made during the course of the audit. The entries were the following:

- One adjusting entry related to investments and unrealized losses to match the June 2023 settlement dates.
- One adjusting entry to record a prior year audit entry, not recorded by the Trust in order to properly roll forward net assets

Additionally, there were no unrecorded entries.

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## ***Disagreements with Management***

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For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during the course of our audits.



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## ***Management Representations***

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We requested certain representations from management that are included in the management representation letter. This letter has been included for informational purposes as Appendix A.

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## ***Fraud and Illegal Acts***

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We did not identify any material fraudulent or illegal acts during the course of our audit, nor were any disclosed to us by management or the Board.

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## ***Management Consultations with Other Independent Accountants***

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In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a “second opinion.” If a consultation involves application of an accounting principle to the entity’s financial statements or a determination of the type of auditors’ opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

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## ***Issues Discussed Prior to Our Selection as Independent Auditors***

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We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Trust’s auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

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## ***Independence***

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We are not aware of any relationships between Crosslin, PLLC, and the Trust that, in our professional judgment, may reasonably be thought to bear on our independence that have occurred during the period from July 1, 2022, through the date of this letter.

We confirm that we are independent with respect to the Trust within the meaning of Rule 101 of the Code of Professional Conduct of the American Institute of Certified Public Accountants and under *Government Audit Standards*.



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## ***Changes in Auditing and Accounting Standards***

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The government and standard-setting bodies are issuing guidance at an unprecedented pace. Crosslin, PLLC is constantly receiving, reviewing, and searching for the latest authoritative literature, in part through its involvement with the AICPA's Government Audit Quality Center and the Government Finance Officers Association ("GFOA"), including GFOA's Special Review Committee. We routinely interface with our customers to ensure proper understanding and application of pronouncements, standards, interpretations, and addenda that arise. In addition, we expect to join the Trust personnel in relevant discussions to implement all new standards as they arise.

Recent accounting pronouncements including the following. We will analyze these Statements with Trust management to ensure appropriate implementation, as applicable.

- **GASB Statement No. 91, Conduit Debt Obligations**  
Effective Date: The requirements of this Statement are effective for reporting periods beginning after December 15, 2022. Earlier application is encouraged.
  
- **GASB Statement No. 97, Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans—an amendment of GASB Statements No. 14 and No. 84, and a supersession of GASB Statement No. 32** Effective Date: The requirements of this Statement are effective as follows:
  - **Effective Dates vary, as there are multiple parts to this amendment that will be effective for fiscal year beginning after June 15, 2022.**
  
- **GASB Statement No. 99, Omnibus 2022** Effective Date: The requirements of this Statement are effective as follows:
  - **The requirements related to extension of the use of LIBOR, accounting for SNAP distributions, disclosures of nonmonetary transactions, pledges of future revenues by pledging governments, clarification of certain provisions in Statement 34, as amended, and terminology updates related to Statement 53 and Statement 63 are effective upon issuance.**
  - **The requirements related to leases, PPPs, and SBITAs are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter.**
  - **The requirements related to financial guarantees and the classification and reporting of derivative instruments within the scope of Statement 53 are effective for fiscal years beginning after June 15, 2023, and all reporting periods thereafter. Earlier application is encouraged and is permitted by topic.**



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## *Changes in Auditing and Accounting Standards - Continued*

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- **GASB Statement No. 100, Accounting Changes and Error Corrections --an amendment of GASB Statement No. 62**  
Effective Date: For fiscal years beginning after June 15, 2023, and all reporting periods thereafter. Earlier application is encouraged.
- **GASB Statement No. 101, Compensated Absences**  
Effective Date: The requirements of this Statement are effective for fiscal years beginning after December 15, 2023, and all reporting periods thereafter. Earlier application is encouraged.



October 4, 2023

Crosslin, PLLC  
The Astoria  
3803 Bedford Avenue, Suite 201  
Nashville, TN 37215

This representation letter is provided in connection with your audit of the financial statements of the TSBA OPEB Trust (the “Trust”), which comprise statement of net position as of June 30, 2023, and the respective statement of changes in net position for the year then ended, and the disclosures (collectively, the “financial statements”), for the purpose of expressing opinions as to whether the financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement. An omission or misstatement that is monetarily small in amount could be considered material as a result of qualitative factors.

We confirm, to the best of our knowledge and belief, as of October 4, 2023, the following representations made to you during your audit.

#### **Financial Statements**

- 1) We have fulfilled our responsibilities, as set out in the terms of the audit engagement letter dated September 1, 2021, including our responsibility for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP and for preparation of the supplementary information in accordance with the applicable criteria.
- 2) The financial statements referred to above are fairly presented in conformity with U.S. GAAP.
- 3) We acknowledge our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
- 4) We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.

- 5) The methods, significant assumptions, and data used in making accounting estimates and their related disclosures are appropriate to achieve recognition, measurement, or disclosure, including those measured at fair value, are reasonable in accordance with U.S. GAAP.
- 6) Related party relationships and transactions, including revenues, expenditures/expenses, loans, transfers, leasing arrangements, and guarantees, and amounts receivable from or payable to related parties have been appropriately accounted for and disclosed in accordance with U.S. GAAP.
- 7) There are no events, except as made known to you, including instances of noncompliance, have occurred subsequent to the date of the statement of net position and through the date of this letter that would require adjustment to or disclosure in the aforementioned financial statements.
- 8) We are not aware of any pending or threatened litigation, claims, or assessments or unasserted claims or assessments that are required to be accrued or disclosed in the financial statements, and we have not consulted external counsel for any material litigation, claims, or assessments through the date of this letter.
- 9) Guarantees, whether written or oral, under which the Trust is contingently liable, if any, have been properly recorded or disclosed.

#### **Information Provided**

- 10) We have provided you with:
  - a) Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements, such as records (including information obtained outside of the general and subsidiary ledgers), documentation, and other matters and all audit or relevant monitoring reports, if any, received from funding sources.
  - b) Additional information that you have requested from us for the purpose of the audit.
  - c) Unrestricted access to persons within the Trust from whom you determined it necessary to obtain audit evidence.
  - d) Minutes of the meetings of the Board of Trustees or summaries of actions of recent meetings for which minutes have not yet been prepared.
- 11) All material transactions have been recorded in the accounting records and are reflected in the financial statements.
- 12) We have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
- 13) We have no knowledge of any fraud or suspected fraud that affects the Trust and involves:

- Management,
  - Employees who have significant roles in internal control, or
  - Others where the fraud could have a material effect on the financial statements.
- 14) We have no knowledge of any allegations of fraud or suspected fraud affecting the Trust's financial statements communicated by employees, former employees, regulators, or others.
- 15) We have no knowledge of instances of noncompliance or suspected noncompliance with provisions of laws, regulations, contracts, or grant agreements, or waste or abuse, whose effects should be considered when preparing financial statements.
- 16) We are not aware of any pending or threatened litigation, claims, or assessments or unasserted claims or assessments that are required to be accrued or disclosed in the financial statements, and we have not consulted external counsel for any material litigation, claims, or assessments through the date of this letter.
- 17) We have disclosed to you the names of the Trust's related parties and all the related party relationships and transactions, including any side agreements.

**Government-specific**

- 18) There have been no communications from regulatory agencies concerning noncompliance with, or deficiencies in, financial reporting practices.
- 19) We have identified to you any previous audits, attestation engagements, and other studies related to the objectives of the audit and whether related recommendations have been implemented.
- 20) There have been no investigations or legal proceedings that have been initiated with respect to the period under audit.
- 21) The Trust has no plans or intentions that may materially affect the carrying value or classification of assets, deferred outflows of resources, liabilities, deferred inflow of resources, or net position.
- 22) We are responsible for compliance with the laws, regulations, and provisions of contracts and grant agreements applicable to us, including tax or debt limits and debt contracts, and legal and contractual provisions for reporting specific activities in separate funds.
- 23) We have appropriately disclosed all information for conduit debt obligations in accordance with provisions of laws and regulations that we believe have a material effect on the financial

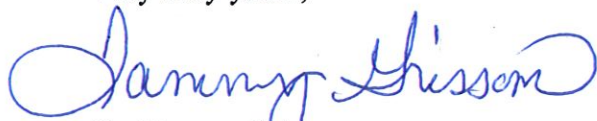
statements or other financial data significant to the audit objectives, and any other instances that warrant the attention of those charged with governance.

- 24) We have identified and disclosed to you all instances of identified and suspected fraud and noncompliance with provisions of laws, regulations, contracts, and grant agreements that we believe have a material effect on the financial statements.
- 25) There are no violations or possible violations of budget ordinances, laws and regulations (including those pertaining to adopting, approving, and amending budgets), provisions of contracts and grant agreements, tax or debt limits, and any related debt covenants whose effects should be considered for disclosure in the financial statements, or as a basis for recording a loss contingency, or for reporting on noncompliance.
- 26) As part of your audit, you assisted with the preparation of the financial statements and disclosures. We acknowledge our responsibility as it relates to those nonaudit services, including that we assume all management responsibilities; oversee the services by designating an individual, preferably within senior management, who possesses suitable skill, knowledge, or experience; evaluate the adequacy and results of the services performed; and accept responsibility for the results of the services. We have reviewed, approved, and accepted responsibility for those financial statements and disclosures.
- 27) The Trust has satisfactory title to all owned assets, and there are no liens or encumbrances on such assets nor has any asset been pledged as collateral.
- 28) The Trust has complied with all aspects of contractual agreements that would have a material effect on the financial statements in the event of noncompliance.
- 29) The financial statements properly disclose all joint ventures and other related organizations, if any.
- 30) Components of net position (restricted for other postemployment benefits) are properly classified and, if applicable, approved.
- 31) Investments are properly valued.
- 32) Expenses have been appropriately classified in the statement of changes in net position.
- 33) Revenues are appropriately classified in the statement of changes in net position.
- 34) Interfund balances have been appropriately classified and reported.
- 35) Deposits and investment securities are properly classified as to risk and are properly disclosed.
- 36) We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you

any significant assumptions and interpretations underlying the measurement and presentation of the RSI.

- 37) We have obtained a copy of the relevant SSAE 18 SOC 1 report that covers the year under audit, related to significant processes and transactions that have been outsourced to those service organizations. In connection with the SSAE 18 SOC 1 report, we have read the report, evaluated the impact of the exceptions to relevant tests, identified the complementary controls listed under the user controls section of the report, and have determined that those user controls have been designed appropriately and have been implemented.

Very truly yours,



Dr. Tammy Grissom  
Trust Administrator



Brittany Massey  
Director of Finance & Member Services



**TSBA OPEB TRUST**  
**AUDITED FINANCIAL STATEMENTS**  
**JUNE 30, 2023**

TSBA OPEB TRUST

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## **TSBA OPEB TRUST**

### **LETTER OF INTRODUCTION**

The TSBA OPEB Trust (the “Trust”) is pleased to present its Annual Financial Report for the year ended June 30, 2023.

#### **Responsibility and Controls**

The Trust is responsible for the financial statements and related information included in this report. A system of internal accounting controls is maintained to provide reasonable assurance that assets are safeguarded and that the books and records reflect only authorized transactions. Limitations exist in any system of internal controls. However, based on recognition that the cost of the system should not exceed its benefits, management believes its system of internal accounting controls maintains an appropriate cost/benefit relationship.

Management believes that its policies and procedures provide guidance and reasonable assurance that the Trust’s operations are conducted according to management’s intentions and to a high standard of business ethics. In management’s opinion, the financial statements present fairly, in all material respects, the net position of the Trust as of June 30, 2023, and the changes in its net position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

#### **Audit Assurance**

The unmodified opinion of our independent external auditors, Crosslin, PLLC, is included in this report.

**TSBA OPEB TRUST  
BOARD OF TRUSTEES**

Dr. Dale Viox, Chairman

Dr. Tammy Grissom, Trust Administrator

Chris Denson

Candy Morgan

Kevin Woods

Wright Cox



## Independent Auditor's Report

Board of Trustees  
TSBA OPEB Trust  
Nashville, Tennessee

### **Report on the Audit of the Financial Statements**

#### ***Opinion***

We have audited the accompanying financial statements of the TSBA OPEB Trust (the "Trust") as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise the Trust's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Trust as of June 30, 2023, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Trust and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Trust's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.



### ***Auditor's Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Trust's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Trust's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.



### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis information on pages 6 through 8 be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### ***Other Information***

Management is responsible for the other information, which comprises the introductory section but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated October 4, 2023, on our consideration of the Trust's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Trust's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Trust's internal control over financial reporting and compliance.

*Crosslin, PLLC*

Nashville, Tennessee  
October 4, 2023

TSBA OPEB TRUST  
MANAGEMENT'S DISCUSSION AND ANALYSIS

Management offers the following discussion and analysis as a narrative introduction to the basic financial statements and an analytical overview of the Trust's financial activities for the fiscal year ended June 30, 2023. This narrative is intended as a supplement and should be read in conjunction with the financial statements.

***Overview of the Financial Statements***

The Trust's financial statements include the following components:

- Statement of Net Position
- Statement of Changes in Net Position
- Notes to Financial Statements

The *Statement of Net Position* presents the Trust's assets, liabilities, and the resulting net position, which are held in trust for the other postemployment benefits of contributing members. This statement reflects a year-end snapshot of the Trust's investments, at fair value, along with cash.

The *Statement of Changes in Net Position* presents information showing how the Trust's net position held in trust for other postemployment benefits changed during the period. This statement includes additions for contributions by employers and investment earnings and deductions for administrative expenses.

The *Notes to Financial Statements* are an integral part of the financial statements and provide additional information that is necessary in order to gain a comprehensive understanding of data reported in the financial statements.

***Financial Highlights***

- Net position is restricted for future benefit payments of participating members. Net position at June 30, 2023 totaled approximately \$146.8 million.
- Net position increased approximately \$21.6 million, which is mainly attributable to favorable financial market conditions compared to the prior year.

***Condensed Financial Information***

In order to ensure the participating employers' ability to properly fund the payment of other postemployment benefits to their employees in future years, it is advisable for employers to accumulate funds on a regular and systematic basis. The principal sources from which the Trust derives additions are employer contributions and earnings on investments.

TSBA OPEB TRUST  
MANAGEMENT'S DISCUSSION AND ANALYSIS

Comparative summary financial statements of the Trust are presented as follows:

**NET POSITION  
JUNE 30, 2023 AND 2022**

	<u>2023</u>	<u>2022</u>
<b>ASSETS</b>		
Cash	\$ 5,654	\$ 5,654
Investments	<u>146,785,465</u>	<u>125,200,074</u>
Total assets	<u>146,791,119</u>	<u>125,205,728</u>
<b>NET POSITION RESTRICTED FOR OPEB</b>	<u><b>\$146,791,119</b></u>	<u><b>\$125,205,728</b></u>

**CHANGES IN NET POSITION  
YEARS ENDED JUNE 30, 2023 AND 2022**

	<u>2023</u>	<u>2022</u>
<b>ADDITIONS</b>		
Employer contributions	<u>\$ 7,587,011</u>	<u>\$ 6,968,612</u>
Total additions	<u>7,587,011</u>	<u>6,968,612</u>
<b>INVESTMENT RETURN (LOSS), NET</b>		
Investment return (loss), net	<u>14,185,044</u>	<u>( 19,331,404)</u>
Total investment return (loss), net	<u>14,185,044</u>	<u>( 19,331,404)</u>
<b>DEDUCTIONS</b>		
Administrative expenses	<u>186,664</u>	<u>193,326</u>
Total deductions	<u>186,664</u>	<u>193,326</u>
<b>NET CHANGE</b>	<u><b>21,585,391</b></u>	<u><b>( 12,556,118)</b></u>
<b>NET POSITION RESTRICTED FOR OPEB</b>		
Beginning of year	<u>125,205,728</u>	<u>137,761,846</u>
End of year	<u><b>\$146,791,119</b></u>	<u><b>\$125,205,728</b></u>

TSBA OPEB TRUST  
MANAGEMENT’S DISCUSSION AND ANALYSIS

***Analysis of Financial Position and Results of Operations***

The Trust’s net position was approximately \$146.8 million at June 30, 2023. During fiscal year 2023, contributions were made to five of the nine active participant accounts.

Current Trust participants and the fiscal year in which they joined the Trust are as follows:

Hickman County Board of Education (Active)	2008 - 2009
Johnson County Board of Education (Active)	2008 - 2009
Shelby County Board of Education (Active)	2008 - 2009
Claiborne County Board of Education (Non-active)	2009 - 2010
Jackson/Madison County Board of Education (Active)	2012 - 2013
Arlington Community Schools Board of Education (Active)	2014 - 2015
Bartlett City Schools Board of Education (Active)	2014 - 2015
Collierville Schools Board of Education (Active)	2014 - 2015
Lakeland City Board of Education (Active)	2014 - 2015
Millington Municipal Schools Board of Education (Active)	2015 - 2016

***Requests for Information***

This financial report is designed to provide a general overview of the Trust’s finances. If you have any questions concerning any of the information provided in this report or would like to request additional financial information, contact the Tennessee School Boards Association’s Finance Department at 525 Brick Church Park Drive, Nashville, Tennessee 37207.

TSBA OPEB TRUST  
STATEMENT OF NET POSITION  
JUNE 30, 2023

	Arlington Community Schools Plan	Bartlett City Schools Plan	Collierville Schools Plan	Hickman County Schools Plan	Jackson- Madison Schools Plan	Johnson County Schools Plan	Lakeland Schools System Plan	Millington Municipal Schools Plan	Shelby County Schools Plan	TSBA OPEB Trust Account	Total
ASSETS											
Cash	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,654	\$ 5,654
Investments, at fair value	4,263,939	6,783,756	2,528,520	2,695,085	489,797	1,333,495	2,919,787	371,977	125,399,109	-	146,785,465
Total assets	4,263,939	6,783,756	2,528,520	2,695,085	489,797	1,333,495	2,919,787	371,977	125,399,109	5,654	146,791,119
NET POSITION											
RESTRICTED FOR OTHER											
POSTEMPLOYMENT											
BENEFITS	<u>\$ 4,263,939</u>	<u>\$ 6,783,756</u>	<u>\$ 2,528,520</u>	<u>\$ 2,695,085</u>	<u>\$ 489,797</u>	<u>\$ 1,333,495</u>	<u>\$ 2,919,787</u>	<u>\$ 371,977</u>	<u>\$ 125,399,109</u>	<u>\$ 5,654</u>	<u>\$ 146,791,119</u>

See accompanying notes to financial statements.

TSBA OPEB TRUST  
STATEMENT OF CHANGES IN NET POSITION  
YEAR ENDED JUNE 30, 2023

	Arlington Community Schools Plan	Bartlett City Schools Plan	Collierville Schools Plan	Hickman County Schools Plan	Jackson- Madison Schools Plan	Johnson County Schools Plan	Lakeland Schools System Plan	Millington Municipal Schools Plan	Shelby County Schools Plan	TSBA OPEB Trust Account	Total
<b>ADDITIONS</b>											
Employer contributions	\$ 355,000	\$ 1,000,000	\$ 300,000	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 5,782,011	\$ -	\$ 7,587,011
Total additions	355,000	1,000,000	300,000	-	-	-	150,000	-	5,782,011	-	7,587,011
<b>INVESTMENT RETURN, NET</b>											
Net appreciation in fair value of investments	310,199	406,023	181,498	209,193	37,982	103,496	214,748	28,804	9,122,952	-	10,614,895
Interest and dividends	110,673	157,346	62,252	73,263	13,347	36,271	76,591	10,137	3,247,733	-	3,787,613
Less investment expenses	(6,332)	(9,147)	(3,603)	(4,182)	(762)	(2,071)	(4,426)	(578)	(186,363)	-	(217,464)
Total investment return, net	414,540	554,222	240,147	278,274	50,567	137,696	286,913	38,363	12,184,322	-	14,185,044
<b>DEDUCTIONS</b>											
Administrative expenses	9,112	13,159	5,222	6,120	1,112	3,029	6,286	845	141,779	-	186,664
Total deductions	9,112	13,159	5,222	6,120	1,112	3,029	6,286	845	141,779	-	186,664
<b>NET INCREASE IN NET POSITION</b>											
	760,428	1,541,063	534,925	272,154	49,455	134,667	430,627	37,518	17,824,554	-	21,585,391
<b>NET POSITION RESTRICTED FOR OTHER POSTEMPLOYMENT BENEFITS:</b>											
BEGINNING OF YEAR	3,503,511	5,242,693	1,993,595	2,422,931	440,342	1,198,828	2,489,160	334,459	107,574,555	5,654	125,205,728
END OF YEAR	\$ 4,263,939	\$ 6,783,756	\$ 2,528,520	\$ 2,695,085	\$ 489,797	\$ 1,333,495	\$ 2,919,787	\$ 371,977	\$ 125,399,109	\$ 5,654	\$ 146,791,119

See accompanying notes to financial statements.

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

A. DESCRIPTION OF THE TRUST

The TSBA GASB 45 Trust was established on April 16, 2009 pursuant to the provisions of the Tennessee Interlocal Cooperation Act (Tenn. Code Ann. § 12-9-101, et seq.) and the policies and bylaws from time to time promulgated by the Board of Trustees (the “Board”). Effective February 15, 2016, the name of the Trust was changed to the TSBA OPEB Trust (the “Trust”). Membership in the Trust shall be open to all members of the Tennessee School Boards Association. Non-members and other governmental entities will be considered by the Trustees on a case by case basis. The purpose of the Trust is to establish a fund through the Trust, which will allow members to pre-fund the liability associated with other postemployment benefits other than pensions. The Trust is not a component unit of another governmental entity.

The Trust’s Board of Trustees has fiduciary responsibility for the investment of monies and administration of the Trust pursuant to the Trust Agreement. The Board of Trustees is currently composed of seven members. Five of the Trustees are appointed from the governing boards of the participating members of the Trust for three-year terms and they may be reappointed. Additionally, the Executive Director and President of the Tennessee School Boards Association (“TSBA”) are ex-officio members of the Board of Trustees. All seven Trustees are voting members.

For the year ended June 30, 2023, the Trust administered Plan assets for nine defined benefit postemployment plans - Arlington Community Schools Plan, Bartlett City Schools Plan, Collierville Schools Plan, Hickman County Schools Plan, Jackson- Madison Schools Plan, Johnson County Schools Plan, Lakeland Schools Systems Plan, Millington Municipal Schools Plan, and Shelby County Schools Plan, (collectively the “Plans”). Although the assets of the Plans are commingled for investment purposes, each of the Plan’s assets are held in an irrevocable trust and may be used only for the payment of benefits to the members of the respective Plan in accordance with the terms of the Plans. The TSBA OPEB Trust Account reflects the activity related to the administration of the Trust.

The Trust does not purport to present the financial status of each of the participating employer’s postemployment benefit plans, nor do these statements contain information on accumulated plan benefits and other disclosures necessary for a fair presentation of the individual plans in accordance with accounting principles generally accepted in the United States of America.

Measurement Focus and Basis of Accounting

The financial statements of the Trust are presented as a fiduciary fund type. The economic resources measurement focus, and the accrual basis of accounting are used in the preparation of the financial statements. Employer contributions to each plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of each employer’s Plan.

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Investments

Investments are reported at fair value. Net investment return consists of realized and unrealized appreciation in the fair value of investments, interest and dividends earned, and investment expenses. In order to account for each participating member's activities, separate accounts are maintained by the Trust.

Fair Value of Financial Instruments

Assets and liabilities recorded at fair value in the statement of financial position are categorized based on the level of judgment associated with the inputs used to measure their fair value. Level inputs, are as follows:

Level 1 - Values are unadjusted quoted prices for identical assets in active markets accessible at the measurement date.

Level 2 - Inputs include quoted prices for similar assets in active markets, quoted prices from those willing to trade in markets that are not active, or other inputs that are observable or can be corroborated by market data for the term of the instrument. Such inputs include market interest rates and volatilities, spreads and yield curves.

Level 3 - Certain inputs are unobservable (supported by little or no market activity) and significant to the fair value measurement. Unobservable inputs reflect the best estimate of what hypothetical market participants would use to determine a transaction price for the asset or liability at the reporting date.

The Trust's financial instruments consist of cash and investments. Cash is recorded at fair value using Level 1 inputs. Investments are recorded at fair value using Level 1 and Level 3 inputs. See Note D.

Administrative Expenses

Each Plan is responsible for its administrative expenses.

Withdrawals

The Trust is specifically authorized to make payments of legitimate reimbursements to member systems requesting their other post-employment benefit ("OPEB") assets. No other withdrawals may be made by member systems.

Taxes

The Trust is exempt from taxation under Section 115 of the Internal Revenue Code. Accordingly, the accompanying financial statements do not include a provision for federal or state income taxes.

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities. Actual results could differ from those estimates.

C. INVESTMENTS

The Trust's investments, at June 30, 2023, consist of the following:

	<u>Fair Value/ Carrying Amount</u>	<u>Cost</u>
Cash and cash equivalents	\$ 2,332,354	\$ 2,332,354
Exchange-traded and closed-end funds	25,555,279	20,103,759
Mutual funds	107,880,953	109,109,892
Structured investments	<u>11,016,879</u>	<u>10,694,430</u>
Total	<u>\$146,785,465</u>	<u>\$142,240,435</u>

D. FAIR VALUE MEASUREMENTS

The Trust categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Trust has the following recurring fair value measurements as of June 30, 2023:

	<u>Measured at Fair Value</u>	<u>Fair Value Measurements at Reporting Date Using</u>		
		<u>(Level 1)</u>	<u>(Level 2)</u>	<u>(Level 3)</u>
Investments:				
Cash and cash equivalents	\$ 2,332,354	\$ 2,332,354	\$ -	\$ -
Exchange-traded and closed-end funds	25,555,279	25,555,279	-	-
Mutual funds	107,880,953	107,880,953	-	-
Structured investments	<u>11,016,879</u>	<u>-</u>	<u>-</u>	<u>11,016,879</u>
	<u>\$146,785,465</u>	<u>\$135,768,586</u>	<u>\$ -</u>	<u>\$11,016,879</u>

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

D. FAIR VALUE MEASUREMENTS - Continued

In determining fair value, the Trust uses various valuation approaches. The following is a description of the valuation methodologies used for instruments measured at fair value and their classification within the valuation hierarchy:

Cash and Cash Equivalents

Cash and cash equivalents are in active markets and classified within Level 1 of the valuation hierarchy.

Exchange-Traded and Closed-End Funds

Investments in exchange-traded and closed-end funds represent securities which are traded on national markets or exchanges. These investments are classified within Level 1 of the valuation hierarchy.

Mutual Funds

Investments in mutual funds represent fixed income mutual funds which are listed on national markets or exchanges. These investments are classified within Level 1 of the valuation hierarchy.

Structured Investments

Structured investments may be linked to a wide variety of underlying asset classes including equities, interest rates, commodities, and currencies. Each underlying asset will have its own unique set of risks and uncertainties. These structured investments are valued by the custodian using a proprietary pricing model and are classified within Level 3 of the valuation hierarchy.

E. RISKS AND UNCERTAINTIES

The Trust's investments include various types of investment funds, which in turn invest in any combination of stock, bonds and other investments exposed to various risks, such as interest rate, credit, and market risk. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the Trust's financial statements.

TSBA OPEB TRUST  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2023

F. RELATED PARTY TRANSACTIONS

The Trust is administered by the Tennessee School Boards Association (“TSBA”). TSBA receives a quarterly administrative fee calculated individually for each participant on a sliding scale as a percentage of invested assets. The fee covers all administrative costs including personnel, office expense, legal, accounting, and promotion. The administrative fee during fiscal year 2023 totaled \$186,664.

G. SUBSEQUENT EVENTS

Management has evaluated subsequent events through October 4, 2023, the date the financial statements were available for issuance, and has determined there were no subsequent events requiring disclosure.



INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL  
REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT  
OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE  
WITH *GOVERNMENT AUDITING STANDARDS*

Board of Trustees  
TSBA OPEB Trust  
Nashville, Tennessee

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the TSBA OPEB Trust (the "Trust"), as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise the Trust's basic financial statements, and have issued our report thereon dated October 4, 2023.

**Report on Internal Control over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the Trust's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Trust's internal control. Accordingly, we do not express an opinion on the effectiveness of the Trust's internal control.

*A deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements, on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.



## **Report on Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the Trust's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

## **Purpose of This Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*Crosslin, PLLC*

Nashville, Tennessee  
October 4, 2023

TSBA OPEB TRUST  
SUMMARY SCHEDULE OF PRIOR AUDIT FINDINGS  
YEAR ENDED JUNE 30, 2023

The Trust had no prior audit findings.

## Custom Report

Prepared on October 17, 2023 for:  
**TSBA OPEB TRUST**

TAMMY GRISSOM TTEE  
TSBA OPEB TRUST U/T/A DTD  
11/05/2012  
525 BRICK CHURCH PARK DRIVE  
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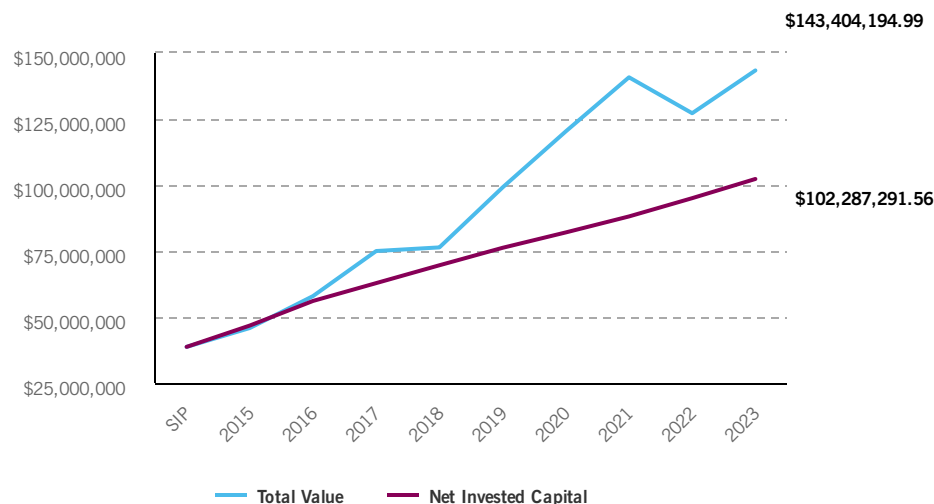
3102 WEST END AVE STE 200  
NASHVILLE, TN 37203

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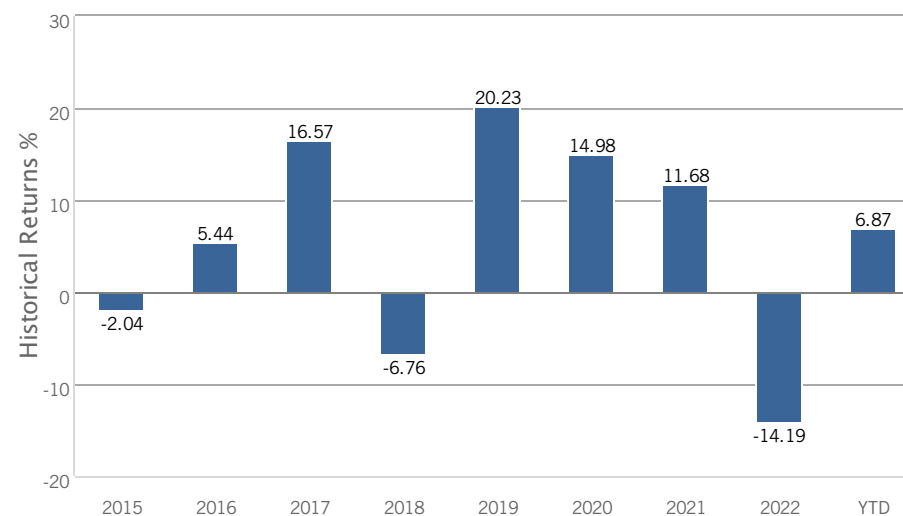
Please review the disclosures and definitions throughout this Document. For more information or questions, please contact your Financial Advisor. Various sub-sections of this Document may not contain information on all accounts/positions covered in this Document and will be denoted on the page.

## TOTAL VALUE VS. NET INVESTED CAPITAL



Does not include Performance Ineligible Assets.

## DOLLAR-WEIGHTED PERIOD RETURN % (NET OF FEES)

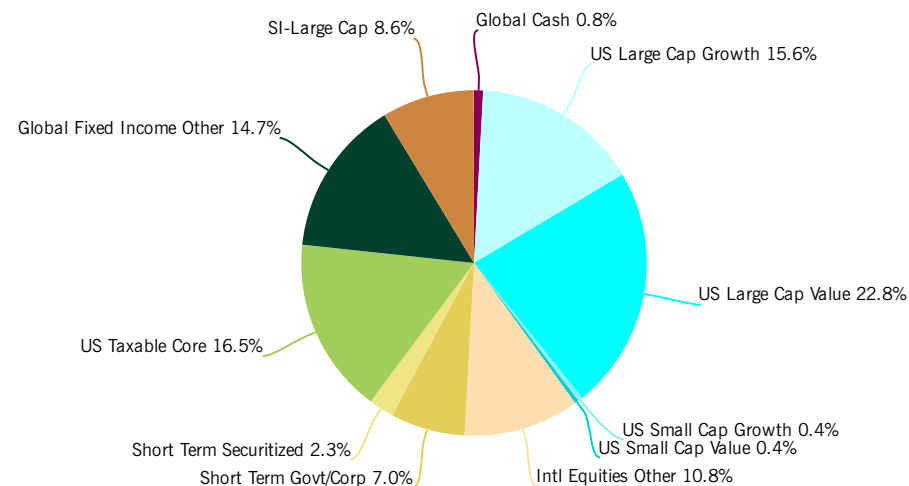


Does not include Performance Ineligible Assets.

## DOLLAR-WEIGHTED RETURN % (NET OF FEES)

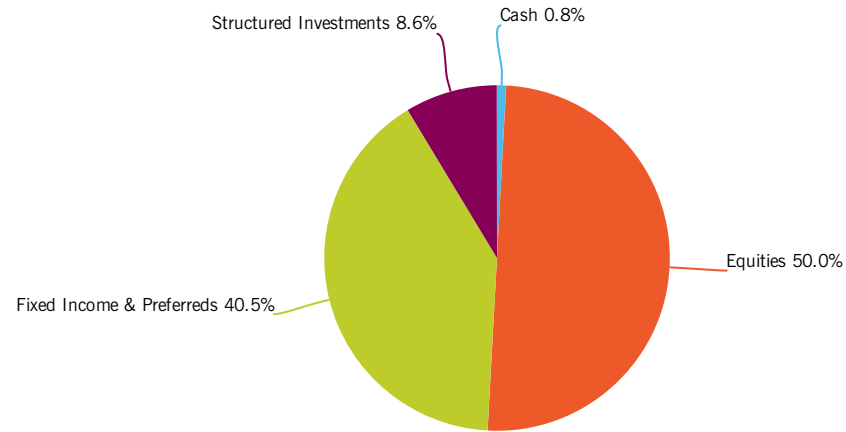
	Quarter to Date (\$) 09/30/23-10/16/23	Year to Date (\$) 12/31/22-10/16/23	Performance Inception (\$) 06/09/15-10/16/23
<b>Beginning Total Value</b>	<b>142,807,338</b>	<b>127,186,040</b>	<b>38,680,482</b>
Net Contributions/Withdrawals	-50,102	7,271,025	63,606,809
Investment Earnings	646,959	8,947,131	41,116,903
<b>Ending Total Value</b>	<b>143,404,195</b>	<b>143,404,195</b>	<b>143,404,195</b>
<b>DOLLAR WEIGHTED RATE OF RETURN (%)</b> (Annualized for periods over 12 months)			
Return % (Net of Fees)	0.45	6.87	5.60
90-Day T-Bills	0.24	4.05	1.36

## ASSET ALLOCATION



The investment returns shown on this page are dollar-weighted measurements which are affected by the timing and amount of your contributions and withdrawals.

ASSET ALLOCATION - ASSET CLASS



ASSET ALLOCATION

	Total Value (\$) 10/16/2023	% of Portfolio 10/16/2023
Cash	1,217,174.13	0.8
Equities	71,740,035.44	50.0
Fixed Income & Preferreds	58,054,362.31	40.5
Structured Investments	12,392,705.57	8.6
<b>TOTAL PORTFOLIO</b>	<b>143,404,277.45</b>	<b>100.0</b>

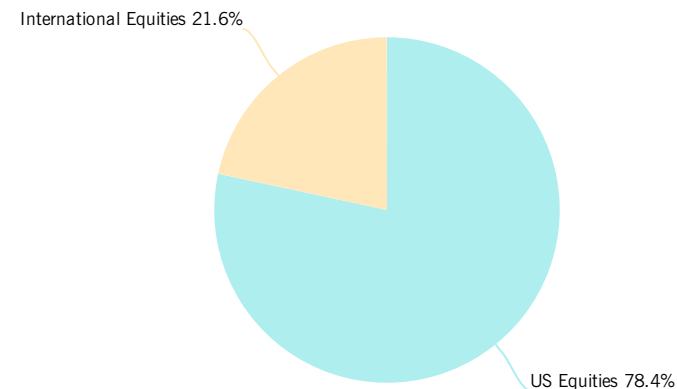
TSBA OPEB TRUST

As of October 16, 2023 | Reporting Currency: USD

## TOP EQUITY POSITIONS BASED ON TOTAL VALUE

SECURITY DESCRIPTION	Total Value (\$) 10/16/2023	% of Equities 10/16/2023
PGIM JENNISON GROWTH Z	13,130,949.47	18.3
JOHN HANCOCK DISPLND VAL INST	9,310,878.99	13.0
ISHARES CORE S&P U.S. GROWTH	9,253,974.24	12.9
BLACKROCK HIGH EQ INCOME INST	9,141,234.98	12.7
ISHARES CORE S&P U.S. VALUE	7,758,124.92	10.8
OAKMARK FUND INSTITUTIONAL	6,517,501.95	9.1
AMERICAN EUROPACIFIC GRW F2	6,462,457.81	9.0
ISHARES CORE MSCI EAFE ETF	5,212,012.80	7.3
THORNBURG INTL GROWTH I	3,838,489.82	5.4
DWS SMALL CAP CORE S	1,114,410.46	1.6
<b>Top Equity Positions</b>	<b>71,740,035.44</b>	<b>100.0</b>
<b>Other Equity Positions</b>	-	-
<b>Total Equities</b>	<b>71,740,035.44</b>	<b>100.0</b>

## ASSET ALLOCATION - EQUITIES



## ASSET ALLOCATION - EQUITIES

	% of Equities 10/16/2023	Total Value (\$) 10/16/2023	% of Portfolio 10/16/2023
<b>US Equities</b>	<b>78.4</b>	<b>56,227,075.01</b>	<b>39.2</b>
US Large Cap Growth	31.2	22,384,923.71	15.6
US Large Cap Value	45.6	32,727,740.84	22.8
US Small Cap Growth	0.8	557,205.23	0.4
US Small Cap Value	0.8	557,205.23	0.4
<b>International Equities</b>	<b>21.6</b>	<b>15,512,960.43</b>	<b>10.8</b>
Intl Equities Other	21.6	15,512,960.43	10.8
<b>TOTAL EQUITIES</b>	<b>100.0</b>	<b>71,740,035.44</b>	<b>50.0</b>

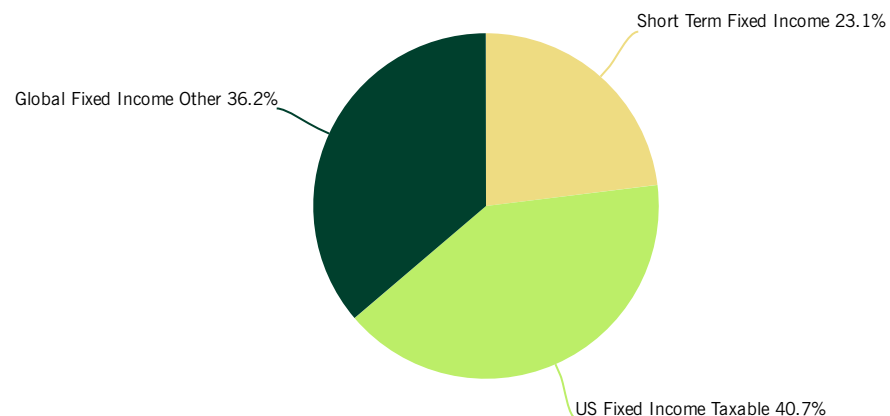
TSBA OPEB TRUST

As of October 16, 2023 | Reporting Currency: USD

## TOP FIXED INCOME &amp; PREFERRED POSITIONS BASED ON TOTAL VALUE

SECURITY DESCRIPTION	Total Value (\$) 10/16/2023	% of Fixed Income & Preferreds 10/16/2023
PGIM TOTAL RETURN BOND Z	23,630,912.69	40.7
PERFORMANCE TRUST STRAT BD I	21,034,806.16	36.2
PGIM SHORT-TERM CORP BOND Z	13,388,643.46	23.1
<b>Top Fixed Income &amp; Preferred Positions</b>	<b>58,054,362.31</b>	<b>100.0</b>
<b>Other Fixed Income &amp; Preferred Positions</b>	-	-
<b>Total Fixed Income &amp; Preferred</b>	<b>58,054,362.31</b>	<b>100.0</b>

## ASSET ALLOCATION - FIXED INCOME &amp; PREFERRED



## ASSET ALLOCATION - FIXED INCOME &amp; PREFERREDS

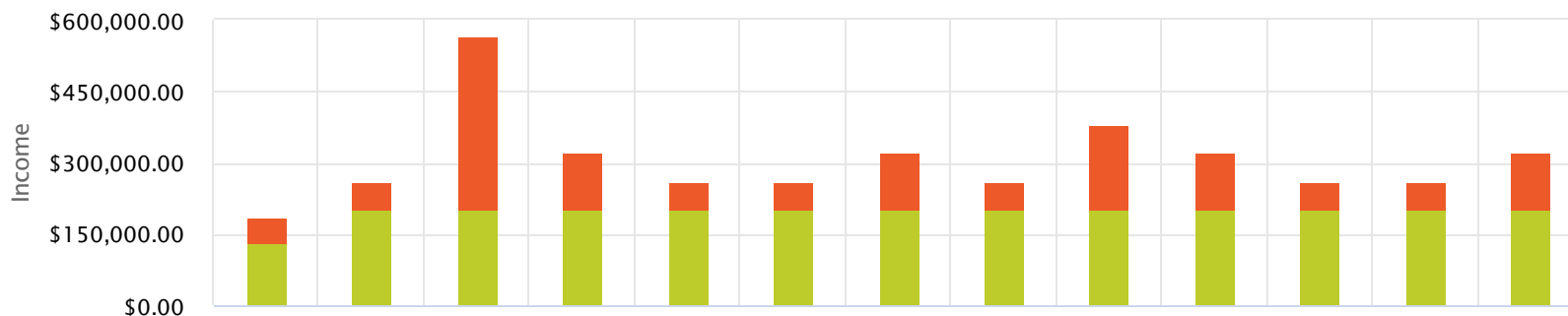
	% of Fixed Income & Preferreds 10/16/2023	Total Value (\$) 10/16/2023	% of Portfolio 10/16/2023
<b>Short Term Fixed Income</b>	<b>23.1</b>	<b>13,388,643.46</b>	<b>9.3</b>
Short Term Govt/Corp	17.3	10,041,482.60	7.0
Short Term Securitized	5.8	3,347,160.87	2.3
<b>US Fixed Income Taxable</b>	<b>40.7</b>	<b>23,630,912.69</b>	<b>16.5</b>
US Taxable Core	40.7	23,630,912.69	16.5
<b>Global Fixed Income Other</b>	<b>36.2</b>	<b>21,034,806.16</b>	<b>14.7</b>
Global Fixed Income Other	36.2	21,034,806.16	14.7
<b>TOTAL FIXED INCOME &amp; PREFERREDS</b>	<b>100.0</b>	<b>58,054,362.31</b>	<b>40.5</b>

# PROJECTED 12 MONTH INCOME SUMMARY

TSBA OPEB TRUST

As of October 16, 2023 | Reporting Currency: USD

## 12 MONTH INCOME SUMMARY

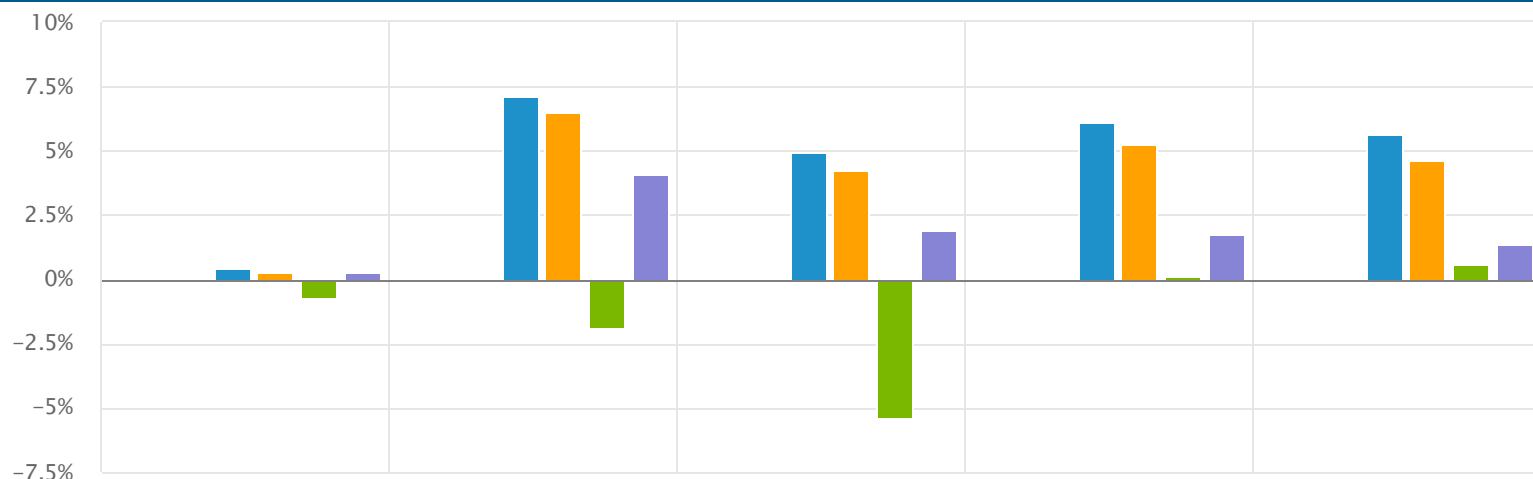


Asset Class	Total Value (\$) 10/16/2023	10/17/23 to 10/31/23 (\$)	Projected Income (\$) (11/01/23 - 10/31/24)												Total	% Yield	
			Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct			
Cash	1,217,174	152	152	152	152	152	152	152	152	152	152	152	152	152	152	1,826	0.15
Equities	71,740,035	55,612	55,612	364,102	120,192	55,612	55,612	120,192	55,612	176,033	120,192	55,612	55,612	120,192	1,384,196	1.93	
Fixed Income & Preferreds	58,054,362	131,398	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	204,222	2,450,667	4.22	
Structured Investments	12,392,706	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>143,404,277</b>	<b>187,162</b>	<b>259,987</b>	<b>568,476</b>	<b>324,566</b>	<b>259,987</b>	<b>259,987</b>	<b>324,566</b>	<b>259,987</b>	<b>380,407</b>	<b>324,566</b>	<b>259,987</b>	<b>259,987</b>	<b>324,566</b>	<b>3,836,689</b>	<b>2.68</b>	

Projected Income is calculated only for holdings where data is available.

In instances whereby payment frequency and/or last payment date is not available, income is based on the current dividend or coupon rate, and will be displayed in the Total column only.

## RETURN % (NET OF FEES) VS. BENCHMARKS (ANNUALIZED)



	Quarter to Date 09/30/23 - 10/16/23	Year to Date 12/31/22 - 10/16/23	Last 3 Years 10/31/20 - 10/16/23	Last 5 Years 10/31/18 - 10/16/23	Performance Inception 06/09/15 - 10/16/23
Beginning Total Value (\$)	142,807,337.91	127,186,039.81	106,819,002.73	79,860,328.06	38,680,482.15
Net Contributions/Withdrawals (\$)	-50,102.03	7,271,024.67	20,250,373.41	33,062,741.76	63,606,809.41
Investment Earnings (\$)	646,959.12	8,947,130.52	16,334,818.86	30,481,125.17	41,116,903.43
Ending Total Value (\$)	143,404,194.99	143,404,194.99	143,404,194.99	143,404,194.99	143,404,194.99
Return % (Net of Fees)	0.45	7.12	4.91	6.10	5.61
TN TSBA Composite (%)	0.27	6.48	4.25	5.26	4.63
Bloomberg US Aggregate (%)	-0.71	-1.91	-5.37	0.12	0.61
90-Day T-Bills (%)	0.24	4.05	1.89	1.77	1.36

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals.

TSBA OPEB TRUST

As of October 16, 2023 | Reporting Currency: USD

## RETURN % (GROSS OF FEES) (ANNUALIZED)

Product/ Security Description ▲	Account Number	Performance Inception Date	Ending Total Value (\$)	Year to Date (%) 12/31/22 - 10/16/23	% of Portfolio
<b>Total Portfolio (Gross of Fees)</b>		<b>06/09/2015</b>	<b>143,404,194.99</b>	<b>7.26</b>	<b>100.00</b>
<i>TN TSBA Composite</i>				<b>6.48</b>	
<b>Stock / Options</b>					
BCS PLUS SPX 25AU05(SQHQQ)	Multiple	01/31/2023	1,388,345.97	3.70	0.97
CITI PLUS SPX 24JN05(SPIEK)	Multiple	11/16/2022	1,280,485.02	12.81	0.89
GS PLUS SPX 24FB05(SQFDJ)	Multiple	07/30/2021	1,362,436.50	14.63	0.95
GS PLUS SPX 24MY03(SQFSK)	Multiple	10/29/2021	1,439,707.58	14.32	1.00
GS PLUS SPX 25MH05(SPHQW)	Multiple	08/31/2022	1,440,082.15	14.09	1.00
MS PLUS SPX 24AU05(SQGIS)	Multiple	01/31/2022	1,344,837.50	14.54	0.94
<b>Exchange Traded/ Closed End Funds</b>					
ISHARES CORE MSCI EAFE ETF(IEFA)	Multiple	11/28/2018	5,212,012.80	6.19	3.63
ISHARES CORE S&P U.S. GROWTH(IUSG)	Multiple	11/28/2018	9,253,974.24	20.62	6.45
ISHARES CORE S&P U.S. VALUE(IUSV)	Multiple	11/28/2018	7,758,124.92	7.99	5.41
<b>Mutual Funds</b>					
AMERICAN EUROPACIFIC GRW F2(AEPFX)	Multiple	07/14/2015	6,462,457.82	5.60	4.51
BLACKROCK HIGH EQ INCOME INST(BMCIX)	Multiple	09/02/2015	9,141,234.99	0.57	6.37
DWS SMALL CAP CORE S(SSLCX)	Multiple	02/20/2018	1,114,410.46	2.70	0.78
JOHN HANCOCK DISPLND VAL INST(JVLIX)	Multiple	07/24/2018	9,310,878.98	5.89	6.49
OAKMARK FUND INSTITUTIONAL(OANMX)	Multiple	07/12/2021	6,517,501.96	16.53	4.54
PERFORMANCE TRUST STRAT BD I(PTIAX)	Multiple	01/26/2021	21,034,806.17	-0.18	14.67
PGIM JENNISON GROWTH Z(PJFZX)	Multiple	09/02/2015	13,130,949.48	36.45	9.16
PGIM SHORT-TERM CORP BOND Z(PIFZX)	Multiple	09/02/2015	13,388,643.46	2.52	9.34

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals. Position level performance detail is only available since 12/31/2014.

## POSITIONS TIME WEIGHTED PERFORMANCE DETAIL

TSBA OPEB TRUST

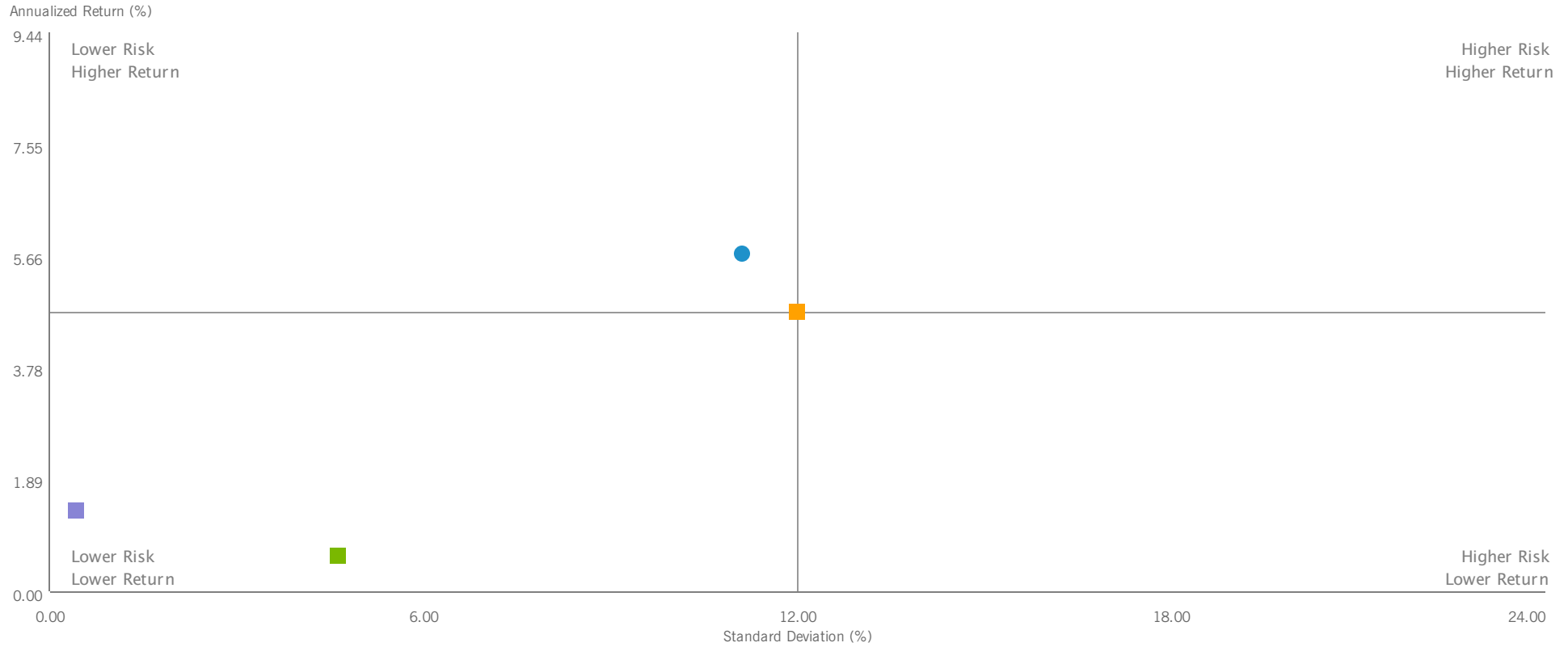
As of October 16, 2023 | Reporting Currency: USD

## RETURN % (GROSS OF FEES) (ANNUALIZED) (Continued)

Product/ Security Description ▲	Account Number	Performance Inception Date	Ending Total Value (\$)	Year to Date (%) 12/31/22 - 10/16/23	% of Portfolio
PGIM TOTAL RETURN BOND Z(PDBZX)	Multiple	04/06/2023	23,630,912.68	-4.62	16.48
THORNBURG INTL GROWTH I(TINGX)	Multiple	09/02/2015	3,838,489.82	5.74	2.68
<b>Corporate Fixed Income</b>					
GS PLUS SPX 00000 25MY05	Multiple	04/14/2023	1,312,285.84	2.04	0.92
GS PLUS SPX 00000 26AP06	Multiple	09/15/2023	1,440,504.00	-1.20	1.00
JPM PLUS SPX 00000 26JA06	Multiple	06/30/2023	1,384,021.00	-4.22	0.97
<b>Cash, MMF and Bank Deposits</b>					
BANK DEPOSIT PROGRAM(BDPS)	Multiple	06/18/2015	1,217,091.68	-	0.85

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals. Position level performance detail is only available since 12/31/2014.

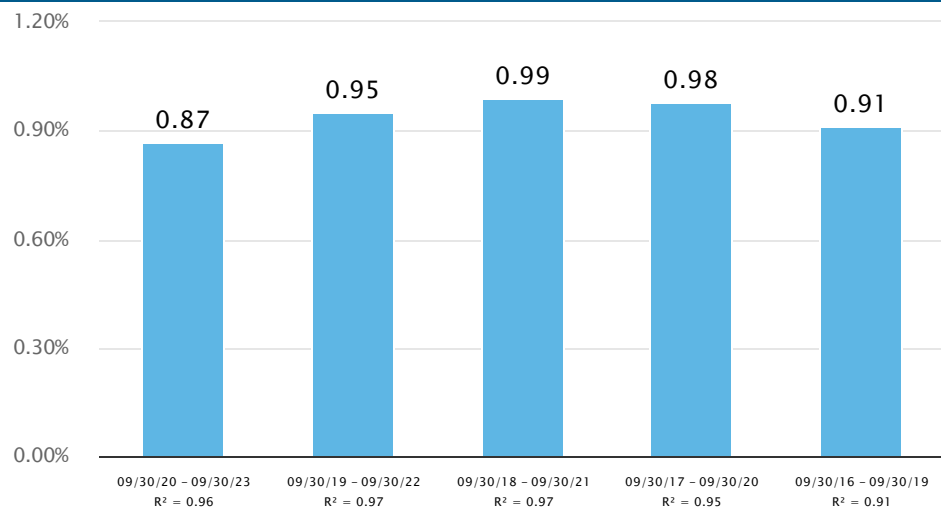
RETURN % (NET OF FEES) AND VOLATILITY VS. BENCHMARKS



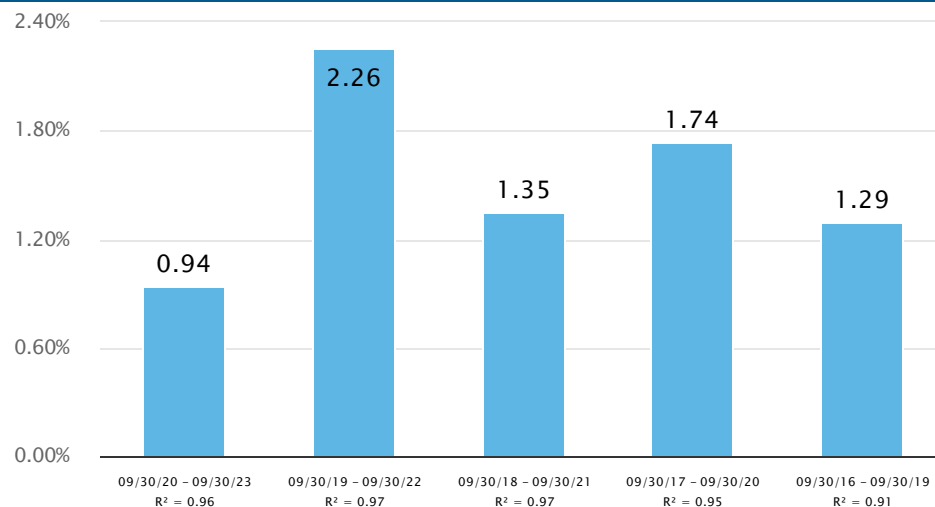
	Return % (Net of Fees) 06/30/15-10/16/23	Standard Deviation (%) 06/30/15-10/16/23
● Portfolio	5.71	11.13
■ TN TSBA Composite	4.72	12.00
■ Bloomberg US Aggregate	0.60	4.62
■ 90-Day T-Bills	1.37	0.43

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals.

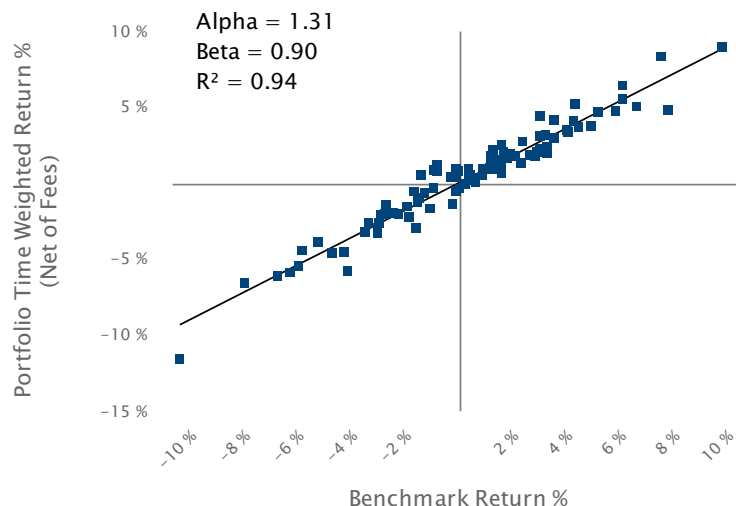
BETA - ROLLING PERIODS - TIME WEIGHTED RETURN %(NET OF FEES)



ALPHA - ROLLING PERIODS - TIME WEIGHTED RETURN %(NET OF FEES)



MONTHLY OBSERVATIONS SINCE 06/30/15 WITH SIMPLE REGRESSION LINE - TIME WEIGHTED RETURN %(NET OF FEES)



**Alpha:** Is a measure of a portfolio's time weighted net of fees return in excess of the market return, both adjusted for risk. A positive alpha indicates that the portfolio outperformed the market on a risk-adjusted basis, and a negative alpha indicates the portfolio did worse than the market.

**Beta:** Is a measure of the sensitivity of a portfolio's time weighted net of fees return against that of the market. A beta greater than 1.00 indicates volatility greater than the market.

**Modern Portfolio Theory:** Seeks to quantify the relationship between risk and return and operates under the assumption that an investor must be compensated for assuming risk.

**R<sup>2</sup>:** Is a measure that indicates the extent to which fluctuations in a portfolio's time weighted net of fees return is correlated with the return of the general market. An R<sup>2</sup> of 0.80 implies that 80% of the fluctuation of a portfolio's return is explained by the fluctuation in the market.

**Graph Notes:** Both the benchmark and portfolio returns are adjusted by the return of the 90-day Treasury Bills to illustrate the excess return above the Risk Free Rate for each period.

The investment returns shown on this page are time-weighted measurements which exclude the effect of the timing and amount of your contributions and withdrawals.

# Executive Summary

## Markets

- After peaking at the end of July at \$4589, the S&P 500 bear market retracement rally, which brought indices to within as much 10% of their 2022 highs, has spent the last 10 weeks stalled out. The S&P 500 has been trading between \$4250 and \$4400 as investor attention shifts from inflation and Fed policy, which has driven the rally through multiple expansion, to achievement of increasingly ambitious and rebounding earnings. Year-to-date, the S&P 500 is up about 12% while the NASDAQ is up about 26%. Equal-weighted indices and the median stock are roughly flat year-to-date.
- The most notable shift in market drivers over the last 10 weeks is the rout in the long-duration Treasury market. Over the last 10 weeks, 10-year interest rates have increased more than 130 basis points to a 16-year high of around 4.8%, with the real rate—critical to equity valuations—hitting around 2.5%, its highest level since 2008. Equally critical is that over the past three months, term premiums have turned strongly positive for the first time in about seven years. Rates are being driven by a set of new factors: excess Treasury supply, owing to US bulging debt; ratings downgrades and concerns about debt sustainability; policy uncertainty; buyer hurdles for Japan and China; and shifting global yield dynamics. Financial conditions are finally starting to tighten.

## Economy

- The US consumer and strong fiscal tailwinds to infrastructure-linked capital expenditures continue to support economic growth. Q3 GDP looks to be extremely strong, estimated at over 4%. While consumer headwinds are building, the US labor market remains resilient. Employment remains stable, close to full employment with the unemployment rate at 3.8%. The labor market is also experiencing its highest participation rate post-Covid.
- The inflation picture is also mixed with most metrics hovering around a 4% annual pace of price hikes. Goods prices are entering deflation, while services prices are still increasing well above the 2% inflation target. Additionally, labor unions are extracting aggressive wage concessions, single family home prices (and thus rents) have stabilized, and oil prices have increased roughly 25% from their spring lows. Geopolitical tensions in the Middle East are adding to supply-side uncertainty.
- Risk of recession remains at least 30%-40% in the next 12 months, based on leading economic indicators, policy lags, and the record length of yield curve inversion. A surging US dollar, hitting six-month highs, is not constructive for US multinational corporations.

## Fed Policy

- The main drivers of hawkish Fed policy have shifted from containing headline inflation to containing growth and labor market strength, which are the sources of stickier inflation. “Higher for longer” is priced into many parts of the Treasury market, but Fed Funds futures still discount four rate cuts in the coming year, versus Fed guidance of no more than two. Equity markets are still not discounting new level of rates, and the implication is an unattractive equity risk premium for the S&P 500 of about 100 basis points.

## Corporate Earnings

- 2023 earnings are now expected to be up to about \$232 per share. Revision trends have been positive, with 12-month forward estimates at \$260 per share and 2025 full-year estimates up 12%, nearing \$285/share.

## GIC Recommendations for Portfolio Positioning

- **Overall, we remain underweight global equities (including US equities), believing that risks remain skewed to the downside, with our June 2024 S&P 500 target price at \$4200. That said, we are inclined to neutralize strong factor positionings. We are balancing exposures between defensive and cyclical, growth and value, and mega-cap and small-cap.**
- **Alternatively, we are remaining overweight fixed income, believing that a “higher-for-longer” regime creates opportunities to own better risk-adjusted returns in current coupons, with the potential for capital gains if rates fade in 2024, as is forecasted. Municipals and investment grade credit remain decent holds barbelled with short-duration Treasuries.**
- **Outside the US, we prefer Japan based on improving growth, inflation dynamics, and a cheap yen. We recently reduced our overweight to emerging markets, believing that US dollar strength and slow China recovery are headwinds.**
- **We also like alternatives in hedge funds, infrastructure, commodities, residential real estate, and private credit.**
- **Remaining fully invested to your personal benchmarks is the most favorable strategy. Do not try to time the markets.**
- **Dollar-cost averaging should be extended and patient, given potential risks ahead. Long-term strategic money should always be deployed in lump sums.**

Source: Morgan Stanley Wealth Management GIC as of October 11, 2023. Equity risk premium is the excess return that an individual stock or the overall stock market provides over a risk-free rate. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

# Summary of GIC Tactical Advice: Global Equities

Tactical Allocation Reasoning as of September 22, 2023

Global Equities	Weight Relative to Model Benchmark	Rationale
US	Underweight	We remain uncertain that forward earnings estimates are accurately discounting the most recent developments of a strong US dollar, rising oil prices, maturing US fiscal stimulus and an increasingly tapped-out US consumer. Additionally, we expect that Fed actions in 2024 may result in a “higher-for-longer” rate scenario. Our preference is for defensive and secular-growth equities with quality balance sheets.
International Equities (Developed Markets)	Market-Weight	The mix of high and sticky inflation, existential risks associated with Russia/Ukraine and the European Central Bank’s position that it has limited tools to help suggest that the odds of recession are over 50%. Developed market exposure should skew toward commodities and materials exporters, especially those in the Asia Pacific region, including Japan.
Emerging Markets	Overweight	Recent softness in China, including macro uncertainty and deflationary pressures, along with growing opacity around policy direction, have caused concern for the country’s growth path. With global growth concerns potentially mounting, we have neutralized a previous overweight to emerging markets.

Source: Morgan Stanley Wealth Management GIC

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# Summary of GIC Tactical Advice: Global Fixed Income

Tactical Allocation Reasoning as of September 22, 2023

Global Fixed Income	Weight Relative to Model Benchmark	Rationale
US Investment Grade	Overweight	While markets had aggressively priced the Fed's hawkish rhetoric, recent bank concerns have brought in pricing of rate cuts through early 2024. We are taking a more balanced risk-reward approach and have added to large underweight positions. With continued Quantitative Tightening ahead, execution risk remains elevated, as do the risks from sticky services inflation. However, bonds still offer decent relative value and the potential for portfolio hedging. Moreover, we expect equity-fixed income correlations to decrease in the event of an earnings recession.
International Investment Grade	Market-Weight*	Central banks' hawkish pivots have prompted a material move in global nominal rates. While timing and catalysts are still hazy, negative-yielding debt has largely vanished in recent months. However, local currencies have recently weakened against a strengthening US dollar. Moreover, our benchmarks and tactical asset allocation models continue to allocate 0% to this asset class.
Inflation-Protected Securities	Market-Weight*	TIPS' real yields have moved up, as realized inflation remains near a 40-year high and geopolitical uncertainties add pricing pressures. Even with real yields now positive, valuation is not compelling in comparison to US investment grade fixed income. Moreover, our benchmarks and tactical asset allocation models continue to allocate 0% to this asset class.
High Yield	Market-Weight*	We have eliminated our exposure to the equity-like asset class to reduce equity beta of portfolios. High yield bonds rallied aggressively after the unprecedented provision of liquidity from the Fed and fiscal stimulus from Washington. However, there is currently limited upside and much downside to invest in riskier products, given the current market environment. Moreover, our benchmarks and tactical asset allocation models continue to allocate 0% to this asset class.

Source: Morgan Stanley Wealth Management GIC

\*The GIC asset allocation models' benchmarks do not include any exposure to this asset class.

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## ACCOUNT(S) INCLUDED IN THIS REPORT

TSBA OPEB TRUST

Reporting Currency: USD

## MORGAN STANLEY WEALTH MANAGEMENT

Account Name	Account Number	Account Type/ Manager Name	Date Opened/ Date Closed	Performance (%) Inception - 10/16/23	Total Value (\$) 10/16/23	% of Portfolio 10/16/23
ARLINGTON CITY - Alternative Investment	471-XXX385	AAA	02/18/20 -	1.48	355,377.27	0.25
ARLINGTON CITY BOE	471-XXX901	Consulting Group Advisor	06/17/15 -	5.72	3,806,911.95	2.66
BARTLETT CITY - Alternative Investment	471-XXX383	AAA	02/18/20 -	1.54	471,941.30	0.33
BARTLETT CITY BOE	471-XXX902	Consulting Group Advisor	06/17/15 -	5.62	6,155,357.95	4.29
Collierville City - Alternative Invest.	471-XXX396	AAA	02/18/20 -	1.59	197,734.86	0.14
COLLIERVILLE CITY BOE	471-XXX903	Consulting Group Advisor	06/17/15 -	5.56	2,270,340.05	1.58
HICKMAN CO.	471-XXX866	Consulting Group Advisor	06/03/15 -	5.76	2,389,148.59	1.67
Hickman Co. - Alternative Investment	471-XXX388	AAA	02/18/20 -	1.70	242,585.93	0.17
JACKSON-MADISON	471-XXX864	Consulting Group Advisor	06/03/15 -	5.74	434,549.01	0.30
JACKSON-MADISON - Alternative Investment	471-XXX403	AAA	02/18/20 -	1.65	43,742.82	0.03
JOHNSON CO.	471-XXX869	Consulting Group Advisor	06/03/15 -	5.75	1,205,620.83	0.84
JOHNSON CO. - Alternative Investment	471-XXX398	AAA	02/18/20 -	1.73	120,525.14	0.08
Lakeland City - Alternative Investment	471-XXX393	AAA	02/18/20 -	1.53	223,183.61	0.16
LAKELAND CITY BOE	471-XXX900	Consulting Group Advisor	06/17/15 -	5.48	2,626,434.67	1.83
MILLINGTON	471-XXX583	Consulting Group Advisor	07/05/16 -	6.54	330,338.81	0.23
MILLINGTON - Alternative Investment	471-XXX409	AAA	02/18/20 -	1.57	32,894.51	0.02
SHELBY CO.	471-XXX863	Consulting Group Advisor	06/03/15 -	5.69	111,780,679.75	77.95

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## ACCOUNT(S) INCLUDED IN THIS REPORT

TSBA OPEB TRUST

Reporting Currency: USD

## MORGAN STANLEY WEALTH MANAGEMENT (Continued)

Account Name	Account Number	Account Type/ Manager Name	Date Opened/ Date Closed	Performance (%) Inception - 10/16/23	Total Value (\$) 10/16/23	% of Portfolio 10/16/23
SHELBY CO. - Alternative Investment	471-XXX380	AAA	02/18/20 -	2.66	10,716,910.40	7.47
<b>Morgan Stanley Wealth Management Total</b>					<b>143,404,277.45</b>	<b>100.00</b>
<b>Total Portfolio</b>					<b>143,404,277.45</b>	<b>100.00</b>

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characteristics of more than one asset class, allocations may be under or over inclusive. These classifications do not constitute a recommendation and may differ from the classification of instruments for regulatory or tax purposes. In addition, the Other asset class contains securities that are not included in the various asset class classifications. This can include, but is not limited to, non-traditional investments such as some Equity Unit Trusts, Index Options and Structured Investments issued outside of Morgan Stanley. Additionally, investments for which we are unable to procure market data to properly classify them will appear in the Other category.

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**Performance:** Performance results are annualized for time periods greater than one year and include all cash and cash equivalents, realized and unrealized capital gains and losses, dividends, interest and income. Depending on the opening or closing date of the account or position, the performance referenced may be for a portion of the time period identified. The investment results depicted herein represent historical performance. As a result of recent market activity, current performance may vary from the figures shown. Please contact your Financial Advisor for up-to-date performance information. Past performance is not a guarantee of future results. Quotations of performance appearing in this report may include performance experienced in legacy accounts which have been closed and purged, and as such are not included on the Accounts Included in This Report page.

Market values used for performance calculation do not include Performance Ineligible Assets and thus may differ from asset allocation market values. Common examples of Performance Ineligible Assets include life insurance and annuities as well as Manually Added and External accounts, assets and liabilities.

Unless otherwise indicated, performance is an aggregated composite calculation of the entire portfolio and may include brokerage and investment advisory accounts as well as assets for different accounts included in this report. The accounts included in the composite may have (or have had) different investment objectives and strategies, been subject to different restrictions, and incurred different types of fees, markups, commissions and other charges. Accordingly, performance results may blend the performance of assets and strategies that may not have been available in all of the accounts at all times during the reporting period. In addition, accounts in the composite may have changed from brokerage to advisory or vice versa. Accounts may also have moved from one advisory program to another (including from a discretionary program to a non-discretionary program).

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**Sub Account and Security Level Performance:** The performance return methodology described above and in the TWR and IRR definitions applies to both Account Level and Sub-Account (e.g. Asset Class or Security level) performance returns. The inputs consist of market values and net flows.

For example, TWR is calculated by taking the Change in Market Value (Ending MV – Beginning MV) less any net flows, divided by the beginning MV.  $TWR = (Ending\ MV - Beginning\ MV - Net\ Flows) / Beginning\ MV$

The difference lies in what is or is not included in the Market Values and Flows. For account level performance, the total account market values and all flows within the account are taken into account. For sub-account level performance, only those market values and flows associated with the specific securities included are taken into account.

Flows that are not security specific typically include account advisory fees, cash contributions or withdrawals, and any other flows that are not attributed to a specific security.

Flows that are security specific including purchases, sales, dividends, interest, partnership distributions, return of capital, fund sales charges, security transaction fees, and ongoing fund expenses are typically reflected in the security level returns.

**Gross of Fees:** The impact of program fees can be material. These program fees are deducted based on your billing cycle and may have a compounding effect on performance. As fees are deducted periodically throughout the year, the compounding effect may increase the impact of the fees by an amount directly related to the gross account performance.

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**Performance Inception Month End:** Performance Inception Month End refers to performance calculated from the end of the month in which the accounts became eligible for performance. Calculating performance from the Performance Inception Month End allows for a comparison to be made to appropriate benchmarks. Performance Inception Month End does not necessarily correspond to the account opening date.

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then placed on the Approved List instead of the Focus List. Investment products may move from the Focus List to the Approved List, or vice versa. GIMA may also determine that an investment product no longer meets the criteria under either process and will no longer be recommended in investment advisory programs (in which case the investment product is given a "Not Approved" status). GIMA has a "Watch" policy and may describe a Focus List or Approved List investment product as being on "Watch" if GIMA identifies specific areas that (a) merit further evaluation by GIMA and (b) may, but are not certain to, result in the investment product becoming "Not Approved." The Watch period depends on the length of time needed for GIMA to conduct its evaluation and for the investment manager or fund to address any concerns. Certain investment products on either the Focus List or Approved List may also be recommended for the **Tactical Opportunities List** based in part on tactical opportunities existing at a given time. The investment products on the Tactical Opportunities List change over time. For more information on the Focus List, Approved List, Tactical Opportunities List and Watch processes, please see the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management. Your Financial Advisor or Private Wealth Advisor can also provide upon request a copy of a publication entitled "Manager Selection Process."

The **Global Investment Committee** is a group of seasoned investment professionals who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend model portfolio weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

The GIC Asset Allocation Models are not available to be directly implemented as part of an investment advisory service and should not be regarded as a recommendation of any Morgan Stanley investment advisory service. The GIC Asset Allocation Models do not represent actual trading or any type of account or any type of investment strategies and none of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, advisory fees, fund expenses) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models which, when compounded over a period of years, would decrease returns.

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The proprietary **Value Score** methodology considers an active investment strategies' value proposition relative to its costs. From a historical quantitative study of several quantitative markers, Value Score measures perceived forward-looking benefit and computes (1) "fair value" expense ratios for most traditional investment managers across 40 categories and (2) managers' perceived "excess value" by comparing the fair value expense ratios to actual expense ratios. Managers are then ranked within each category by their excess value to assign a Value Score. Our analysis suggests that greater levels of excess value have historically corresponded to attractive subsequent performance.

For more information on the ranking models, please see *Adverse Active Alpha<sup>SM</sup> 2.0: Scoring Active Managers According to Potential Alpha* and *Value Score: Scoring Fee Efficiency by Comparing Managers' "Fair Value" and Actual Expense Ratios*. The whitepapers are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on AAA, please see the Adverse Active Alpha Ranking Model and Selecting Managers with Adverse Active Alpha whitepapers. The whitepaper are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

**The Global Investment Manager Analysis (GIMA) Services Only Apply to Certain Investment Advisory Programs** GIMA evaluates certain investment products for the purposes of some – but not all – of Morgan Stanley Smith Barney LLC's investment advisory programs (as described in more detail in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management). If you do not invest through one of these investment advisory programs, Morgan Stanley Wealth Management is not obligated to provide you notice of any GIMA Status changes even though it may give notice to clients in other programs.

**Strategy May Be Available as a Separately Managed Account or Mutual Fund** Strategies are sometimes available in Morgan Stanley Wealth Management investment advisory programs both in the form of a separately managed account (“SMA”) and a mutual fund. These may have different expenses and investment minimums. Your Financial Advisor or Private Wealth Advisor can provide more information on whether any particular strategy is available in more than one form in a particular investment advisory program. Generally, investment advisory accounts are subject to an annual asset-based fee (the “Fee”) which is payable monthly in advance (some account types may be billed differently). In general, the Fee covers Morgan Stanley investment advisory services, custody of securities with Morgan Stanley, trade execution with or through Morgan Stanley or its affiliates, as well as compensation to any Morgan Stanley Financial Advisor.

In addition, each account that is invested in a program that is eligible to purchase certain investment products, such as mutual funds, will also pay a Platform Fee (which is subject to a Platform Fee offset) as described in the applicable ADV brochure. Accounts invested in the Select UMA program may also pay a separate Sub-Manager fee, if applicable.

If your account is invested in mutual funds or exchange traded funds (collectively “funds”), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund’s share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV).

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley’s Separately Managed Account (“SMA”) programs may effect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instances, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: [www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf](http://www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf). For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV), or contact your Financial Advisor / Private Wealth Advisor.

**Conflicts of Interest:** GIMA’s goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients’ assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. Separately, certain strategies managed or sub-advised by us or our affiliates, including but not limited to MSIM and Eaton Vance Management (“EVM”) and its investment affiliates, may be included in your account. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA’s evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS&Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts, and managers in various advisory programs. Morgan Stanley Wealth Management, managers, MS&Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account.

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Morgan Stanley charges each fund family we offer a mutual fund support fee, also called a “revenue-sharing payment,” on client account holdings in fund families according to a tiered rate that increases along with the management fee of the fund so that lower management fee funds pay lower rates than those with higher management fees.

**Consider Your Own Investment Needs:** The model portfolios and strategies discussed in the material are formulated based on general client characteristics including risk tolerance. This material is not intended to be an analysis of whether particular investments or strategies are appropriate for you or a recommendation, or an offer to participate in any investment. Therefore, clients should not use this material as the sole basis for investment decisions. They should consider all relevant information, including their existing portfolio, investment objectives, risk tolerance, liquidity needs and investment

time horizon. Such a determination may lead to asset allocation results that are materially different from the asset allocation shown in this profile. Talk to your Financial Advisor about what would be an appropriate asset allocation for you, whether Morgan Stanley Pathway Funds is an appropriate program for you.

**No obligation to notify** – Morgan Stanley Wealth Management has no obligation to notify you when the model portfolios, strategies, or any other information, in this material changes.

*For index, indicator and survey definitions referenced in this report please visit the following: <https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions>*

**The Morgan Stanley Pathway Funds, Firm Discretionary UMA Model Portfolios**, and other asset allocation or any other model portfolios discussed in this material are available only to investors participating in Morgan Stanley Consulting Group advisory programs. For additional information on the Morgan Stanley Consulting Group advisory programs, see the applicable ADV brochure, available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV) or from your Morgan Stanley Financial Advisor or Private Wealth Advisor. To learn more about the Morgan Stanley Pathway Funds, visit the Funds' website at <https://www.morganstanley.com/wealth-investmentsolutions/cqcm>. Consulting Group is a business of Morgan Stanley.

**Morgan Stanley Pathway Program Asset Allocation Models** There are model portfolios corresponding to five risk-tolerance levels available in the Pathway program. Model 1 is the least aggressive portfolio and consists mostly of bonds. As the model numbers increase, the models have higher allocations to equities and become more aggressive. Pathway is a mutual fund asset allocation program. In constructing the Pathway Program Model Portfolios, Morgan Stanley Wealth Management uses, among other things, model asset allocations produced by Morgan Wealth Management's Global Investment Committee (the "GIC"). The Pathway Program Model Portfolios are specific to the Pathway program (based on program features and parameters, and any other requirements of Morgan Stanley Wealth Management's Consulting Group). The Pathway Program Model Portfolios may therefore differ in some respects from model portfolios available in other Morgan Stanley Wealth Management programs or from asset allocation models published by the Global Investment Committee.

The type of mutual funds and ETFs discussed in this presentation utilizes nontraditional or complex investment strategies and/or derivatives. Examples of these types of funds include those that utilize one or more of the below noted investment strategies or categories or which seek exposure to the following markets: (1) commodities (e.g., agricultural, energy and metals), currency, precious metals; (2) managed futures; (3) leveraged, inverse or inverse leveraged; (4) bear market, hedging, long-short equity, market neutral; (5) real estate; (6) volatility (seeking exposure to the CBOE VIX Index). Investors should keep in mind that while mutual funds and ETFs may, at times, utilize nontraditional investment options and strategies, they should not be equated with unregistered privately offered alternative investments. Because of regulatory limitations, mutual funds and ETFs that seek alternative-like investment exposure must utilize a more limited investment universe. As a result, investment returns and portfolio characteristics of alternative mutual funds and ETFs may vary from traditional hedge funds pursuing similar investment objectives. Moreover, traditional hedge funds have limited liquidity with long "lock-up" periods allowing them to pursue investment strategies without having to factor in the need to meet client redemptions and ETFs trade on an exchange. On the other hand, mutual funds typically must meet daily client redemptions. This differing liquidity profile can have a material impact on the investment returns generated by a mutual fund or ETF pursuing an alternative investing strategy compared with a traditional hedge fund pursuing the same strategy.

Nontraditional investment options and strategies are often employed by a portfolio manager to further a fund's investment objective and to help offset market risks. However, these features may be complex, making it more difficult to understand the fund's essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage."

***Please consider the investment objectives, risks, fees, and charges and expenses of mutual funds, ETFs, closed end funds, unit investment trusts, and variable insurance products carefully before investing. The prospectus contains this and other information about each fund. To obtain a prospectus, contact your Financial Advisor or Private Wealth Advisor or visit the Morgan Stanley website at [www.morganstanley.com](http://www.morganstanley.com). Please read it carefully before investing.***

**Money Market Funds:** You could lose money in money market funds. Although money market funds classified as government funds (i.e., money market funds that invest 99.5% of total assets in cash and/or securities backed by the U.S. government) and retail funds (i.e., money market funds open to natural person investors only) seek to preserve value at \$1.00 per share, they cannot guarantee they will do so. The price of other money market funds will fluctuate and when you sell shares they may be worth more or less than originally paid. Money market funds may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits. A money market fund investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or 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.

*Investors should carefully consider the investment objectives, risks, charges and expenses of a money market fund before investing. The prospectus contains this and other information about the money market fund. To obtain a prospectus, contact your Financial Advisor or visit the money market fund company's website. Please read the prospectus carefully before investing.*

**Exchange Funds** are private placement vehicles that enable holders of concentrated single-stock positions to exchange those stocks for a diversified portfolio. Investors may benefit from greater diversification by exchanging a concentrated stock position for fund shares without triggering a taxable event. These funds are available only to qualified investors and may only be offered by Financial Advisors who are qualified to sell alternative investments. Before investing, investors should consider the following:

- Dividends are pooled
- Investors may forfeit their stock voting rights
- Investment may be illiquid for several years
- Investments may be leveraged or contain derivatives
- Significant early redemption fees may apply
- Changes to the U.S. tax code, which could be retroactive (potentially disallowing the favorable tax treatment of exchange funds)
- Investment risk and potential loss of principal

#### KEY ASSET CLASS CONSIDERATIONS AND OTHER RISKS

Investing in the markets entails the risk of market volatility. The value of all types of investments, including stocks, mutual funds, exchange-traded funds ("ETFs"), closed-end funds, and unit investment trusts, may increase or decrease over varying time periods. To the extent the investments depicted herein represent **international securities**, you should be aware that there may be additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be magnified in **emerging markets and frontier markets**. Some funds also invest in foreign securities, which may involve currency risk. There is no assurance that the fund will achieve its investment objective. **Small- and mid-capitalization companies** may lack the financial resources, product diversification and competitive strengths of larger companies. In addition, the securities of small- and mid-capitalization companies may not trade as readily as, and be subject to higher volatility than, those of larger, more established companies. The value of **fixed income securities** will fluctuate and, upon a sale, may be worth more or less than their original cost or maturity value. Bonds are subject to interest rate risk, call risk, reinvestment risk, liquidity risk, and credit risk of the issuer. **High yield bonds** are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. In the case of **municipal bonds**, income is generally exempt from federal income taxes. Some income may be subject to state and local taxes and to the federal alternative minimum tax. Capital gains, if any, are subject to tax. **Treasury Inflation Protection Securities' (TIPS)** coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation. There is no guarantee that investors will receive par if TIPS are sold prior to maturity. The returns on a portfolio consisting primarily of **environmental, social, and governance-aware investments ("ESG")** may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein. **Options** and margin trading involve substantial risk and are not appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, **closed-end funds** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. Shares of closed-end funds frequently trade at a discount from their NAV which may increase investors' risk of loss. The risk of loss due to this discount may be greater for investors expecting to sell their shares in a relatively short period after completion of the public offering. This characteristic is a risk separate and distinct from the risk that a closed-end fund's net asset value may decrease as a result of investment activities. NAV is total assets less total liabilities divided by the number of shares outstanding. At the time an investor purchases or sells shares of a closed-end fund, shares may have a market price that is above or below NAV. Portfolios that invest a large percentage of assets in only one industry **sector** (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

**Structured Investments** are complex and not appropriate for all investors. An investment in Structures Investments involve risks. These risks can include but are not limited to: (1) Fluctuations in the price, level or yield of underlying instruments, interest rates, currency values and credit quality, (2) Substantial or total loss of principal, (3) Limits on participation in appreciation of underlying instrument, (4) Limited liquidity, (5) Issuer credit risk and (6) Conflicts of Interest. There is no assurance that a strategy of using structured product for wealth preservation, yield enhancement, and/or interest rate risk hedging will meet its objectives.

**Alternative investments** may be either traditional alternative investment vehicles, such as hedge funds, fund of hedge funds, private equity, private real estate and managed futures or, non-traditional products such as mutual funds and exchange-traded funds that also seek alternative-like exposure but have significant differences from traditional alternative investments. Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; and Risks associated with the operations, personnel, and processes of the manager. Further, opinions regarding Alternative Investments expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management.

Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing.

Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

A majority of Alternative Investment managers reviewed and selected by GIMA pay or cause to be paid an ongoing fee for distribution from their management fees to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase an interest in an Alternative Investment and in some instances pay these fees on the investments held by advisory clients. Morgan Stanley Wealth Management rebates such fees that are received and attributable to an Investment held by an advisory client and retains the fees paid in connection with investments held by brokerage clients. Morgan Stanley Wealth Management has a conflict of interest in offering alternative investments because Morgan Stanley Wealth Management or our affiliates, in most instances, earn more money in your account from your investments in alternative investments than from other investment options.

It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 260 basis points or more annually depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, "blow ups," or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. However, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial "lift" or upwards bias.

**Hedge Funds of Funds** and many funds of funds are private investment vehicles restricted to certain qualified private and institutional investors. They are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They may be highly illiquid, can engage in leverage and other speculative practices that may increase volatility and the risk of loss, and may be subject to large investment minimums and initial lockups. They involve complex tax structures, tax-inefficient investing and delays in distributing important tax information. Categorically, hedge funds and funds of funds have higher fees and expenses than traditional investments, and such fees and expenses can lower the returns achieved by investors. Funds of funds have an additional layer of fees over and above hedge fund fees that will offset returns. An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. An investment in a **target date portfolio** is subject to the risks attendant to the underlying funds in which it invests, in these portfolios the funds are the Consulting Group Capital Market funds. A target date portfolio is geared to investors who will retire and/or require income at an approximate year. The portfolio is managed to meet the investor's goals by the pre-established year or "target date." A target date portfolio will transition its invested assets from a more aggressive portfolio to a more conservative portfolio as the target date draws closer. An investment in the target date portfolio is not guaranteed at any time, including, before or after the target date is reached. **Managed futures** investments are speculative, involve a high degree of risk, use significant leverage, are generally illiquid, have substantial charges, subject investors to conflicts of interest, and are appropriate only for the risk capital portion of an investor's portfolio. Managed futures investments do not replace equities or bonds but rather may act as a complement in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors.

### Virtual Currency Products (Cryptocurrencies)

**Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and may result in a loss of the entire investment. Risks and considerations include but are not limited to:**

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. **The price of Digital Assets could decline rapidly, and investors could lose their entire investment.**
- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.
- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor's subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.
- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.
- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.
- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.
- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund's or product's ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.

- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset.
- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from "airdrops" with respect to, or "forks" in, a Digital Asset's blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a "fork" in the Digital Asset blockchain could materially decrease the price of such Digital Asset.
- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products' use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.
- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result, like other investors have, you can lose some or all of your holdings of Digital Assets.
- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.
- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human trafficking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting off entirely the ability to use or trade Digital Asset products.
- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.
- Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.
- The exchange rate of virtual currency products versus the USD historically has been very volatile and the exchange rate could drastically decline. For example, the exchange rate of certain Digital Assets versus the USD has in the past dropped more than 50% in a single day. Other Digital Assets may be affected by such volatility as well.
- Digital Asset exchanges have limited operating and performance histories and are not regulated with the same controls or customer protections available to more traditional exchanges transacting equity, debt, and other assets and securities. There is no assurance that a person/exchange who currently accepts a Digital Asset as payment will continue to do so in the future.
- The regulatory framework of Digital Assets is evolving, and in some cases is uncertain, and Digital Assets themselves may not be governed and protected by applicable securities regulators and securities laws, including, but not limited to, Securities Investor Protection Corporation coverage, or other regulatory regimes.
- Morgan Stanley Smith Barney LLC or its affiliates (collectively, "Morgan Stanley") may currently, or in the future, offer or invest in Digital Asset products, services or platforms. The proprietary interests of Morgan Stanley may conflict with your interests.
- The foregoing list of considerations and risks are not and do not purport to be a complete enumeration or explanation of the risks involved in an investment in any product or fund investing or trading in Digital Assets.

**Asset allocation and diversification** do not assure a profit or protect against loss in declining financial markets. Past performance is no guarantee of future results. Actual results may vary.

## TSBA OPEB TRUST

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**Rebalancing** does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

Indices are unmanaged and investors cannot directly invest in them. They are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Composite index results are shown for illustrative purposes only, generally do not represent the performance of a specific investment, may not, for a variety of reasons, be an appropriate comparison or benchmark for a particular investment and may not necessarily reflect the actual investment strategy or objective of a particular investment. Consequently, comparing an investment to a particular index may be of limited use.

To obtain **Tax-Management Services**, a client must complete the Tax-Management Form, and deliver the signed form to Morgan Stanley. For more information on Tax-Management Services,

including its features and limitations, please ask your Financial Advisor for the Tax Management Form. Review the form carefully with your tax advisor. Tax-Management Services: (a) apply only to equity investments in separate account sleeves of client accounts; (b) are not available for all accounts or clients; and (c) may adversely impact account performance. Tax-management services do not constitute tax advice or a complete tax-sensitive investment management program. There is no guarantee that tax-management services will produce the desired tax results.

**When Morgan Stanley Smith Barney LLC, its affiliates and Morgan Stanley Financial Advisors and Private Wealth Advisors (collectively, "Morgan Stanley") provide "investment advice" regarding a retirement or welfare benefit plan account, an individual retirement account or a Coverdell education savings account ("Retirement Account"), Morgan Stanley is a "fiduciary" as those terms are defined under the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and/or the Internal Revenue Code of 1986 (the "Code"), as applicable. When Morgan Stanley provides investment education, takes orders on an unsolicited basis or otherwise does not provide "investment advice", Morgan Stanley will not be considered a "fiduciary" under ERISA and/or the Code. For more information regarding Morgan Stanley's role with respect to a Retirement Account, please visit [www.morganstanley.com/disclosures/dol](http://www.morganstanley.com/disclosures/dol). Tax laws are complex and subject to change. Morgan Stanley does not provide tax or legal advice. Individuals are encouraged to consult their tax and legal advisors (a) before establishing a Retirement Account, and (b) regarding any potential tax, ERISA and related consequences of any investments or other transactions made with respect to a Retirement Account. Individuals should consult their tax advisor for matters involving taxation and tax planning and their attorney for matters involving trust and estate planning, charitable giving, philanthropic planning and other legal matters.**

**Lifestyle Advisory Services:** Products and services are provided by third party service providers, not Morgan Stanley Smith Barney LLC ("Morgan Stanley"). Morgan Stanley may not receive a referral fee or have any input concerning such products or services. There may be additional service providers for comparative purposes. Please perform a thorough due diligence and make your own independent decision.

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**The Morgan Stanley Goals-Planning System (GPS)** includes a brokerage investment analysis tool. While securities held in a client's investment advisory accounts may be included in the analysis, the reports generated from the GPS Platform are not financial plans nor constitute a financial planning service. A financial plan generally seeks to address a wide spectrum of a client's long-term financial needs, and can include recommendations about insurance, savings, tax and estate planning, and investments, taking into consideration the client's goals and situation, including anticipated retirement or other employee benefits. Morgan Stanley Smith Barney LLC ("Morgan Stanley") will only prepare a financial plan at a client's specific request using Morgan Stanley approved financial planning software. Investing in financial instruments carries with it the possibility of losses and that a focus on above-market returns exposes the portfolio to above-average risk. Performance aspirations are not guaranteed and are subject to market conditions. High volatility investments may be subject to sudden and large falls in value, and there could be a large loss on realization which could be equal to the amount invested. **IMPORTANT:** The projections or other information provided by the Morgan Stanley Goals Planning System regarding the likelihood of various investment outcomes (including any assumed rates of return and income) are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Morgan Stanley does not represent or guarantee that the projected returns or income will or can be attained.

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**Important information about your relationship with your Financial Advisor and Morgan Stanley Smith Barney LLC when using LifeView Goal Analysis or LifeView Advisor.** When your Financial Advisor prepares and delivers a Financial Goal Analysis (i.e., when using LifeView Goal Analysis), they will be acting in a *brokerage* capacity. When your Financial Advisor prepares a Financial Plan (i.e., when using LifeView Advisor), they will be acting in an *investment advisory* capacity with respect to the delivery of your Financial Plan. This Investment Advisory relationship will begin with the delivery of the Financial Plan and ends thirty days later, during which time your Financial Advisor can review the Financial Plan with you. To understand the differences between brokerage and advisory relationships, you should consult your Financial Advisor, or review our “Understanding Your Brokerage and Investment Advisory Relationships,” *brochure* available at <https://www.morganstanley.com/wealth-relationshipwithms/pdfs/understandingyourrelationship.pdf>

We may act in the capacity of a broker or that of an advisor. As your broker, we are not your fiduciary and our interests may not always be identical to yours. Please consult with your Financial Advisor or Private Wealth Advisor to discuss our obligations to disclose to you any conflicts we may from time to time have and our duty to act in your best interest. We may be paid both by you and by others who compensate us based on what you buy. Our compensation, including that of your Financial Advisor or Private Wealth Advisor, may vary by product and over time.

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**GLOBAL INVESTMENT COMMITTEE (GIC) ASSET ALLOCATION MODELS:** The Asset Allocation Models are created by Morgan Stanley Wealth Management’s GIC.

**HYPOTHETICAL MODEL PERFORMANCE (GROSS):** Hypothetical model performance results do not reflect the investment or performance of an actual portfolio following a GIC Strategy, but simply reflect actual historical performance of selected indices on a real-time basis over the specified period of time representing the GIC’s strategic and tactical allocations as of the date of this report. The past performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation or trading strategy. Hypothetical performance results do not represent actual trading and are generally designed with the benefit of hindsight. Actual performance results of accounts vary due to, for example, market factors (such as liquidity) and client-specific factors (such as investment vehicle selection, timing of contributions and withdrawals, restrictions and rebalancing schedules). Clients would not necessarily have obtained the performance results shown here if they had invested in accordance with any GIC Asset Allocation Model for the periods indicated. Despite the limitations of hypothetical performance, these hypothetical performance results allow clients and Financial Advisors to obtain a sense of the risk/return trade-off of different asset allocation constructs. The hypothetical performance results in this report are calculated using the returns of benchmark indices for the asset classes, and not the returns of securities, fund or other investment products. Models may contain allocations to Hedge Funds, Private Equity and Private Real Estate. The benchmark indices for these asset classes are not issued on a daily basis. When calculating model performance on a day for which no benchmark index data is issued, we have assumed straight line growth between the index levels issued before and after that date.

**FEES REDUCE THE PERFORMANCE OF ACTUAL ACCOUNTS:** None of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, fees) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models. The GIC Asset Allocation Models and any model performance included in this presentation are intended as educational materials. Were a client to use these models in connection with investing, any investment decisions made would be subject to transaction and other costs which, when compounded over a period of years, would decrease returns. Information regarding Morgan Stanley’s standard advisory fees is available in the Form ADV Part 2, which is available at [www.morganstanley.com/adv](http://www.morganstanley.com/adv). The following hypothetical illustrates the compound effect fees have on investment returns: For example, if a portfolio’s annual rate of return is 15% for 5 years and the account pays 50 basis points in fees per annum, the gross cumulative five-year return would be 101.1% and the five-year return net of fees would be 96.8%. Fees and/or expenses would apply to clients who invest in investments in an account based on these asset allocations, and would reduce clients’ returns. The impact of fees and/or expenses can be material.

**Variable annuities** are long-term investments designed for retirement purposes and may be subject to market fluctuations, investment risk, and possible loss of principal. All guarantees, including optional benefits, are based on the financial strength and claims-paying ability of the issuing insurance company and do not apply to the underlying investment options. Optional riders may not be able to be purchased in combination and are available at an additional cost. Some optional riders must be elected at time of purchase. Optional riders may be subject to specific limitations, restrictions, holding periods, costs, and expenses as specified by the insurance company in the annuity contract. If you are investing in a **variable annuity** through a tax-advantaged retirement plan such as an IRA, you will get

no additional tax advantage from the variable annuity. Under these circumstances, you should only consider buying a variable annuity because of its other features, such as lifetime income payments and death benefits protection. Taxable distributions (and certain deemed distributions) are subject to ordinary income tax and, if taken prior to age 59½, may be subject to a 10% federal income tax penalty. Early withdrawals will reduce the death benefit and cash surrender value.

**Equity securities** may fluctuate in response to news on companies, industries, market conditions and general economic environment. **Ultrashort-term fixed income** asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

**Master Limited Partnerships (MLPs)** are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk. Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk. The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value. MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV, and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

**Investing in commodities** entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention. **Physical precious metals** are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor.

**REITs** investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions. Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage. Principal is returned on a monthly basis over the life of a **mortgage-backed security**. Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. **Asset-backed securities** generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.

**Yields** are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision. **Credit ratings** are subject to change. **Duration**, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. The majority of \$25 and \$1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per \$25 or \$1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price. The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk. The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield. Some \$25 or \$1000 par **preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Companies paying **dividends** can reduce or cut payouts at any time.

**Nondiversification:** For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time. Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

**Growth investing** does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. **Value investing** does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected. Any type of **continuous or periodic investment plan** does not assure a profit and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fluctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.

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In addition, each account that is invested in a program that is eligible to purchase certain investment products, such as mutual funds, will also pay a Platform Fee (which is subject to a Platform Fee offset) as described in the applicable ADV brochure. Accounts invested in the Select UMA program may also pay a separate Sub-Manager fee, if applicable.

If your account is invested in mutual funds or exchange traded funds (collectively "funds"), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund's share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV).

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may affect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instance, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: [www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf](http://www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf). For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV), or contact your Financial Advisor / Private Wealth Advisor.

## GENERAL DEFINITIONS

**Alpha:** Is a measure of a portfolio's time weighted net of fees return in excess of the market return, both adjusted for risk. A positive alpha indicates that the portfolio outperformed the market on a risk-adjusted basis, and a negative alpha indicates the portfolio did worse than the market.

**Annualized Standard Deviation:** A statistical calculation that measures the volatility of returns over time; the larger the standard deviation, the greater the volatility.

**Beta:** Is a measure of the sensitivity of a portfolio's time weighted net of fees return against that of the market. A beta greater than 1.00 indicates volatility greater than the market.

**CCY:** Represents the currency of the underlying instrument. Currency is a medium of exchange for goods and services.

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**Dollar-Weighted Return (Internal Rate of Return):** A return calculation that measures the actual performance of a portfolio over the reporting period. Since dollar weighted returns include the impact of client contributions and withdrawals, they should not be compared to market indices or used to evaluate the performance of a manager, but can be used to evaluate progress toward investment goals.

**Graph Notes:** Both the benchmark and portfolio returns are adjusted by the return of the 90-day Treasury Bills to illustrate the excess return above the Risk Free Rate for each period.

**Gross of Fees:** Performance results depicted as "gross" of fees do not reflect the deduction of any wrap fee, investment management fee, trade commissions, and/or other account fees. Your actual returns are lower after deducting these expenses. Please see the Morgan Stanley Smith Barney LLC Form ADV Part 2 Brochure for advisory accounts and/or any applicable brokerage account trade confirmation statements for a full disclosure of the applicable charges, fees and expenses. Your Financial Advisor will provide those documents to you upon request.

**Investment Earnings:** A combination of the income received and total portfolio value increase or decrease, excluding net contributions and withdrawals, over the reporting period.

**Modern Portfolio Theory:** Seeks to quantify the relationship between risk and return and operates under the assumption that an investor must be compensated for assuming risk.

**Net Contributions/Withdrawals:** The net value of cash and securities contributed to or withdrawn from the account(s) during the reporting period. Net contributions and withdrawals may include advisory fees for advisory accounts.

**Net of Fees:** Performance results depicted as "net" of fees shall mean that any wrap fee, investment management fees, trade commissions, and/or other account fees have been deducted. Any other fees or expenses associated with the account, such as third party custodian fees, may not have been deducted. Please see the Morgan Stanley Smith Barney LLC Form ADV Part 2 Brochure for advisory accounts and/or any applicable brokerage account trade confirmation statements for a full disclosure of the applicable charges, fees and expenses. Your Financial Advisor will provide those documents to you upon request.

**Performance ineligible assets:** Performance returns are not calculated for certain assets because accurate valuations and transactions for these assets are not processed or maintained by Morgan Stanley Smith Barney LLC. Common examples include life insurance and annuities as well as Manually Added and External accounts, assets and liabilities.

**R<sup>2</sup>:** Is a measure that indicates the extent to which fluctuations in a portfolio's time weighted net of fees return is correlated with the return of the general market. An R<sup>2</sup> of 0.80 implies that 80% of the fluctuation of a portfolio's return is explained by the fluctuation in the market.

**Tax-Qualified Account(s):** Accounts that qualify for favorable tax treatment under US federal tax law and may benefit from favorable tax treatment under applicable state tax law. Typically, these accounts benefit from tax deferred growth potential, meaning investment earnings (such as capital gains, dividends, and interest) are generally not subject to federal income tax while the earnings remain in the account. Capital gains rates generally do not apply. Distributions of taxable amounts are generally subject to ordinary income tax and, if made before age 59 1/2, may be subject to a 10% (25% for certain SIMPLE IRA distributions) penalty tax. Some tax-qualified accounts, such as traditional Individual Retirement Accounts ("IRA") and employer sponsored retirement plan accounts, may allow tax deductible and/or pre-tax contributions (subject to certain limitations and restrictions). Other tax-qualified accounts, such as Roth IRAs and Coverdell Education Savings Accounts, may allow income tax free distributions, but only if certain conditions are satisfied.

**Taxable Account(s):** Accounts that are not Tax-Qualified Account(s), meaning investment earnings (such as capital gains, dividends, and interest) are generally subject to current US federal income taxation when held by US taxable investors. Note, however, that this category may include specific assets that are generally not subject to US federal income tax such as municipal bonds.

**Time-Weighted Return:** A return calculation that measures the investment performance of a portfolio over the reporting period. Time weighted returns do not include the impact of client contributions and withdrawals and therefore, may not reflect the actual rate of return the client received. Time weighted returns isolate investment actions and can be compared to benchmarks and used to evaluate the performance of a manager.

**Total Cost:** The sum of all costs incurred by a firm in producing a certain level of output.

**Total Value:** "Total Value" represents the Market Value of the portfolio or Asset Class referenced and includes the accrual of interest and dividends. Total Value in the Asset Allocation view prior to January 2014, does not reflect the accrual of interest and dividends. Total Value for Morgan Stanley & Co. and External accounts also does not include accrued interest and dividends.

## BENCHMARK DEFINITIONS

**TN TSBA Composite:** The current allocation is comprised of 50.00% MSCI AC World Net, 10.00% MSCI EM Net, 15.00% MSCI EAFE Net, 25.00% Bloomberg Global Aggregate 1-3 Y.

**90-Day T-Bills:** Equal dollar amounts of three-month Treasury bills are purchased at the beginning of each of three consecutive months. As each bill matures, all proceeds are rolled over or reinvested in a new three-month bill. The income used to calculate the monthly return is derived by subtracting the original amount invested from the maturity value. The yield curve average is the basis for calculating the return on the index. The index is rebalanced monthly by market capitalization. The 90-Day Treasury Bill is a short-term obligation issued by the United States government. T-bills are purchased at a

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discount to the full face value, and the investor receives the full value when they mature. The difference of discount is the interest earned. T-bills are issued in denominations of \$10,000 auction and \$1,000 increments thereafter.

**MSCI AC World Net:** The MSCI ACWI Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 46 country indexes comprising 23 developed and 23 emerging market country indexes. The developed market country indexes included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indexes included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkiye, and United Arab Emirates (as of June 2014). Net total return indices reinvest dividends after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

**MSCI EAFE Net:** The MSCI EAFE Index -Europe, Australasia, Far East - is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US and Canada. The MSCI EAFE Index consists of the following 21 developed market country indexes: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom (as of June 2014). Net total return indices reinvest dividends after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

**MSCI EM Net:** The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 23 emerging market country indexes: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkiye, and United Arab Emirates (as of June 2014). Net total return indices reinvest dividends after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

**Bloomberg Global Aggregate 1-3 Y:** The Bloomberg Global Aggregate Index provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment grade 144A securities. This index is the 1-3 Yr component of the Global Aggregate index.

**Bloomberg US Aggregate:** The Bloomberg US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency).