



AGENDA

Meeting of the Board of Trustees

Thursday, September 28, 2023 – 9:00 a.m.

**TMRS Office
2717 Perseverance Drive, Suite 300
Austin, Texas**

Zoom Link for Public:

<https://tmrs.zoom.us/j/89837354644?pwd=b0w0aVVpdkcXSlpJMjJNT0p2OXNGZz09>

The Board may discuss any item on the Agenda at any time during the meeting.

Call to Order

Invocation

Pledge of Allegiance

Consent Agenda

- 1. Consider and Act on Consent Agenda.** *Bob Scott*
 - a. Approve Minutes from the June 22, 2023 Board of Trustees meeting
 - b. Quarterly Confirmation of Member Retirements
 - c. Quarterly Confirmation of Supplemental Death Benefit Payments and Grants of Extended Supplemental Death Benefits Coverage
 - d. Receive Quarterly Financial Statements as of June 30, 2023
 - i. Statements of Fiduciary Net Position
 - ii. Statements of Changes in Fiduciary Net Positions
 - iii. Expense Fund Balance Sheet
 - iv. Expense Fund Schedule of Operating and Capital Expenditures

Executive Director Reports

2. **Executive Director's Report.** *David Wescoe*
3. **Receive Senior Staff Quarterly Reports.** Chief Financial Officer (*Mike Apperley*), Chief Legal Officer (*Christine Sweeney*), Chief Service Officer (*Debbie Muñoz*), Chief Information Officer (*Jac Greene*), and Director of Governmental Relations (*Dan Wattles*)

Plan Design and Funding

4. **Consider and Act on Actuarial Experience Study Results.** *Leslee Hardy, Joe Newton and Janie Shaw, GRS*

Board Officers and Stakeholder Advisory Committee

5. **Consider and Act on Stakeholder Advisory Committee Chair and Vice Chair.** *Bob Scott*
6. **Consider and Act on Appointments to the Stakeholder Advisory Committee.** *Debbie Muñoz*
7. **Consider and Act on Topics for Stakeholder Advisory Committee.** *Bob Scott*

Internal Audit

8. **Report on Audit Committee's September 6, 2023 Meeting.** *David Landis, Jesús Garza, and Kristyn Scoggins*
9. **Consider and Act on Amendments to Internal Audit Charter.** *Kristyn Scoggins*

Finance and Human Resource Reports

10. **Report on Budget and Compensation Committee Meeting.** *Johnny Huizar, Bill Philibert, Mike Apperley, and Candace Nolte*
11. **Consider and Act on TMRS Salary Schedules.** *Mike Apperley and Leslie Ritter*
12. **Discuss 2024 Draft Operating and Capital Budgets.** *Mike Apperley and Candace Nolte*

Investment Reports

13. Chief Investment Officer's Reports. *David Hunter*

- a. CIO Report
- b. Trust Fund Report: Second Quarter 2023
- c. Receive 2023 Completed Investments Report
- d. Receive Second Quarter 2023 Investment Compliance Report

14. General Investment Consultant Quarterly Report. *Sam Austin, NEPC*

15. Consider and Act on Benchmarks. *Sam Austin, NEPC*

16. Board Education: Artificial Intelligence and its Potential Impact on Investments. *Tim McCusker, NEPC*

17. Board Education: Hedge Funds Asset Class. *Tim Sweeney*

Executive Session

18. Executive Session. *Bob Scott*

- a. In accordance with Section 551.074, Texas Government Code, the Board of Trustees may meet in executive session to deliberate personnel matters, including the appointment, employment, evaluation, compensation, performance, reassignment, duties, discipline, selection or dismissal of one or more public officers or employees, including without limitation, the Executive Director, the Internal Auditor and Chief Legal Officer, and thereafter may consider appropriate action in open session; and
- b. In accordance with Section 855.007, Texas Government Code, the Board of Trustees may meet in executive session to (i) receive information from or question the employees, consultants, or legal counsel of the System or a third party relating to an investment or a potential investment; (ii) meet with the System's internal or external auditors to discuss any one or more of the matters set forth in Section 855.007(h); and /or (iii) consider and discuss evaluations or duties of Trustees or Board consultants, and self-evaluations of the Board as a whole, and thereafter may consider appropriate action in open session.

Future Agenda Items

19. Call for Future Agenda Items. *Bob Scott*

Adjournment

The Board may meet in Executive Session on any item listed above as authorized by the Texas Open Meetings Act or by the Texas Municipal Retirement System Act.

In accordance with Texas Government Code Section 855.007, the Board may conduct the open and/or closed portions of the meeting by telephone conference call and/or by videoconference. The location of the meeting at which at least one Trustee of the Board will be physically present is the Texas Municipal Retirement System office, 2717 Perseverance Drive, Suite 300, Austin, TX, which will be open and audible to the public during the open portions of the meeting.



September 19, 2023

To: Board of Trustees

From: Christine M. Sweeney, Chief Legal Officer *CS*

Re: Agenda Item 1: Consider and Act on Consent Agenda

The Consent Agenda includes Minutes from the June 22, 2023 Board meeting, quarterly reports on service retirements, disability retirements, death benefits, and financial statements as of June 30, 2023. The Consent Agenda is adopted as one item.

RECOMMENDATION

Staff recommends that the Board adopt the Consent Agenda as presented.

ATTACHMENTS

- 1 - Minutes from the June 22, 2023 Board meeting
- 2 - Retirement and Supplemental Death Benefit Reports
(summary report attached; detailed report in Diligent Resource Center due to confidential information)
- 3 - Financial Statements (in Diligent Board Books)



**MINUTES OF THE
TEXAS MUNICIPAL RETIREMENT SYSTEM
Meeting of the Board of Trustees**

June 22, 2023 – 9:00 a.m.

The Board of Trustees of the Texas Municipal Retirement System (TMRS) convened for a meeting at 9:00 a.m. at the TMRS office, located at 2717 Perseverance Drive, Suite 300 in Austin, Texas, with the following Trustees present: Chair Bob Scott, Vice Chair Anali Alanis (via Zoom), Bill Philibert, Jesus Garza, and Johnny Huizar (via Zoom). Trustee David Landis was absent.

Staff present included: David Wescoe, Debbie Muñoz, Christine Sweeney, Mike Apperley, David Hunter, Candace Nolte, T.J. Moen, and Michele Fullon. Consultants present included: Robert Klausner, Sam Austin, Brittany Smith, and Joe Newton. Michelle Mellon-Werch served as Secretary of the meeting.

Mr. Scott called the meeting to order at 9:00 a.m.

Consent Agenda

1. Consider and Act on Consent Agenda.

Mr. Philibert moved that the Board adopt the Consent Agenda, including but not limited to the Minutes from the May 25, 2023, meeting. Mr. Garza seconded the motion, which passed 5-0.

Executive Director Reports

2. Executive Director's Report.

Mr. Wescoe reported that House Bill 2464 has been signed by the Governor. Mr. Wescoe explained that TMRS staff has prepared communications to participating cities that is available on the website and is programming for plan studies for cities. The 2022 ACFR has been published, which includes celebration of TMRS' 75th anniversary. City contribution rate letters have been published and sent to all cities for calendar year 2024. TMRS celebrated its 75th Anniversary with an Open House the day before the Board Meeting. Texas Municipal League published an article about the milestone and Mr. Wescoe presented a video created to celebrate.

3. Receive Senior Staff Quarterly Reports.

Mr. Wescoe presented the Senior Staff Quarterly reports.

Mr. Garza asked for additional information on the Texas Quality Foundation work. Mr. Wescoe responded that activities have started through the Texas Quality Foundation to work towards a national Baldrige Award, which will be a multi-year process. Ms. Alanis explained the process and the levels that entities must go through to achieve a Texas Quality Foundation award.

Board Committees

4. Consider and Act on New Advisory Committee and Charter.

Mr. Scott reviewed the draft charter for the new Stakeholder Advisory Committee. Mr. Scott said he would like a timeline from staff to begin convening the Committee to start planning for the next legislative session. Mr. Garza asked about some of the differences between the structure of the current Advisory Committee on Benefit Design and the new Stakeholder Advisory Committee. He and Mr. Scott discussed the changes to the composition of the Committee. Mr. Garza asked how staff will implement the changes. Ms. Sweeney explained that staff will reach out to member organizations and potential active member and retiree candidates to explain the Committee's purpose and determine interest in participation. Member organizations will designate their representatives. Candidates for the active member and retiree positions will be vetted by staff and brought to the Board. Mr. Garza also asked what the scope of the new Committee will be and how that will be determined. Mr. Wescoe and Mr. Scott discussed the purpose of the Stakeholder Committee and how the charter speaks to the issue. Trustees discussed waiting to appoint a Chair and Vice Chair of the Stakeholder Committee until the September Board meeting.

Mr. Garza moved that the Board dissolve the current Advisory Committee on Benefit Design, create a Stakeholder Advisory Committee, and adopt the Stakeholder Advisory Committee Charter as presented, all effective immediately. Mr. Philibert seconded the motion, which passed 5-0.

Legal Reports

5. Consider and Act on Final Adoption of Proposed TMRS Rules – Chapter 127.

Ms. Sweeney asked the Board for final action on the proposed repeal and replacement of Chapter 127 of TMRS's rules that address compliance with the Texas Public Information Act, the Internal Revenue Code and certain internal TMRS procedures. In March, the Board approved publication of the proposed rule changes. The proposed rule amendments were then provided to the Governor's Office for review and had no comments. After incorporating non-substantive changes requested by the *Texas Register* staff, the proposed rule changes were published in the *Texas Register* on May 19, 2023. The public comment period expired on June 18, and no comments were received. If the Board approves the proposed Final Order, they will be published again in the *Texas Register* before they take effect.

Mr. Philibert moved that the Board approve and authorize the Board Chair to execute the Final Order, adopt the repeal of the current Chapter 127 rules, and adopt the new Chapter 127 rules, to

be effective 20 days after they are filed with the Secretary of State's Texas Register division, without changes to the proposed language as published. Mr. Huizar seconded the motion, which passed 5-0.

Finance

6. Receive 2022 Financial Statement and the Schedule of Changes in Fiduciary Net Position by Participating City Audit Results.

Candace Nolte introduced Brittany Smith, CliftonLarsonAllen LLP (CLA) Engagement Manager, to present the results of the 2022 Financial Statements and Schedule of Changes in Fiduciary Net Position. Ms. Smith informed the Board that CLA has provided a clean, unmodified opinion. They also completed their audit of the Schedule of Changes in Fiduciary Net Position (by Participating City) and gave a clean, unmodified opinion.

7. Receive System and Organization Controls (SOC) Audit Results.

Ms. Smith reported that CLA also provided a clean, unmodified opinion on the System Organization and Controls (SOC) Audit Report around the controls presented by TMRS, that they were fairly presented, adequately designed and operating effectively during the period for May 1, 2022, through April 30, 2023.

8. Receive Required Auditor Communications to the Board of Trustees.

Ms. Smith provided information to the Board required under AICPA auditing standards. She reminded the Board of CLA's responsibilities under U.S. Generally Accepted Auditing Standards. She stated that TMRS management was cooperative during the audit process. There were no disagreements with management, no difficulties, management did not consult with other accountants, no major issues were discussed with management prior to retention and management representation was provided in a Management Representation Letter.

Mr. Scott commented on how important and helpful CLA's opinion and SOC 1 Audit are to give cities assurances that the information provided by TMRS is fairly stated and accurate.

9. Receive and Approve Distribution of 2022 Annual Comprehensive Financial Report.

Mike Apperley presented the 2022 Annual Comprehensive Financial Report (ACFR) to the Board and thanked Ms. Nolte and her team for their work on the report. Ms. Nolte then reviewed the various sections of the ACFR.

Mr. Scott asked Joe Newton from GRS to explain the difference between investment losses and decrease in total assets with respect to external cash flow and his expectations for our cash flow given TMRS' demographics. Mr. Newton stated that there is nothing wrong with negative cash flow. The net negative cashflows are predictable and small, which is very positive. GRS expects TMRS to have a small negative cash flow for the next fifteen to twenty years.

Mr. Garza moved that the Board accept and approve the distribution of the 2022 Annual Comprehensive Financial Report. Mr. Philibert seconded the motion, which passed 5-0.

10. Consider and Act on Renewal of External Audit Services Contract.

Mr. Apperley explained that TMRS has worked with CLA for the past five years, and just presented the financial and SOC 1 audits. Staff expressed its opinion that CLA provided exceptional auditing services. Due to the efficiency and effectiveness of the CLA audit team, staff recommends that the Board consider a five-year extension with CLA. After that TMRS would plan to go out for an RFP. CLA rotated its partner on the audit last year and the team has been stable and very knowledgeable about pension system issues.

The Board discussed the logistics of renewal. This would extend the contract through 2028 for FY 2027.

Ms. Analis moved that the Board authorize the Executive Director to negotiate and execute a five-year contract extension with CliftonLarsonAllen LLP. Mr. Philibert seconded the motion, which passed 5-0.

Investment Reports

11. Chief Investment Officer's Report.

Mr. Hunter reviewed the highlights of his report. The Trust Fund is achieving two Board-approved strategic objectives: returns exceeded the asset allocation benchmark by 6.3% and generated above median fund returns using below median risk compared to its peer group of public plans for the one-year ended June 30, 2023. He reported that TMRS can claim compliance with the Global Investment Performance Standards (GIPS) for 2021 and 2022. He has hired Darren Schlissel as Senior Portfolio Manager in Fixed Income.

12. Receive First Quarter 2023 Investment Compliance Report.

Michelle Fullon reported that during the first quarter, TMRS and its investment managers complied with applicable investment guidelines and all testable parameters in the Investment Policy Statement.

13. Receive Final Asset Liability Study Results and Consider and Act on Asset Allocation.

Sam Austin reviewed the process beginning with the Board Retreat in February and including subsequent presentations on the importance of asset allocation, the Asset Liability Study and Asset Allocation results and GRS presenting their Actuarial Valuation results. He presented the options for allocations discussed at last Board meeting and how those options would affect probability of achieving assumed rate of return, risk and volatility. Mr. Austin said staff and NEPC are recommending Option 2, which allocates 3% more to private equity and 3% more to private debt, while reducing non-core fixed income by 4% and other private markets by 2%, but all options presented are prudent.

Mr. Garza commented that this is a good exercise but when the Board made allocation changes about two years ago, they wanted to let it sit for several years for implementation. He would like to continue with that strategy for now. Mr. Scott asked about the pros and cons of private equity

and private debt as an investment. Mr. Austin stated that NEPC forecasts these two asset classes will be among the highest earning classes. Mr. Hunter confirmed that TMRS has seen strong excess returns in the amount of 7.9% for Private Equity and 6.9% in Private Debt. Mr. Scott asked why staff and NEPC was recommending Option 2 ahead of the other options. Mr. Hunter explained that Option 2 has an 18-month expected implementation period where the other higher return seeking options will take 24 to 36 months to implement. The Board and staff discussed the importance of implementation and pacing. Mr. Scott stated that because of various factors, including the System's demographics, cash flow, ability to implement and others, he feels comfortable going with a bit higher private equity and private debt. He also stated that all the options are expected to return higher than the Board's assumed investment return, which he feels is very conservative.

Mr. Garza asked how the Trust Fund would have performed over the past year, had we been allocated to Option 2. Mr. Hunter expressed his opinion that we would have done better because private debt and equity had better returns. The difficulties in the past year were due to global public equity returns at -18% and fixed income at -13%. Mr. Huizar stated that he feels comfortable with the recommendations by staff and NEPC because they fit the Board's goals. Mr. Philibert also stated that he is comfortable with Option 2. Ms. Alanis feels that NEPC and staff have given their expert recommendations and she feels comfortable with what they have explained.

Ms. Alanis moved to adopt Option 2 as recommended by NEPC and staff as TMRS' new Asset Allocation. Mr. Huizar seconded the motion, which passed 4-1, with Mr. Garza voting no.

Board Education

14. Board Education: Other Public and Private Markets Asset Class.

Mr. Hunter introduced T.J. Moen, Portfolio Director for Other Public and Private Markets (OPPM) to provide board education on the OPPM portfolio. Mr. Moen reviewed the purpose of the OPPM asset class and the investment strategies that can be considered in this class. He then reviewed the Trust Fund's exposure by sector in this asset class as of March 31, 2023. There are \$6.1 billion in commitments with a total current value of \$2.5 billion net asset value. The asset class is 39% funded across 30 managers, of which some are generalists and others are specialists in one specific aspect of the class. OPPM has outperformed the TMRS real return benchmark by 3.4% per year for the last five years. OPPM private investments have outperformed the MSCI ACWI over the five-year period by 7.5%, which translates to \$317 million in excess value to the Trust Fund. Mr. Moen highlighted the 2022 goals for the asset class that were achieved and the 2023 goals for the portfolio.

Future Board Agenda Items

15. Call for Future Agenda Items.

Mr. Scott called for future agenda items. Mr. Wescoe stated that Mr. Philibert asked for a presentation on artificial intelligence, which is slated for the September meeting. Mr. Garza noted that the Board had discussed the election of the Chair and Vice Chair of the Stakeholder Advisory Committee for the next meeting.

Mr. Scott adjourned the meeting at 10:43 a.m.

David B. Wescoe
Executive Director

Bob Scott
Chair, Board of Trustees



September 19, 2023

To: Board of Trustees

From: Andi Focht-Williams, Director of Benefit Administration *Andi Focht-Williams*

Re: Agenda Item 1 - Consent Agenda – Retirements and Supplemental Death Benefit Payments

The attached Retirement Report and Supplemental Death Benefits Payments Report reflect processing activity by the Benefit Administration Department in accordance with the TMRS Act and has been reviewed and approved by Chief Service Officer, Debbie Muñoz.

Texas Municipal Retirement System**Board Retirement Report****Summary of Individual Member Retirements Processed from 04-2023 to 06-2023**

Total Number of Retirements by Option	Service	Disability	Total
Retiree Life Only	347	6	353
Retiree Life -- 100% to Survivor	341	9	350
Retiree Life -- 75% to Survivor	77	0	77
Retiree Life -- 50% to Survivor	138	0	138
Retiree Life -- 5 Years Guaranteed	17	0	17
Retiree Life -- 10 Years Guaranteed	20	0	20
Retiree Life -- 15 Years Guaranteed	47	1	48
Cashout of Reserves	23	0	23
Total Number -- All Options	1,010	16	1,026

Total Monthly Benefits (Nearest Dollar)	\$2,310,025	\$13,824	\$2,323,849
Average Monthly Benefit (Nearest Dollar)	\$2,287	\$864	\$2,265
Average Age at Retirement	59	49	59
Average Years of Service at Retirement	21	13	21

Partial Lump Sum Distributions	
No. of Retirements Taking a PLSD	716
Total Amount Paid	\$54,804,597
% of PLSD Funds Rolled Over	64%
% of PLSD Funds Not Rolled Over	36%

**Texas Municipal Retirement System
Supplemental Death Benefits Report**

**Summary of Supplemental Death Benefit Payments and Applications for Supplemental
Death Benefits Extended Coverage from April 1, 2023 to June 30, 2023**

Supplemental Death Benefit Payments	
By Beneficiaries of Active Members	43 payments totaling \$2,529,171.83
By Beneficiaries of Retired Members	281 payments totaling \$1,916,914.52
Applications for Supplemental Death Benefits Extended Coverage	
None	

TEXAS MUNICIPAL RETIREMENT SYSTEM
STATEMENTS OF FIDUCIARY NET POSITION
As of June 30, 2023 and 2022

	<u>6/30/2023</u>	<u>6/30/2022</u>
ASSETS		
Cash	\$ 5,551,543	\$ 24,505,311
Receivables:		
Contributions	160,084,216	115,321,108
Interest and dividends	31,779,674	24,788,696
Investment trades	1,642,146	187,547,067
Total receivables	<u>193,506,036</u>	<u>327,656,871</u>
Investments, at fair value:		
Short-term investments	323,736,532	340,456,152
Derivative contracts	1,156,820	1,036,896
Fixed income securities	3,169,218,027	2,866,872,259
Inflation-linked bonds	-	36,532,625
Global public equities	12,969,283,837	11,305,131,067
REITs	39,935,246	46,503,088
Non-core fixed income funds	5,342,476,371	5,928,398,614
Other public & private markets funds	4,574,337,656	3,836,641,481
Hedge funds	1,989,433,494	2,720,124,623
Private equity funds	3,998,012,322	3,404,212,709
Real estate funds	4,997,394,688	4,348,704,429
Total investments	<u>37,404,984,993</u>	<u>34,834,613,943</u>
Total assets	37,604,042,572	35,186,776,125
LIABILITIES		
Investment trades payable	5,901,884	282,696,672
Accrued investment management fees	4,678,711	5,777,359
Accounts payable and other accrued liabilities	<u>29,933,785</u>	<u>32,918,284</u>
Total liabilities	40,514,380	321,392,315
FIDUCIARY NET POSITION		
Restricted for pensions	37,560,243,099	34,862,166,320
Held in trust for other benefits	<u>3,285,093</u>	<u>3,217,490</u>
Total fiduciary net position	<u><u>\$37,563,528,192</u></u>	<u><u>\$34,865,383,810</u></u>

TEXAS MUNICIPAL RETIREMENT SYSTEM
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
For the Six Months Ending June 30, 2023 and 2022

	<u>2023</u>	<u>2022</u>
ADDITIONS		
Contributions:		
Pension plan - cities	\$ 571,199,043	\$ 502,909,202
Pension plan - Member	283,055,869	249,740,852
Supplemental death benefits plan - cities	9,353,385	5,265,813
Total contributions	<u>863,608,297</u>	<u>757,915,867</u>
Net investment income/(loss):		
Net appreciation/(depreciation) in fair value of investments	1,910,348,163	(3,722,425,002)
Interest and dividends	248,684,968	242,810,855
Total investment income/(loss)	<u>2,159,033,131</u>	<u>(3,479,614,147)</u>
Less: investment manager fees/transaction costs	(8,649,639)	(10,667,687)
Net investment income/(loss)	<u>2,150,383,492</u>	<u>(3,490,281,834)</u>
Other miscellaneous	14,893	20,441
Total additions	<u>3,014,006,682</u>	<u>(2,732,345,526)</u>
DEDUCTIONS		
Benefit payments:		
Service retirement	828,457,360	755,901,650
Disability retirement	8,894,409	8,617,162
Supplemental death benefits	9,222,281	7,863,806
Partial lump-sum distributions	131,441,264	142,581,738
Total benefit payments	<u>978,015,314</u>	<u>914,964,356</u>
Member account refunds	34,532,755	38,162,251
Budget transfer and other	34,799,305	33,091,853
Total deductions	<u>1,047,347,374</u>	<u>986,218,460</u>
CHANGE IN FIDUCIARY NET POSITION	1,966,659,308	(3,718,563,986)
FIDUCIARY NET POSITION		
Restricted for pensions:		
Beginning of year	35,593,714,895	38,578,132,313
End of year	<u>\$37,560,243,099</u>	<u>\$34,862,166,320</u>
Held in trust for other benefits:		
Beginning of year	3,153,989	5,815,483
End of year	<u>\$ 3,285,093</u>	<u>\$ 3,217,490</u>

TEXAS MUNICIPAL RETIREMENT SYSTEM
EXPENSE FUND
Balance Sheet
As of June 30, 2023

ASSETS

Due from Pension Trust Fund	\$ 30,185,200
Accounts receivable and other assets	12,797
Leasehold improvements	1,291,145
Furniture and equipment, net	<u>1,647,408</u>
 Total assets	 33,136,550

LIABILITIES

Accounts payable & accrued expenses	1,184,966
GASB pension liability and deferrals	3,406,915
Accrued leave liability	<u>3,950,991</u>
 Total liabilities	 8,542,872

NET POSITION


Net position, beginning of year	6,775,892
Net receipts over disbursements:	
Revenue and net fund transfers	34,800,000
Operating expenses	(16,408,176)
PASMod expenses	<u>(574,038)</u>
 Net position, end of period	 <u>24,593,678</u>
 Total liabilities and net position	 <u><u>\$ 33,136,550</u></u>

TEXAS MUNICIPAL RETIREMENT SYSTEM
EXPENSE FUND
Schedule of 2023 Operating Expenses
For the Six Months Ending June 30, 2023

	Budget	Actual	Budget (\$) Remaining	Budget (%) Remaining
Personnel services:				
Salaries and payroll taxes	\$ 17,693,469	\$ 7,311,435	\$ 10,382,034	58.7
Employee benefits	4,274,795	1,852,501	2,422,294	56.7
Contract labor/temporary staffing	100,000	-	100,000	100.0
Total personnel services	22,068,264	9,163,936	12,904,328	58.5
Professional services:				
Actuarial	823,700	363,850	459,850	55.8
Audit	189,225	165,245	23,980	12.7
Custodial and banking	1,573,000	774,319	798,681	50.8
Information services consultants	492,900	120,809	372,091	75.5
Investment consultants	1,806,000	919,150	886,850	49.1
Legal	1,161,500	289,131	872,369	75.1
Other services	452,700	329,567	123,133	27.2
Total professional services	6,499,025	2,962,071	3,536,954	54.4
Facilities	2,854,889	1,353,276	1,501,613	52.6
Information technology:				
Cloud-hosted services	2,483,761	1,112,456	1,371,305	55.2
Hardware/software and support	999,780	629,246	370,534	37.1
Total information technology	3,483,541	1,741,702	1,741,839	50.0
Other administrative:				
Board of Trustees/Advisory Committee	132,540	50,885	81,655	61.6
City and member outreach	786,090	429,247	356,843	45.4
Professional development	503,871	231,490	272,381	54.1
Supplies/document storage/misc.	656,513	324,272	332,241	50.6
Travel	635,293	151,297	483,996	76.2
Total other administrative	2,714,307	1,187,191	1,527,116	56.3
Total operating expenses	\$ 37,620,026	\$ 16,408,176	\$ 21,211,850	56.4



September 19, 2023

To: Board of Trustees
From: David Wescoe, Executive Director 
Re: Agenda Item 2: Executive Director's Report

It's been a calendar quarter since the Board last met, and it's nice to be on a quarterly meeting schedule. I won't say there is an inverse relationship between the frequency of Board meetings and staff effectiveness, but....

HB 2464 COLA Update. The City of Amarillo has requested a model ordinance for a 30% non-retroactive COLA. It's nice that HB 2464's sponsor city will be able to utilize the new COLA option. So far, three cities have adopted an ordinance to implement the new COLA option.

New Participating Cities. On September 1, the cities of Coldspring and Petrolia joined TMRS, and they will be followed by the City of Lowry Crossing on October 1. When the City of Wolfe City joins TMRS on November 1, we will have 933 participating cities. Anthony Mills (or, Bijan as he is known around the office) is a recruiting star.

Main Street on the Street. In July, the City Services department emailed *Main Street* to more than 3,000 city contacts.

GASB Reports Published. In July, GASB 68 reporting packages and GASB 75 OPEB reports were published for city use.

City Focus Group Established. The City Services department established TMRS' first-ever city focus group, comprised of five experienced and knowledgeable city correspondents. The group's feedback has already improved communications and operations.

We Continue to Recruit Talent. Since June, the Senior Staff has continued to add talent. Kristyn Scoggins was appointed Director of Internal Audit; Software team lead Michael Nichols, Java developer Louis Weyrich, software developers Jessamyn McTwigan and Julis Paxton (no relation) joined the Information Services department; Eric Heron and Jamie Radke joined the Benefits Administration department as managers; and Darren Schlissel, a Portfolio Director, joined the Investment department.

Monthly Webinars Continue to Add Value. Staff has hosted 11 webinars since June, and these new education events are very popular with cities and Members. Last week's Member webinar had more than 500 attendees.

Green Belt Training. Selected staff participated in our first-ever on-site Green Belt training sessions. This training is an important element of our on-going quality initiatives.

Improved Investment Returns. The Board's 2021 asset allocation changes combined with reaching our target asset allocation continue to improve investment returns. For the one-year periods ended June 30, 2023 and 2022, TMRS's net returns ranked in the first quartile compared to public funds with more than \$10 billion in AUM. For comparison, for the eight prior one-year periods ending June 30 (2014-2021), TMRS' net returns ranked in the fourth quartile.

Debbie Muñoz is Accepted! I was proud to nominate Debbie Muñoz for the Governor's Executive Development Program (GEDP) and even prouder when she was accepted. Participating in this prestigious program will help Debbie extend and expand her already considerable leadership skills. Debbie is TMRS' first-ever participant in the GEDP.

Member Service Center. For the last two months, the MSC's median call wait time has been seven seconds.



September 19, 2023

To: Board of Trustees

From: Michael Apperley, Chief Financial Officer *Michael Apperley*

Re: Agenda Item 3: Third Quarter Chief Financial Officer Report

1. Chief Projects

- Texas Quality Foundation. Staff are developing the first submission for the program. The first level is known as the Pioneer Level and requires an organizational profile that describes basic information about TMRS. Our report will be ready for submission to the Texas Quality Foundation by the end of the year in line with our Action Plan.
- Performance Metrics. I am working with staff across departments to develop and implement performance metrics. Development of a performance metric reporting framework and potential performance metrics is ongoing. Metrics will be finalized and reporting will begin in the fourth quarter 2023.

2. Finance. Finance has worked on the following:

- 2024 Operating and Capital Budgets. Working with Senior Staff, Finance developed the draft 2024 Operating and Capital Budgets for Board consideration. The draft budgets were presented to the Board's Budget and Compensation Committee on September 21.
- Annual Comprehensive Financial Report (ACFR) and the Popular Annual Financial Report (PAFR). The Governor, Lt. Governor, Comptroller, Attorney General, The Texas House and Senate, and the Texas Congressional Delegation all received a letter with a link to the ACFR and PAFR. We submitted the ACFR and PAFR for the year-ended December 31, 2022, to GFOA for their respective awards programs.
- Employee Payroll. Finance staff calculated employee deductions for ERS benefits that change September 1 each year. Those changes were reflected in the September 1 payroll.

- City Contribution Portal. Finance staff continued to work with our external vendor to improve functionality in the City Portal. A new batch of modifications was released in August.

3. **Records.** Record activities this period included:

- Operations. During the third quarter, staff processed 6,228 faxes and processed 12,610 pieces of incoming and outgoing mail. In addition, staff scanned 43,646 pages and indexed, verified and loaded 13,051 documents into our content management system.
- Records Retention Certification. Staff continues to review TMRS' records retention schedule as part of the Texas State Library and Archives Commission recertification process. The process is 95% complete and about one year ahead of schedule. The schedule will be submitted to TSLAC according to their reporting schedule (August 2024).
- Annual City Payroll Record Review. Staff completed the annual project to review all City Payroll records that have met their retention period.
- Data Cleaning. Staff continued to clean up old data records in Perceptive that were originally misidentified or were incomplete.
- Records Destruction. Staff identified several records that had met their retention period. Records staff worked with the data owners on authorizing the destruction of 37 boxes at our offsite storage facility and 5,811 electronic records on the TMRS network.

4. **Human Resources.** HR activities this period included:

- Personnel. HR has facilitated recruiting, interviewing, hiring and onboarding of six new employees in the third quarter. These new hires were selected from 543 applicants. The six positions approved by the Board for the Information Services department have now been filled. HR staffing metrics are included in the Board Dashboard located in Diligent's Resource Center.
- Leadership Academy. The Inaugural Leadership Academy has commenced. Participants attended *Managing and Supervising People* in July and followed up with supplemental facilitated discussions on *Managers and Change* and *Leading Your Team Through Change* in August and September.
- Staff Salary Schedule Changes. Staff completed a project examining staff salary schedules and proposed changes to simplify existing salary schedules, increase flexibility in compensation strategy and adjust salary scales for the Austin job market. Previous salary schedules included more job titles than positions and limited salary growth for some positions. The proposed concept flattens the organizational structure and allows for greater salary growth across job classifications. Salary structures were developed for each functional areas at TMRS, which allowed salary bands to be structured for distinct job disciplines in the different areas. The project included a review of public and private

entities to ensure that the resulting salary scales reflected TMRS's changing competitive position, economic conditions and compensation objectives.

- LinkedIn Learning. Staff finalized implementation of LinkedIn Learning, which is an online training provider for all TMRS staff. This training is available to all staff and will be used for just-in-time, as well as scheduled training. Managers received training on assigning training to staff and expectations for the program were established. All staff will be up and running with the program on October 2, 2023.
- Service Anniversary Awards. TMRS celebrated staff by holding a service award ceremony on July 27, 2023 for all TMRS staff with at least 5 years of service at TMRS. Staff celebrated with awards that recognized over 210 years of service to TMRS.

5. Internal Audit. Internal audit activities included:

- Revisions to the Internal Audit Charter. Kristyn Scoggins reviewed the internal audit charter as required by auditing standards and presented her recommendations to the Internal Audit Committee on September 6, 2023. Recommended changes included clarifying the reporting structure, reorganizing sections to flow more logically, and rewriting some of the technical concepts in plain English. The committee agreed with her recommendations and is recommending the full Board approve the revised charter.
- An Audit of Investment Compliance Activities. The audit is in progress and scheduled to be completed by the November 2023 Audit Committee meeting.
- 2024 Midpoint Risk Assessment and Audit Plan. The 2024 Interim Risk Assessment and 2024 Audit Plan are in progress. Kristyn have been meeting with staff across TMRS departments to review and update the 2023 Risk Assessment to reflect any changes since last year. The 2024 Audit Plan will reflect any significant changes to the updated Risk Assessment. The updated 2024 Risk Assessment and 2024 Audit Plan will be presented to the Audit Committee in November 2023.



September 19, 2023

To: Board of Trustees

From: Christine M. Sweeney, Chief Legal Officer *CS*

Re: Agenda Item 3: Third Quarter Legal Report

Investment Compliance. Board meeting materials include the quarterly Investment Compliance Report with the materials for Item 13.

TMRS Legal Work on Investment Matters, Public Information Requests, and Other Matters.

- **Investment Matters.** Below is a summary of the investment allocations and other investment related agreements that staff attorneys have reviewed and approved during the period noted.
 - From June 10, 2023 to September 15, 2023
 - 7 investment allocation transactions
 - 14 other investment related items
- **General Contracting and Benefits Matters.** Since June, Legal has handled and submitted the following items for signature or approval. Many non-investment matters handled by Legal staff do not require a signature or approval by the Executive Director and those are not included in the numbers below:
 - From June 10, 2023 to September 15, 2023
 - 20 contracts (non-investment related) submitted for signature
 - 5 other benefits administration and non-investment related items submitted for signature or approval
 - 80 city ordinances reviewed or generated for City Services
 - Submitted final adopted Chapter 127 rule amendments to Texas Register
- **Public Information Requests.** Since June 10, Legal staff have worked on 13 information requests under the Texas Public Information Act.

TMRS Administrative Cases. None pending.

Legal Supplement. The Legal Supplement in the Diligent Resource Center includes confidential legal updates and background information.



September 19, 2023

To: Board of Trustees

From: Debbie Muñoz, Chief Service Officer

Re: Agenda Item 3: Third Quarter Services Report

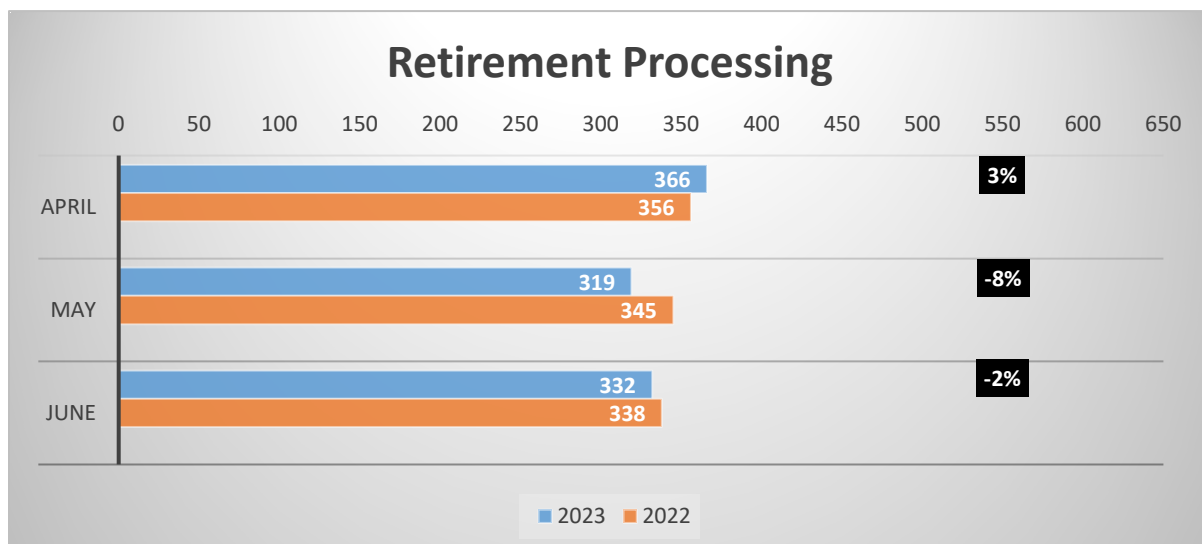
I'm pleased to report on the third quarter activities of the Benefit Administration, City Services, Communications, Education Services, Member Service Center, Plan Design and Funding, and Project Management departments.

Benefit Administration

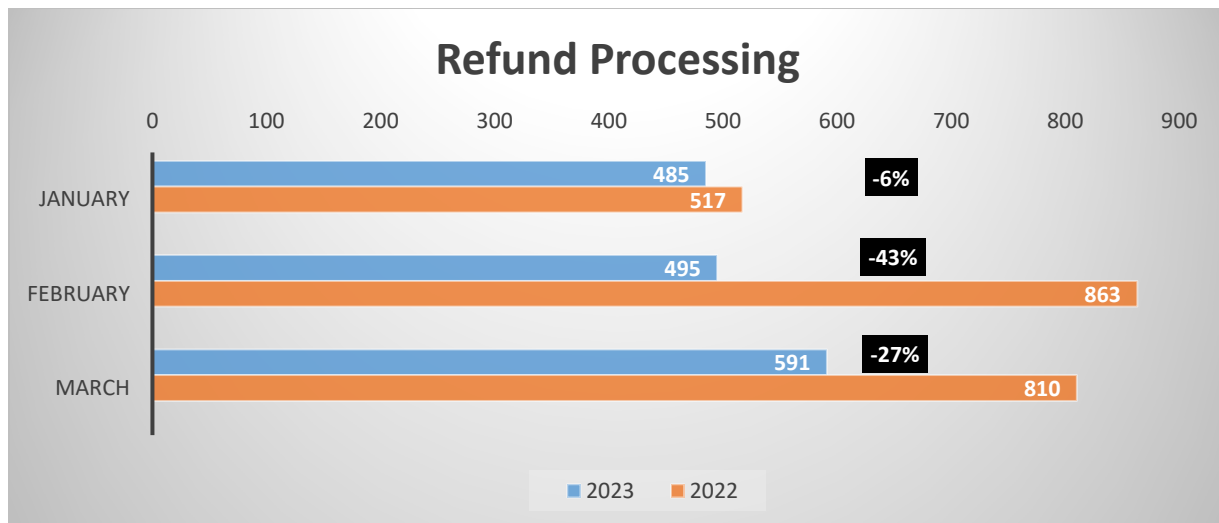
Personnel Update. TMRS welcomed two new Managers, Eric Hearon and Jamie Radke, to the Benefit Administration team. Eric has extensive management experience and most recently managed large departments at the Travis County Tax Assessor and the Texas Department of Motor Vehicles. Jamie's management experience includes managing customer service staff at the Williamson County Appraisal District and managing staff and operations at businesses in Las Vegas and Austin.

Benefit Administration also welcomed internal transfers Veronica Escobedo and Rachel Mota.

Retirements. In the second quarter of 2023, TMRS processed 1,017 retirements, a 2% decrease from the same quarter in 2022 and a 17% increase from the 1,225 retirements processed in the previous quarter of 2023.



Refunds. TMRS issued 2,131 refunds in the second quarter of 2023, which was a 10% decrease from the same quarter in 2022, and a 36% increase from the 1,571 refunds processed in the previous quarter.



City Services

Plan Changes. In June, we released an updated plan change cost tool that compares the cost of a city's current plan to alternative benefit plans. Since then, we have been busy working with cities considering plan changes. Year-to-date, more than 300 plan change studies have been prepared, 34 cities have made changes to their TMRS plan, and 89 cities have requested model ordinances.

City Consultations. City Services, Education Services, and the Plan Design and Funding teams have attended 25 city council meetings and provided consultations with 98 cities.

New COLA Legislation. Since the HB 2464 non-retroactive repeating COLA option became available to cities on May 27, more than 110 cities have requested a cost analysis for the new COLA, 16 cities have requested model ordinances to adopt the new COLA, and three cities have adopted the new COLA. Cities have until December 31 to finalize the adoption of the new COLA option for 2024.

New City Outreach. New city recruitment efforts include written correspondence and/or in-person visits to 268 potential new cities. Since January, 14 new cities have joined TMRS including the most recent additions of Coldspring, Petrolia, and Little River-Academy. Lowry Crossing will begin participation on October 1, and Wolfe City will begin participation on November 1. This will bring the number of participating cities to 933.

Communications

Organizational Support. Communications continues to collaborate with other departments to complete various projects. This quarter, Communications has assisted with the following:

- Created GASB 68 and GASB 75 web pages and communications notices for Plan Design and Funding
- Hosted receptions for the Texas Municipal Police Association and Combined Law Enforcement Associations of Texas
- Produced the Q3 MainStreet for City Services
- Participated in the education and facilitation of the City Focus Group for City Services
- Created new city welcome packets
- Provided more than 100 website changes across departments
- Designed new recruiting materials for Human Resources
- Assisted in the production of the Annual City Training Conference (ACTC)
- Created an online virtual photo booth for use in the ACTC and field visits

Communication Numbers. Since January 1, Communications has sent 43 mass emails to 578,500 recipients, hosted 604,000 website page views, and 8,000 mobile app downloads.

Education Services

Webinars. The Education team has hosted 17 webinars this year for more than 1,300 attendees. Members and cities can register to attend these educational monthly webinars on tmrs.com.

Member Counseling/Education. Education Representatives have counseled/educated more than 11,000 Members in 2023. Of those Members who were educated this year, 977 were counseling sessions scheduled by using the online scheduling tool available on tmrs.com. In addition, the Education team has represented TMRS at 150 city events this quarter and counseled/educated approximately 5,020 Members.

Member Service Center

Call Volume. Since January 1, the Member Service Center has answered 67,699 incoming calls with a median call wait time of 11 seconds.

Call Topics. Calls related to refund and retirement payments continue to represent most of all calls received. The team continues to conduct ongoing training, promote MyTMRS and drive customer engagement by offering tmrs.com to give feedback regarding the service they received.

Plan Design and Funding (PDF)

City Dashboard. The city dashboard was updated to reflect the results of the 2022 valuation on June 28. The dashboard provides 10 years of historical funding data for each participating city and allows each city to compare their funding metrics to all other TMRS cities.

GASB 68 and GASB 75 Financial Reporting Packages. The 2023 financial reporting packages for each participating city were uploaded to the TMRS website in July. An announcement was posted on the TMRS website and emailed to city contacts. Kenneth assists individual cities and/or their city auditors with any necessary reconciliations of the census data, contribution information or other related requests.

2023 Actuarial Experience Study. Leslee Hardy has been working with GRS in preparing the 2023 actuarial experience study report. GRS will be presenting the study results and making a recommendation for new actuarial assumptions at the September meeting. The new assumptions will be first reflected in the December 31, 2023, valuation.

Project Management

Personnel Update. Tricia Solis has been promoted to TMRS' first ever Project Manager for the Services Division. In her new role, Tricia will serve as the liaison between service and IS departments to manage all projects related to enhancing member and city services.

Pension Administration Modernization Update. Benefit Administration management and IS staff identified the technical requirements for electronic city certification of online refund requests through the TMRS City Portal. The project is on schedule with a targeted completion date of December 31, 2023.

Beneficiary Limits. Programming to support the repeal of Board Rule 127.2 and allow designation of more than three beneficiaries was released in August 2023.

COLA bill. Programming efforts to distinguish between cost of living adjustment options as allowed by HB 2464 are on schedule to be completed in September.

Retirement Factors. Programming changes to derive the retirement factors based on whole months of age rather than whole years for benefit calculations effective January 1, 2024, are on schedule to be completed in September.



September 19, 2023

To: Board of Trustees

From: Jac Greene, Chief Information Officer 

Re: Agenda Item 3: Third Quarter Information Services Report

The IS department made significant progress on business and 2023 Action Plan technology-related projects. We filled all Board-approved software development positions and have begun cross training; we welcomed Michael Nichols, Julia Paxton, Jessamyn McTwigan, and Louis Weyrich to continue development on MyTMRS and NextGen; and we are continuing to build a new IS department culture of results-driven teamwork.

IS activities this quarter included:

1. Security Enhancement and Risk Mitigation. The security team continued to improve the IS security program by tuning existing security solutions, increasing IS change management, and leading cross team incident response processes; we completed business impact analysis interviews with key departments and engaged with Internal Audit regarding annual risk reporting; we processed hundreds of support tickets and remediated security issues. Finally, we continue working to improve the use of fraud prevention technologies in the call center and online refund projects.
2. IS Software and Data Development. The team delivered changes for multiple beneficiaries in August and will roll out the Birthday rule, new COLA option legislation, and SECURE 2.0 updates on September 28th. For the Online Refunds project, we coded and built reports for MyTMRS and NextGen changes, assisted with creating online certification within the City Portal, and maintained data integrity through support tickets. Finally, the team migrated source code to a modern code control system.
3. Web Content Management System. The WebCMS project continues to move forward for on-time deployment in November. The IS team is reviewing the capabilities and security of the proposed hosted solution while the business team works on content improvements.
4. IS NetOps & Customer Support. The NetOps and Customer Support teams processed more than 1,300 helpdesk tickets; designed and deployed a new City Portal document upload workflow to improve electronic document image quality; refreshed the intranet server; supported the new investments portfolio management deployment; and continued with routine patches to servers, computers, firewalls and network devices.



September 19, 2023

To: Board of Trustees

From: Dan Wattles, Director Governmental Relations

A handwritten signature in blue ink that reads 'Dan Wattles' is written over the printed name in the 'From' field.

Re: Agenda Item 3: Third Quarter Governmental Relations Report

2023 Senior Staff Action Plan. Item No. 10 in the 2023 Senior Staff Action Plan, “Celebrate TMRS’ 75th Anniversary in Style,” is in progress.

On June 21, TMRS Board members, staff, former Board members and employees, legislative staffers, and other guests attended the 75th Anniversary Celebration reception at TMRS' offices. Also in June, the 2022 Annual Comprehensive Financial Report was published that included the Governor's Certificate, all-staff photo, and an overview of the 75th anniversary.

75th Anniversary recognition activities continued throughout the third quarter of 2023.

88th Legislature. The 88th Regular Legislative Session ended May 29. Governor Abbott called a special session immediately following the close of the regular session to address property tax reform and human trafficking. No bills were passed. The special session ended June 28.

Governor Abbott called a second special session immediately following the close of the first special session to again consider property tax reform and human trafficking. Two bills were passed. Neither bill affected TMRS. The special session ended July 13.

Pension Review Board. TMRS is in compliance with all PRB reporting requirements.



September 19, 2023

To: Board of Trustees

From: Leslee S. Hardy, Director of Plan Design & Funding

A handwritten signature in blue ink that reads 'Leslee S. Hardy'. The signature is written in a cursive style with a large, stylized 'L' and 'H'.

Re: Agenda Item 4: Consider and Act on 2023 Actuarial Experience Study Results

TMRS Board policy is to conduct an actuarial experience study every four years, and the last study was performed in 2019.

The purpose of an experience study is to compare actual to expected plan experience and determine if a change is warranted. The assumptions reviewed in the experience study are generally divided into two categories, economic and demographic. Guidelines for setting actuarial assumptions are set by Actuarial Standards of Practice.

The results of the 2023 experience study and recommended assumptions are summarized in the attached *2023 Experience Study Summary of Recommendations*. The complete study is included in the Diligent resource center.

RECOMMENDATION:

Staff recommends that the Board accept GRS' recommended assumption set as reflected in the *Actuarial Experience Investigation Study as of December 31, 2022*. The recommended changes in assumptions will be effective with the December 31, 2023 actuarial valuation.

ATTACHMENTS:

- 1 GRS Presentation – 2023 Experience Study Results
- 2 GRS' 2023 *Experience Study - Summary of Recommendations*
- 3 GRS' *Actuarial Experience Investigation Study as of December 31, 2022* (Diligent Resource Center)

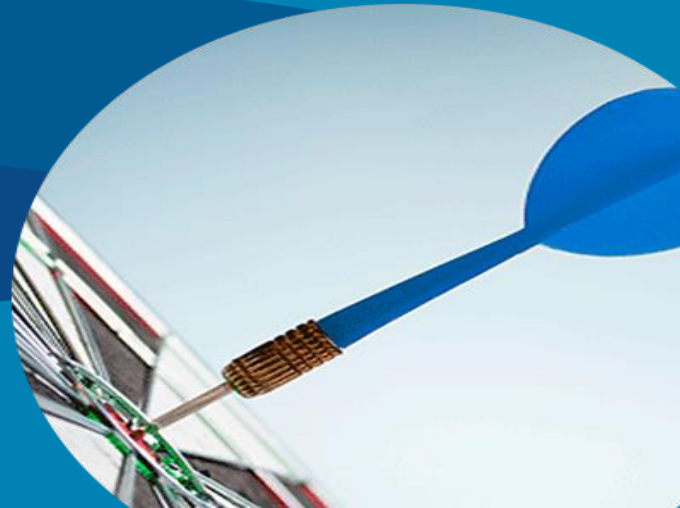


Texas Municipal Retirement System 2023 Experience Study Results

September 2023

Janie Shaw

Joe Newton



Purpose of an Experience Study

- An experience study is a regularly scheduled process to analyze whether there needs to be changes to the assumptions
- The assumptions are not static; they should occasionally change to reflect
 - Developing industry best practices
 - New information and changing knowledge
 - Mortality improvement
 - Changing patterns of retirements, terminations, etc.
 - Implementation of improved technology and processes
- Thus, our analysis will address the following questions for each assumption
 - What was TMRS' actual experience?
 - How does that compare with current assumptions?
 - Is a change warranted?

Big Picture Differences compared to 2019 Experience Study

- The pandemic distorted the results for some of the years, and likely changed some of the trends but it is too early to tell
- Inflation has been high, and wage inflation is starting to reflect that
- Capital market expectations have increased after several years at historically low levels.
- The median return assumption from the NASRA survey has dropped from 7.25% to 7.00%. However, with the recent increases in interest rates, good chance it stalls around that point for a while.
- Average amortization period was 18 years, now 15 years
 - Essentially all cities are in positive amortization

Summary of Preliminary Findings

- In general, the current assumption set is reasonable.
 - The net impact is minor to the current contribution levels
 - At the individual City level, will depend on how the City's turnover changed in comparison to TMRS as a whole
- The meaningful recommendations are:
 - Higher projected salary increases
 - Increase rates of turnover for longer service members
 - These mainly offset each other
- Full detail is in the report

Summary of System-wide Results

Actuarial Impact of Recommendations
Illustrated based on December 31, 2022 Actuarial Valuation
Active TMRS Cities in Total (BAF Only)

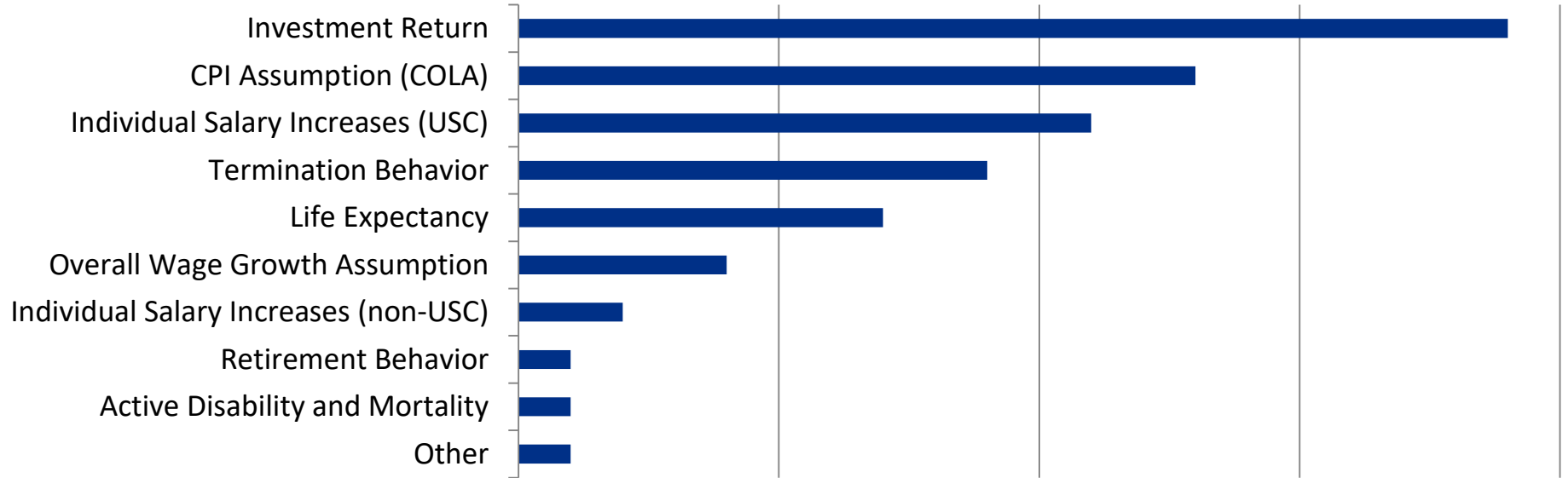
	<u>Current</u>	<u>Proposed</u>	<u>Difference</u>
	(1)	(2)	(2) - (1)
1. Present Value of Benefits	\$ 51,653	\$ 51,677	\$ 24
2. a. Actives & Inactives	22,166	22,123	(43)
b. Annuitants	<u>19,674</u>	<u>19,449</u>	<u>(225)</u>
3. Total actuarial accrued liability (2a + 2b)	\$ 41,840	\$ 41,572	\$ (268)
4. Actuarial value of assets	<u>37,448</u>	<u>37,448</u>	<u>-</u>
5. UAAL (3 - 4)	\$ 4,392	\$ 4,124	\$ (268)
6. Funded ratio (4 / 3)	89.5%	90.1%	0.6%
7. UAAL/Payroll	55.6%	52.2%	-3.4%

Illustrated Contribution Rate for Calendar Year 2024:

8. Full retirement rate			
a. Normal cost	8.92%	9.35%	0.43%
b. Prior service	<u>4.92%</u>	<u>4.60%</u>	<u>-0.32%</u>
c. Full retirement rate	13.84%	13.95%	0.11%
9. Estimated Contributions	\$ 1,133	\$ 1,142	\$ 9
\$ in millions			

Magnitude of Actuarial Assumptions

Impact on Contribution Rates if a Change is Needed

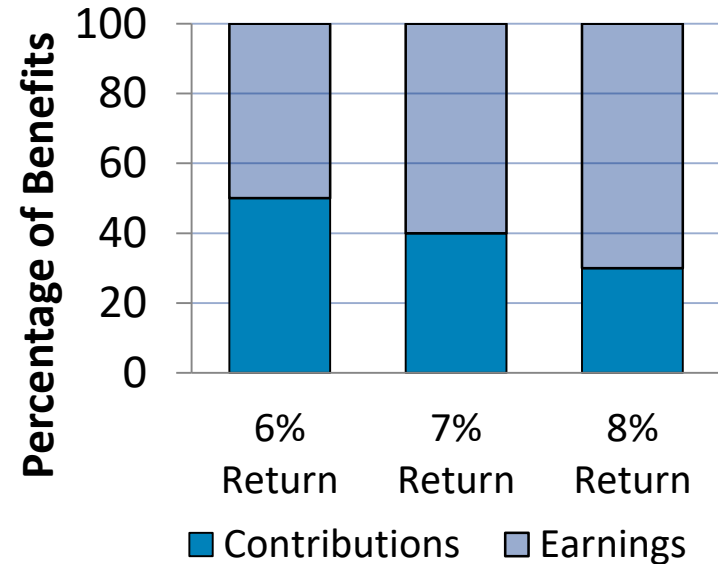


Inflation Finding

- Current sources of forecasts for the next 10-20 years range from 2.1% to 2.57% expectations
- We find the current 2.50% to be reasonable
- The COLA is tied to inflation so a low assumption could understate that cost

Investment Return Assumption

- This assumption is used to predict what percentage of future benefit payments will be covered by investment earnings and what percentage by contributions.
- Lower Returns/Higher Contributions



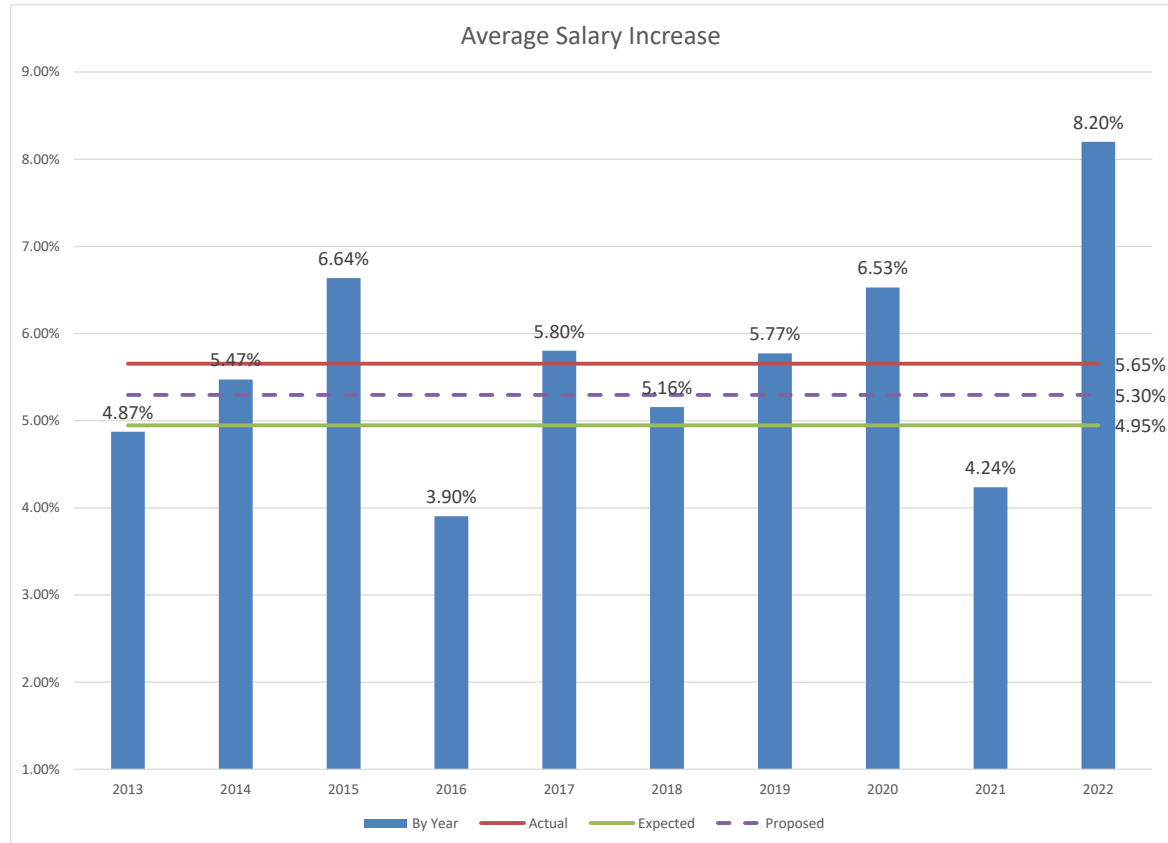
Recommendation for Investment Return Assumption

- In June NEPC disclosed a 7.1% expected return based on the new target allocation
- Our survey averages to a 7.2% expectation
- The forward looking expectations are volatile from year to year
- We recommend no change to the 6.75% assumption

10-year Expected Return of Current Portfolio					
Determined by last 5 GRS Surveys					
2019	2020	2021	2022	2023	Average
(1)	(2)	(3)	(4)	(5)	(6)
6.8%	6.4%	6.1%	5.9%	7.2%	6.5%

Salary Increases for Individuals:

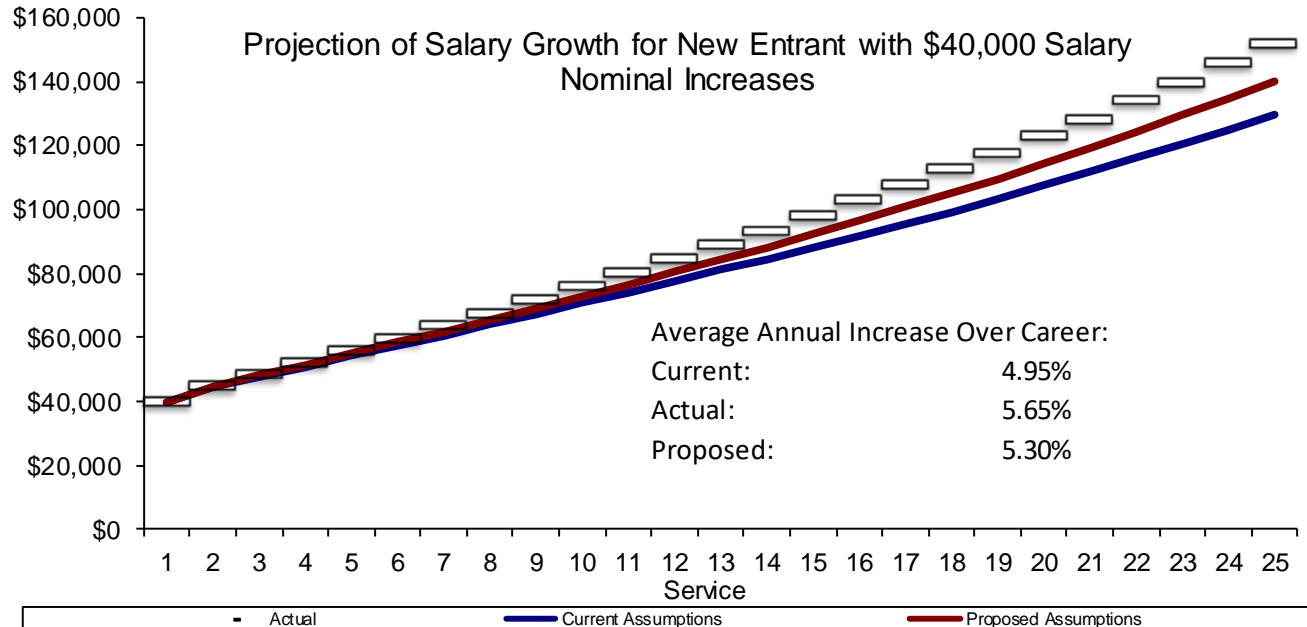
Salary Increases have been higher than the current assumption 7 of the past 10 years



The assumption is a schedule based on service

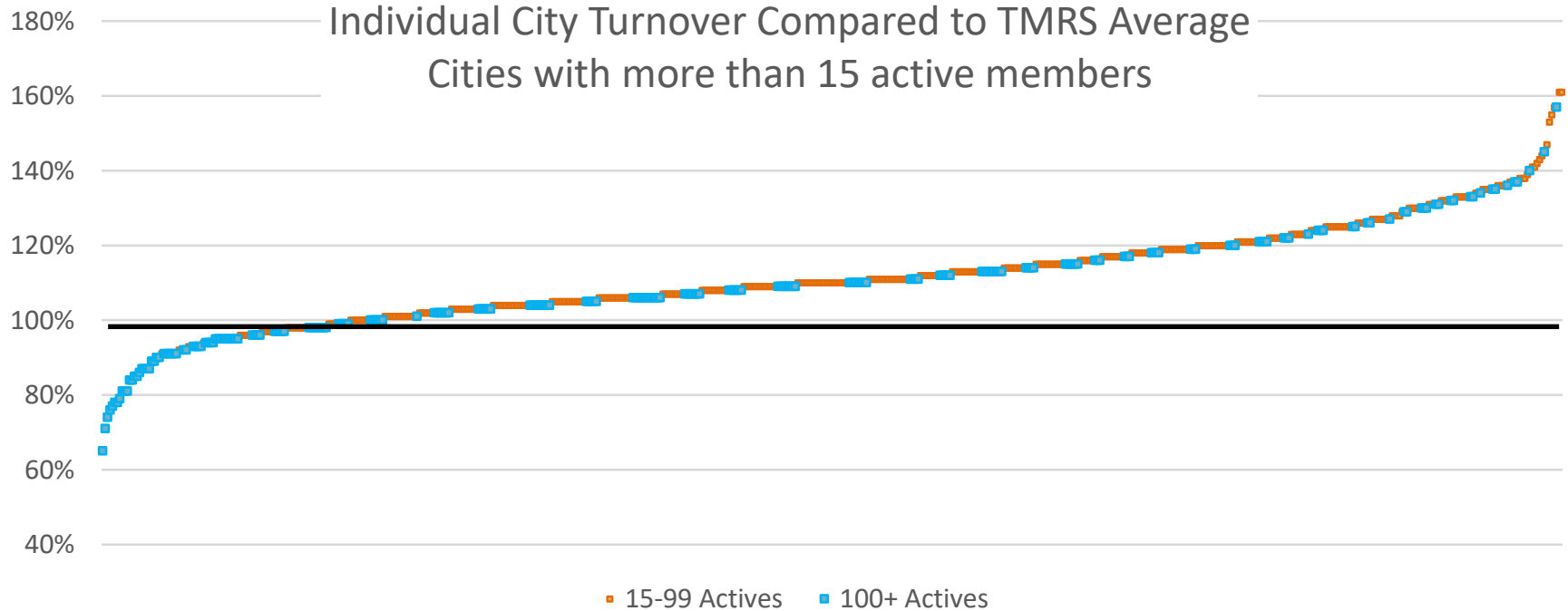
We are recommending moving half way towards the experience

Summarized Data from Last Decade



Turnover varies widely across the Population of Cities

We have adjusted each City's turnover assumption based on its own experience



Supplemental Death Benefit Plan: Recommendation

- Lower premiums for actives from 200% of expectation to 150%
- Keep premiums for retirees at 110%
- Margin is there in case mortality doesn't return to normal, and to build the balance back up enough to protect against a future adverse event

Summary

- Analysis mainly confirmed current assumptions and processes
- Full Listing of Recommendations in Experience Study Report
 - Includes Detailed information and Rationale for each assumption
- Approved assumptions to be used in the December 31, 2023 valuation

Disclaimers

- This presentation is intended to be used in conjunction with the 2023 Actuarial Experience Study. This presentation should not be relied on for any purpose other than the purpose described in the report.
- Readers are cautioned to examine original source materials and to consult with subject matter experts before making decisions related to the subject matter of this presentation.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.

2023 Experience Study - Summary of Recommendations

Generally, the impact on the contribution rates from the recommended changes are minor. The main factor that will determine whether a City will have a meaningful increase or decrease in their contribution rate is whether the City had a large change up or down in their individual turnover multiplier. Otherwise, the increase in the salary assumptions increased the normal cost but this was largely offset by an increase in the rate of turnover for longer career members. The average payroll weighted contribution rate for retirement increases by 0.11% of payroll based on all recommended assumptions and methods. Our recommended changes to the current actuarial assumptions, and supporting rationale, may be summarized as follows:

Economic Assumptions

1. No change to the inflation assumption of 2.50%.
2. No change to the current nominal investment return assumption of 6.75%. Based on our analysis and the Portfolio "Option 2" adopted by the Board at the June meeting, the median expected geometric return (50th percentile) over the next 10 years for the current asset allocation is approximately 7.2%. This is similar to the result of 7.1% provided by NEPC. Over the last five years, the results of the GRS annual survey of investment professionals would have produced expected returns ranging from 5.9% in 2022 to 7.2% in 2023. These expectations are volatile from year to year and the current 6.75% is in the middle of what that range has been.
3. We recommend increasing the ultimate salary increase by 0.1% to 3.60% for long service members. We also recommend adding 0.25% to all steps in the 25-year service related component of the assumption based on recent trends and experience. The net impact is an approximate 0.35% increase in the average annual increase throughout a member's career. This is the most meaningful change in this experience study and increases normal costs, especially if a City has the Updated Service Credit provision.
4. No change to the load on the Updated Service Credit calculation equal to 0.1% per year into the future to reflect the asymmetric accrual pattern associated with the benefit formula.
5. No change to the current payroll growth rate assumption of 2.75%. The payroll growth assumption does not impact the liabilities, only the development of the amortization of the unfunded actuarial accrued liability and becomes less important the shorter the remaining amortization bases become. Recommend continuing to include a reduction for some cities based on patterns of population decline.
6. No change to the assumed future cost-of-living increases for the traditional retroactive COLAs. New assumptions were added for the non-retroactive COLA added in the 2023 legislative session.

Mortality Assumptions (Valuation Purposes Only – No Impact on Annuity Purchase Rates)

7. We recommend adding a small load to the mortality tables for healthy retirees based on recent higher mortality experience. We will monitor this assumption to see if a more meaningful change is warranted in the next experience study. We will continue to assume that mortality rates will improve in the future using a fully generational approach, and update the projection scale to the most recent MP-2021 Scales with immediate convergence to the ultimate rates of improvement for all years.
8. No change to the process of using the same tables as the non-disabled retirees for disabled post-retirement mortality assumption with a set-forward and a minimum mortality probability to reflect impaired mortality for this group.
9. No change for the pre-retirement mortality tables for females but recommend adding a 10% load to mortality rates for males.
10. No change in the assumption that there will be no subsidy provided through the Annuity Purchase Rates (APRs) to either the member or the employer from the other party, and thus will generally be equivalent to the mortality expectations in the actuarial valuation over time. The known APRs until 2032 are explicitly valued and then the APRs and the valuation mortality are assumed to be equivalent.

Other Demographic Assumptions

11. Recommend simplifying the assumptions for retirement probabilities from the current tables which are based on age and benefit provisions to just one based on age. No meaningful change to the pattern of retirement overall.
12. Recommend slightly decreasing the rates of termination for early career members but simplifying the table after the first three years to be based solely on years from retirement. The net impact is higher probability of turnover for members who will have longer careers, and thus have larger liabilities. We have made small adjustments to the multipliers to the base rates based on job classification (police, fire, or other) and to the City specific multiplier as appropriate.
13. Recommend decreasing the forfeiture rates for vested members not eligible for retirement.
14. Recommend reducing the rates of disability.
15. No change to the current 40% Partial Lump Sum assumption.
16. No change to the assumption that members choose the 50% Survivor Option at retirement.

Actuarial Methods and Policies

17. No change to the use of a 10-year smoothing technique, nor the use of a “soft” corridor around the market value of assets to determine the actuarial value of assets, used for determining the annual employer contribution rates. No change to the 12% corridor to approximate one standard deviation of the expected annual investment performance.

18. No change to the use of the Entry Age Normal Cost Method.
19. No change to the use of closed 20-year amortization periods for experience losses for underfunded cities.
20. No change to the adjustments made to the mortality, turnover, and amortization periods for small cities.
21. No change to the provision that once a city reaches overfunded status, all prior closed non-ad hoc bases are erased and no change to the amortization policy for overfunded cities to a credit that would be projected to remain the same over all time horizons and keep the funded ratio constant at the current level.
22. No change to the use of 12-year level dollar amortization policy for ad hoc benefit enhancements.
23. Supplemental Death Benefit Fund: Recommend lowering the current load on active term costs from 2.0 to 1.5 and no change to the 1.1 load on the premium for retirees.

Actuarial Impact of Recommendations
Illustrated based on December 31, 2022 Actuarial Valuation
Active TMRS Cities in Total (BAF Only)

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September 19, 2023

To: Board of Trustees

From: Debbie Muñoz, Chief Service Officer

A handwritten signature in blue ink that reads 'Debbie J. Muñoz'. The signature is written in a cursive, flowing style.

Re: Agenda Item 5: Consider and Act on Stakeholder Advisory Committee Chair and Vice Chair.

At its June meeting, the Board established the Stakeholder Advisory Committee.

The Committee's Charter states that the Board Chair shall appoint, subject to Board approval, two Trustees to be the Committee's Chair and Vice Chair.

The 2023 Chair of the prior Advisory Committee on Benefit Design was Anali Alanis and Bob Scott was the Vice Chair.

Staff recommends that the Chair propose, and the Board approve, the Chair and Vice Chair of the Stakeholder Advisory Committee for the remainder of 2023.



September 19, 2023

To: Board of Trustees

From: Debbie Muñoz, Chief Service Officer

Re: Agenda Item 6: Consider and Act on Appointments to the Stakeholder Advisory Committee.

At its June meeting, the Board established the Stakeholder Advisory Committee.

Committee members shall include one representative from seven identified municipal organizations, two TMRS active members (preferably who participate in TML affiliate organizations), and one TMRS retiree.

Each organization has designated their Committee representative:

- Texas Municipal League: Bennett Sandlin
- Texas City Management Association: Paulette Hartman
- Government Finance Officers Association of Texas: Casey Srader
- Texas Municipal Human Resources Association: Chereé Bontrager
- Texas Municipal Police Association: Mitch Landry
- Combined Law Enforcement Associations of Texas: Scott Leeton
- Texas State Association of Fire Fighters: Jaime Reyes

The Board Chair, subject to Board approval, appoints the two active members and one retiree. The following individuals have agreed to serve as Committee members.

- Jay Warren (active) is the City of Arlington's Director of Communication and Legislative Affairs. Mr. Warren oversees the city's communications, city secretary, intergovernmental affairs, and call center. He also supports the City Manager and City Council. He is serving his second term as the Board President of the Texas Association of Municipal Information Officers.
- Roberto Reyna (active) is the City of San Antonio's Assistant Director of Public Works and has served in various engineering and leadership capacities, including 10 years as the Storm Water Engineering Division Manager. Mr. Reyna is the President of the American Public Works Association - South Central Branch.

- Brenda Martin (retiree) retired from the City of Lewisville in January 2023 after serving as the city's Director of Finance. A certified public accountant, she also served as the Finance Director at the City of Edmond, Oklahoma and held private sector positions.


Each individual's biography is included in the Diligent Resource Center.

Staff recommends that the Board approve Messrs. Warren and Reyna as the active member representatives and Ms. Martin as the retiree representative on the Stakeholder Advisory Committee.



September 19, 2023

To: Board of Trustees

From: Debbie Muñoz, Chief Service Officer 

Re: Agenda Item 7: Consider and Act on Topics for the Stakeholder Advisory Committee.

At its June meeting, the Board established the Stakeholder Advisory Committee.

The Committee's Charter states that the Board will assign issues and topics to the Committee and that the Committee Chair shall schedule meetings as appropriate.

Pursuant to the Board's request, staff suggest the Board consider the following potential topics and timeline.

Potential Topics

- Benefits
 - New COLA options
 - Adding a 2.5:1 city matching rate
- Administrative
 - Review statutory maximum contribution rate limits
 - Review plan change management (e.g., make any plan change effective January 1)
- Member and City Services

Potential Timeline

Suggested Committee meeting dates:

- November 2023
- January/February 2024
- Spring/Summer 2024
- September 2024 Board of Trustees meeting: Approve draft legislation, if any
- Fall/Winter 2024, if necessary

Staff recommend that the Board discuss and assign Committee topics.



September 19, 2023

To: Board of Trustees

From: Kristyn Scoggins, Director of Internal Audit *Kristyn Scoggins*

Re: Agenda Item 8: Report on Audit Committee's September 6, 2023 Meeting

The Audit Committee met on September 6, 2023 with the following Trustees present via Zoom: Committee Chair David Landis and Committee Vice Chair Jesús Garza. Staff present included Christine Sweeney, Mike Apperley, Kristyn Scoggins and Madison Jechow.

An Update on External Audit Services Contract. Mr. Apperley discussed a negotiated amendment to extend the current agreement with CliftonLarsonAllen, LLP (CLA) for external auditing to December 31, 2028. CLA provided both financial and systems operating controls (SOC) audits for TMRS during the last five years. TMRS will go out for RFP at the end of the contract term.

Consider and Act on Approval of Revised Internal Audit Charter. The Audit Committee reviewed the proposed changes and unanimously agreed to recommend the updated Internal Audit Charter to the Board of Trustees for approval. See Agenda Item 9.



September 19, 2023

To: Board of Trustees

From: Kristyn Scoggins, Director of Internal Audit *Kristyn Scoggins*

Re: Agenda Item 9: Consider and Act on Amendments to Internal Audit Charter

Auditing standards require the Internal Audit Charter to be periodically reviewed in order to address changes to standards or conditions within the organization. I reviewed the existing Internal Audit Charter, which was last approved in 2019, and identified the following proposed changes:

- Under the current charter, the Director of Internal Audit report administratively to the Executive Director. I recommend that the Internal Audit Charter allows the Executive Director to name an appropriate designee if they choose.
- Wording was revised to clarify topics written in auditor jargon.
- Some sections were moved to flow more logically. Content in those sections was not changed.

At the Audit Committee meeting on September 6, 2023, the Committee reviewed the proposed changes and unanimously agreed to recommend the updated Internal Audit charter to the Board of Trustees for approval.

RECOMMENDATION

The Audit Committee recommends the Board of Trustees approve the updated Internal Audit Charter.



September 28, 2023

To: Board of Trustees

From: Michael Apperley, Chief Financial Officer

Re: Agenda Item 10: Report on Budget and Compensation Committee's Meeting

The Budget and Compensation Committee plans to meet at the TMRS office on September 27.

The Committee has two agenda items: 1) to review and discuss the draft 2024 Operating and Capital Budgets, and 2) to discuss and act on proposed changes to TMRS salary scales.

Draft 2024 Operating and Capital Budgets. The Committee will review and discuss the draft 2024 Operating and Capital Budgets. Staff will present these draft budgets to the Board at its September 28 meeting and bring the final budgets to the Board at its December 14 meeting.

Proposed Changes to TMRS salary scales. Staff will outline a proposal to change existing TMRS salary scales to better reflect TMRS' changing competitive position, economic conditions, and compensation objectives. The proposal includes different salary scales for TMRS's five functional departments to account for different compensation needs for each area. Staff will request Chair Huizar and Vice Chair Philibert recommend the Board approve these changes.



September 28, 2023

To: Board of Trustees

From: Michael Apperley, Chief Financial Officer *Michael Apperley*
Leslie Ritter, Director of Human Resources *Leslie Ritter*

Re: Agenda Item 11: Consider and Act on TMRS Salary Schedules

TMRS' compensation philosophy, approved by the Board in October 2020, is to establish and administer an equitable program that provides consistent treatment for all employees. The compensation philosophy provides pay opportunities commensurate with a position's internal and external value.

In accordance with the Board guidelines, staff reviewed existing pay structures to determine if revisions were necessary to reflect TMRS' changing competitive position, economic conditions, and compensation objectives. Based on that review, staff developed different salary structures for TMRS's five major functional departments to account for the different compensation needs for each area.

Each proposed salary scale has no more than five job classifications, with broader salary bands. Minimum, midpoint, and maximum salaries were developed to reflect current market trends, as well as existing TMRS structures.

TMRS's existing guidelines have 149 titles and 23 salary classifications. Under the proposed structure, each functional department would have no more than five salary classifications, usually with one title per classification. This flattens the organizational structure and allows for department-specific compensation to meet market needs.

RECOMMENDATION:

The Budget and Compensation Committee and staff recommend that the Board of Trustees approve the proposed salary scales to be effective October 1, 2023.

ATTACHMENTS:

1 –Proposed Salary Scales



Proposed salary (\$) scales are:

Chief Financial Officer Group			
Title	Min	Mid	Max
Chief Financial Officer	168,750	225,000	281,250
Director	130,000	180,000	225,000
Manager	97,500	130,000	162,500
Accountant/Lead	67,500	90,000	126,000
Analyst/Specialist	48,000	60,000	90,000

Chief Investment Officer Group			
Title	Min	Mid	Max
Chief Investment Officer	300,000	375,000	562,500
Deputy Chief Investment Officer	240,000	300,000	450,000
Portfolio Director	200,000	250,000	375,000
Portfolio Manager	144,000	180,000	270,000
Analyst	100,000	125,000	187,500

Chief Information Officer Group			
Title	Min	Mid	Max
Chief Information Officer	192,000	240,000	312,000
Director	160,000	200,000	260,000
Manager	120,000	150,000	210,000
Lead/Senior	104,000	130,000	195,000
Architect/Analyst/Administrator/Engineer	60,000	105,000	157,500

Chief Services Officer Group			
Title	Min	Mid	Max
Chief Services Officer	180,000	225,000	292,500
Director	135,000	180,000	234,000
Manager	94,500	135,000	168,750
Lead/Senior	67,500	90,000	126,000
Analyst/Representative/Specialist	48,000	60,000	90,000

Chief Legal Officer Group			
Title	Min	Mid	Max
Chief Legal Officer	240,000	300,000	375,000
Deputy General Counsel	200,000	250,000	325,000
Assistant General Counsel	152,000	190,000	228,000
Attorney	112,000	140,000	175,000
Paralegal	60,000	80,000	112,000

Administrative			
Title	Min	Mid	Max
Director of Plan Design and Funding	136,000	170,000	221,000
Director of Governmental Relations	112,000	160,000	192,000
Compliance Officer	110,000	140,000	170,000
Actuarial Analyst	96,000	120,000	156,000
Administrative Support	60,000	75,000	112,500

Agenda Item 11 – Consider and Act on TMRS Salary Schedules

Michael Apperley and Leslie Ritter

September 28, 2023

Agenda Item 11 – Proposed Changes to TMRS Salary Schedule

Recommendations:

- Create different salary structures for each functional area.
- Salary structures have no more than five job classifications for each functional area.
- Establish new minimum, midpoint, and maximum salary points to reflect market conditions and allow for salary growth.

Example Salary Schedules

Chief Financial Officer Group			
Title	Min	Mid	Max
Chief Financial Officer	168,750	225,000	281,250
Director	130,000	180,000	225,000
Manager	97,500	130,000	162,500
Accountant/Lead	67,500	90,000	126,000
Analyst/Specialist	48,000	60,000	90,000

Chief Investment Officer Group			
Title	Min	Mid	Max
Chief Investment Officer	300,000	375,000	562,500
Deputy Chief Investment Officer	240,000	300,000	450,000
Portfolio Director	200,000	250,000	375,000
Portfolio Manager	144,000	180,000	270,000
Analyst	100,000	125,000	187,500

Chief Information Officer Group			
Title	Min	Mid	Max
Chief Information Officer	192,000	240,000	312,000
Director	160,000	200,000	260,000
Manager	120,000	150,000	210,000
Lead/Manager	104,000	130,000	195,000
Architect/Analyst/Administrator/Engineer	60,000	105,000	157,500



September 28, 2023

To: Board of Trustees

From: Michael Apperley, Chief Financial Officer *Michael Apperley*
Candace Nolte, Finance Director

Re: Agenda Item 12: Review and Discuss 2024 Operating and Capital Budgets

The 2024 Operating and Capital budgets demonstrate staff's continued cost-conscious efforts while improving operational effectiveness.

Operating Budget. The 2024 Operating budget (\$38,659,787) is flat compared to the 2023 Operating budget (\$37,620,026) except for two items that total just over \$1 million.

- **Personnel Services.** Personnel Services increased \$498,268 that reflects a budgeted 4% salary increase for staff. This will keep staff compensation competitive with increasing salary costs in the Austin metro area. Headcount is flat compared with 2023.
- **Investment Department Technology.** TMRS' investment staff is licensing two new technology applications that will provide staff with even more robust portfolio analytical and monitoring capabilities. The combined annual cost of these two licenses is \$652,000.

Capital Budget. Staff is requesting Capital budget expenditures of \$1.75 million in 2024. NextGen, our pension administration system that was deployed in 2005, is nearing the end of its useful life and implementation of new functionality, such as online retirement applications, is slow due to the system's complex software architecture. MyTMRS, our Member portal, is also affected by NextGen's limitations.

The \$1.75 million will allow TMRS to hire external programming consultants to augment Information Services department software development staff to accelerate the project, leveraging institutional knowledge and third-party expertise to achieve the best result.

Thank you for your support.

ATTACHMENTS:

1 –Draft 2024 Operating and Capital Budget

Agenda Item 11 – Consider and Act on TMRS Salary Schedules

Michael Apperley and Leslie Ritter

September 28, 2023

Agenda Item 11 – Proposed Changes to TMRS Salary Schedule

Recommendations:

- Create different salary structures for each functional area.
- Salary structures have no more than five job classifications for each functional area.
- Establish new minimum, midpoint, and maximum salary points to reflect market conditions and allow for salary growth.

Agenda Item 12 – Discuss Draft 2024 Operating and Capital Budgets

Michael Apperley and Candace Nolte
September 28, 2023

Draft 2024 Operating and Capital Budgets

Operating and Capital Budgets For the Years Ending December 31

	2024	2023	Increase/ (Decrease)	% Change
Personnel Services	\$ 22,566,532	\$ 22,068,264	\$ 498,268	2 %
Professional Services	6,469,603	6,499,025	(29,422)	— %
Facilities	2,965,060	2,854,889	110,171	4 %
City and member outreach	820,750	786,090	34,660	4 %
Information Technology	4,135,044	3,593,591	541,453	15 %
Other Administrative	1,702,798	1,818,167	(115,369)	(6) %
Total Operating Budget	\$ 38,659,787	\$ 37,620,026	\$ 1,039,761	3 %
Capital Budget	\$ 1,750,000	\$ 10,000	\$ 1,740,000	

2024 Operating Budget

The 2024 Operating Budget is flat compared to 2023, except for two items that total just over \$1 million.

- **Personnel Services** increased \$498,268 and reflects budgeted mid-year salary increases of 4% to stay competitive with salaries in the Austin metro area
- **Information Technology** increased \$541,453 and includes two new software applications (Backstop and iLevel) for \$652,000 that will provide investment staff with more robust analytical and monitoring capabilities

Draft 2024 Capital Budget

Staff is requesting capital budget expenditures of \$1.75 million for three capital projects:

- NextGen rebuild \$1 million
- MyTMRS updates \$500,000
- Online Retirement functionality \$250,000

Next Steps

- Staff will update each budget between September and December
- Committee and staff will present the final budgets at the December Board meeting for approval



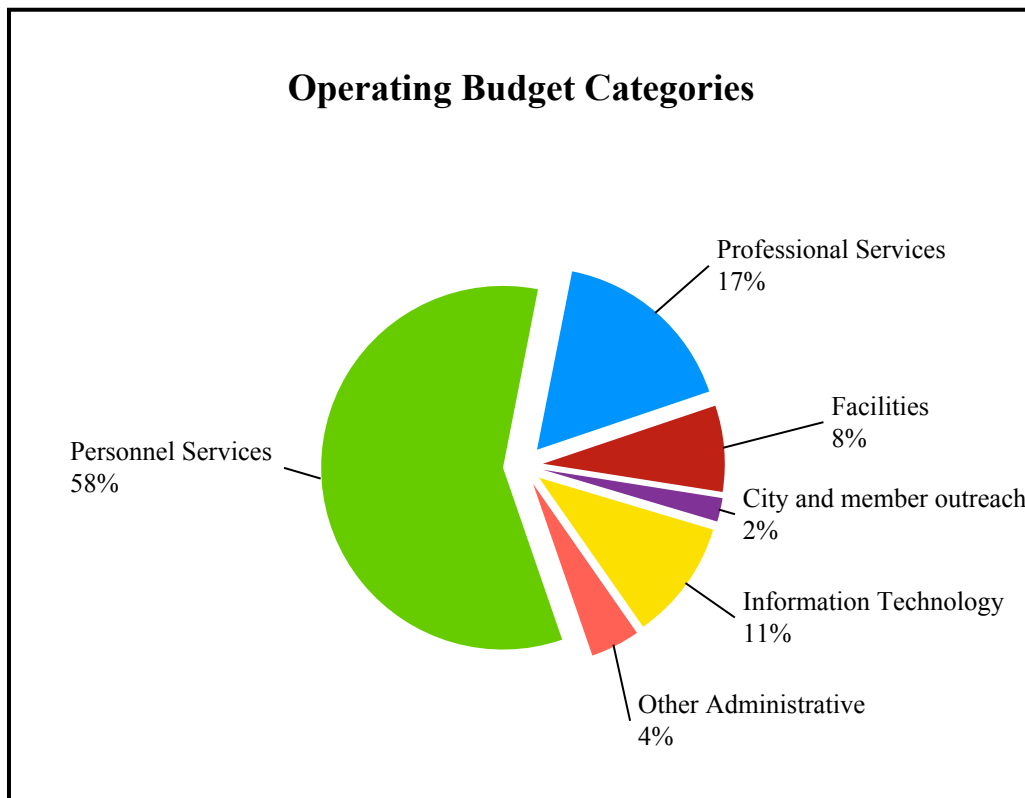
Operating and Capital Budgets

Fiscal Year 2024

Summary

This Summary presents the 2024 TMRS Operating and Capital budgets. For comparison purposes, the 2023 budgets are also shown.

Operating and Capital Budgets For the Years Ending December 31					
	2024	2023	Increase/ (Decrease)	% Change	
Personnel Services	\$ 22,566,532	\$ 22,068,264	\$ 498,268	2 %	
Professional Services	6,469,603	6,499,025	(29,422)	— %	
Facilities	2,965,060	2,854,889	110,171	4 %	
City and member outreach	820,750	786,090	34,660	4 %	
Information Technology	4,135,044	3,593,591	541,453	15 %	
Other Administrative	1,702,798	1,818,167	(115,369)	(6) %	
Total Operating Budget	\$ 38,659,787	\$ 37,620,026	\$ 1,039,761	3 %	
Capital Budget	\$ 1,750,000	\$ 10,000	\$ 1,740,000		



Summary (continued)

Operating Budget

The 2024 Operating Budget reflects an increase of \$1 million, or 3%, from the 2023 operating budget. Two budget items account for the increase:

- **Personnel Services.** The increase in personnel services of \$498,000, or 2%, reflects 4% anticipated pay adjustments to be granted at mid-year, and no increase to employee headcount.
- **Information Technology.** The increase in information technology of \$541,000, or 15%, is due to the following:
 - TMRS' investment staff is licensing two new technology applications that will provide staff with even more robust portfolio analytical and monitoring capabilities. While the combined annual cost of these licenses is \$652,000, that cost will be partially offset by eliminating other, now unnecessary, technology applications. Therefore, the net increase in the Investment department's budget for the improved technology is approximately \$218,000.
 - Information Services is budgeting for procurement of new applications to enable business innovations, and upgrades to existing applications to improve operations, gain efficiencies and enhance security.

Capital Budget

The 2024 Capital Budget of \$1,750,000 is for a rebuild of NextGen, our pension administration system, that will replace aging software components, increase the efficiency of the systems, and add new functionality. This project is expected to be completed by year-end 2024 utilizing a combination of internal staff and third-party resources.

Operating and Capital Budgets

For the Years Ending December 31

	2024	2023	Increase/ (Decrease)	% Change
Personnel services:				
Salaries and payroll taxes	\$ 18,206,792	\$ 17,693,469	\$ 513,323	3 %
Benefits	4,359,740	4,274,795	84,945	2 %
Contract labor/temporary staffing	—	100,000	(100,000)	(100) %
Total personnel services	22,566,532	22,068,264	498,268	2 %
Professional services:				
Actuarial	774,900	823,700	(48,800)	(6) %
Audit	217,300	189,225	28,075	15 %
Custodial and banking	1,577,000	1,573,000	4,000	— %
Information services	456,500	492,900	(36,400)	(7) %
Investment	2,059,283	1,914,000	145,283	8 %
Legal	868,500	1,053,500	(185,000)	(18) %
Other services	516,120	452,700	63,420	14 %
Total professional services	6,469,603	6,499,025	(29,422)	— %
Facilities	2,965,060	2,854,889	110,171	4 %
City and member outreach	820,750	786,090	34,660	4 %
Information technology:				
Investment department technology	1,655,982	1,437,712	218,270	15 %
Software and support	2,184,790	1,891,107	293,683	16 %
Hardware/data center/other	294,272	264,772	29,500	11 %
Total information technology	4,135,044	3,593,591	541,453	15 %
Other administrative:				
Board of Trustees/Advisory Committee	143,640	132,540	11,100	8 %
Professional development	454,372	503,871	(49,499)	(10) %
Insurance/equipment/records management	515,120	546,463	(31,343)	(6) %
Travel	589,666	635,293	(45,627)	(7) %
Total other administrative	1,702,798	1,818,167	(115,369)	(6) %
Total operating budget	\$ 38,659,787	\$ 37,620,026	\$ 1,039,761	3 %
Capital budget	\$ 1,750,000	\$ 10,000	\$ 1,740,000	

Certain prior year line items have been reclassified to conform with the current year presentation.

Operating Budget - Personnel Services

Personnel Services For the Years Ending December 31				
	2024	2023	Increase/ (Decrease)	% Change
Salaries and payroll taxes:				
Staff salaries	\$ 17,039,370	\$ 16,553,068	\$ 486,302	3 %
Payroll taxes	1,167,422	1,140,401	27,021	2 %
Total	18,206,792	17,693,469	513,323	3 %
Benefits:				
TMRS contributions	2,765,218	2,678,796	86,422	3 %
Insurance	1,577,740	1,578,790	(1,050)	— %
Other	16,782	17,209	(427)	(2) %
Total	4,359,740	4,274,795	84,945	2 %
Contract Labor/Temporary Staffing	—	100,000	(100,000)	(100) %
Total Personnel Services	\$ 22,566,532	\$ 22,068,264	\$ 498,268	2 %

Personnel Services is the largest budget category at 58% of the 2024 operating budget and reflects an increase of \$498,268, or 2%, from the prior year. There are no new FTEs included in the 2024 budget.

Staff salaries are estimated based on current employee payroll and include one-half of the 4% estimated annual pay adjustments.

Payroll taxes are calculated from estimated staff salaries at the 6.2% rate for Social Security and 1.45% rate for Medicare.

TMRS contributions. TMRS employees participate in the TMRS retirement system. Employees contribute 7% of their salary and TMRS matches their account balances 2:1 upon retirement. The actuarially determined employer contribution rate for 2024 is 16.05% (15.73% retirement rate and .32% supplemental death benefit rate). Consistent with prior years, the 2024 operating budget maintains a prior contribution rate of 16.28%, which is estimated to save \$1.9 million in future contributions by paying off the Unfunded Actuarial Accrued Liability nine years earlier.

Insurance. TMRS offers employees insurance through the Employees Retirement System of Texas Group Benefits Program (ERS-GBP). Health, vision, dental, long-term disability, accidental death and life insurance are provided at no cost to the individual employee. In addition, TMRS subsidizes 50% of the premium for dependent health coverage. The ERS-GBP plan year runs from September 1 through August 31, therefore the 2024 budget includes estimated rate increases for the last four months of 2024.

TMRS subsidizes retirees' health insurance premiums based on a tenure schedule. The 2024 budget includes the subsidy for retirees currently covered, as well as an estimate for potential new retirements in 2024.

Operating Budget - Professional Services

Professional Services For the Years Ending December 31				
	2024	2023	Increase/ (Decrease)	% Change
Actuarial:				
Retainer	\$ 624,900	\$ 623,700	\$ 1,200	— %
Other	150,000	200,000	(50,000)	(25) %
Total Actuarial	774,900	823,700	(48,800)	(6) %
Audit:				
External financial and SOC-1 audits	197,300	189,225	8,075	4 %
Internal audit peer review	20,000	—	20,000	100 %
Total Audit	217,300	189,225	28,075	15 %
Custodial and Banking:				
Custodial services	1,515,000	1,515,000	—	— %
Depository services	62,000	58,000	4,000	7 %
Total Custodial and Banking	1,577,000	1,573,000	4,000	— %
Information Services:				
IT research and consulting services	129,000	127,000	2,000	2 %
Information services support	227,500	255,900	(28,400)	(11) %
Cybersecurity audit	100,000	110,000	(10,000)	(9) %
Total Information Services	456,500	492,900	(36,400)	(7) %
Investment:				
Alternatives	1,250,000	1,200,000	50,000	4 %
General investment	561,000	550,000	11,000	2 %
Other	248,283	214,000	34,283	16 %
Total Investment Consultants	2,059,283	1,964,000	95,283	5 %
Legal:				
Fiduciary	120,000	120,000	—	— %
Investment	555,000	700,000	(145,000)	(21) %
Other	193,500	183,500	10,000	5 %
Total Legal	868,500	1,003,500	(135,000)	(13) %
Other Services:				
Disability Board	45,000	45,000	—	— %
Governance/strategic planning	125,000	150,000	(25,000)	(17) %
Human resources	97,500	81,800	15,700	19 %
Legislative	100,000	84,000	16,000	19 %
Mortality data/verification	31,700	28,900	2,800	10 %
Other	116,920	63,000	53,920	86 %
Total Other Services	516,120	452,700	63,420	14 %
Total Professional Services	\$ 6,469,603	\$ 6,499,025	\$ (29,422)	— %

Certain prior year line items have been reclassified to conform with the current year presentation.

Operating Budget - Professional Services (continued)

Professional Services represents 17% of the 2024 operating budget and is consistent with the 2023 operating budget.

Actuarial services are provided by Gabriel, Roeder, Smith and Company (GRS) and represent 12% of the professional services budget category. The budget includes GRS' annual retainer, funds for legislative actuarial studies and the estimated cost of making the grid accessible to participating cities when evaluating plan changes.

Audit services make up 3% of the professional services budget category. External financial and SOC-1 audits are performed by CLA. The 2024 budget also includes \$20,000 for an external peer review of Internal Audit, which is required once every five years per auditing standards.

Custodial and banking services make up 24% of the professional services budget category. TMRS retained State Street Bank as custodian and JPMorgan Chase as depository bank.

Information services consultants make up 7% of the professional service category and include third-party support for information services projects.

Investment consultants make up 32% of total professional services. NEPC provides general investment consulting services to the Board (\$550,000) and Albourne America provides alternatives investment consulting services (\$1.2 million). Other investment consulting services include: transaction cost analysis, proxy voting, background checks for investment manager principals, GIPS certification and global tax services.

Legal services make up 13% of the professional services budget category and include fiduciary legal counsel, investment-related and other legal matters.

Other services make up 8% of the professional services budget category.

Operating Budget - Facilities

Facilities				
For the Years Ending December 31				
	2024	2023	Increase/ (Decrease)	% Change
Office rent	\$ 2,929,927	\$ 2,814,900	\$ 115,027	4 %
Building maintenance / utilities	29,133	24,989	4,144	17 %
Property/liability insurance	6,000	15,000	(9,000)	(60) %
Total Facilities	\$ 2,965,060	\$ 2,854,889	\$ 110,171	4 %

Facilities is 8% of the 2024 operating budget and reflects an increase of 4% from the 2023 budget.

Office rent. The Grove lease agreement includes scheduled monthly base rental payments through April 2034 and pass-through of facilities expenses for utilities, property maintenance, janitorial services, insurance and property taxes.

Building maintenance / utilities. TMRS is responsible for certain repairs and maintenance costs and streaming cable services.

Property / liability insurance. TMRS maintains property / liability insurance as required under The Grove lease agreement.

Operating Budget - City and Member Outreach

City and Member Outreach For the Years Ending December 31				
	2024	2023	Increase/ (Decrease)	% Change
Printing and mailing	\$ 555,500	\$ 520,840	\$ 34,660	7 %
Member education	265,250	265,250	—	— %
Total City and Member Outreach	\$ 820,750	\$ 786,090	\$ 34,660	4 %

City and Member Outreach represents 2% of the operating budget and includes costs of outreach efforts to our participating cities and members.

Printing and mailing. TMRS incurs printing and mailing costs for publications such as *RetirementWise* and *TMRS Times* newsletters, Member Annual Statements, Retirement Benefit Statements, annual financial reports and other single issue brochures/publications. The 2024 budget includes a new service - Mailstream on Demand - that will provide efficiencies for member communication.

Member education includes costs for the TMRS Annual Training Seminar, educational video recordings, booth exhibits and receptions at other events.

Operating Budget - Information Technology

Information Technology For the Years Ending December 31					
	2024	2023	Increase/ (Decrease)	% Change	
Investment department technology:					
Investment data/research subscriptions	\$ 1,004,419	\$ 1,437,712	\$ (433,293)	(30) %	
Investment software solutions	651,563	—	651,563	100 %	
Total investment-related technology	1,655,982	1,437,712	218,270	15 %	
Software and support:					
Subscription-based technology	1,351,944	1,046,049	305,895	29 %	
Software licenses/maintenance	832,846	845,058	(12,212)	(1) %	
Total software and support	2,184,790	1,891,107	293,683	16 %	
Hardware/data center/other					
Hardware/information technology supplies	209,900	174,600	35,300	20 %	
Data center	61,200	65,000	(3,800)	(6) %	
Internet service and other	23,172	25,172	(2,000)	(8) %	
Total hardware and other	294,272	264,772	29,500	11 %	
Total Information Technology	\$ 4,135,044	\$ 3,593,591	\$ 541,453	15 %	

Information Technology is 11% of the 2024 proposed operating budget.

Investment department technology is 40% of this budget category, providing support for the Investment team's analysis and reporting. The 2024 budget includes the following new services:

- \$269,000 for Backstop Solutions, which is software that incorporates tools for portfolio and research management, manager relationships and opportunity tracking in a centralized location. It serves as an information repository, user interface and customer relationship management system for the investment team.
- \$383,000 for iLevel, which is a system for the collection, analysis and reporting of asset level data. Asset level data informs portfolio construction, manager selection, and fee-reducing co-investment transactions.

Due to the robust nature of the new investment technology solutions, certain other services are no longer necessary and were eliminated from the 2024 budget, bringing the net budget impact down to \$218,000.

Information Services (continued)

Software and support is 53% of this budget category, and includes the following new technology:

- Replacement system for existing Oracle Report Builder, a product no longer supported by Oracle.
- DocuSign to facilitate secure document upload and online signatures for benefit administration.
- Planet Press to automate printing and mailing of Member and city letters, reducing costs and increasing quality, capabilities and reporting.
- Identity and access management solution to ensure secure and efficient control over user identities, access permissions, and authentication processes, thereby minimizing risks, enhancing compliance, and safeguarding sensitive data and resources.
- JIRA Service Management to provide a single platform to centrally manage and automate the day-to-day operations and work tracking within the Information Services team.

Operating Budget - Other Administrative

Other Administrative For the Years Ending December 31				
	2024	2023	Increase/ (Decrease)	% Change
Board of Trustees/Advisory Committee:				
Meetings	\$ 117,480	\$ 106,380	\$ 11,100	10 %
Professional development and other	26,160	26,160	—	— %
Total Board of Trustees/Advisory Committee	143,640	132,540	11,100	8 %
Professional development:				
Member dues	47,189	48,407	(1,218)	(3) %
Subscriptions/publications	75,706	112,699	(36,993)	(33) %
Training/tuition	331,477	342,765	(11,288)	(3) %
Total professional development	454,372	503,871	(49,499)	(10) %
Insurance/equipment/records management.:				
Business insurance	182,305	208,773	(26,468)	(13) %
Office equipment and supplies	157,600	144,750	12,850	9 %
Records management	39,000	39,000	—	— %
Miscellaneous	136,215	153,940	(17,725)	(12) %
Total insurance/equipment/records management	515,120	546,463	(31,343)	(6) %
Travel:				
Business travel	469,752	476,180	(6,428)	(1) %
Professional development travel	119,914	159,113	(39,199)	(25) %
Total travel	589,666	635,293	(45,627)	(7) %
Total Other Administrative	\$ 1,702,798	\$ 1,818,167	\$ (115,369)	(6)%

Other Administrative represents 4% of the 2024 proposed operating budget and reflects a decrease of (6)% from the 2023 budget.

Board of Trustees/Advisory Committee expenses include estimates for six Board meetings, a Board Retreat and three Advisory Committee meetings. This category also includes travel for Board members and Board education/training expense.

Professional Development is approximately 27% of the Other Administrative budget category. Each department itemizes expected training costs by employee. Most departments include requests for annual user conferences, as well as other technical training relevant to their respective duties and to meet continuing professional education requirements.

Operating Budget - Other Administrative (continued)

Insurance/equipment/records management include items that are not specifically categorized elsewhere:

- Business insurance costs include estimates of fiduciary and errors and omissions liability, automobile, crime, foreign liability and workers compensation coverage based on quotes received from the respective carriers.
- Office equipment and supplies include general office supplies, furniture and equipment purchases at amounts below capitalization thresholds, and equipment rentals.
- Records management includes document storage and shredding services provided by Iron Mountain.
- Miscellaneous includes business meals, staff office functions, wellness initiatives, and human resources recruiting costs to cover expenses for job postings and background checks.

Travel expenses include staff travel for city visits, Member events, investment due diligence and professional development.

Capital Budget

Capital Budget For the Years Ending December 31				
	2024	2023	Increase/ (Decrease)	% Change
NextGen and MyTMRS modification	\$ 1,750,000	\$ —	\$ 1,750,000	100 %
Relay 2500 folder/insertter	—	10,000	(10,000)	(100)%
Total Capital Expenditures	\$ 1,750,000	\$ 10,000	\$ 1,740,000	

NextGen, TMRS' pension administration system that was deployed in 2005, is nearing the end of useful life and is difficult to update or modify with new functionality. In addition, MyTMRS, our member portal, relies on NextGen and is therefore constrained by NextGen's limitations.

Staff reviewed two potential solutions:

- A complete replacement of NextGen with a new Pension Administration System, at an estimated cost ranging from \$20 million to \$40 million, over a five to six year period.
- A significant rebuild and expansion of NextGen's current functionality, utilizing a combination of existing staff and third-party resources. The estimated cost of this solution is \$1.75 million, and would be completed over a period of 12 to 15 months.

Staff recommends rebuilding NextGen with internal and external resources. This approach is the most cost-efficient and timely solution, and allows TMRS to leverage institutional knowledge and third-party expertise to achieve the best result.



September 19, 2023

To: Board of Trustees

From: David Hunter, Chief Investment Officer

Re: Agenda Item 13a: Chief Investment Officer Report

Delivering Above Median Returns with Below Median Risk. For the one-year period ended June 30, 2023, TMRS achieved our strategic financial objective of generating above median returns using below median risk compared to other public plans > \$10 billion. The Trust Fund's net return for the one-year ended June 30, 2023 was 8.17%, exceeding the Actual Allocation Benchmark (AAB) by 4.3% and Strategic Target Allocation (STA) benchmark by 3.6%. Global Equity, Other Public & Private Markets (OPPM), Hedge Funds, Non-Core Fixed Income (NCFI), and Real Estate generated positive one-year net returns of 16%, 13%, 5.4%, 4%, and 3%, respectively. Private Equity and Core Fixed Income net returns were -0.45% and -0.82% for the same periods, respectively. The net return for the five-years ended June 30, 2023 was 5.99% exceeding the AAB and STA benchmarks by 1.3% and 0.31%, respectively. Private Equity and Real Estate were top performers with net returns of 19% and 9%, respectively, the last 5 years. Net returns for all asset classes exceeded performance benchmarks for the 1 and 5 years ended June 30, 2023, excluding Global Equity. Actual asset allocation levels were within approved ranges.

Trust Fund preliminary net returns ranked in the first quartile for one-year and fourth quartile for the five-years ended June 30, 2023, respectively, among other public defined benefit plans with more than \$10 billion in assets. This is the first time the Trust Fund has ranked in the top-quartile among these plans for the one-year period in four consecutive quarters.

Staff Investment Committee (SIC). Since June, the SIC approved \$835 million of investments with five existing firms in NCFI, Private Debt, Private Equity and Real Estate and one \$75 million investment with a new Private Equity manager. Based on Board approval of STA changes that went into effect on July 1, 2023, the SIC approved asset class reassignments to move six funds into asset classes which are most appropriate for their risk return profile. The SIC also updated its Investment Guidelines and Charter in alignment with the new STA approved by the Board in June.

Investment Strategy Update. Staff is focused on streamlining our manager roster by expanding commitments with our top performing managers, while reducing commitments with below median firms or strategies that are no longer aligned with our STA. TMRS completed \$3.5 billion of new investments in the first half of 2023 including \$2.4 billion with eight existing managers.

Portfolio Management (PM). The PM team structure was refined in August to enhance our One Team model and affirm that each PM team member is required to source and advance prudent investments and vote on all investment opportunities in our pipeline meetings. The Investment team commenced implementation of new investment technology services that will materially enhance portfolio management sourcing, monitoring, management and reporting in 2024. Investment Services also developed automated Asset Class Reports (ACR) for OPPM, Real Estate and Private Equity. These ACR reports serve as a one-page dashboard that rank order each investment by key performance indicators to efficiently support portfolio management actions.

Benchmark Recommendations. When the Board approved the Trust Fund's new asset allocation in June, the NCFI and OPPM asset classes were updated. NCFI was split into NCFI and Private Debt, while OPPM was divided into Infrastructure and Other Private. New benchmarks are recommended by NEPC for the four updated asset classes. Additionally, a new benchmark is being recommended for Private Equity.

Board Education. NEPC CIO Tim McCusker will speak about Artificial Intelligence (AI) and its Potential Impact on Investments. Tim Sweeney, Head of Public Markets, will present the Annual Review of Hedge Funds.

Q2 2023 Trust Fund Report

Dave Hunter, CIO

Board of Trustees Meeting

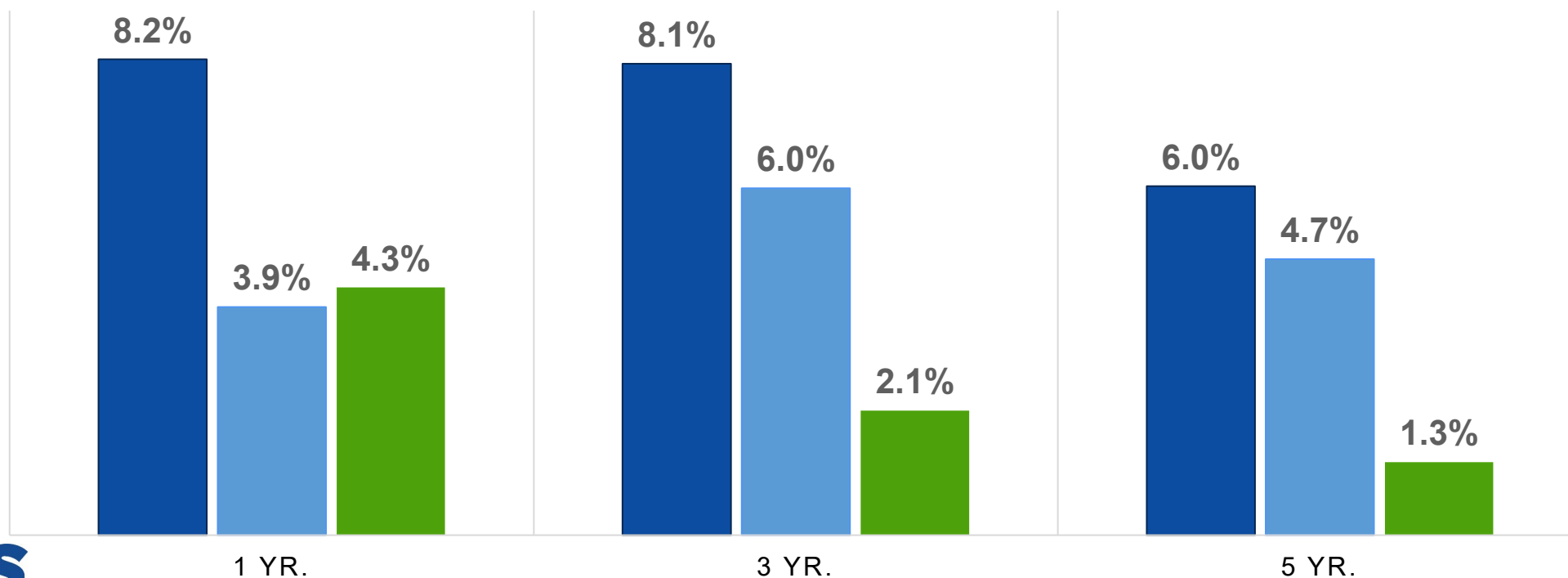
September 28, 2023

Trust Fund Net Returns Exceed Benchmarks

Net Returns exceed Actual Allocation Benchmarks (AAB) by 1.3% over the last 5 years. For the first time ever, Trust Fund returns ranked in the first quartile (Public Plans \$10+ billion) for four consecutive one-year periods ended June 30, 2023 (3Q/4Q of 2022 and 1Q/2Q of 2023).

Net Performance as of June 30, 2023

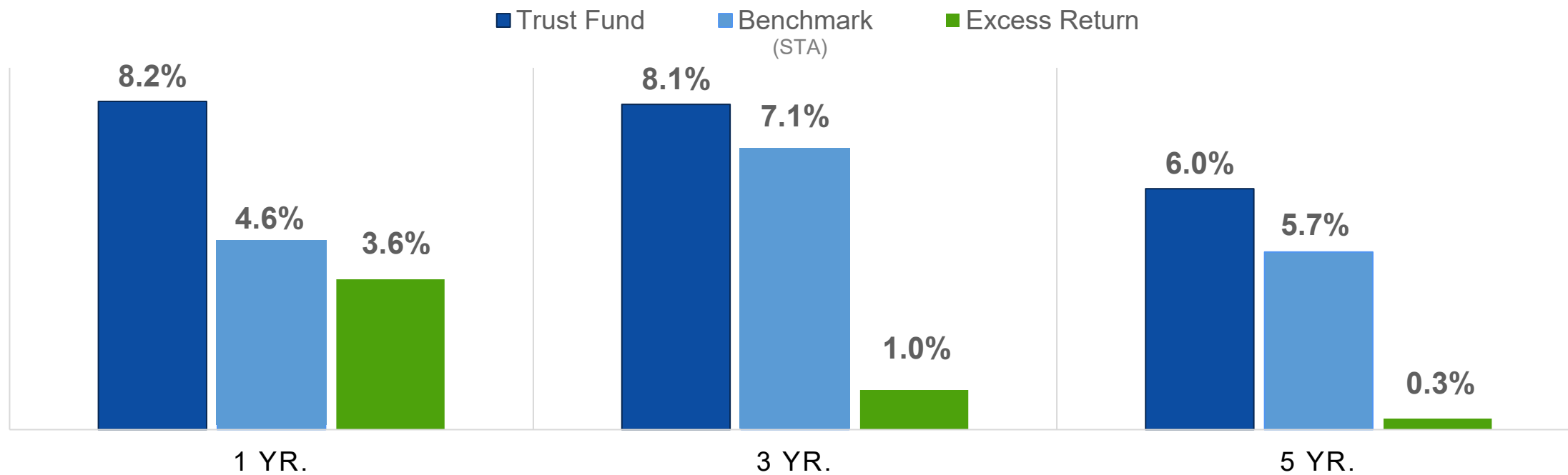
■ Trust Fund ■ Benchmark ■ Excess Return



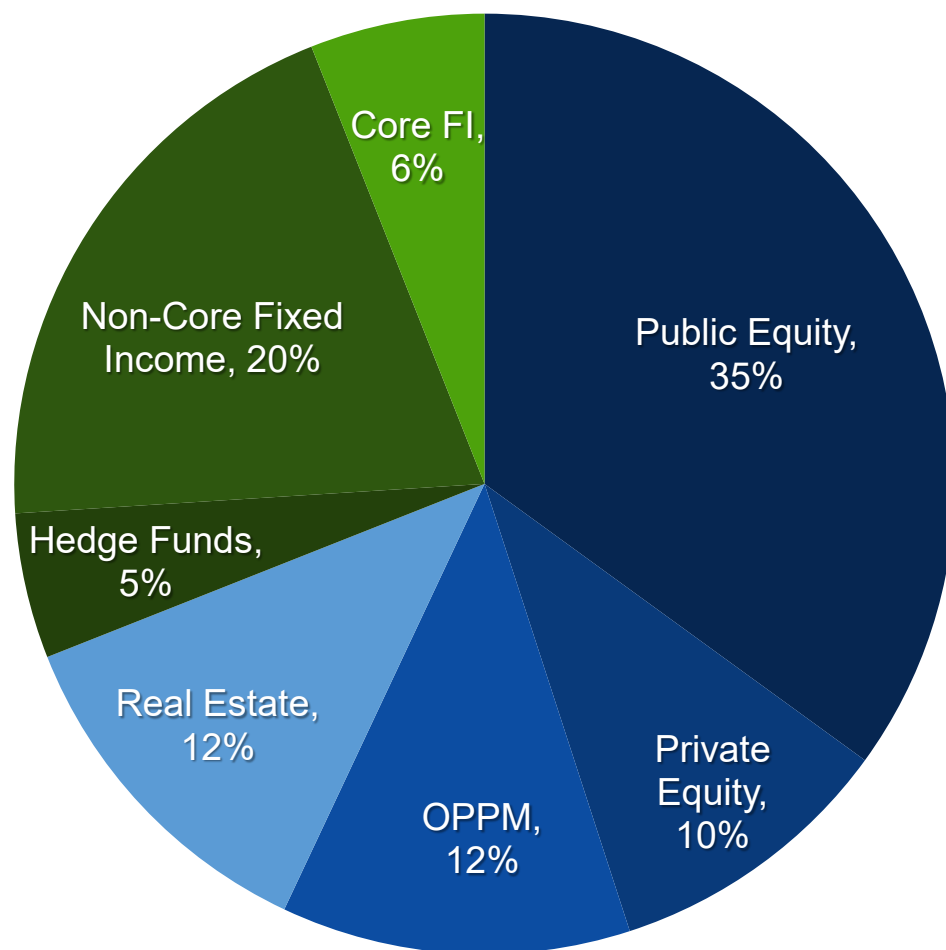
Trust Fund Net Returns Exceed Benchmarks

Net Returns exceed the Strategic Target Allocation (STA) Benchmark by 0.3% over the last 5 years. For the first time ever, Trust Fund returns ranked in the first quartile (Public Plans \$10+ billion) for four consecutive one-year periods ended June 30, 2023 (3Q/4Q of 2022 and 1Q/2Q of 2023).

Net Performance as of June 30, 2023



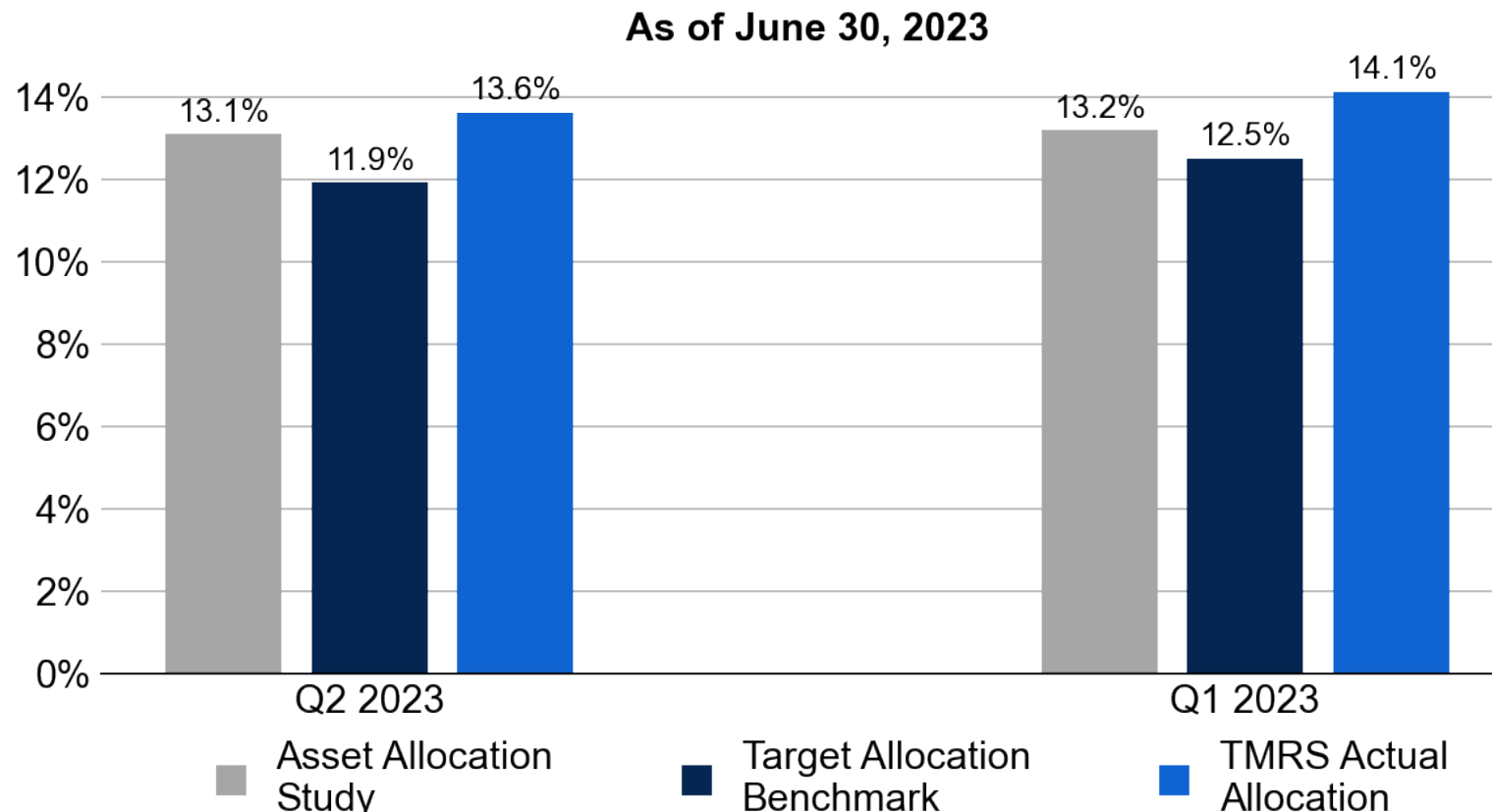
Trust Fund Asset Allocations Align with Targets



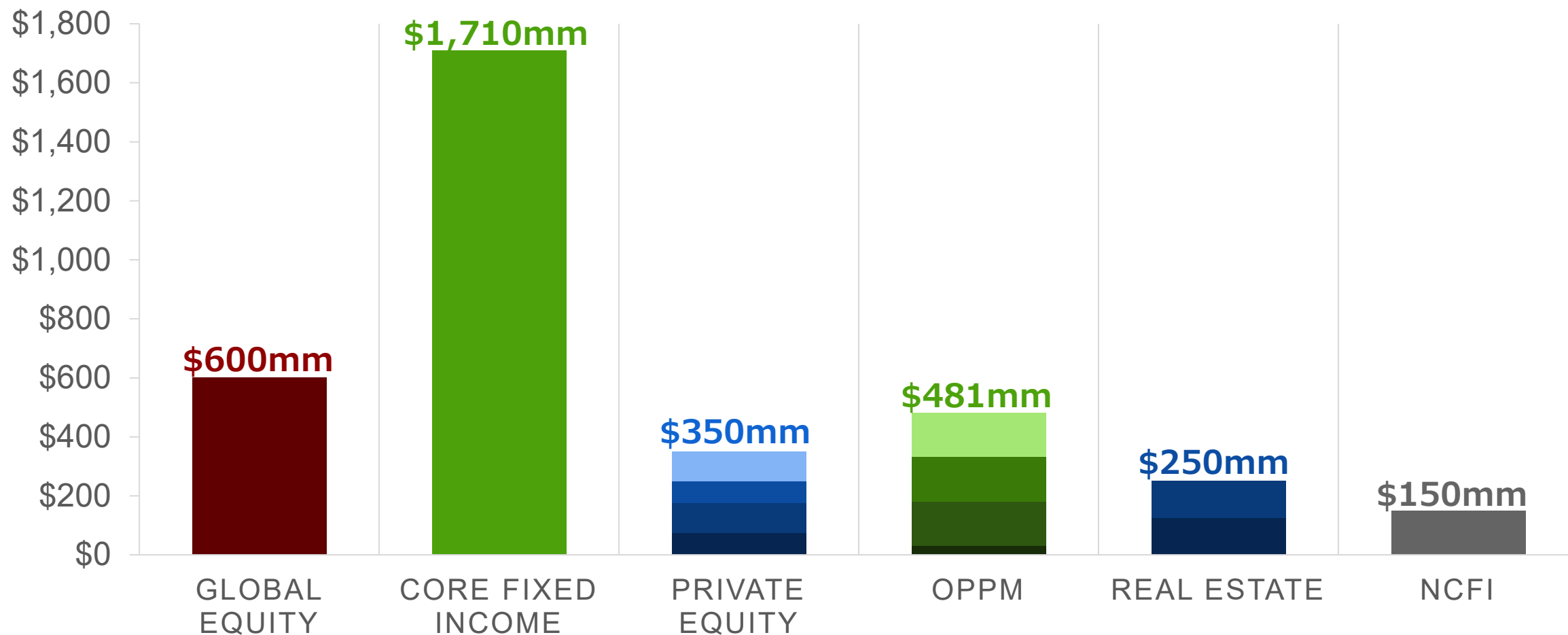
	Strategic Target	Actual as of June 30, 2023	Policy Range
■ Public Equity	35%	34.9%	25 – 45%
■ Private Equity	10%	10.7%	5 – 15%
■ OPPM	12%	12.2%	7 – 17%
■ Real Estate	12%	13.3%	7 – 17%
■ Hedge Funds	5%	5.3%	0 – 10%
■ NCFI	20%	18.6%	15 – 25%
■ Core FI	6%	4.4%	1 – 11%
■ Cash	0%	0.5%	0 – 3%

Trust Fund Risk

Compares near-term total risk as of Q2 2023 for TMRS' Target Allocation Benchmark and as Invested against long-term risk assumptions in Asset Allocation Study



2023 Completed Investments Exceeds \$3.5 Billion



2023 Completed Investments Report

As of 6/30/2023

ASSET CLASS / STRATEGY	COMPLETED DATE	MANAGER OR FUND NAME	NEW / EXISTING MANAGER	AMOUNT COMMITTED	PUBLIC / PRIVATE MARKET
Global Equity					
Active ACWI EX-US	June 26	Arrowstreet Capital, Limited Partnership	New	\$600,000,000	Public
Core Fixed Income					
Core	April 25	Northern Trust Investments, Inc.	Existing	\$1,710,000,000	Public
Non-Core Fixed Income					
Opportunistic Credit	March 16	Arrow Credit Opportunities II USD Feeder SCSp	New	\$150,000,000	Private
Real Estate					
Value Added	June 30	Virtus Real Estate Capital IV, LP	Existing	\$125,000,000	Private
Value Added	April 21	Stockbridge Value Fund V, LP	Existing	\$125,000,000	Private
Other Public and Private Markets					
Infrastructure	March 17	MTP Zilker AV1 LLC	Existing	\$31,000,000	Private
Infrastructure	March 16	Excelsior Renewable Energy Feeder Fund II-B LP	New	\$150,000,000	Private
Energy	March 1	Pearl Energy Investments III, LP	New	\$150,000,000	Private
Other	January 4	Bain Capital Insurance Fund, L.P.	Existing	\$150,000,000	Private
Hedge Funds		N/A			
Private Equity					
Buyout	March 31	Public Pension Capital, LLC	Existing	\$75,000,000	Private
Buyout	March 14	Parthenon Investors VII, LP	Existing	\$100,000,000	Private
Buyout	January 27	Gemspring Capital Fund III, LP	New	\$75,000,000	Private
Buyout	January 12	Arcline Capital Partners III LP	Existing	\$100,000,000	Private
TOTAL:				<u>\$3,541,000,000</u>	



September 19, 2023

To: Board of Trustees

**From: Michele Fullon, Investment Compliance Officer
Christine Sweeney, Chief Legal Officer**

A handwritten signature in black ink, appearing to read 'Michele Fullon', is written to the right of the 'From:' line.

Re: Agenda Item 13d: Second Quarter 2023 Investment Compliance Report

Investment Manager Compliance: In the second quarter, State Street completed 2,300 automated tests that confirmed that TMRS investment managers had adhered to their investment guidelines and were in compliance with TMRS' guidelines.

Investment Policy Statement (IPS) Compliance: Investment Compliance tested all testable parameters within the IPS and Investment Guidelines, including, (i) strategic diversification requirements, (ii) geographic and economic diversification requirements, (iii) investment manager concentration limits, and (iv) investment vehicle concentration limits. Testing confirmed that TMRS was in compliance with all testable parameters.



September 19, 2023

To: Board of Trustees

From: David J. Hunter, Chief Investment Officer

A handwritten signature in blue ink, appearing to read "D. J. Hunter", is written over the "From:" line of the email header.

Re: Agenda Item 14: General Investment Consultant Quarterly Report

Sam Austin will discuss NEPC's Quarterly Investment Performance Report.

Attachment - NEPC 2Q 2023 Executive Summary



2Q 2023 QUARTERLY PERFORMANCE REPORT EXECUTIVE SUMMARY

SEPTEMBER 28, 2023

Samuel Austin, Partner



TOTAL FUND PERFORMANCE SUMMARY

COMPARED TO ASSET ALLOCATION BENCHMARK & STRATEGIC TARGET ALLOCATION

	Market Value (\$)	1 Yr (%)	5 Yrs (%)	10 Yrs (%)
Total Fund, Net of Fees	37,446,535,211	8.17	5.99	6.50
Actual Allocation Benchmark		3.91	4.71	5.70
Over/Under		4.26	1.28	0.80
Strategic Target Allocation Index		4.59	5.68	6.51
Over/Under		3.58	0.31	-0.01

- **For the one-year period ended June 30, 2023, the Trust Fund returned 8.17%, exceeding the Asset Allocation Benchmark by 4.26%.**
 - Fixed Income, Other Public and Private Markets, Real Estate, Hedge Funds, and Private Equity exceeded their respective benchmarks, while Global Equity trailed.
- **For the five-year ended June 30, 2023, the Trust Fund returned 5.99%, exceeding the Asset Allocation Benchmark by 1.28%.**
 - Fixed Income, Other Public and Private Markets, Real Estate, Hedge Funds, and Private Equity exceeded their respective benchmarks, while Global Equity trailed.



TOTAL FUND PERFORMANCE SUMMARY

COMPARED TO OTHER PUBLIC PENSION PLANS GREATER THAN \$10 BILLION IN ASSETS

	1 Yr (%)	Quartile Rank	5 Yrs (%)	Quartile Rank	10 Yrs (%)	Quartile Rank
Total Fund, Net of Fees	8.17	1st	5.99	4th	6.50	4th
Actual Allocation Benchmark	3.91	4 th	4.71	4 th	5.70	4 th
Strategic Target Allocation Index	4.59	4 th	5.68	4 th	6.51	4 th
<i>InvMetrics Public DB > \$10 Billion Median</i>	<i>7.07</i>		<i>6.96</i>		<i>7.52</i>	

- For the one-year ended June 30, 2023, the Trust Fund returned 8.17% and ranked in the first quartile among other Public Defined Benefit Plans greater than \$10 billion in assets.
- For the five-years ended June 30, 2023, the Trust Fund returned 5.99% and ranked in the fourth quartile among other Public Defined Benefit Plans greater than \$10 billion in assets.

TOTAL FUND PERFORMANCE

VERSUS ACTUAL ALLOCATION BENCHMARK

- **The Trust Fund performance expectation is to exceed the Actual Allocation Benchmark over rolling five-year periods.**
- **In the five-year period ended June 30, 2023, TMRS outperformed the Actual Allocation Benchmark by 1.28%, net of fees.**

Rolling 5 Year Total Fund Performance vs. Actual Allocation Benchmark

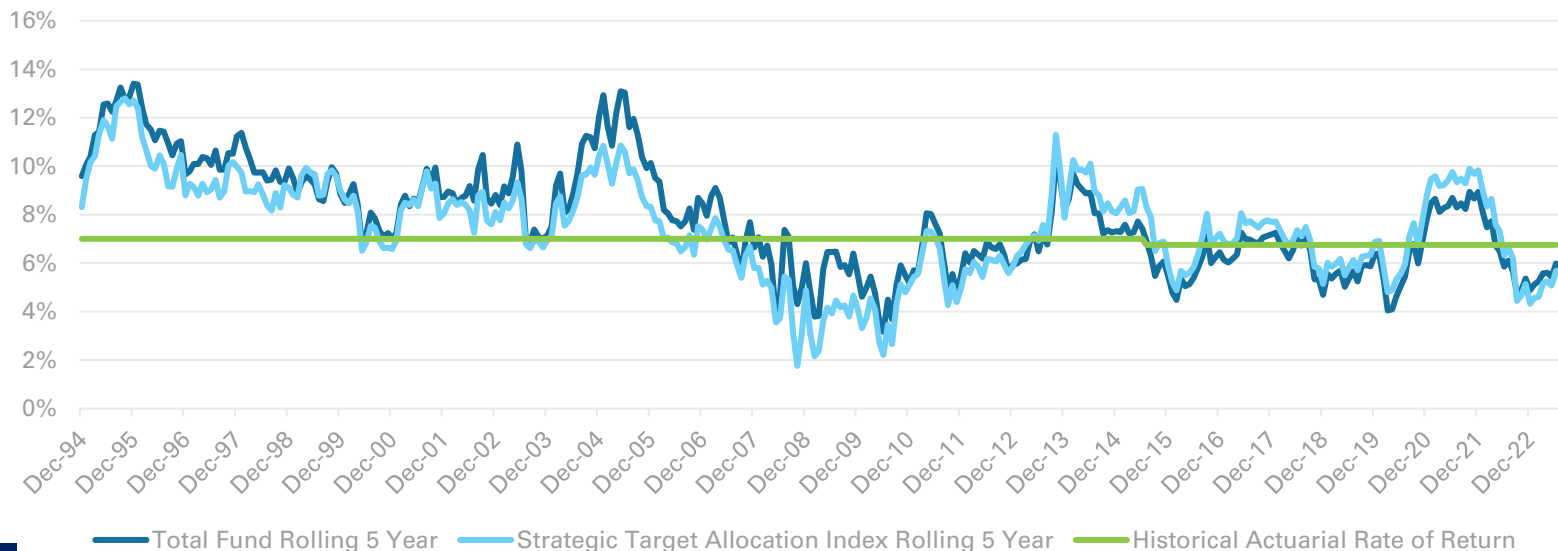


TOTAL FUND PERFORMANCE

VERSUS STRATEGIC TARGET ALLOCATION INDEX AND ASSUMED RATE OF RETURN

- For the five-year period ended June 30, 2023, the Trust Fund's return of 5.99%, net of fees, trailed the Board's Assumed Long-Term Rate of Return of 6.75%.
- The five-year return for the Strategic Target Allocation Index was 5.68%, as of June 30, 2023.

Rolling 5 Year Total Fund Performance vs. Strategic Target Allocation Index vs. Historical Actuarial Rate of Return



TOTAL FUND PERFORMANCE SUMMARY

RISK, NET RETURN AND RISK-ADJUSTED RETURNS

	1 Year Ending June 30, 2023					
	Risk	Quartile Rank	Return	Quartile Rank	Risk-Adjusted Return	Quartile Rank
Total Fund	7.26	1st	8.17	1st	0.63	1st
Actual Allocation Benchmark	10.30	3 rd	3.91	4 th	0.08	4 th

- **TMRS' Trust Fund ranks in the first quartile among other Public Defined Benefit Plans with more than \$10 billion in assets for the one-year period ending June 30, 2023, as measured by standard deviation.**
- **The risk-adjusted return ranked in the first quartile which indicates that the Trust Fund generated more return given its risk profile among other Public Defined Benefit Plans with more than \$10 billion in assets for the one-year period ending June 30, 2023, as measured by the Sharpe ratio.**



The Standard Deviation interquartile range is defined as the lowest Standard Deviation measuring in the first quartile. This is a change from prior quarters where the lowest Standard Deviation was measured in the fourth quartile.

TOTAL FUND PERFORMANCE SUMMARY

RISK, NET RETURN AND RISK-ADJUSTED RETURNS

5 Years Ending June 30, 2023						
	Risk	Quartile Rank	Return	Quartile Rank	Risk-Adjusted Return	Quartile Rank
Total Fund	6.95	1st	5.99	4th	0.65	2nd
Actual Allocation Benchmark	7.74	1 st	4.71	4 th	0.43	4 th

- **The Trust Fund's risk profile, as measured by standard deviation, ranks in the first quartile among other Public Defined Benefit Plans with greater than \$10 billion in assets for the five-year period ending June 30, 2023.**
- **The risk-adjusted return ranked in the second quartile among other Public Defined Benefit Plans with more than \$10 billion in assets for the five-year period ending June 30, 2023, as measured by the Sharpe ratio.**



The Standard Deviation interquartile range is defined as the lowest Standard Deviation measuring in the first quartile. This is a change from prior quarters where the lowest Standard Deviation was measured in the fourth quartile.

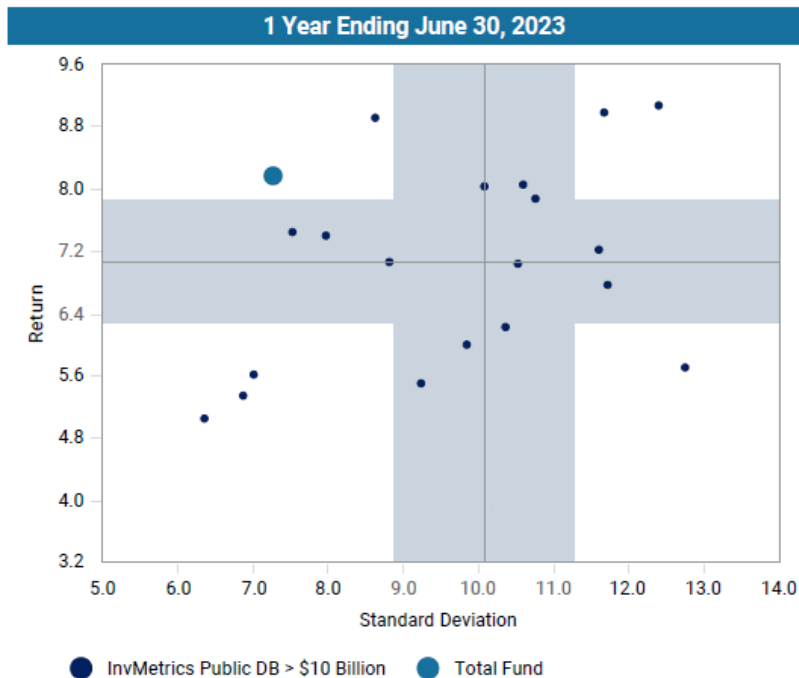
ASSET ALLOCATION COMPLIANCE

ACTUAL ASSET ALLOCATION VS. INVESTMENT POLICY ALLOCATION

	Current (\$)	Current (%)	Policy (%)	Differences* (%)	Policy Range (%)	Within Range
■ Core Fixed Income	1,654,300,916	4.4	6.0	-1.6	1.0 - 11.0	Yes
■ Non-Core Fixed Income	6,976,104,801	18.6	20.0	-1.4	15.0 - 25.0	Yes
■ Global Equity	13,057,526,887	34.9	35.0	-0.1	25.0 - 45.0	Yes
■ Real Estate	4,997,903,297	13.3	12.0	1.3	7.0 - 17.0	Yes
■ Other Public and Private Markets	4,575,130,815	12.2	12.0	0.2	7.0 - 17.0	Yes
■ Hedge Funds	1,989,433,496	5.3	5.0	0.3	0.0 - 10.0	Yes
■ Private Equity	3,998,066,478	10.7	10.0	0.7	5.0 - 15.0	Yes
■ Cash Composite	198,068,521	0.5	0.0	0.5	0.0 - 3.0	Yes
Total Fund	37,446,535,211	100.0	100.0	0.0		

- **Actual asset class allocations are in compliance with Investment Policy ranges as of June 30, 2023.**

TOTAL FUND RISK VS. NET RETURN: ONE YEAR

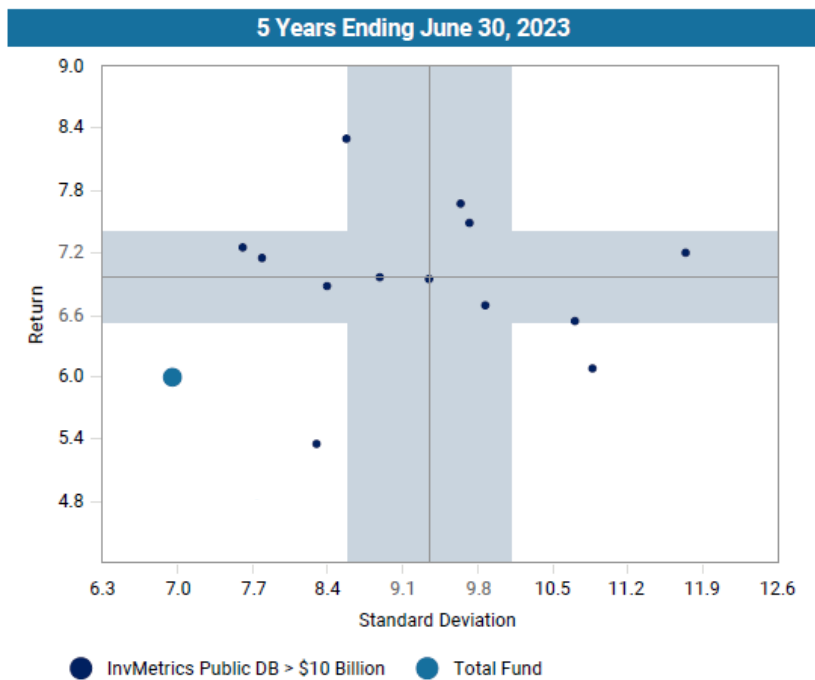


The Trust Fund generated a first quartile net investment return with lower risk, as measured by standard deviation, among other Public Defined Benefit Plans with more than \$10 billion in assets for the 1-year period ended June 30, 2023.

1 Year Ending June 30, 2023				
	Risk	Quartile Rank	Return	Quartile Rank
Total Fund	7.26	1st	8.17	1st
<i>InvMetrics Public DB > \$10 Billion Median</i>	<i>10.07</i>		<i>7.07</i>	

- The Standard Deviation interquartile range is defined as the lowest Standard Deviation measuring in the first quartile. This is a change from prior quarters where the lowest Standard Deviation was measured in the fourth quartile.
- InvMetrics Public DB > \$10B Median includes 19 observations.

TOTAL FUND RISK VS. NET RETURN: FIVE YEARS



The Trust Fund underperformed in its peer universe due to having the least amount of risk as measured by standard deviation in the 5-year period, among other Public Defined Benefit Plans with more than \$10 billion in assets.

5 Years Ending June 30, 2023				
	Risk	Quartile Rank	Return	Quartile Rank
Total Fund	6.95	1st	5.99	4th
<i>InvMetrics Public DB > \$10 Billion Median</i>	<i>9.35</i>		<i>6.96</i>	

- The Standard Deviation interquartile range is defined as the lowest Standard Deviation measuring in the first quartile. This is a change from prior quarters where the lowest Standard Deviation was measured in the fourth quartile.
- InvMetrics Public DB > \$10B Median includes 13 observations.

PERFORMANCE DETAIL

	Allocation		Performance (%)								
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	37,446,535,211	100.0	2.79	6.32	8.17	8.09	5.99	6.87	6.50	8.15	Jan-89
Actual Allocation Benchmark			<u>3.39</u>	<u>7.76</u>	<u>3.91</u>	<u>5.95</u>	<u>4.71</u>	<u>5.78</u>	<u>5.70</u>	<u>7.49</u>	
Over/Under			-0.60	-1.44	4.26	2.14	1.28	1.09	0.80	0.66	
Strategic Target Allocation Index			<u>3.47</u>	<u>8.14</u>	<u>4.59</u>	<u>7.14</u>	<u>5.68</u>	<u>6.81</u>	<u>6.51</u>	<u>7.76</u>	
Over/Under			-0.68	-1.82	3.58	0.95	0.31	0.06	-0.01	0.39	
Global Equity	13,057,526,887	34.9	5.81	13.18	16.01	10.27	6.88	9.21	8.64	5.91	Jan-08
Total Equity Index			<u>5.89</u>	<u>13.25</u>	<u>16.14</u>	<u>10.97</u>	<u>7.70</u>	<u>9.84</u>	<u>9.00</u>	<u>6.09</u>	
Over/Under			-0.08	-0.07	-0.13	-0.70	-0.82	-0.63	-0.36	-0.18	
Core Fixed Income	1,654,300,916	4.4	-0.79	2.05	-0.82	-3.77	1.02	0.73	1.71	6.53	Jan-89
Fixed Income Benchmark			<u>-0.84</u>	<u>2.09</u>	<u>-0.94</u>	<u>-3.97</u>	<u>0.77</u>	<u>0.44</u>	<u>1.52</u>	<u>6.03</u>	
Over/Under			0.05	-0.04	0.12	0.20	0.25	0.29	0.19	0.50	
Non-Core Fixed Income	6,976,104,801	18.6	1.87	4.20	3.98	5.36	4.15	4.78		4.14	Oct-14
Total Non-Core Fixed Income Weighted Index			<u>2.11</u>	<u>3.95</u>	<u>-1.26</u>	<u>1.81</u>	<u>1.70</u>	<u>2.73</u>		<u>2.34</u>	
Over/Under			-0.24	0.25	5.24	3.55	2.45	2.05		1.80	
Other Public and Private Markets	4,575,130,815	12.2	3.49	9.33	12.97	9.66	5.53	5.05	4.31	4.32	Feb-11
Total Real Return Index			<u>6.57</u>	<u>16.03</u>	<u>2.51</u>	<u>5.07</u>	<u>2.65</u>	<u>3.20</u>	<u>3.16</u>	<u>3.25</u>	
Over/Under			-3.08	-6.70	10.46	4.59	2.88	1.85	1.15	1.07	
Real Estate	4,997,903,297	13.3	-1.22	-2.61	2.99	11.05	9.04	9.48	10.80	10.23	Nov-11
Real Estate Benchmark			<u>-3.38</u>	<u>-8.37</u>	<u>-3.91</u>	<u>7.75</u>	<u>7.13</u>	<u>7.43</u>	<u>9.26</u>	<u>9.69</u>	
Over/Under			2.16	5.76	6.90	3.30	1.91	2.05	1.54	0.54	
Hedge Funds	1,989,433,496	5.3	0.65	2.90	5.36	5.52	4.10	5.27		4.33	Aug-14
Hedge Funds Benchmark			<u>-0.93</u>	<u>0.50</u>	<u>-1.37</u>	<u>6.61</u>	<u>4.06</u>	<u>4.38</u>		<u>3.33</u>	
Over/Under			1.58	2.40	6.73	-1.09	0.04	0.89		1.00	
Private Equity	3,998,066,478	10.7	1.81	1.23	-0.45	25.96	19.26	18.10		16.14	Dec-15
Private Equity Index			<u>6.95</u>	<u>17.48</u>	<u>-7.68</u>	<u>14.35</u>	<u>12.54</u>	<u>13.31</u>		<u>11.78</u>	
Over/Under			-5.14	-16.25	7.23	11.61	6.72	4.79		4.36	
Cash Composite	198,068,521	0.5	1.21	2.70	4.15	1.50	1.62	1.38	1.11	0.83	Jun-08
FTSE 1 Month US T-Bill index			<u>1.21</u>	<u>2.31</u>	<u>3.70</u>	<u>1.29</u>	<u>1.50</u>	<u>1.31</u>	<u>0.93</u>	<u>0.68</u>	
Over/Under			0.00	0.39	0.45	0.21	0.12	0.07	0.18	0.15	

Texas Municipal Retirement System

PERFORMANCE DETAIL

June 30, 2023

Composite Benchmark Comments

The Actual Allocation Benchmark is calculated monthly using beginning of month asset class weights applied to each corresponding benchmark return and currently consists of the following:

- Total Equity Benchmark
- Fixed Income Benchmark
- Non-Core Fixed Income Benchmark
- OPPM Benchmark
- Real Estate Benchmark
- Hedge Funds Benchmark
- Private Equity Benchmark
- FTSE 30 Day T-Bill Index

The Strategic Target Allocation Index represents asset allocation targets adopted historically and currently consists of the following:

- 35.0% Total Equity Benchmark
- 6.0% Fixed Income Benchmark
- 20.0% Non-Core Fixed Income Benchmark
- 12.0% OPPM Benchmark
- 12.0% Real Estate Benchmark
- 5.0% Hedge Funds Benchmark
- 10.0% Private Equity Benchmark

Asset Class Composite Benchmarks:

The Total Equity Benchmark is calculated monthly and consists of 50% Russell 3000 Index and 50% MSCI EAFE Index (USD) (Net) through 07/31/2010; a blend of the Russell 3000 Index, MSCI ACW Ex US IM Index (USD) (Net) and MSCI EAFE Index (USD) (Net) at beginning of month investment weights through 11/30/2012; and a blend of the Russell 3000 Index and MSCI ACW Ex US IM Index (USD) (Net) at beginning of the month weights through 12/31/2018; and MSCI ACW IM Index (USD) (Net) thereafter.

The Fixed Income Benchmark is calculated monthly and consists of the Bloomberg US Gov't Crdt Lng Trm Bond Index through 06/30/2009; Bloomberg US Agg Bond Index thereafter.

The Non-Core Fixed Income Benchmark is calculated monthly using beginning of the month sub-asset class weights within the Non-Core Fixed Income Composite applied to each sub-asset class primary benchmark return through 6/30/2021, and the Bloomberg US Agg Bond Index + 1.5% on an unlagged, month lagged, or quarter lagged basis in proportion of the managers in the composite on an unlagged, month lagged, or quarter lagged basis.

The OPPM Benchmark is calculated monthly using beginning of the month sub-asset class weights within the OPPM Composite applied to each sub-asset class primary benchmark return through 6/30/2021, and the MSCI ACW IM Index (USD) (Net) on an unlagged, month lagged, or quarter lagged basis in proportion of the managers in the composite on an unlagged, month lagged, or quarter lagged basis.

The Real Estate Benchmark is the NCREIF ODCE Index (Gross), one quarter lag through 06/30/2021, and NCREIF ODCE Index (Net), one quarter lag thereafter.

The Hedge Funds Benchmark is calculated monthly and consists of the HFRI FOF: Dv'd Index (1 Mo Lag) through 6/30/2021, and HFRI Asset Weighted Composite Index (1 Mo Lag) thereafter.

The Private Equity Benchmark is set equal to the Composite return through 6/30/2021, and MSCI ACW IM Index (USD) (Net), one quarter lag thereafter.



September 19, 2023

To: Board of Trustees

A handwritten signature in blue ink, appearing to read "D. J. Hunter", is written over the "To:" line of the memo.

From: David J. Hunter, Chief Investment Officer

Re: Agenda Item 15: Consider and Act on Benchmarks

Four new asset classes were created when the Board approved the Trust Fund's new asset allocation in June, and Sam Austin will discuss NEPC's recommended benchmarks for these asset classes. Additionally, a new benchmark is being recommended for the Private Equity asset class to adopt the most widely used private equity benchmark.

Staff recommends the Board approve the new benchmarks.



BENCHMARK RECOMMENDATIONS

BOARD OF TRUSTEES MEETING

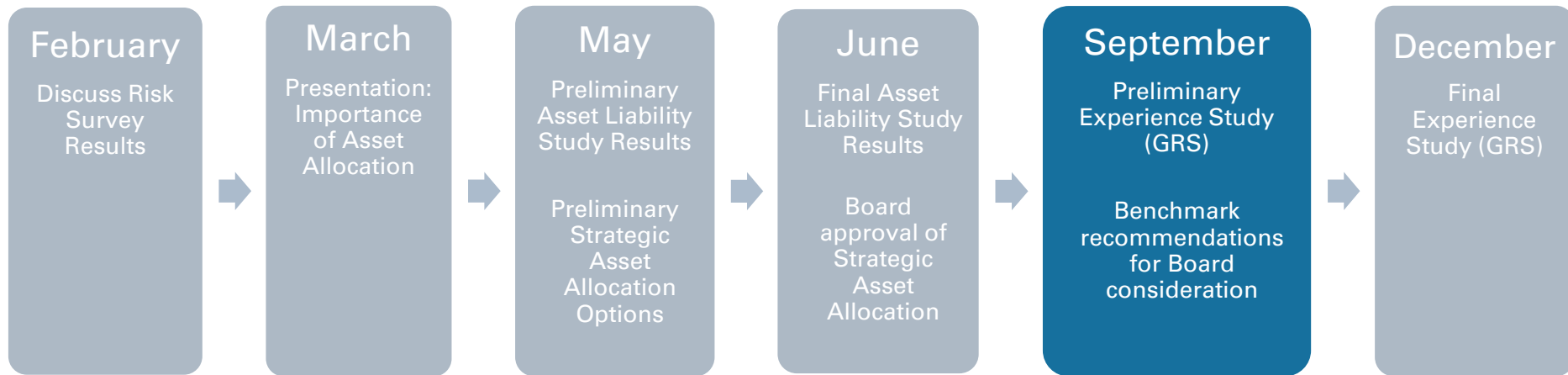
SEPTEMBER 28, 2023

Samuel Austin, Partner



PROPRIETARY & CONFIDENTIAL

ASSET LIABILITY STUDY & ASSET ALLOCATION STUDY TIMELINE



- **The IPS notes, “The Board’s Asset Allocation includes asset classes, strategic target allocations with minimum and maximum allocation ranges, and a benchmark to measure investment performance.”**
- **As a result of the Board approving Asset Allocation updates in June, benchmark updates are required.**

BENCHMARK RECOMMENDATIONS

- When the Board approved the Trust Fund's new asset allocation in June, the Non-Core Fixed Income and Other Public and Private Markets asset classes were updated.
- Non-Core Fixed Income was split into "Non-Core Fixed Income" and "Private Debt".
- Other Public & Private Markets was divided into "Infrastructure" and "Other Private".
- New benchmarks are recommended by NEPC for the four updated asset classes. Additionally, a new benchmark is being recommended for Private Equity to adopt the most widely used private equity benchmark.

Asset Class	Current Benchmarks	Recommended Benchmarks
Non-Core Fixed Income	Bloomberg US Agg. Bond Index + 1.5%	CS Leveraged Loan Index (50% Weight) plus ICE BofA US HY Constrained Index(50%
Private Debt		CS Leveraged Loan Index + 100 bps
Infrastructure	MSCI ACWI Investable Market Index (N)	Cambridge Infrastructure Index
Other Private		MSCI ACWI Investable Market Index (N)
Private Equity	MSCI ACWI Investable Market Index (N)	Cambridge US All Private Equity Index

ASSET ALLOCATION STUDY COMPLETION

If the Board adopts the benchmark recommendations, TMRS' Asset Allocation would be complete and fully represented as follows:

Asset Class	Min. %	Strategic Target Allocation %	Max. %	NEPC Recommended Benchmarks
Global Equity	25%	35%	45%	MSCI ACWI Investable Market Index (N)
Core Fixed Income	1%	6%	11%	Bloomberg US Aggregate Bond Index
Non-Core Fixed Income	1%	6%	11%	CS Leveraged Loan Index (50%) + ICE BofA US HY Constrained Index (50%)
Hedge Funds	0%	5%	10%	HFRI Asset Weighted Composite Index
Cash Equivalents	0%	0%	3%	FTSE 1-month US T-Bill Index
Total Public Assets		52%		
Private Equity	8%	13%	18%	Cambridge US All Private Equity Index
Real Estate	7%	12%	17%	NCREIF-ODCE Index (N)
Infrastructure	1%	6%	11%	Cambridge Infrastructure Fund Index
Other Private	0%	4%	9%	MSCI ACWI Investable Market Index (N)
Private Debt	8%	13%	18%	CS Leveraged Loan Index + 100 bps
Total Private Assets		48%		

SUMMARY

- Each recommended benchmark fairly reflects the risk and return profile of how each asset class is expected to perform going forward and consistent with NEPC's risk and return capital market expectations.
- NEPC believes our recommendations reflect a reasonable approach to rebalancing, risk mitigation and liquidity preferences.



Sam Austin
Partner

NEPC
50 California Street, Suite 850
San Francisco, CA 94111

September 19, 2023

Board of Trustees
Texas Municipal Retirement System
2717 Perseverance Drive
Austin, TX 78731

Dear Trustees,

TMRS's Investment Policy Statement states, "The Board's Asset Allocation includes asset classes, strategic target allocations with ranges, and benchmarks to measure investment performance."

On June 22, the Board approved an asset allocation which included the following changes:

- Non-Core Fixed Income was divided into:
 - Non-core Fixed Income
 - Private Debt
- Other Public and Private markets was replaced by:
 - Infrastructure
 - Other Private

Now, NEPC is recommending benchmarks for these four asset classes (see Table 1).

Table 1

Asset Class	Current Benchmarks	Recommended Benchmarks
Non-Core Fixed Income (NCFI)	Bloomberg US Aggregate Bond Index + 1.5%	CS Leveraged Loan Index (50%) + ICE BofA US High Yield Constrained Index (50%)
Private Debt (NCFI)		CS Leveraged Loan Index + 100bps
Infrastructure (OPPM)	MSCI ACWI Investable Market Index (Net)	Cambridge Infrastructure Index
Other Private (OPPM)		MSCI ACWI Investable Market Index (Net)

In addition, NEPC recommends the Private Equity benchmark be changed to the Cambridge US All Private Equity index which is the most widely used private equity benchmark.

Each recommended benchmark fairly reflects the risk and return profile of how each asset class is expected to perform going forward and consistent with NEPC's risk and return capital market expectations. NEPC believes our recommendations reflect a reasonable approach to rebalancing, risk mitigation and liquidity preferences.

If the Board agrees, TMRS' asset classes, strategic target allocation and ranges, and benchmarks would be as set out in Table 2 below.

Table 2

Asset Class	Min. %	Strategic Target Allocation %	Max. %	Benchmarks
Global Equity	25%	35%	45%	MSCI ACWI Investable Market Index (Net)
Core Fixed Income	1%	6%	11%	Bloomberg U.S. Aggregate Bond Index
Non-Core Fixed Income	1%	6%	11%	CS Leveraged Loan Index (50%) + ICE BofA U.S. High Yield Constrained Index (50%)
Hedge Funds	0%	5%	10%	HFRI Asset Weighted Composite Index
Cash Equivalents	0%	0%	3%	FTSE 1-month U.S. T-Bill Index
Total Public Assets		52%		
Private Equity	8%	13%	18%	Cambridge U.S. All Private Equity Index
Real Estate	7%	12%	17%	NCREIF-ODCE Index (Net)
Infrastructure	1%	6%	11%	Cambridge Infrastructure Fund Index
Other Private	0%	4%	9%	MSCI ACWI Investable Market Index (Net)
Private Debt	8%	13%	18%	CS Leveraged Loan Index + 100 bps
Total Private Assets		48%		

I look forward to discussing NEPC's recommended benchmarks with you at our September 28 Board meeting.

Regards,



Sam Austin



September 19, 2023

To: Board of Trustees

From: David J. Hunter, Chief Investment Officer

A handwritten signature in blue ink, appearing to read 'D. Hunter', is positioned to the right of the 'From:' line.

Re: Agenda Item 16: Board Education: Artificial Intelligence and its Potential Impact on Investments

At the May Board meeting, Board member Bill Philibert requested a discussion about artificial intelligence and its potential impact on investments. Tim McCusker, NEPC's Chief Investment Officer, will review this topic.

Attachment – Overview of Artificial Intelligence Presentation



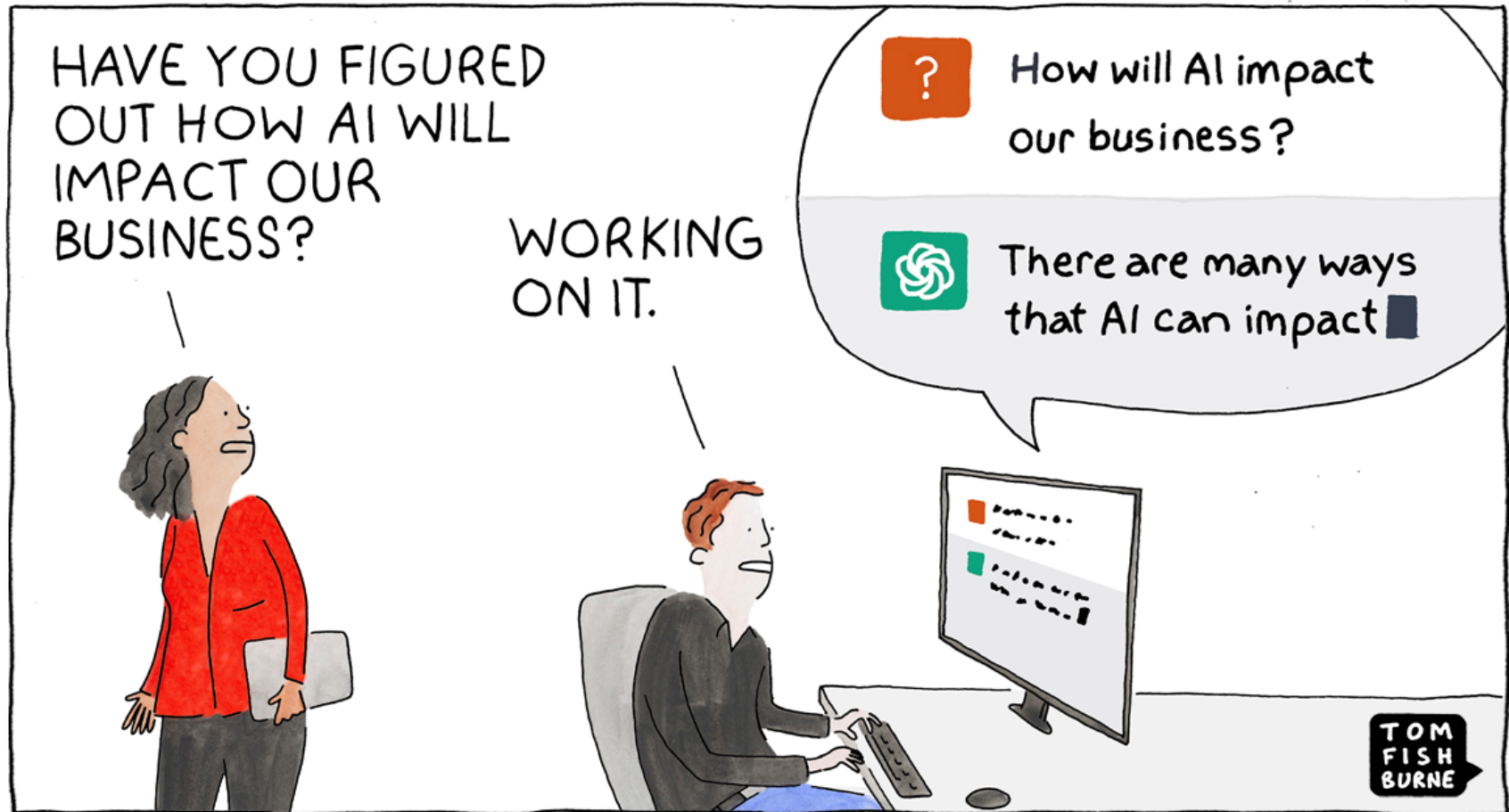
BOARD EDUCATION: ARTIFICIAL INTELLIGENCE AND ITS POTENTIAL IMPACT ON INVESTMENTS

SEPTEMBER 28, 2023

Timothy McCusker, FSA, CFA, CAIA
Chief Investment Officer



ARTIFICIAL INTELLIGENCE IS IMPACTING BUSINESS



ARTIFICIAL INTELLIGENCE: A DEFINITION

CHATGPT: CAN YOU GIVE ME A SIMPLE DEFINITION OF ARTIFICIAL INTELLIGENCE IN 3-4 BULLET POINTS?



Sure! Here's a simple definition of artificial intelligence (AI) in a few bullet points:

- **Mimicking Human Intelligence:** Artificial Intelligence refers to the creation of computer systems that can perform tasks that typically require human intelligence.
- **Learning and Adaptation:** AI systems are designed to learn from data and improve their performance over time without explicit programming, adapting to new information and experiences.
- **Problem Solving:** AI involves using algorithms and models to analyze complex problems, make decisions, and generate solutions, often at a speed and scale beyond human capability.
- **Various Applications:** AI is used in a wide range of applications, from voice assistants like Siri to self-driving cars, medical diagnoses, recommendation systems, and more.

WHY NOW FOR AI?

TECHNOLOGICAL DRIVERS OF LAST DECADE



**Computing
Power**



**Big
Data**

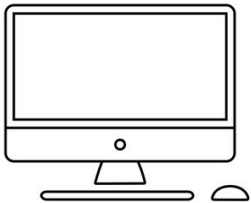


**Algorithm
Advancement**

TECH PLATFORM SHIFTS HAPPEN ABOUT ONCE A DECADE

1980s

PCs



DELL

1990s

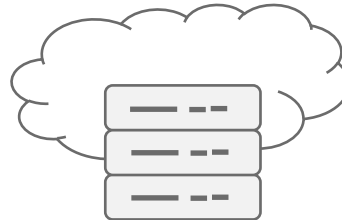
Internet



Google

2000s

Cloud



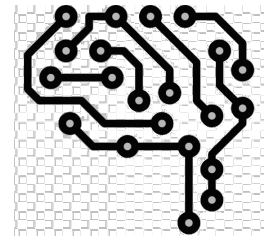
2010s

Mobile



2020s

AI



???

AI IS THE TECHNOLOGICAL TECTONIC SHIFT OF THE CURRENT DECADE

“The development of AI is as fundamental as the creation of the microprocessor, the personal computer, the Internet, and the mobile phone.”

– Bill Gates, Founder of Microsoft

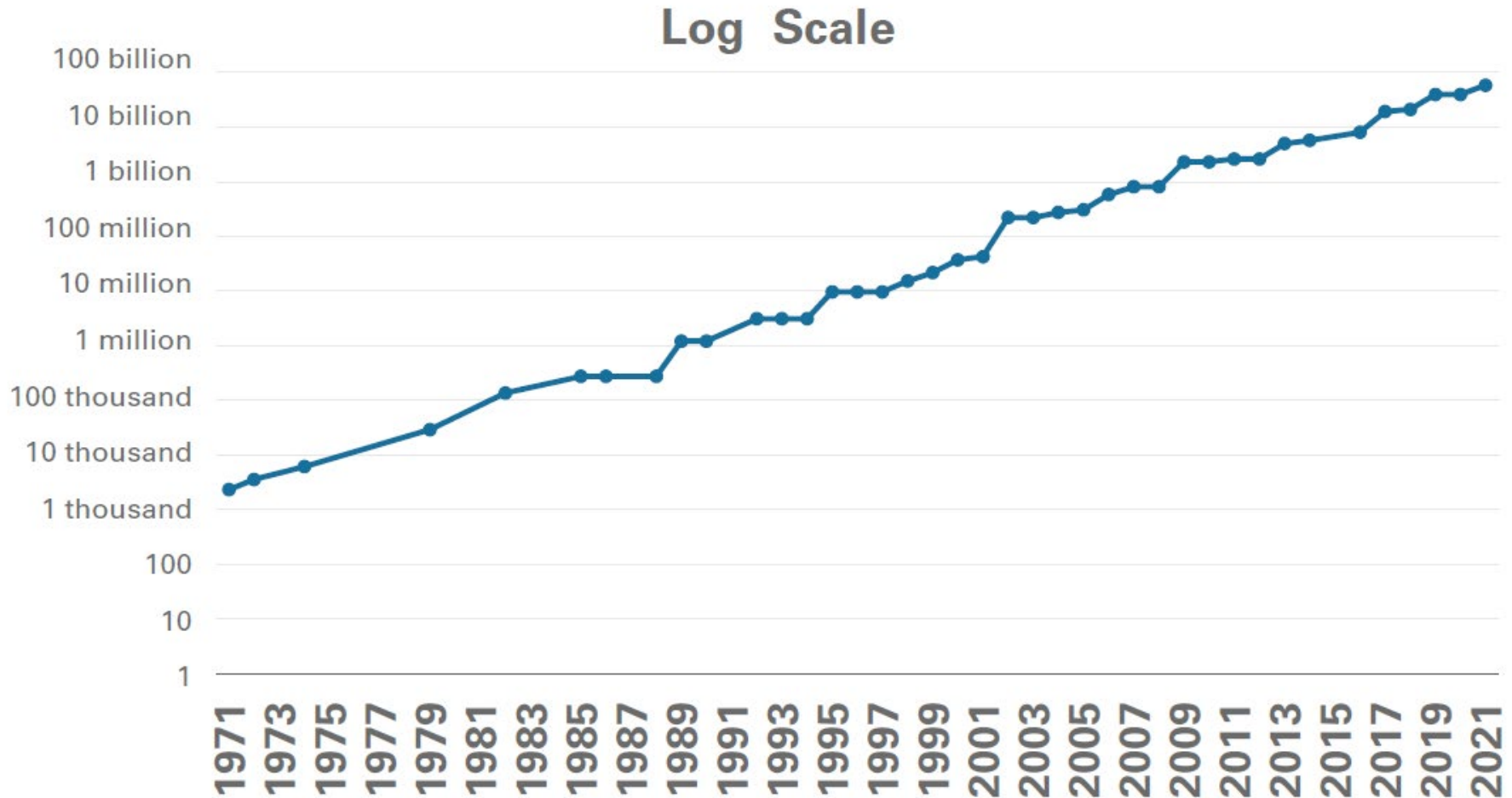


Generative AI and Predictive AI:

- **Generative AI creates new content**
- **Predictive AI uses historical data to forecast future outcomes**
- **Both use machine learning algorithms and deep learning**

COMPUTING POWER

MOORE'S LAW - TRANSISTORS PER MICROPROCESSOR

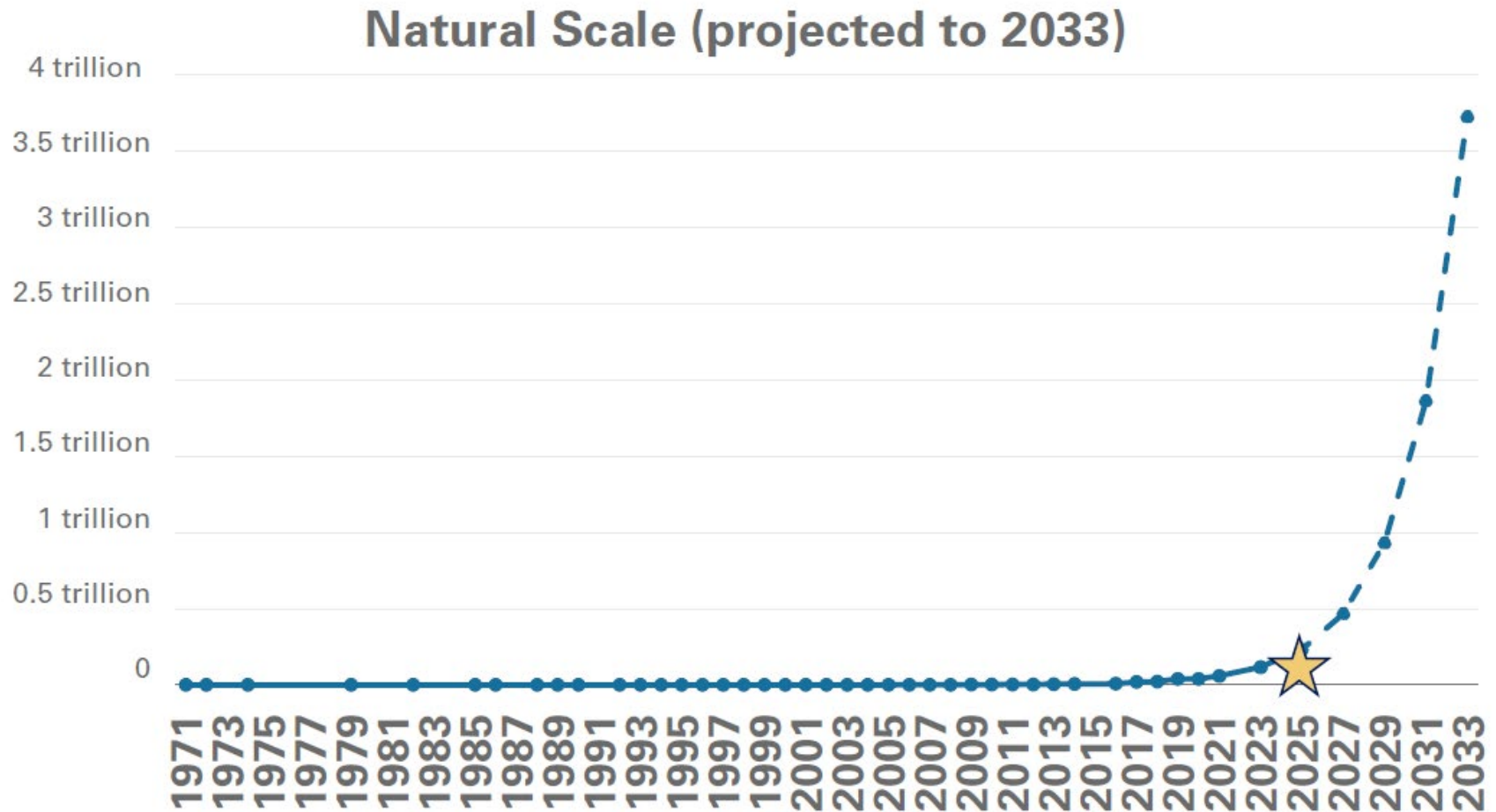


Moore's law is an observation that the number of transistors on computer chips doubles every two years.

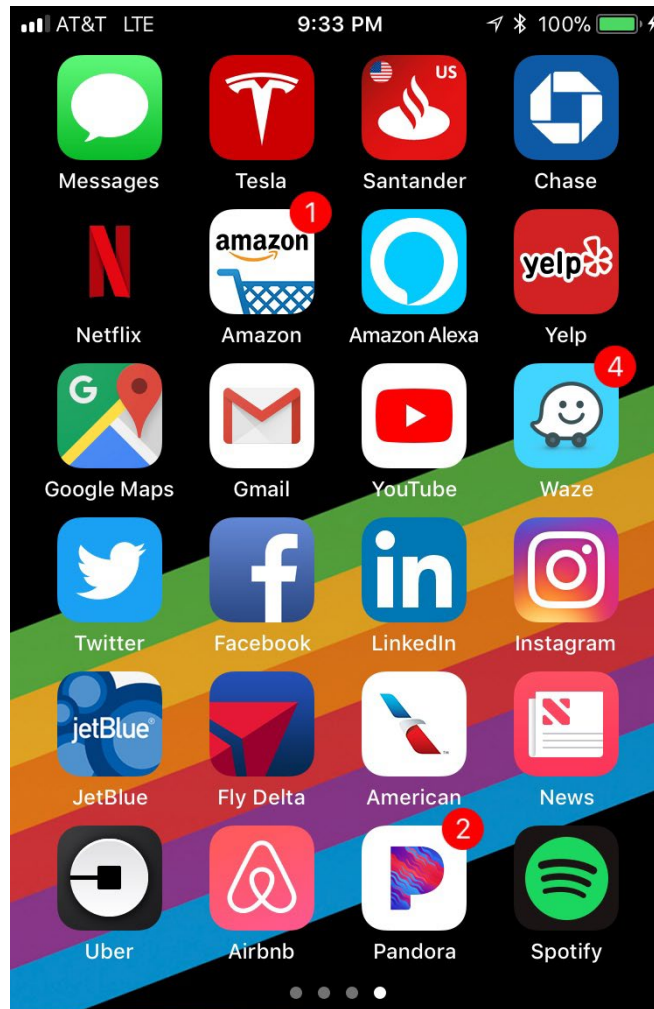
Log scales show the base value of 10 raised to the power of a value (10 has a log of 1, 100 has a log of 2).

COMPUTING POWER

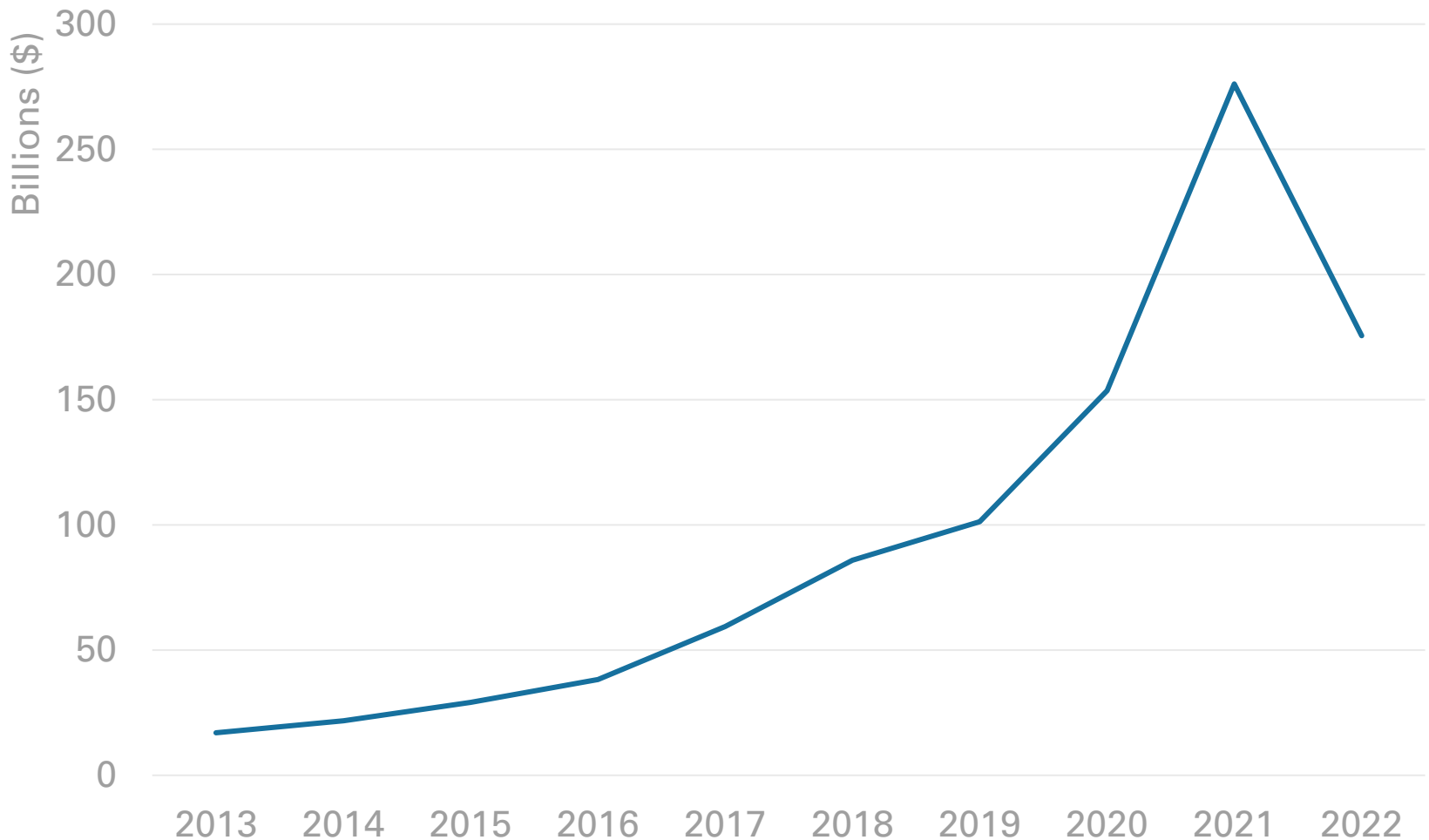
MOORE'S LAW - TRANSISTORS PER MICROPROCESSOR



ARTIFICIAL INTELLIGENCE

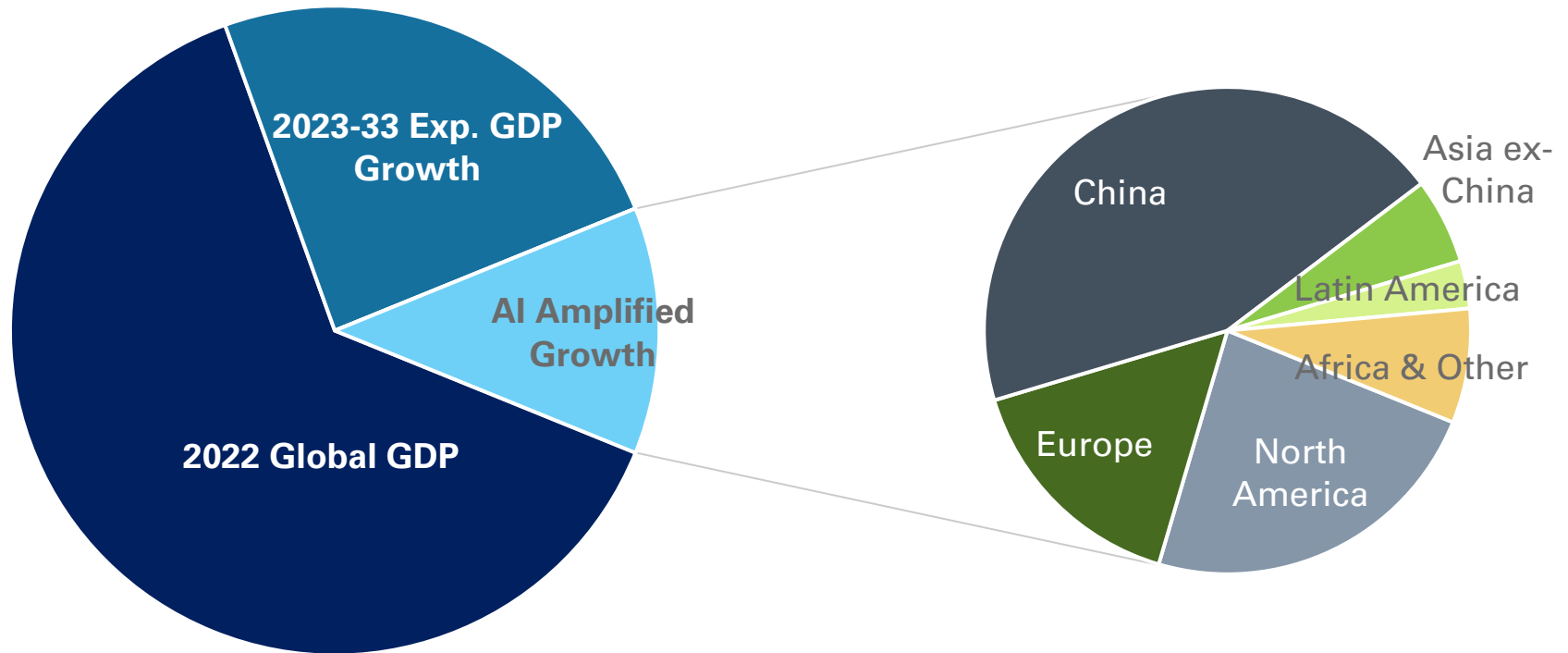


GLOBAL CORPORATE INVESTMENT IN AI



AI EXPECTED TO DRIVE GLOBAL GROWTH

PROJECTED 2033 GLOBAL GDP



BROAD POTENTIAL INVESTMENT APPLICATIONS

Industry	Examples of AI Use Cases
Healthcare	Medical diagnosis, drug discovery, personalized treatment plans, predictive analytics, patient monitoring
Finance	Fraud detection, risk assessment, trading algorithms, customer service chatbots, personalized financial advice
Transportation	Autonomous vehicles, route optimization, predictive maintenance, traffic management, fleet management
Retail	Personalized recommendations, chatbots, inventory management, supply chain optimization, visual search
Manufacturing	Predictive maintenance, quality control, supply chain optimization, autonomous robots, predictive analytics
Education	Personalized learning, real-time feedback, administrative automation, chatbots, adaptive assessments
Agriculture	Crop monitoring, disease detection, yield optimization, irrigation management, weather forecasting
Energy	Energy usage monitoring, renewable energy optimization, predictive maintenance, asset management, demand forecasting
Law	Contract analysis, research, doc review, e-discovery, compliance
Entertainment	Personalized recommendations, chatbots, content creation, sentiment analysis, interactive experiences

IMPLICATIONS FOR THE INVESTMENT WORLD



HOW CAN INVESTORS GET EXPOSURE TO AI?

AI FINANCIAL EXPOSURE

VENTURE CAPITAL



MEGA-CAP TECH



Venture:
OpenAI
Sequoia
Zymergen
Bessemer
SentinelOne
ElementalAI

MegaCap:
Microsoft
Google
Apple
ByteDance
Amazon
NVIDIA

NEPC DISCLOSURES

Past performance is no guarantee of future results.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

Some of the information presented herein has been obtained from external sources NEPC believes to be reliable. While NEPC has exercised reasonable professional care in preparing this content, we cannot guarantee the accuracy of all source information contained within.

The opinions presented herein represent the good faith views of NEPC as of the publication date and are subject to change at any time.

This presentation contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.





September 19, 2023

To: Board of Trustees

From: David J. Hunter, Chief Investment Officer

Re: Agenda Item 17: Board Education: Hedge Fund Asset Class

A handwritten signature in blue ink, appearing to read "D. Hunter", is written over the "From:" line of the memo.

In accordance with the Investment Policy Statement, comprehensive asset class reviews are conducted annually. At the September Board meeting, Head of Public Markets Tim Sweeney will present the Hedge Fund asset class review.

The presentation material is available in the Diligent Resource Center in the tab titled "September 28, 2023, Board Meeting."



Board Education: Hedge Funds Asset Class

Timothy Sweeney

Director of Public Markets

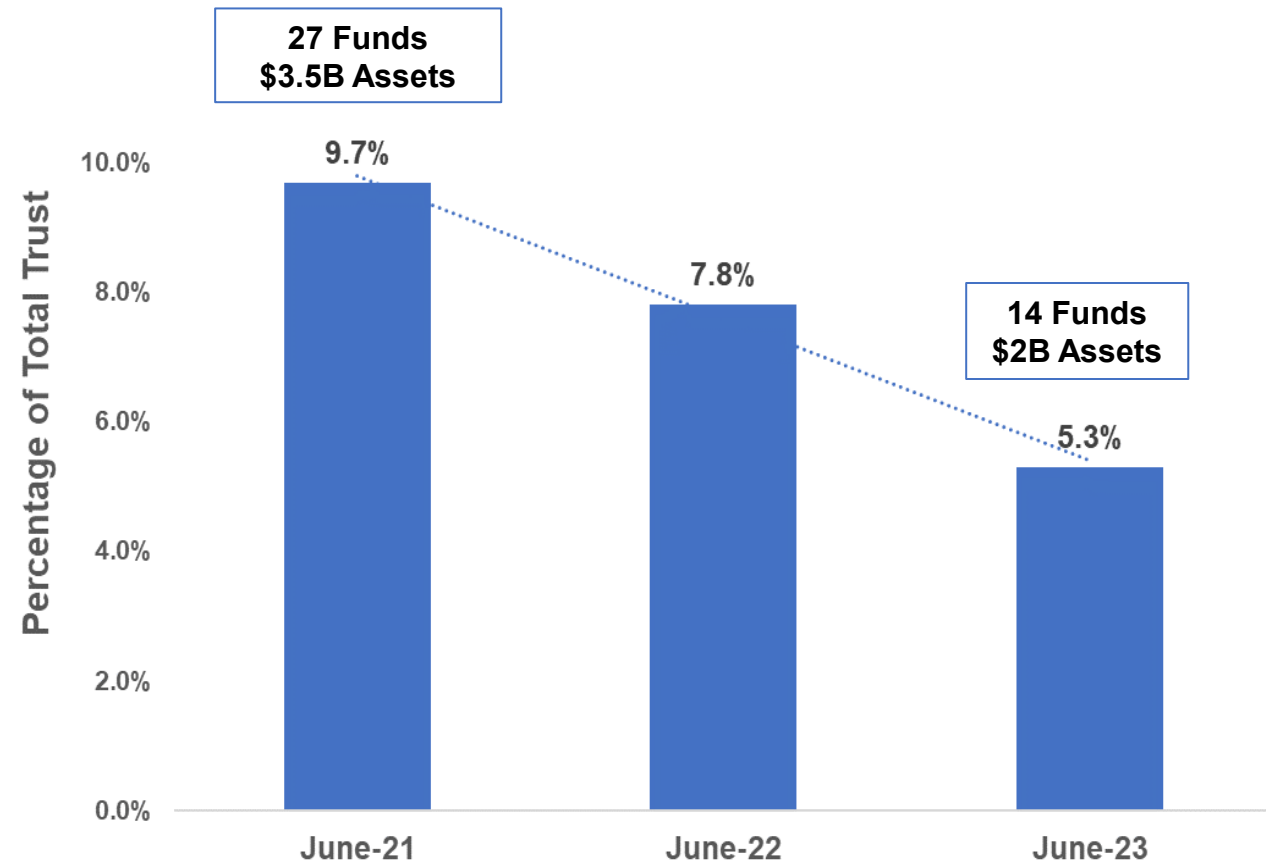
September 28, 2023

What is the Hedge Fund Asset Class?

- The Hedge Fund asset class protects Trust Fund capital, diversifies risk, and enhances returns.
- The Hedge Fund portfolio contains four strategies:
 - **Equity Hedge** – Long and short equity securities
 - **Global Macro** – Interest rates, futures, currencies, and commodities
 - **Relative Value** – Returns that are not sensitive to market direction
 - **Event Driven** – Distressed debt, mergers, and acquisitions

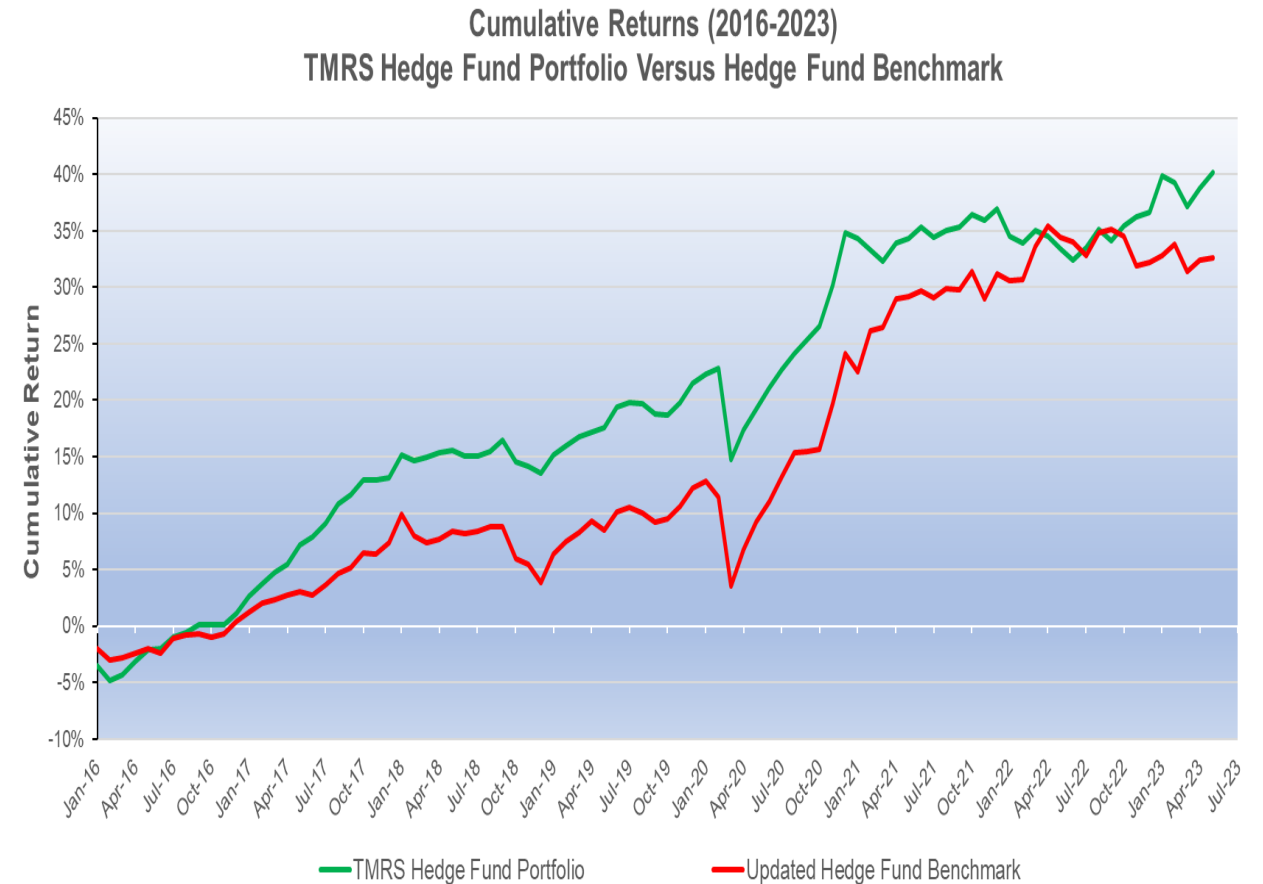
Hedge Fund Portfolio Update as of June 30, 2023

- The Hedge Fund portfolio reached the Board-approved 5% allocation target in the 1st quarter of 2023 at \$2b in assets.
- The portfolio consists of 14 funds that are independently rated 'above average' or 'amongst the best in the strategy' for operational and investment risk by Albourne.



Performance Update as of June 30, 2023

- Staff successfully aligned the Hedge Fund portfolio with managers who have the highest probability of beating the Hedge Fund benchmark.
- For the 1-year period ending June 30, 2023, the Hedge Fund portfolio exceeded the benchmark by more than 6.5%.



Performance as of June 30, 2023

All Strategies	1 Yr	3 Yr (Annualized)	5 Yr (Annualized)	Inception (Annualized)
TMRS Hedge Fund Portfolio	5.36%	5.52%	4.10%	4.33%
Hedge Fund Benchmark	-1.37%	6.56%	4.03%	3.31%
Excess Return	6.73%	-1.04%	0.07%	1.01%

- Staff maintained managers with increased return expectations and aligned equity strategies with the Hedge Fund benchmark.
- In the past year, equity hedge and relative value strategies were strong contributors to performance, while global macro strategies were a small detractor.

Portfolio Initiatives

2023 Checklist



Reach 5% target allocation

Achieved the target allocation in the first quarter of 2023



Increase Portfolio Return Profile

Consolidated top performing managers and simplified the portfolio with higher returning strategies



Adjust to new Hedge Fund Benchmark

Portfolio aligns with the sub strategies defined in the TMRS Investment Policy Statement

2024 Goals



Scale Partnerships

Partner with operationally sound managers that exceed the hedge fund benchmark across varying market cycles



Diversify Equity Hedge Strategies

Focus on managers that capture equity market returns while lowering downside volatility



Continued Benchmark outperformance

Manager returns should exceed the hedge fund benchmark and be accretive to the overall Trust