

Joint Meeting of the Board of Trustees
and
Investment Advisory Committee

December 5, 2023



PUBLIC COMMENTS

December 5, 2023

Public Agenda Item #1

Call Meeting of the ERS Board of Trustees to Order

December 5, 2023

Public Agenda Item #2

Call Meeting of the Investment Advisory Committee to Order

December 5, 2023

Public Agenda Item #3

Consideration of Consent Agenda - (Action)

December 5, 2023

Discussion

Action Item

Public Agenda Item #4

**Consideration of Texa\$aver Product Review Committee
Updates and Investment Policy - (Action)*

December 5, 2023

David T. Veal, Chief Investment Officer and Product Review Committee Chair
Angelica Harborth, Deferred Compensation Program Manager, Group Benefits

Texa\$aver Program

Overview



- Texa\$averSM 401(k)/457 program (Texa\$aver) is a voluntary tax-deferred defined contribution program
- Texa\$aver offers two plans to assist state and higher education employees with personal retirement savings
 - 401(k) plan – available to state agency employees
 - 457 plan – available to state agency and eligible higher education employees

Retirement Preparation:
A Shared Responsibility



Texa\$aver program

Executive Summary



Plan Data as of 9/30/23

401(k) Plan	
Assets under Management (AUM)	\$3.2B
Traditional balances	\$3.1B
Roth balances	\$117.8M
No. of Participant Accounts	238,827
Contributing	108,739
Non-contributing	130,088

457 Plan	
Assets under Management (AUM)	\$1.3B
Traditional balances	\$1.1B
Roth balances	\$106.7M
No. of Participant Accounts	33,852
Contributing	17,062
Non-contributing	16,790

Texa\$aver Program



Investment Products

Texa\$aver offers a range of investment products to help participants reach their individual retirement savings goals. The investment products are the same between both plan types.

Target Date Funds

- Manager reduces investment risk over time by steadily lowering equity exposure
- Requires the lowest level of participant engagement to build and maintain portfolio
- Represents 25% of program assets

Core Funds

- Participants (or managed account platform) create portfolios from asset class building blocks
- Requires a higher level of participant engagement to build and maintain portfolio.
- Represents 70% of program assets

Self Directed Brokerage Account

- Participants create their own investment portfolios using tradeable securities
- Requires the highest level of participant engagement to build and maintain portfolio
- Represents 5% of program assets

Texa\$aver Program

Product Review Committee (PRC)



- Consultant to the Board regarding the Texa\$aver investment lineup
- Meets quarterly to conduct investment reviews and make necessary recommendations regarding the program's investment products
- The PRC may appoint a subcommittee for a specific purpose (e.g. due diligence, fund evaluation, research, etc.)

Texa\$aver Program



Investment Policy and PRC Charter

- The Texa\$aver Investment Policy defines the program's investment philosophy and serves as a guide for fund selection and performance monitoring
- The PRC Charter defines the PRC's composition and outlines the duties and responsibilities of its members
- Staff reviews these documents annually and changes are presented to the Board at least every three years as required by the Texa\$aver Investment Policy
- Both documents were previously reviewed and adopted by the Board in December 2020
- Updates were formulated with ERS Staff, Office of General Counsel, and the PRC
- Proposed updates sent to the Board on 10/27 with feedback requested back by 11/13

Proposed Updates



- Majority of changes were for clarity and readability
- Other updates included clarifying processes for performance monitoring and investment philosophy
- **Chapter II: Governance Roles and Responsibilities**
 - Section A. Plan Documents
 - Removed references to plan document attachments. Plan documents are posted to the Texa\$aver website and housed outside of the Investment Policy.

Proposed Updates Cont'd



- Section B. Roles and Responsibilities
 - Added language to clarify roles of Board of Trustees, Investment Advisory Committee (IAC), and ERS Staff
- Section B. Roles and Responsibilities – Contracted Administrators, Advisors and Vendors
 - Added language to specify qualified vendors of investment products, TPAs, advisors, and investment managers must provide program services in an impartial, conflict-free manner and provide written disclosure to ERS of all conflicts and potential conflicts of interest

Proposed Updates Cont'd



- **Chapter III: Investment Philosophy, Objectives and Structure**
 - Section A. Investment Philosophy
 - Added clarifying language related to participant engagement and the necessity for individual efforts to make informed decisions regarding investment selections
 - Section D. Investment Structure/Categories Tier 2: Professionally Managed Core Funds (Core Funds)
 - Added language specifying that low-cost passively managed investment funds should serve as the PRC's default option during fund due diligence

Proposed Updates Cont'd



- **Chapter V: Investment Product Selection**
 - Section D. Product Search Criteria
 - Added language regarding potential selection of funds utilizing securities lending
- **Chapter VI: Code of Ethics**
 - Expanded Code of Ethics to include Standards of Conduct and Conflicts of Interest sections
- **Addendum I: Product Review Committee Charter**
 - PRC Charter was added as an addendum to the Texa\$aver Investment Policy for continuity and will no longer be a separate document

Discussion

Action Item

PRC and Staff Recommendation



1. Recommend that the Board of the Employees Retirement System of Texas approve the Texa\$averSM 401(k)/457 Program Investment Policy attached as Exhibit A of this agenda item

Public Agenda Item #5

** Consideration of Retirement Program Actuarial Valuations and Financial Status*

December 5, 2023

Jennifer Chambers, Director of Government Relations and Special Projects

Joe Newton, FSA, EA, MAAA, Gabriel, Roeder, Smith & Company

Dana Woolfrey, FSA, EA, MAAA, Gabriel, Roeder, Smith & Company

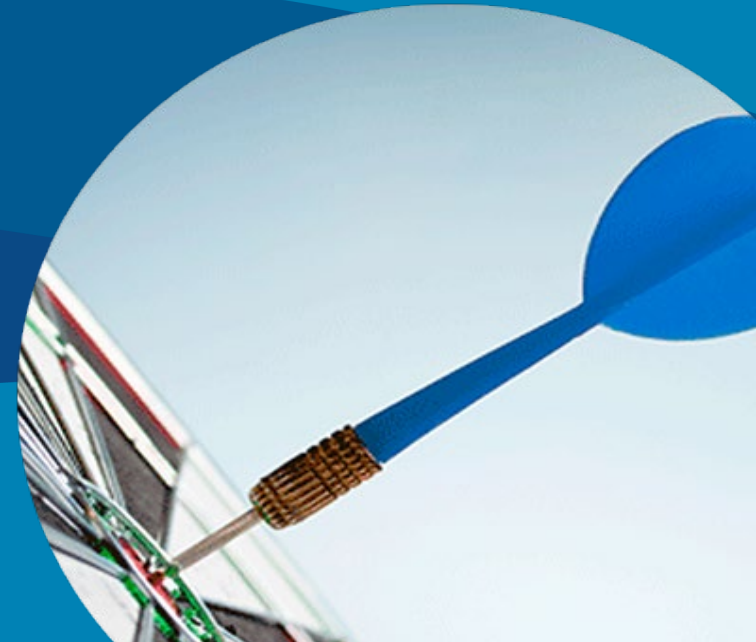


Actuarial Valuations of the ERS Retirement Funds as of August 31, 2023

Joe Newton, FSA, EA, MAAA

Dana Woolfrey, FSA, EA, MAAA

December 5, 2023



Agenda

- Primarily, observe impact of State commitment to pension funding in 2023 legislative session
 - House Bill 1 Appropriations and Senate Bill 30 Supplemental Appropriations
 - ERS Funding Valuation Results
 - \$1B additional appropriation
 - LECOSRF Valuation Results
 - \$772 million appropriation
 - Employer contributions increased from 0.50% to 1.75% of pay
 - JRS2 Valuation Results
 - \$99 million appropriation
 - Employer contributions increased from 15.663% to 19.25% of pay

Purpose of Actuarial Valuation

- Snapshot as of August 31, 2023 using member data, financial data, benefit and contribution provisions, actuarial assumptions and methods as of that date
- Purposes:
 - Determine adequacy of current statutory contributions
 - Set future amounts of contributions if current found to be inadequate
 - Measure the actuarial liabilities and funding levels
 - Provide other information for reporting
 - GASB 67/68, Annual Comprehensive Financial Report
 - Explain changes in actuarial condition of the plans
 - Track changes over time
 - Analyze future outlook

ERS

Funding Valuation Results

at August 31, 2023

Legacy Payment Dynamic

Sec. 815.407 LEGACY PAYMENTS. (a) In addition to the state contributions required by this subtitle, each fiscal year the state shall make an actuarially determined payment in the amount necessary to amortize the system's unfunded actuarial liabilities by not later than the fiscal year ending August 31, 2054.

- This amount is a level dollar amount schedule, not tied to payroll or headcount
- Projected at \$510 million per year through 2054 in the initial impact statement
- ERS will also continue to receive contributions from the members and 10% of pay contributions from the State/agencies

Legacy Payment Dynamic

- Statutory commitment to make at least actuarially determined level dollar contribution to fully fund by August 31, 2054
 - Time is the known quantity, not contributions
 - Exactly 31 years at valuation date
 - \$510 million annual appropriations were made in 2021 and 2023 sessions
 - Based on analysis during 2021 session
 - Future contributions can vary based on
 - Experience
 - Determines required minimum
 - Choice to hold at \$510 million when formula might require a lower amount
 - Reduces chance of required increase from experience
 - Reduces time to full funding
- Assuming future contributions aren't reduced

Senate Bill 30 Supplemental Appropriations

- Extra \$165 million to make up unanticipated (method of finance) shortfall on FY 2023 \$510 million legacy payment
- Extra \$900 million to pay down unfunded liability
 - Reduces future minimum legacy payments needed to meet statutory full funding requirement by \$77 million per year or,
 - To the extent State continues \$510 million:
 - could reduce time to full funding or,
 - reduces the necessary investment return needed to achieve full funding by 2054
 - Based on current results, need 6.68% annual return to reach full funding in 2054

Larger than expected salary increases had the largest impact on plan liabilities

- Increased UAAL by \$869 million
- Adverse impact to static results
 - Funded ratio, unfunded liability as of August 31, 2023
 - This increases the liability (and thus UAAL) because now annuities for current actives are projected to be larger than previous projections
- Limited impact to forward looking results
 - The increase in liabilities is offset over time by higher payroll contributions
 - Minimal impact to long-term trajectory of funded ratio and UAAL, minimum legacy payment

Investment Experience was very close to expected

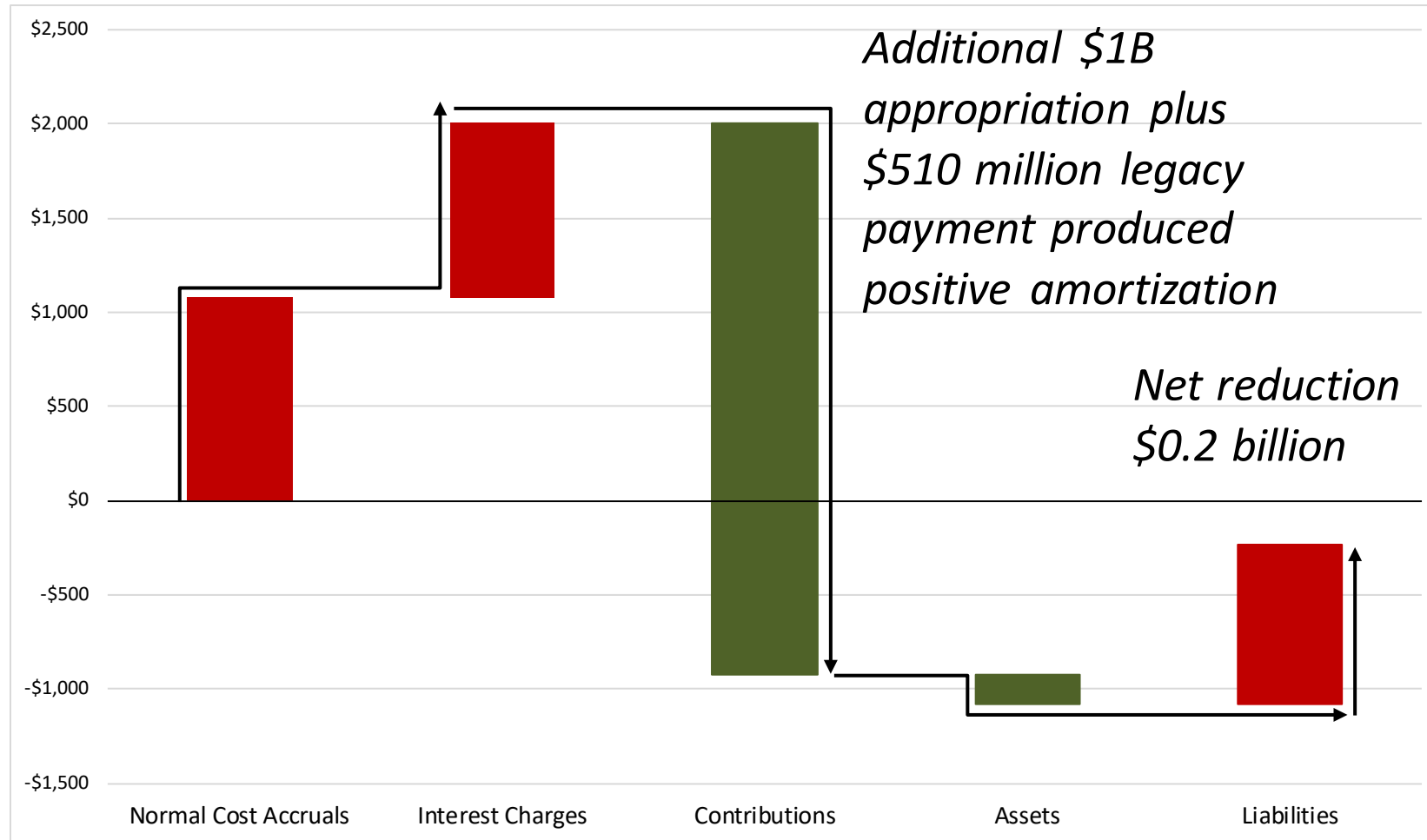
- FY23 Market return 6.75%
- 5- year smoothed actuarial return 7.5%
- Compares to actuarial assumption of 7.0%
- Modest gains on valuation results

Valuation Results (ERS)

(\$ in millions)

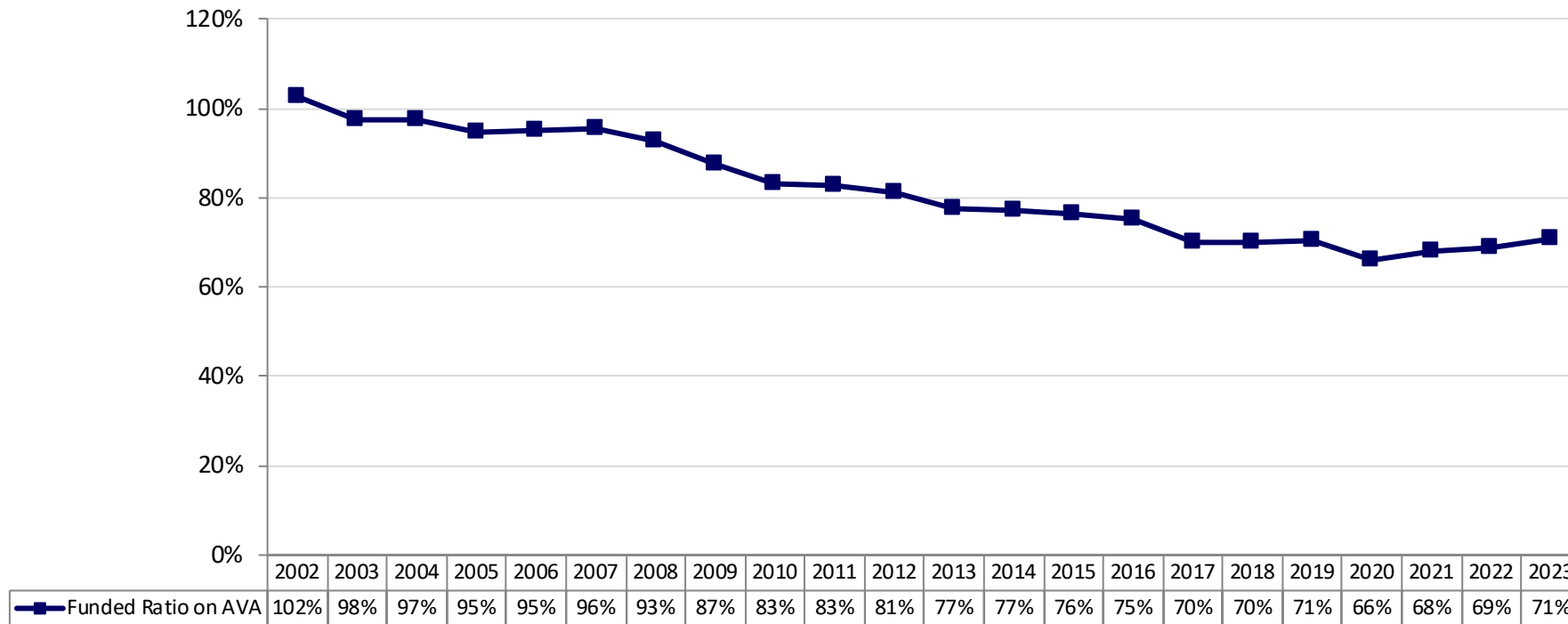
Actuarial Valuation as of August 31,		
	2023	2022
Actuarial Accrued Liability	\$47,993	\$45,862
Actuarial Value of Assets	<u>33,977</u>	<u>31,616</u>
Unfunded Accrued Liability	\$14,016	\$14,246
Funded Ratio	70.8%	68.9%
Amortization Period Per Section 815.407	31 years	32 years

Change in UAAL Since Prior Valuation



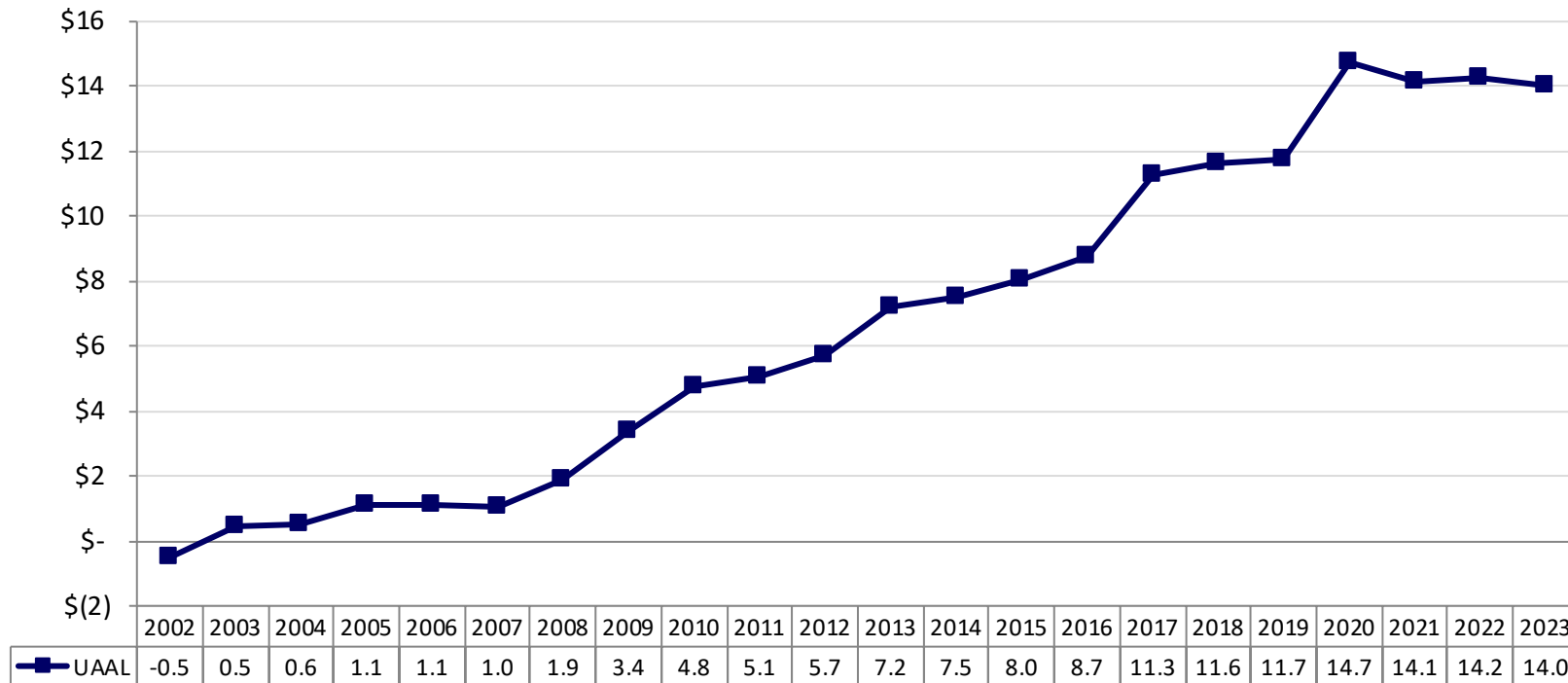
Funded Ratio

- The Funded Ratio increased from 69% to 71%
- Primarily from additional \$1 billion from Senate Bill 30



UAAL History

- Trend in UAAL is the main metric for monitoring the strength of a pension system
- An increasing UAAL means the accumulation of assets is falling further behind the target
- A declining UAAL (especially for a number of years in a row) means the package of benefits, funding, and investments is strengthening in comparison to the target



LECOSRF

Funding Valuation Results

at August 31, 2023

Timing of LECOS and JRS2 Appropriations

- \$772 million for LECOS and \$99 million JRS2 came in on September 8 (8 days after the valuation date)
- Completely changes the funding dynamic
- For **funding** valuation / long-term decision making purposes these amounts were **included**
 - Start reflecting the *new normal* now
- For **accounting** these amounts were **not included**
 - still reflects large net pension liability
 - but subsequent event is noted

LECOSRF *Needed* Additional Funding

Amounts based on prior valuation

- Going into legislative session

Ongoing Costs	Statutory Contributions	Sufficient?
1.94% of Pay	0.50% employee payroll 0.50% employer payroll <u>0.78% of pay court fees</u> 1.78% of pay total	x

Legacy Debt	Funds Available for Legacy Debt	Sufficient?
\$715 million	No contributions available to pay down legacy debt	x

- Not paying ongoing costs, adding to already significant debt
- Time to depletion = 23 years

LECOSRF *Got* Additional Funding

Amounts based on prior valuation

- Post-legislative session

Ongoing Costs	Statutory Contributions	Sufficient?
1.94% of Pay	0.50% employee payroll 1.75% employer payroll <u>0.78% of pay court fees</u> 3.03% of pay total	✓

Legacy Debt	Funds Available for Legacy Debt	Sufficient?
\$715 million	Paid \$772 million to cover full debt and year of interest	✓

- Paid off unfunded liability, increased contributions sufficiently to pay ongoing costs
- Time to depletion = N/A, time to full funding = now

Valuation Results - LECOS

(\$ in millions)

LECO Supplemental Retirement Fund		
Actuarial Valuation as of	2023	2022
Actuarial Accrued Liability	\$1,800	\$1,729
Actuarial Value of Assets	<u>1,800</u>	<u>1,014</u>
Unfunded Accrued Liability	\$0	\$715
Funded Ratio	100.0%	58.6%
Statutory Contributions	3.26%	1.78%
Normal Cost Rate	2.11%	1.94%
Contributions Sufficient?	Yes	No

JRS2

Funding Valuation Results

at August 31, 2023

JRS2 Needed Additional Funding

Amounts based on prior valuation

- Going into legislative session

Ongoing Costs	Statutory Contributions	Sufficient?
26.81% of Pay	9.38% employee payroll <u>15.66% employer payroll</u> 25.04% of pay total	✘

Legacy Debt	Funds Available for Legacy Debt	Sufficient?
\$89 million	No contributions available to pay down legacy debt	✘

- Not paying ongoing costs, adding to already significant debt
- Time to depletion = 47 years

JRS2 Got Additional Funding

Amounts based on prior valuation

- Post-legislative session

Ongoing Costs	Statutory Contributions	Sufficient?
26.81% of Pay	9.38% employee payroll <u>19.25% employer payroll</u> 28.63% of pay total	✓

Legacy Debt	Funds Available for Legacy Debt	Sufficient?
\$89 million	Paid \$99 million to cover full debt and year of interest	✓

- Paid off unfunded liability, increased contributions sufficiently to pay ongoing costs
- Time to depletion = N/A, time to full funding = now

Valuation Results – JRS2

(\$ in millions)

Judicial Retirement System of Texas, Plan 2		
Actuarial Valuation as of	2023	2022
Actuarial Accrued Liability	\$672	\$642
Actuarial Value of Assets	<u>679</u>	<u>553</u>
Unfunded Accrued Liability	(\$8)	\$89
Funded Ratio	101.2%	86.2%
Statutory Contributions	28.61%	25.04%
Normal Cost Rate	28.24%	26.81%
Contributions Sufficient?	Yes	No

JRS2 new hire cash balance structure

- Senate Bill 1245 introduced Cash Balance Plan for judges taking office on or after September 1, 2024
- Mirrors most of the ERS provisions
- Lower cost plan
- Does not impact this valuation
- Will increase plan sustainability in the future
 - More buffer between needed and received contributions
 - Benefits more responsive to adverse experience (less volatility in surplus/UAAL)

Low-Default Risk Obligation Measure

- New Actuarial Standard of Practice Requirement
- Lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits
 - 5.15% discount rate
- Difference = Cost to De-risk

	ERS	LECOS	JRS2
A. LDROM measure of benefits earned as of the measurement date:	\$59,717 million	\$2,270 million	\$799 million
B. Valuation liability at 7% on measurement date:	\$47,992 million	\$1,800 million	\$672 million
C. Cost to mitigate investment risk in the System's portfolio:	\$11,725 million	\$470 million	\$127 million

Summary

- LECOSRF and JRS2 outlooks completely changed in one legislative session
- ERS is still on track
- Benefit security remarkably improved for all participants in ERS plans over the last 3 years
- Recommend to stay the course

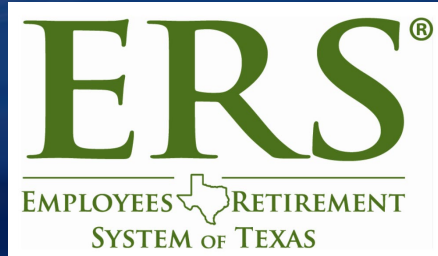
Discussion

Public Agenda Item #6

** Consideration of Quarterly Review of Investment
Performance and Market Environment*

December 5, 2023

David T. Veal, Chief Investment Officer
John McCaffrey, Managing Director of Portfolio Management
Sam Austin, Partner, NEPC



QUARTERLY PERFORMANCE REPORT

EMPLOYEES RETIREMENT
SYSTEM OF TEXAS

DECEMBER 5, 2023

Sam Austin, Partner

Michael Malchenko, Consultant



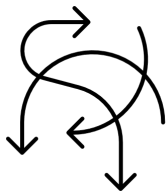
TABLE OF CONTENTS

- Economic and Market Environment
- Executive Summary



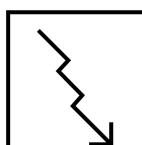
ECONOMIC AND MARKET ENVIRONMENT

ECONOMIC ENVIRONMENT



Navigating uncertainty

- Geopolitical tensions add uncertainty to economic picture
- Fed has signaled keeping rates “higher for longer” to continue inflation fight
- High interest costs continue to roll through economy



Bond yields spike

- U.S. 10-year Treasury yields have spiked to highest level since 2007
- U.S. economy continues to show resilience with expected positive 3Q23 GDP growth
- Stock valuations have come down

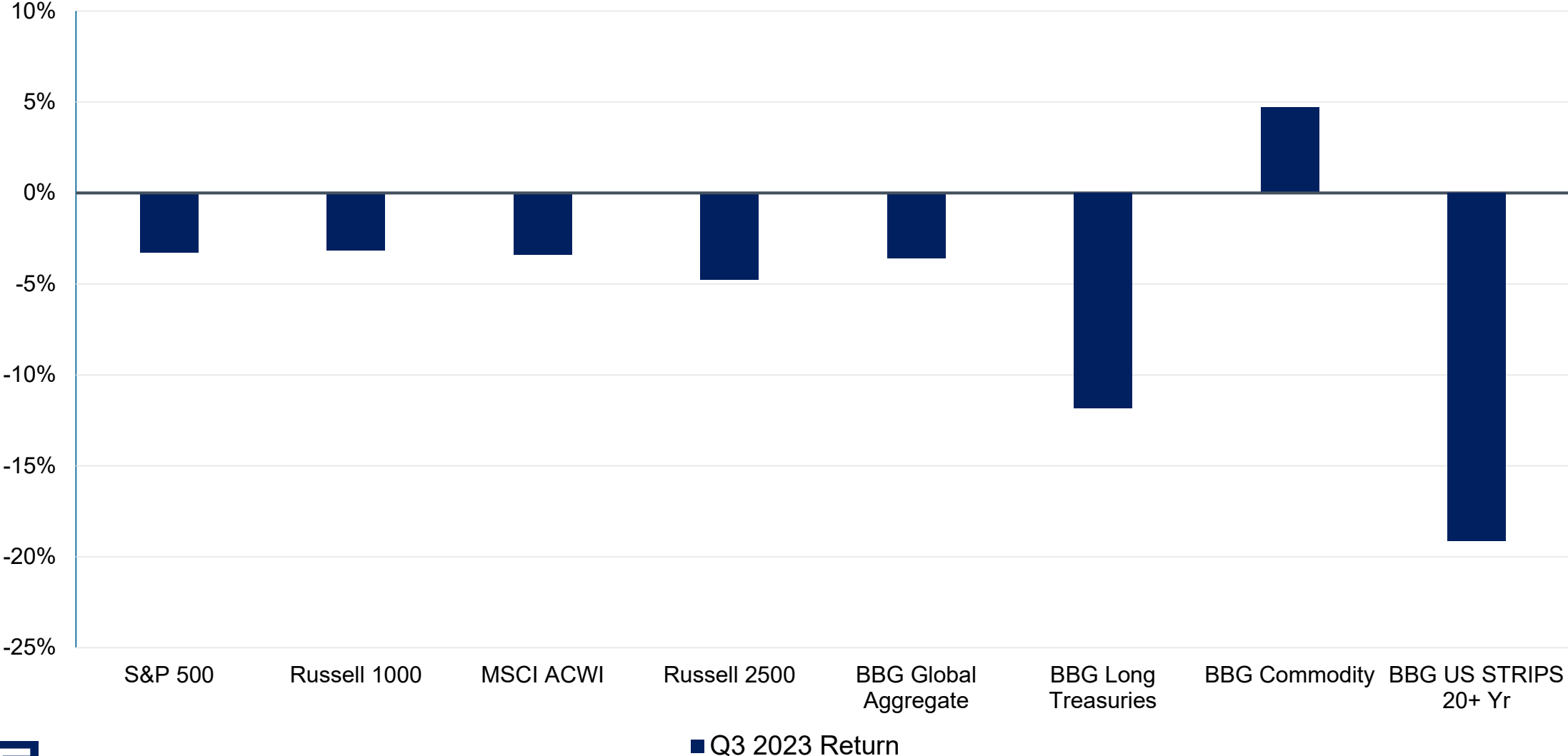


Inflation continues to decelerate

- Annual CPI has declined from 9.1% in June 2022 to 3.7% in September 2023
- Further price deceleration may be more difficult
- Fed may hold on further rate hikes if growth weakens



BEST AND WORST INDEX PERFORMANCE





EXECUTIVE SUMMARY



ERS TRUST DASHBOARD

Performance	CYTD	FYTD 2023
Total Trust	5.31% (28)	-1.58% (8)
Policy Benchmark	4.37% (56)	-1.74% (10)
Excess Return	0.94%	0.16%

Risk Statistics	5-Year	3-Year	
	Sharpe Ratio	Sortino Ratio	Tracking Error
Total Trust	0.69 (1)	1.05 (3)	1.78%
Policy Benchmark	0.49 (14)	0.73 (13)	-

Attribution Summary

Largest Contributors (Quarter)

Private Real Estate (+0.2%) contributed positively versus the Policy Benchmark, followed by Public Equity (0.1%), Public Real Estate (0.1%), and Infrastructure (0.1%).

Largest Detractors (Quarter)

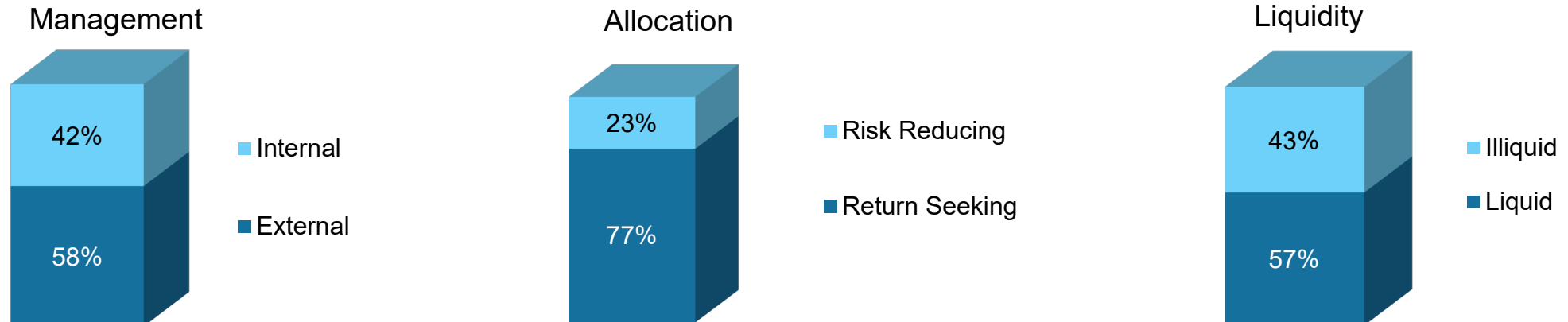
No composites contributed negatively versus the Policy Benchmark.



Note: Numbers in parentheses indicate the Trust's rank among the peer universe of Public Defined Benefit plans greater than \$1 Billion.

ERS TRUST DASHBOARD

Profile	
Market Value at September 30, 2023	\$36.24 Billion
Actuarial Accrued Liability August 31, 2022	\$45.9 Billion
Actuarial Value of Assets August 31, 2022	\$31.6 Billion
ERS Trust Funded Ratio August 31, 2022	68.9%
Actuarial Assumed Rate of Return	7.00%
Retirees and Beneficiaries August 31, 2022	122,720
Retirement Payments Year Ended August 31, 2022	\$3.91 Billion





PERFORMANCE SUMMARY

TOTAL TRUST PERFORMANCE DETAIL (NET OF FEES)

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Trust	\$36,244,043,590	-0.6% (3)	-1.6% (8)	9.2% (76)	9.5% (1)	7.3% (2)	7.5% (6)
			-1.7% (10)	8.7% (89)	6.5% (28)	5.8% (24)	

- For the one-year period ended September 30, 2023, the Trust outperformed the policy benchmark by 0.5%.
- In the one-year period, the Trust's assets increased from \$32.19 billion to \$36.24 billion. This includes a \$3.40 billion net investment gain within the one-year period and a \$238 million net investment loss within the third calendar quarter of 2023.

Note: The Passive Index is comprised of 80% MSCI ACWI IMI and 20% Bloomberg Intermediate Treasury Index. Numbers in parentheses indicate the Trust's rank among the peer universe of Public Defined Benefit plans greater than \$1 Billion.



TOTAL TRUST PERFORMANCE DETAIL (NET OF FEES)

3 Years Ending September 30, 2023

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
--	--------	--------------------	--------------	---------------

Total Trust	9.5% (1)	7.5% (3)	1.00 (1)	1.76 (1)
Policy Benchmark	6.5% (28)	7.8% (7)	0.62 (15)	1.00 (15)

5 Years Ending September 30, 2023

	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
--	--------	--------------------	--------------	---------------

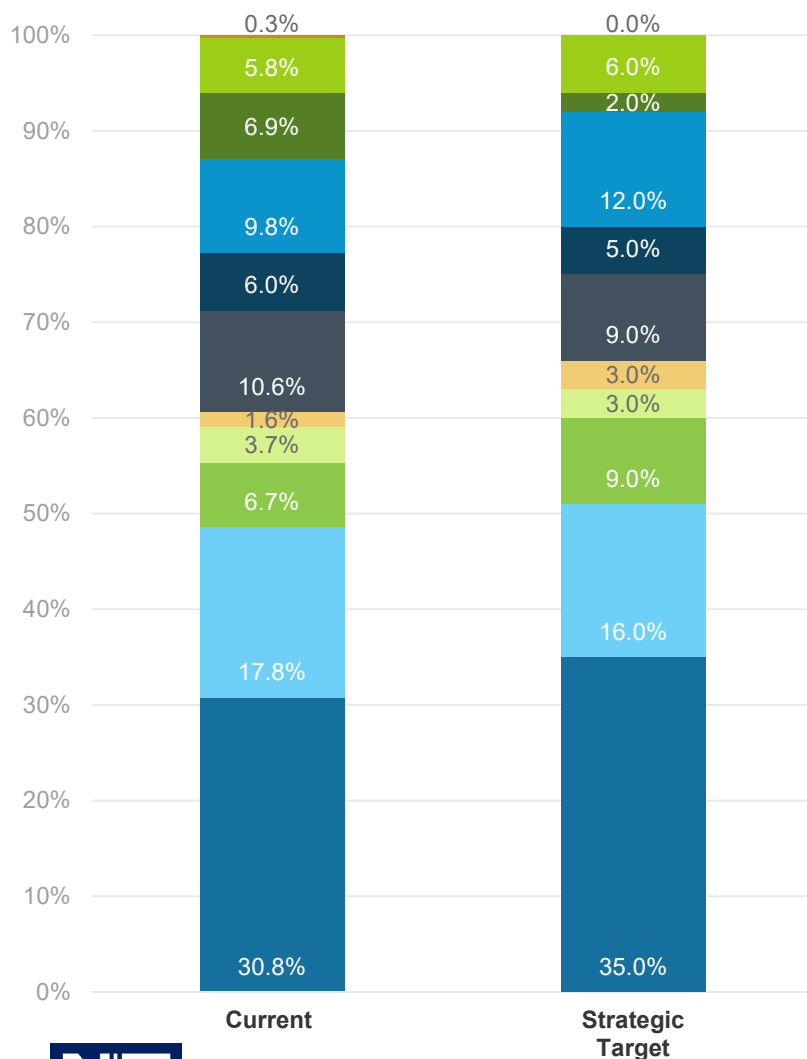
Total Trust	7.3% (2)	8.1% (3)	0.69 (1)	1.05 (3)
Policy Benchmark	5.8% (24)	8.7% (9)	0.49 (14)	0.73 (13)

- The three-year and five-year Trust returns have outperformed the actuarial rate of return.
- On a risk-adjusted basis, the three-year and five-year Sharpe and Sortino Ratios outperformed the benchmark, indicating that active management benefitted the plan.

TOTAL TRUST ASSET GROWTH SUMMARY

	Fiscal YTD	Last Three Months	Year-To-Date	One Year	Three Years	Five Years
Beginning Market Value	\$35,566,772,822	\$35,467,365,822	\$33,167,264,323	\$32,190,473,886	\$28,618,113,390	\$28,923,385,305
Contributions	\$4,587,937,582	\$5,306,240,035	\$10,751,385,503	\$12,621,737,303	\$57,053,799,323	\$85,210,021,275
Withdrawals	-\$3,331,315,000	-\$4,291,913,270	-\$9,410,008,285	-\$11,965,733,691	-\$58,576,794,506	-\$89,354,376,975
Net Cash Flow	\$1,256,622,582	\$1,014,326,765	\$1,341,377,218	\$656,003,612	-\$1,522,995,183	-\$4,144,355,701
Net Investment Change	-\$579,351,814	-\$237,648,997	\$1,735,402,049	\$3,397,566,092	\$9,148,925,383	\$11,465,013,986
Ending Market Value	\$36,244,043,590	\$36,244,043,590	\$36,244,043,590	\$36,244,043,590	\$36,244,043,590	\$36,244,043,590
Net Change	\$677,270,768	\$776,677,768	\$3,076,779,267	\$4,053,569,704	\$7,625,930,200	\$7,320,658,285

TRUST ASSET ALLOCATION VS. POLICY TARGETS

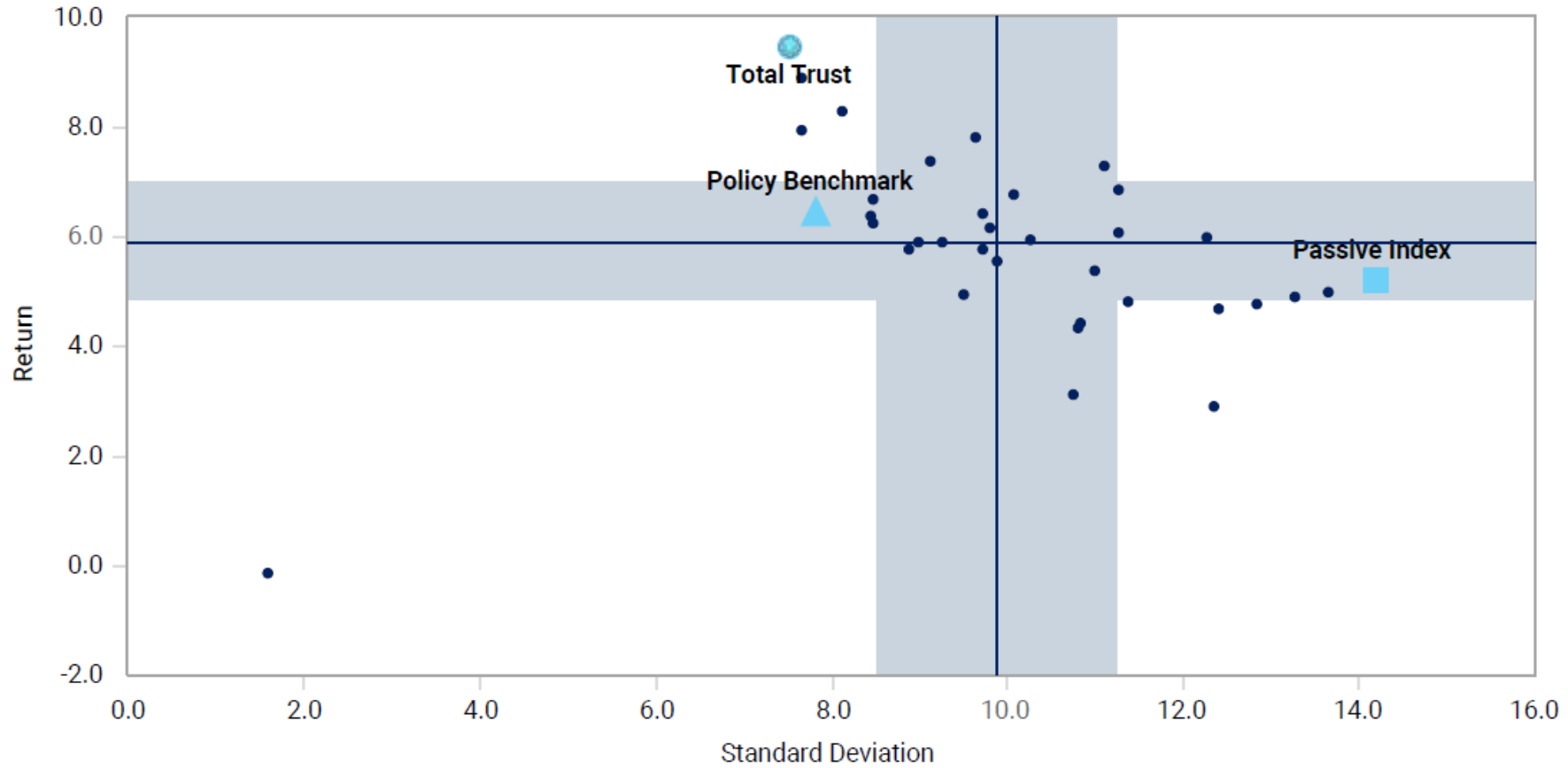


Asset Allocation as of September 30, 2023				
	Current Value	Current	Strategic Target	Tactical Range
Public Equity	\$11,156,779,349	30.8%	35.0%	25.0% - 45.0%
Private Equity	\$6,457,168,091	17.8%	16.0%	11.0% - 21.0%
Public Credit	\$2,433,782,758	6.7%	9.0%	4.0% - 14.0%
Private Credit	\$1,357,989,405	3.7%	3.0%	0.0% - 8.0%
Real Estate - Public	\$574,739,202	1.6%	3.0%	0.0% - 13.0%
Real Estate - Private	\$3,831,548,806	10.6%	9.0%	4.0% - 14.0%
Infrastructure	\$2,192,581,287	6.0%	5.0%	0.0% - 10.0%
Rates	\$3,559,161,740	9.8%	12.0%	7.0% - 17.0%
Cash	\$2,487,445,468	6.9%	2.0%	1.0% - 3.0%
Hedge Funds	\$2,091,580,320	5.8%	6.0%	0.0% - 11.0%
Special Situations	\$101,267,165	0.3%	0.0%	0.0% - 5.0%
Total	\$36,244,043,590	100%	100%	



TOTAL TRUST RISK/RETURN

3 Years Ending September 30, 2023
vs. InvMetrics Public DB > \$1 Billion

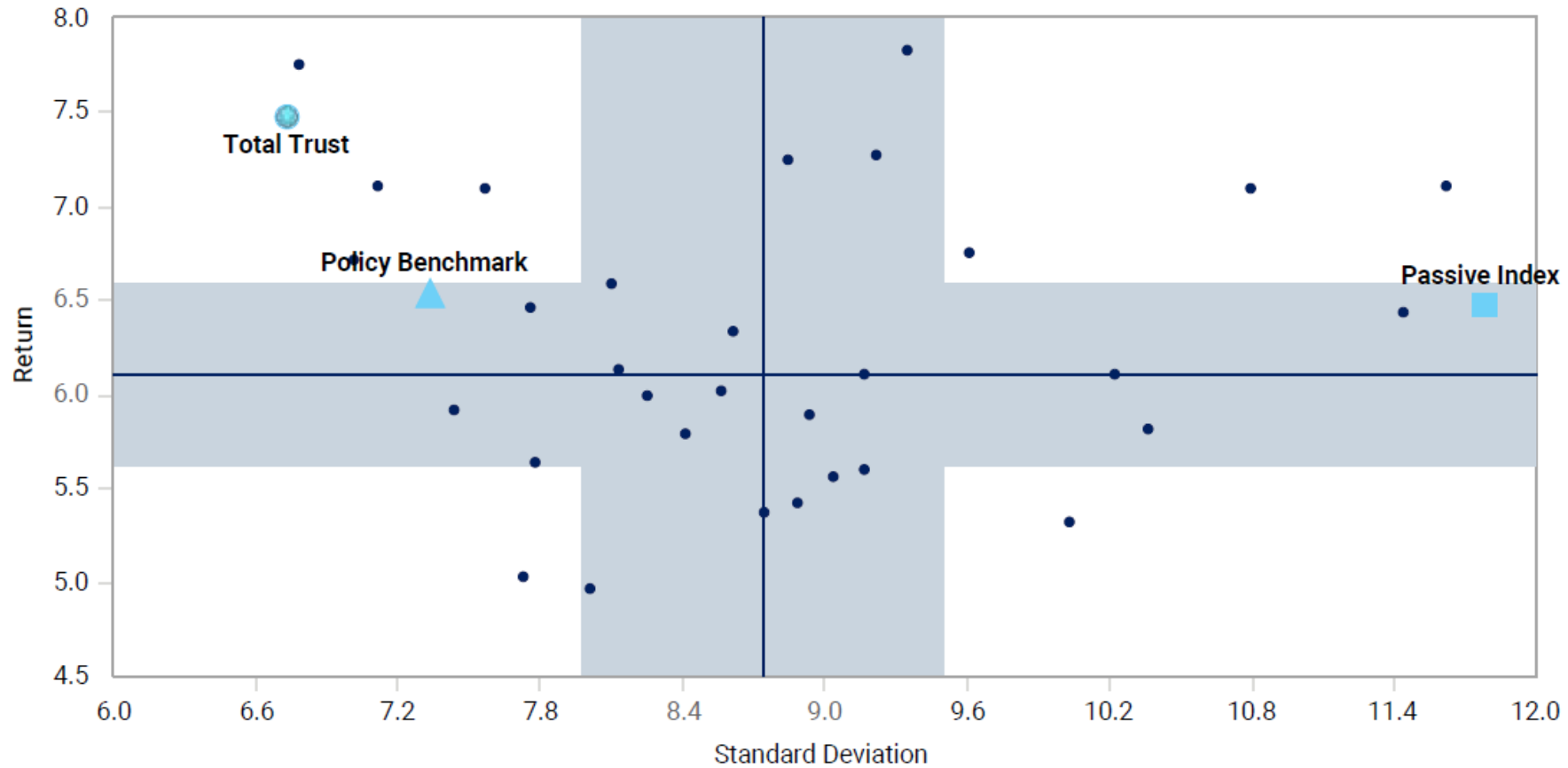


● Total Trust ▲ Policy Benchmark ■ Passive Index



TOTAL TRUST RISK/RETURN

10 Years Ending September 30, 2023
vs. InvMetrics Public DB > \$1 Billion

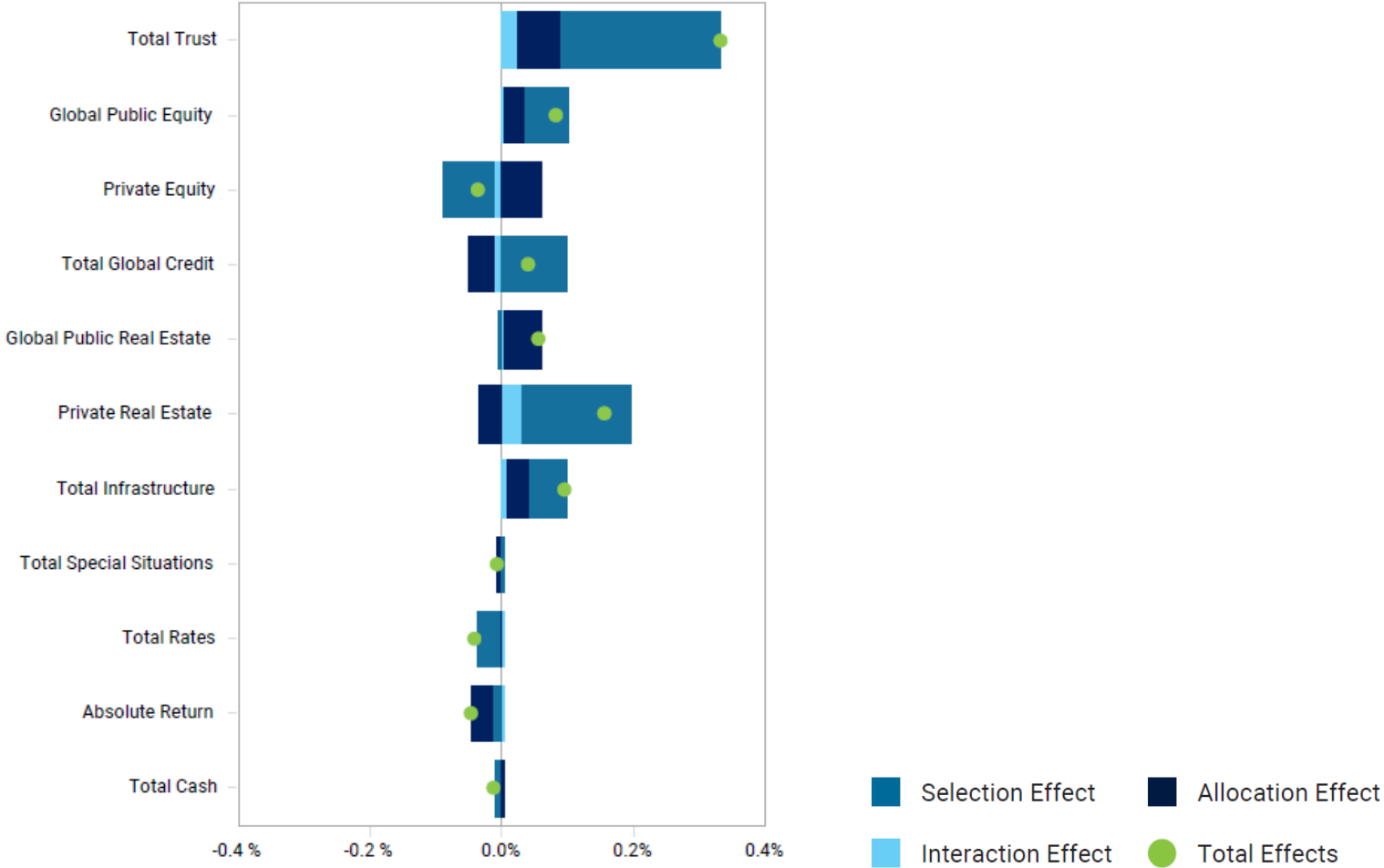


● Total Trust ▲ Policy Benchmark ■ Passive Index



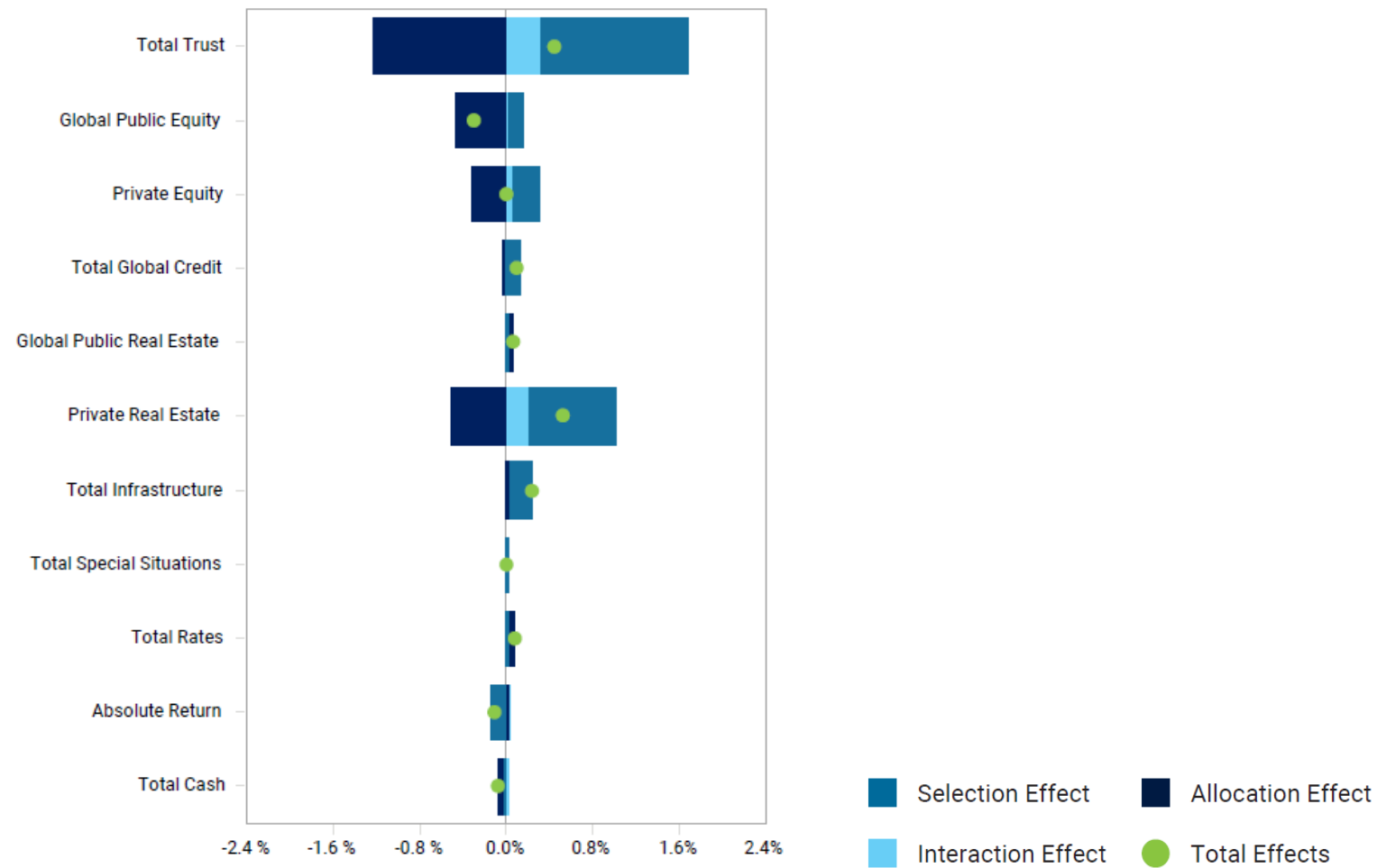
TOTAL TRUST ATTRIBUTION ANALYSIS

Attribution Effects
1 Quarter Ending September 30, 2023

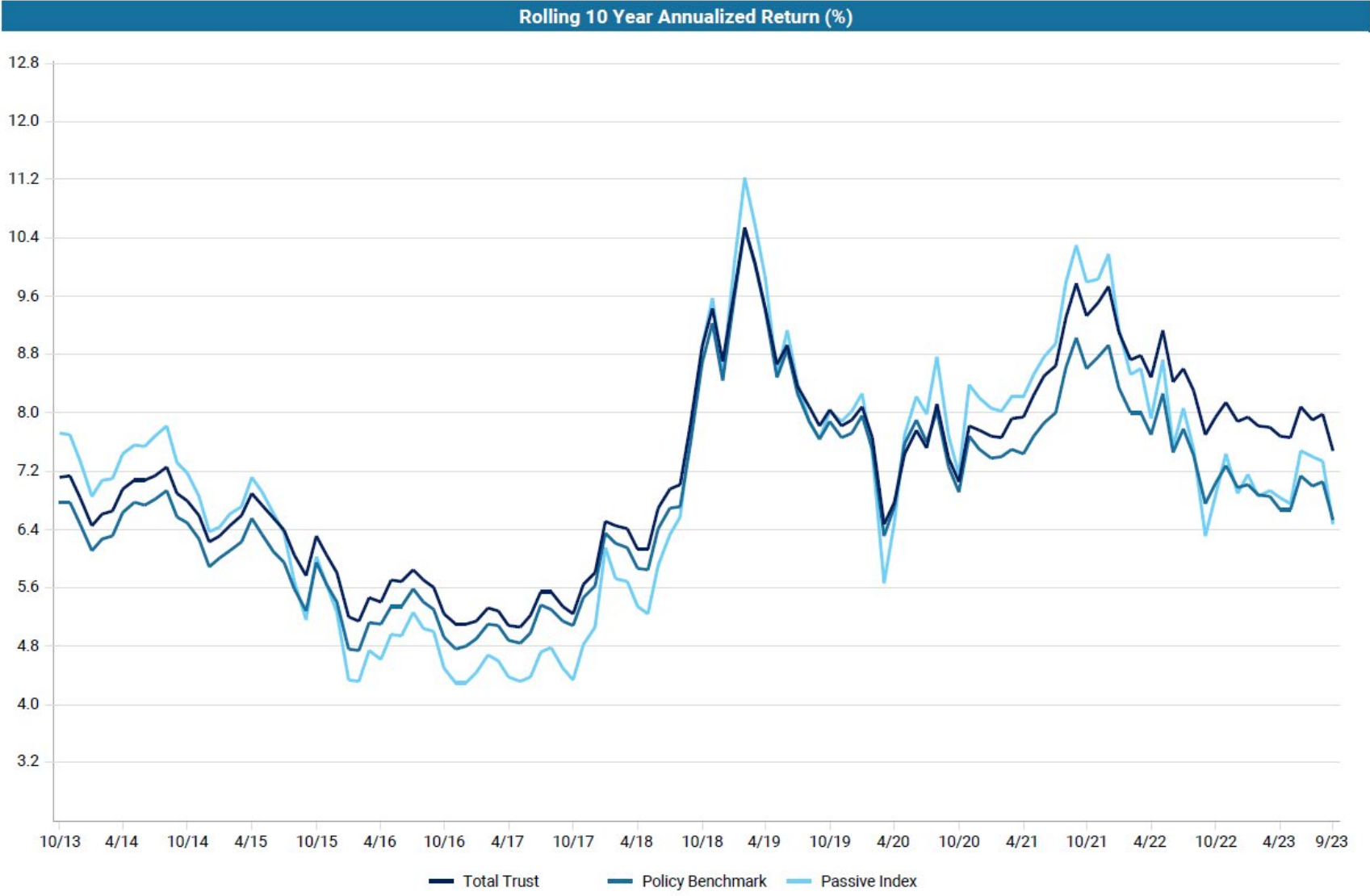


TOTAL TRUST ATTRIBUTION ANALYSIS

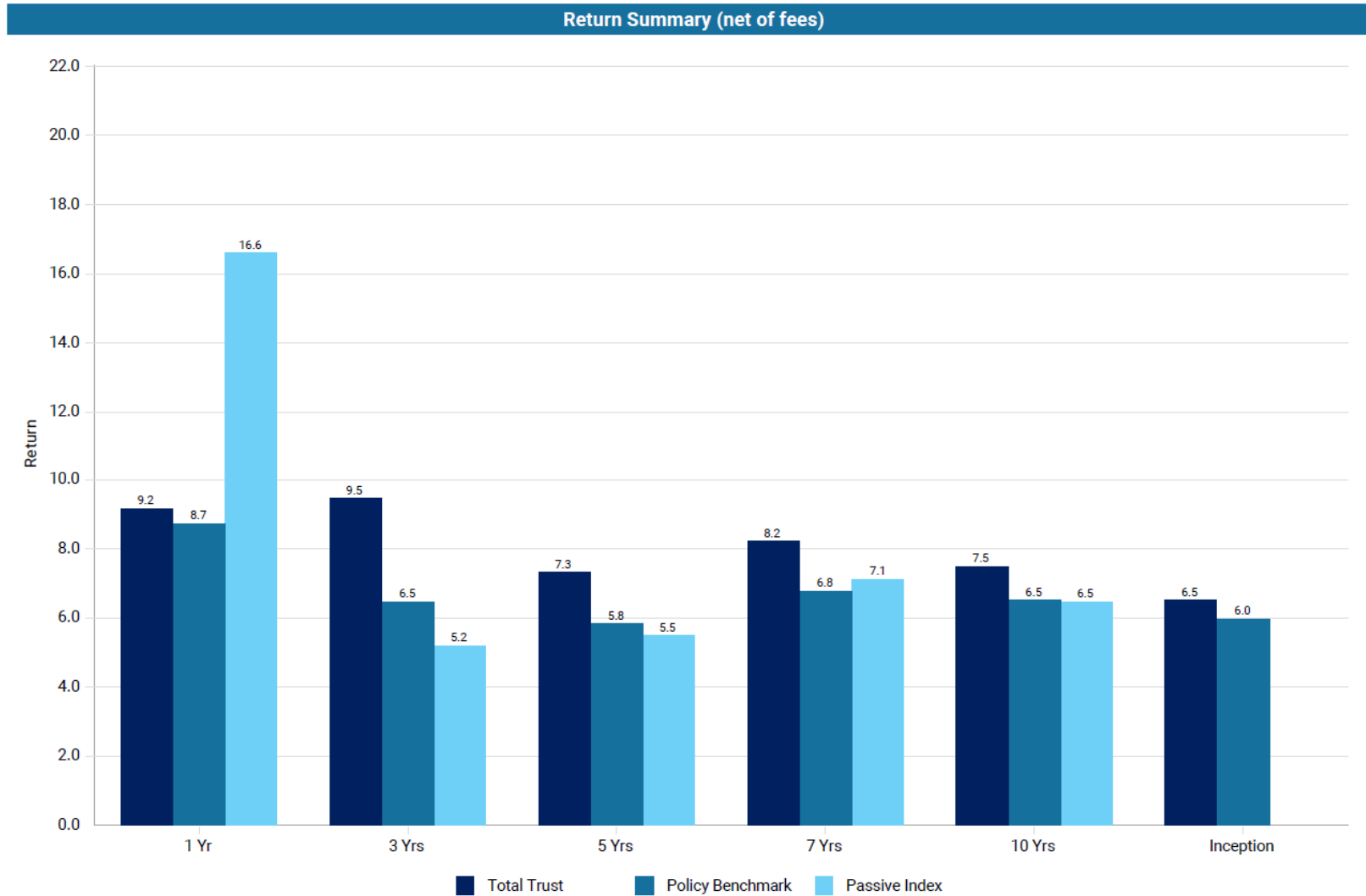
Attribution Effects
1 Year Ending September 30, 2023



LONG TERM INVESTMENT RESULTS



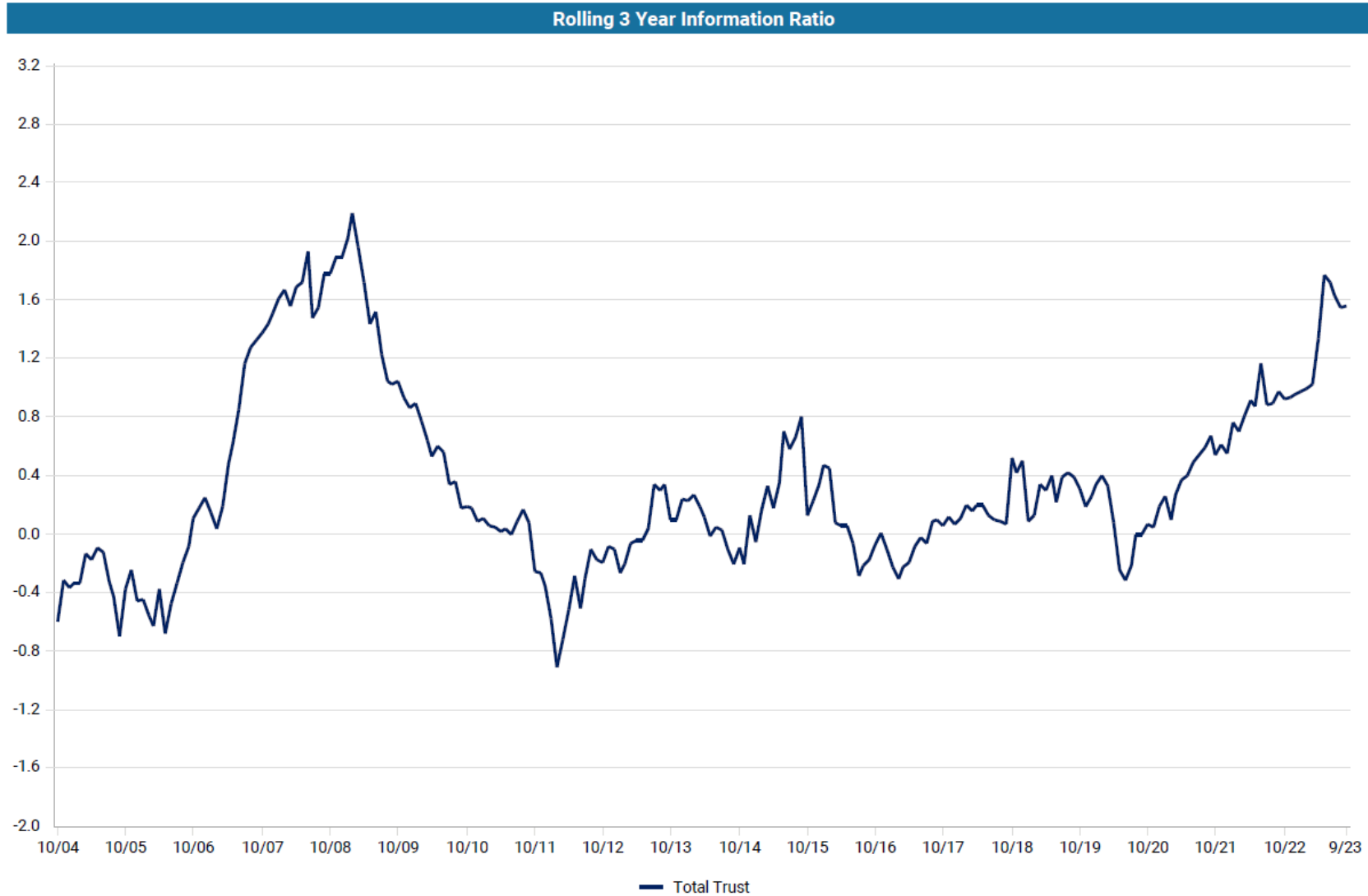
LONG TERM INVESTMENT RESULTS



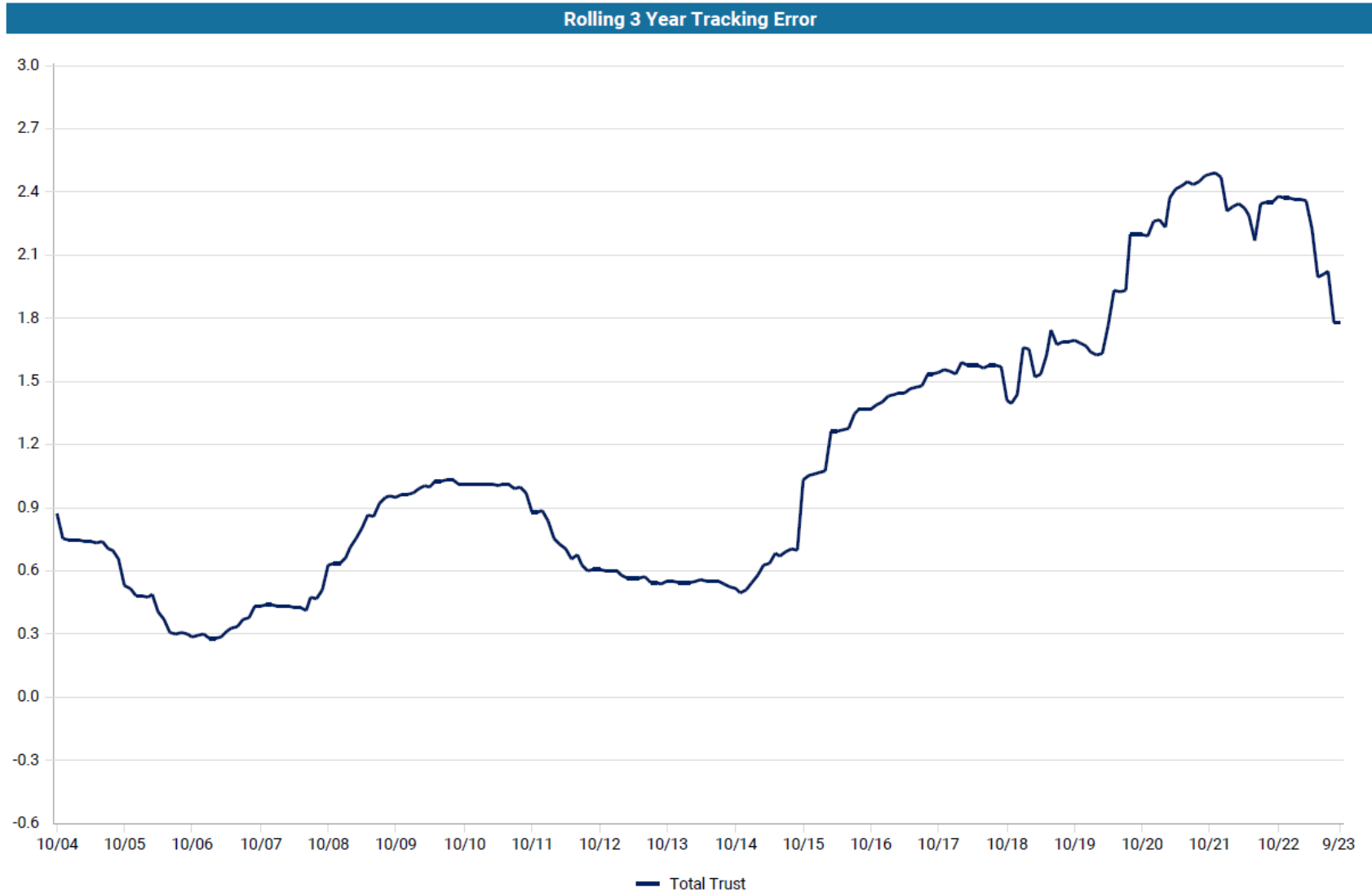
Note: The Passive Index is comprised of 80% MSCI ACWI IMI and 20% Bloomberg Intermediate Treasury Index. Index definitions can be found in the appendix.



ROLLING INFORMATION RATIO



ROLLING TRACKING ERROR



PERFORMANCE SUMMARY COMMENTARY

- **Over the past 10 years, Total Trust outperformed the Policy Benchmark by 1.0% and outperformed the Plan's actuarial rate of return of 7.0% by 0.5%.**
- **In the one-year period ended September 30, 2023, the Trust outperformed the Policy Benchmark by 0.5%.**
 - The largest contributors to performance against the benchmark were Private Real Estate (+0.5%), and Infrastructure (+0.2%).
 - The largest detractors were Public Equity (-0.3%), Absolute Return (-0.1%), and Cash (-0.1%).
- **In the past one-year, portfolio positioning at the asset class level detracted -1.2% from Total Trust returns versus the policy benchmark.**
 - An underweight position in Public Equity contributed negatively (-0.5%).
 - An overweight position in Private Real Estate contributed negatively (-0.5%).
 - An overweight position in Private Equity contributed negatively (-0.3%).

Discussion

Market Conditions

December 5, 2023

David T. Veal, Chief Investment Officer

John McCaffrey, Managing Director of Portfolio Management

Market Conditions

Portfolio Management

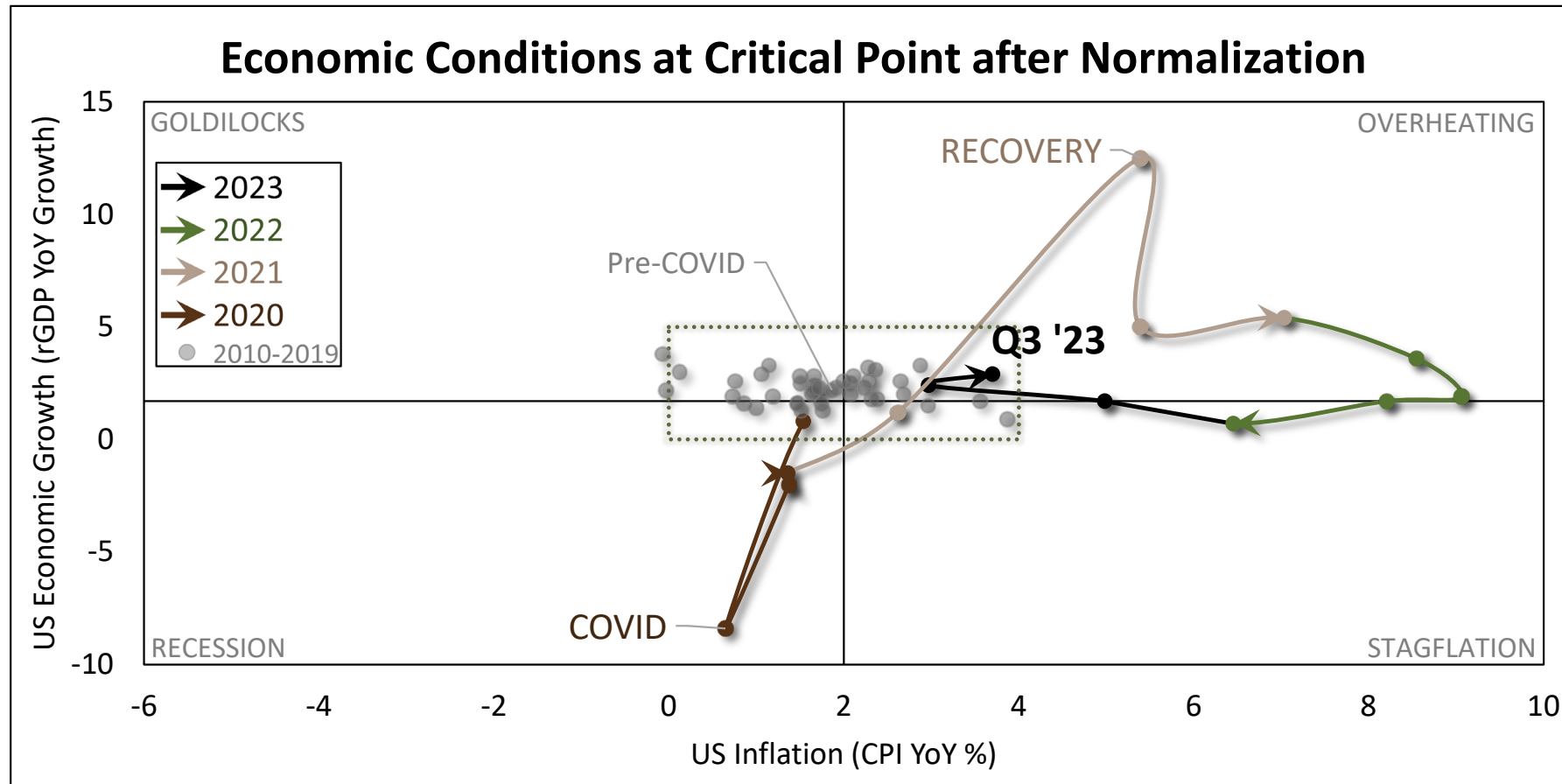


Strategic goal: balance risk and return in pursuit of the strategic objectives of the investment program.

- Ensure diversification appropriate to economic conditions
- Allocate risk prudently given market conditions across asset classes
- Invest for long-term growth while providing short-term liquidity

Market Conditions

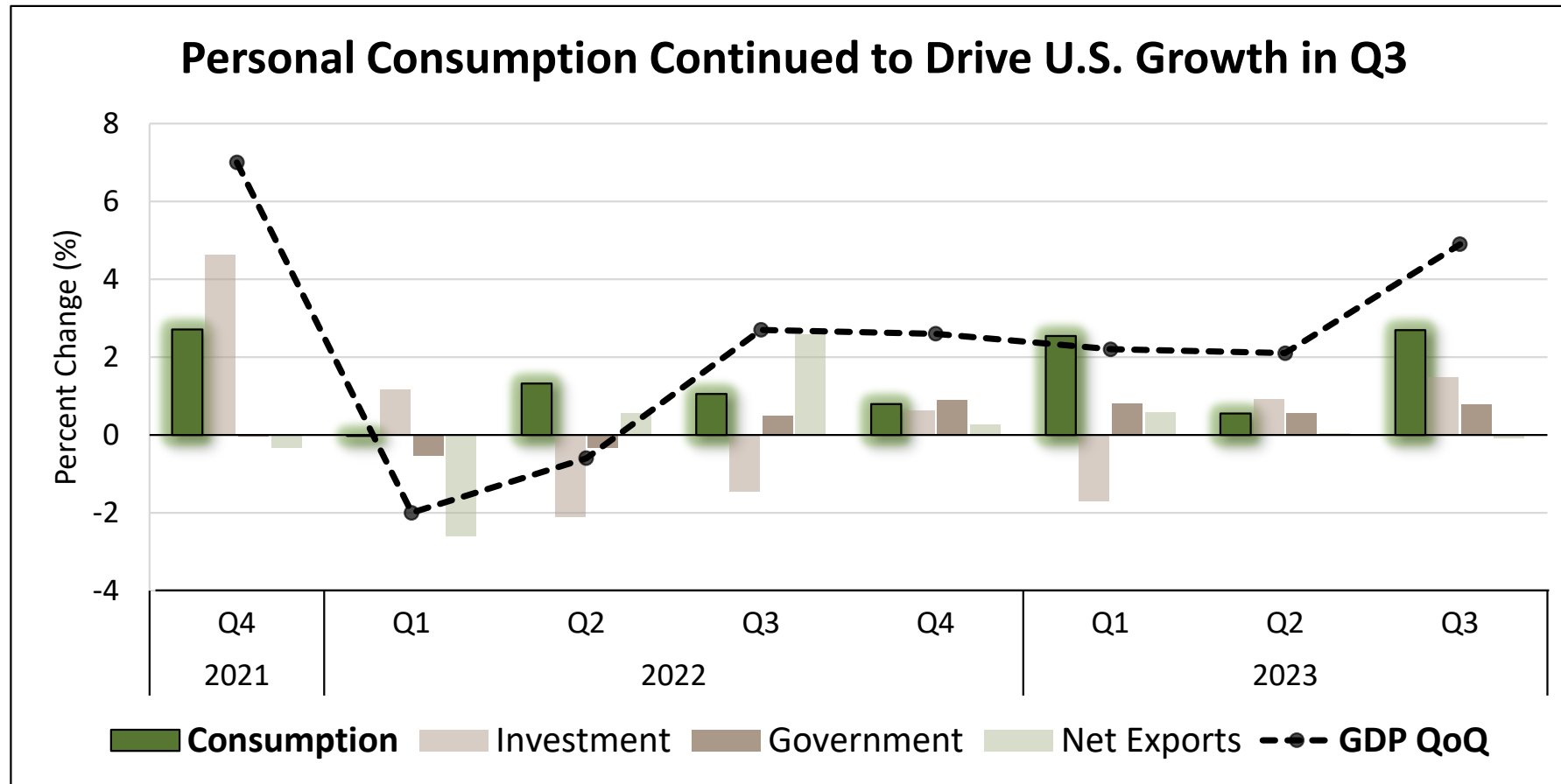
Economic Conditions



Source: Bloomberg, US Bureau of Economic Analysis, US Bureau of Labor Statistics

Market Conditions

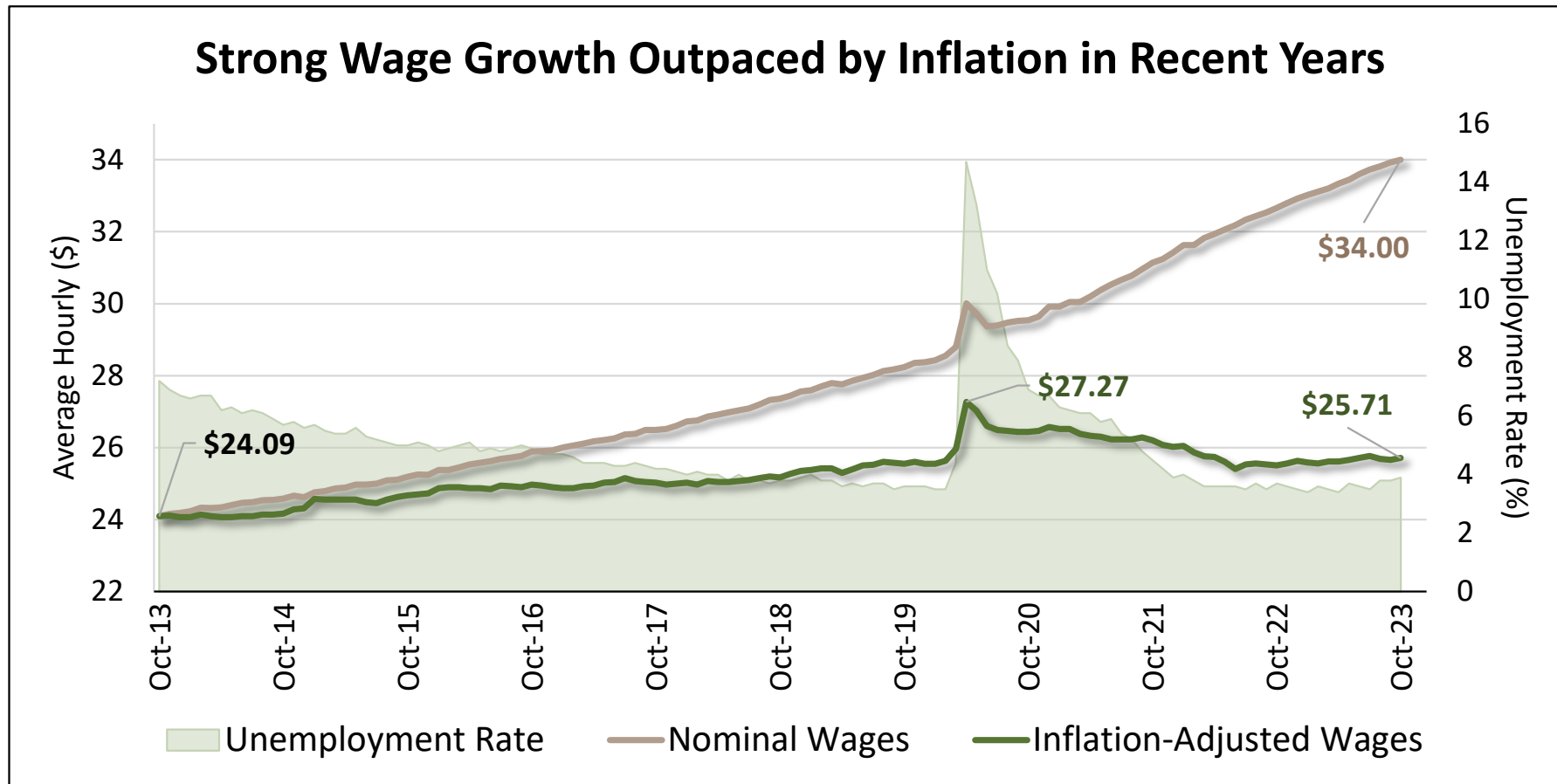
Economic Growth



Source: Bloomberg, US Bureau of Economic Analysis

Market Conditions

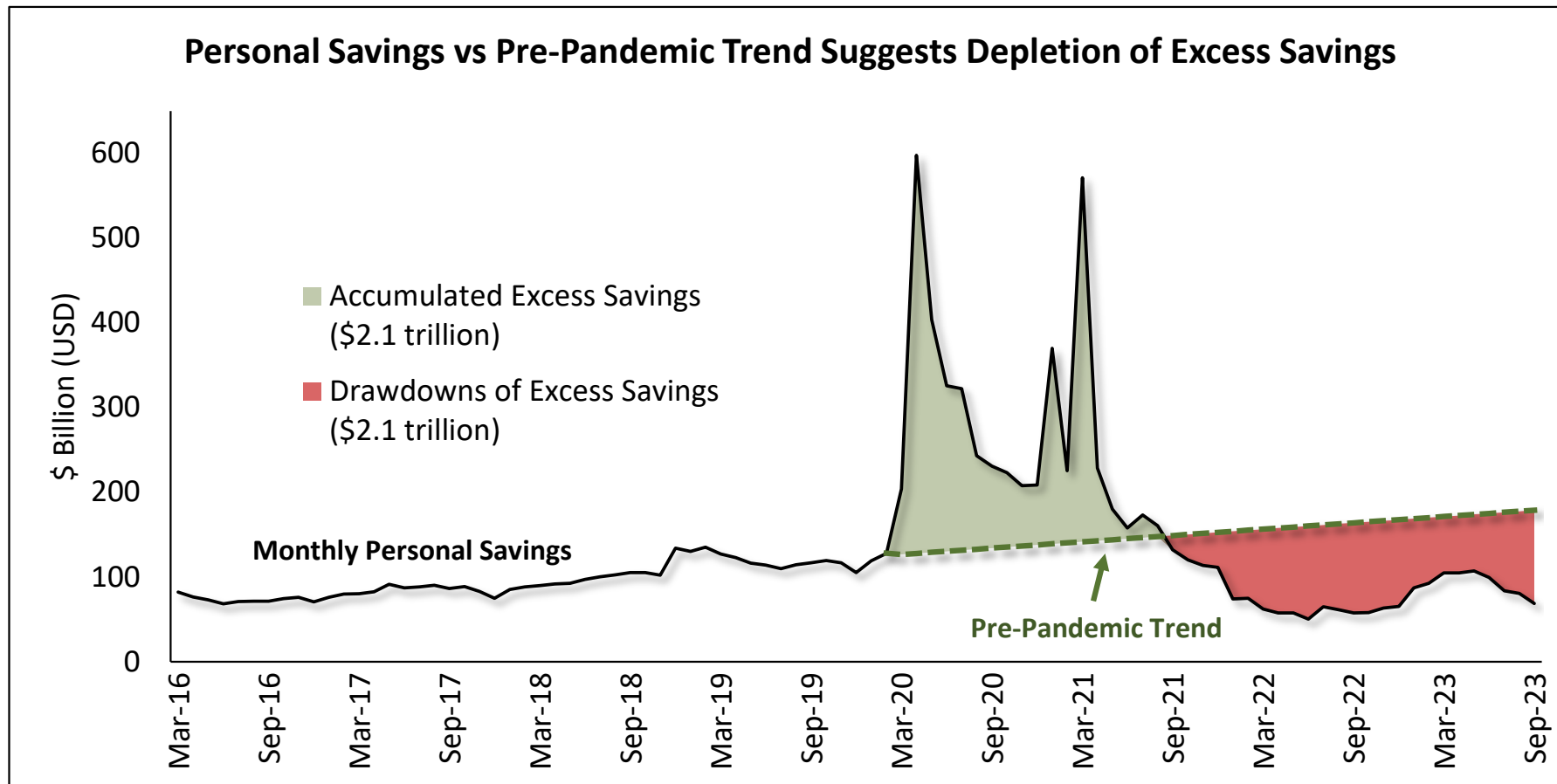
Consumption Outlook



Source: US Bureau of Labor Statistics

Market Conditions

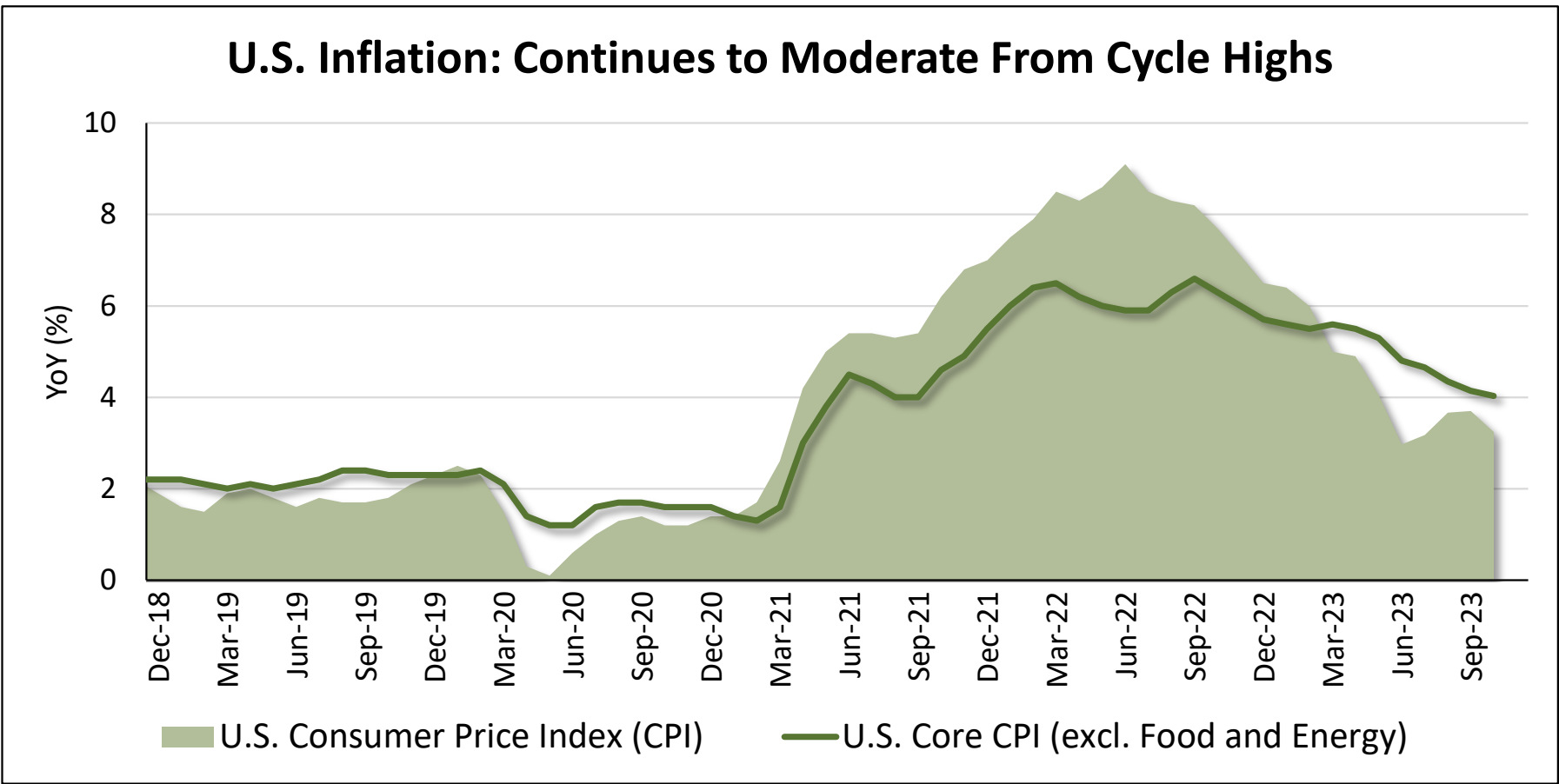
Consumption Outlook



Source: US Bureau of Economic Analysis, Federal Reserve Bank of San Francisco

Market Conditions

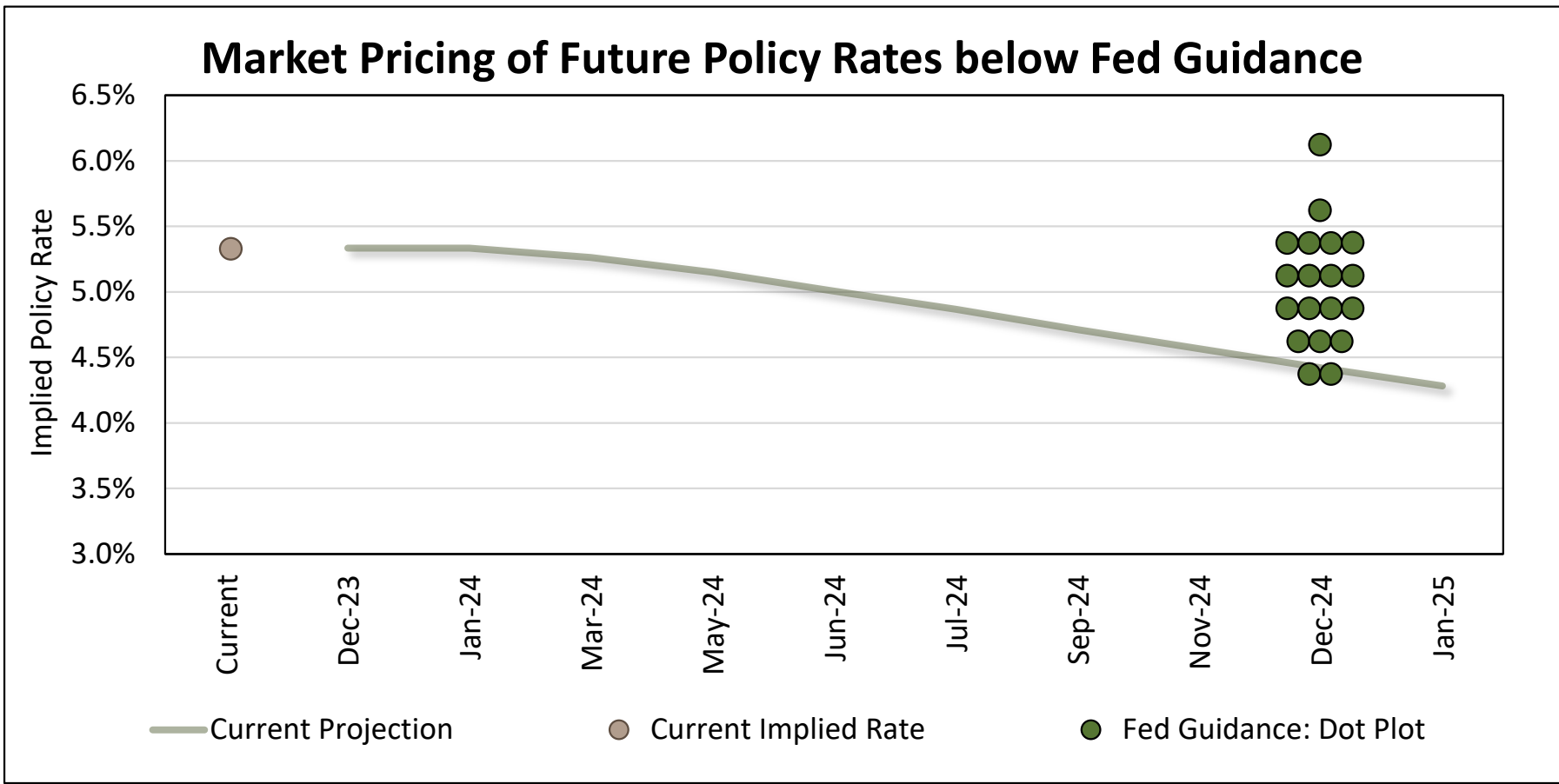
U.S. Inflation



Source: Bloomberg, US Bureau of Labor Statistics

Market Conditions

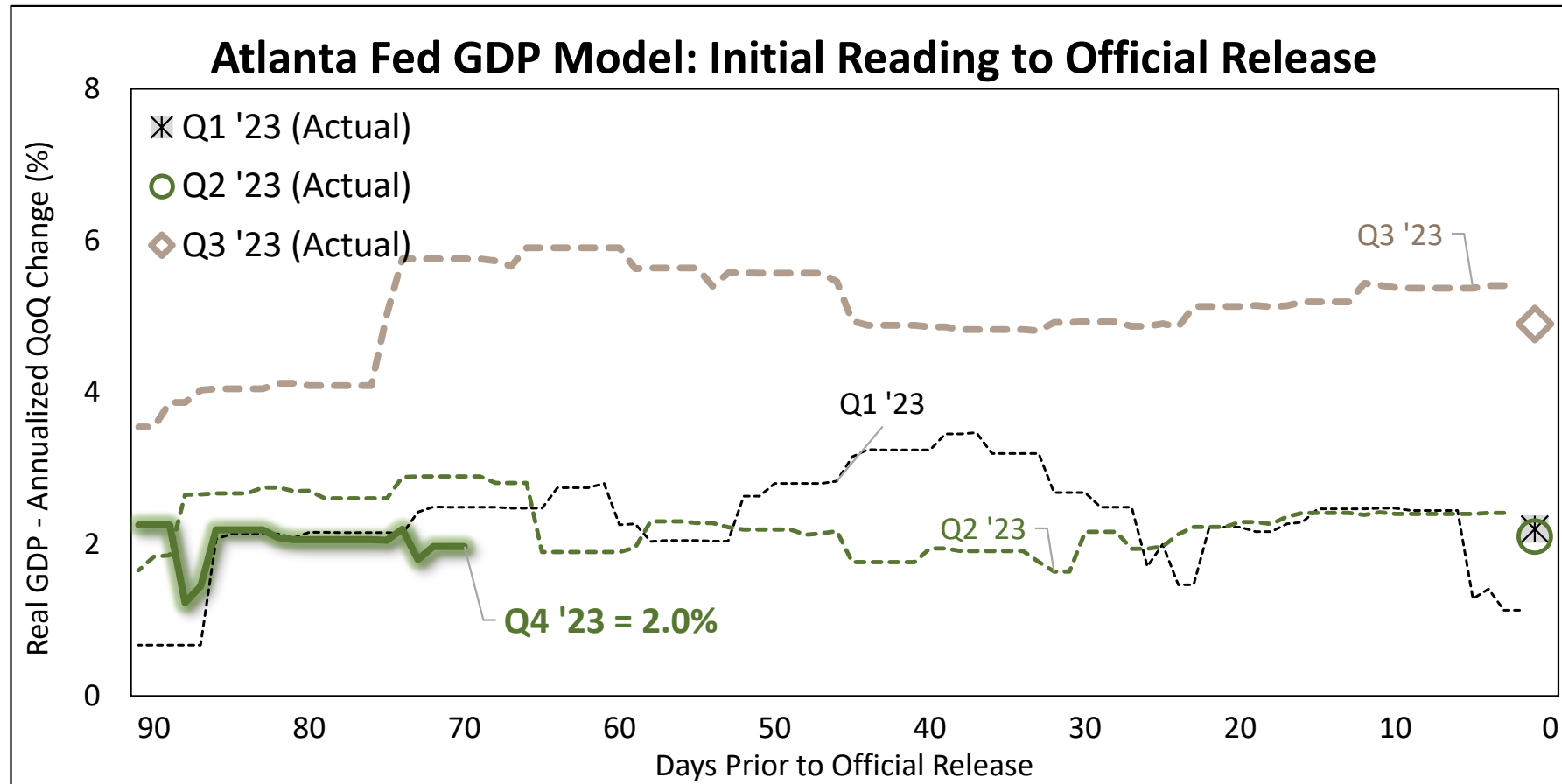
Monetary Policy



Source: Bloomberg, Chicago Mercantile Exchange, US Federal Reserve, as of November 19, 2023

Market Conditions

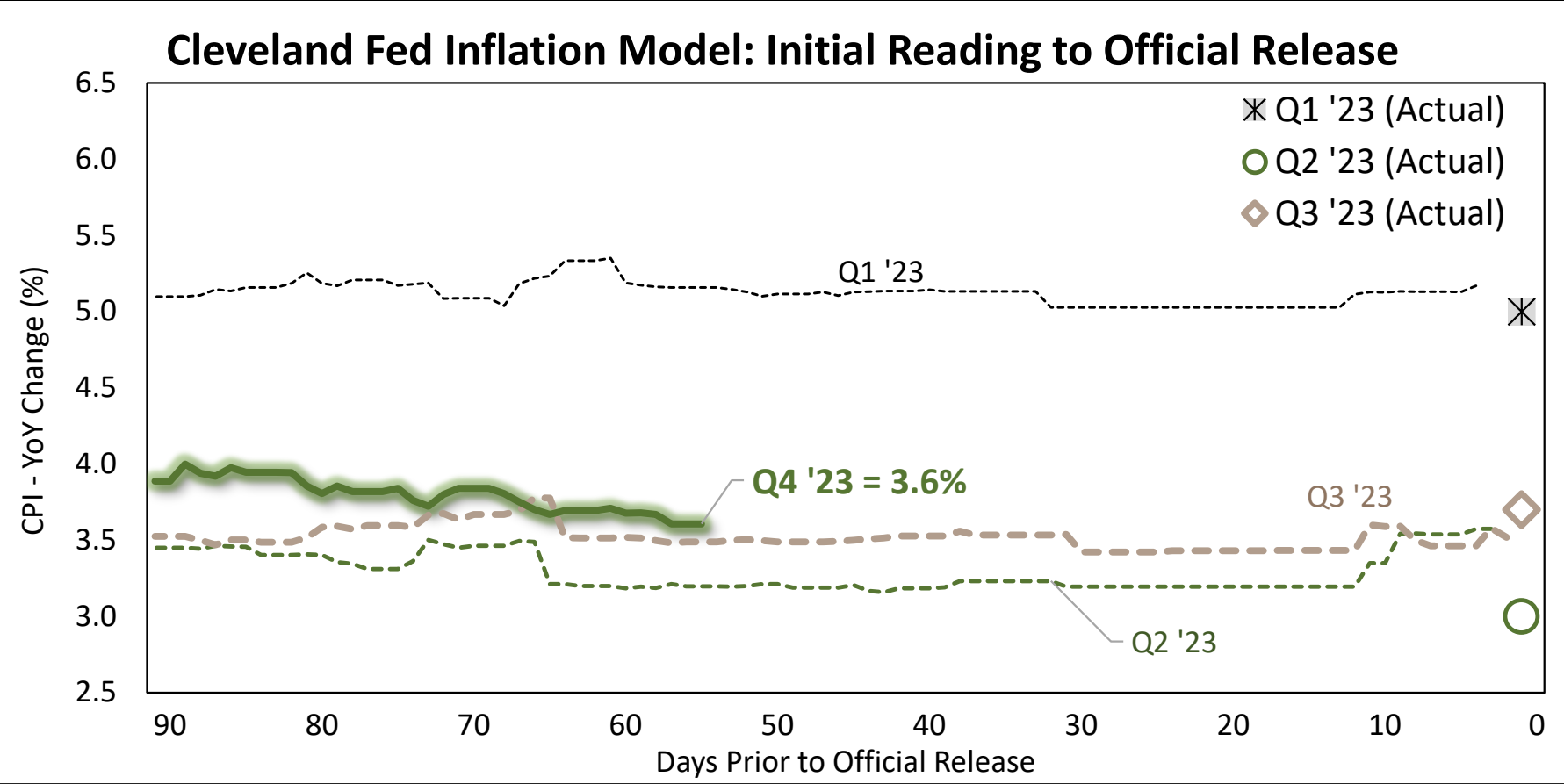
Growth Outlook



Source: Bloomberg, Federal Reserve Bank of Atlanta. As of November 19, 2023

Market Conditions

Inflation Outlook



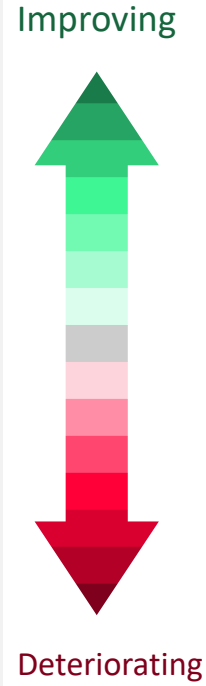
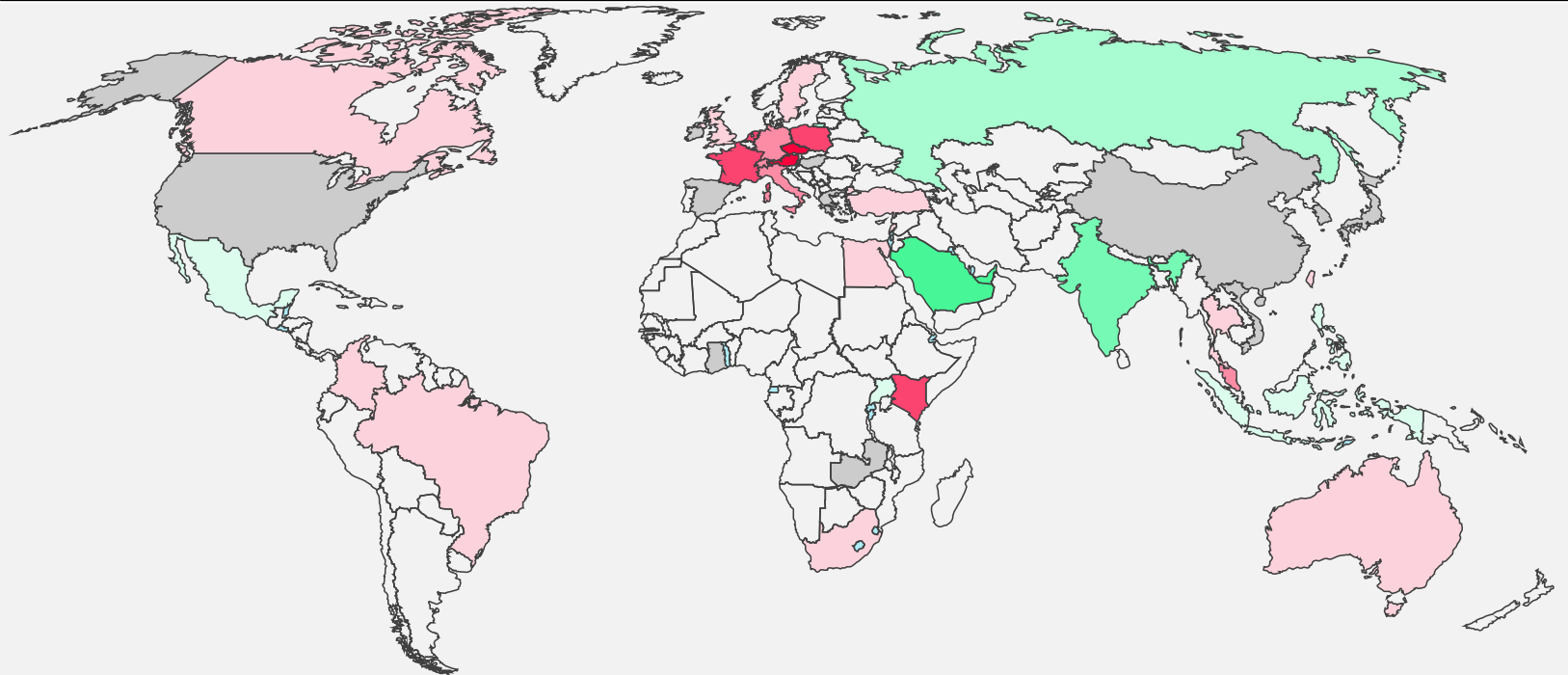
Source: Bloomberg, Federal Reserve Bank of Cleveland. As of November 19, 2023

Market Conditions

Global Purchasing Managers' Indices (PMIs)



Global Composite Purchasing Managers' Indices (PMIs) - October 2023

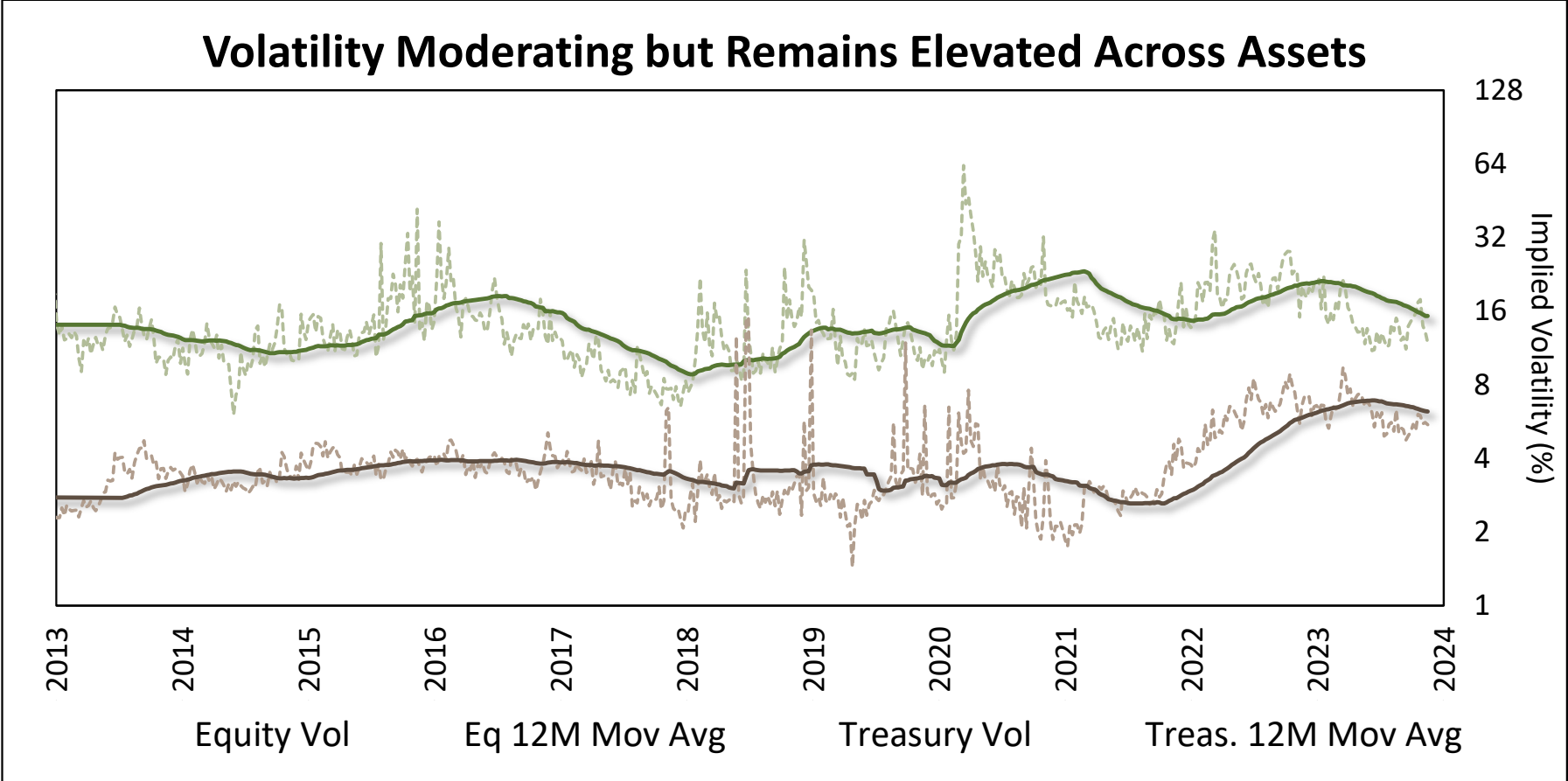


2021		2022										2023													
Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	WORLD	
Green	Green	Green	Green	Green	Green	Green	Green	Grey	Grey	Grey	Grey	Red	Red	Grey	Green	Green	Green	Green	Green	Green	Green	50.6	50.5	50.0	

Source: Bloomberg, IHS Markit Economics

Market Conditions

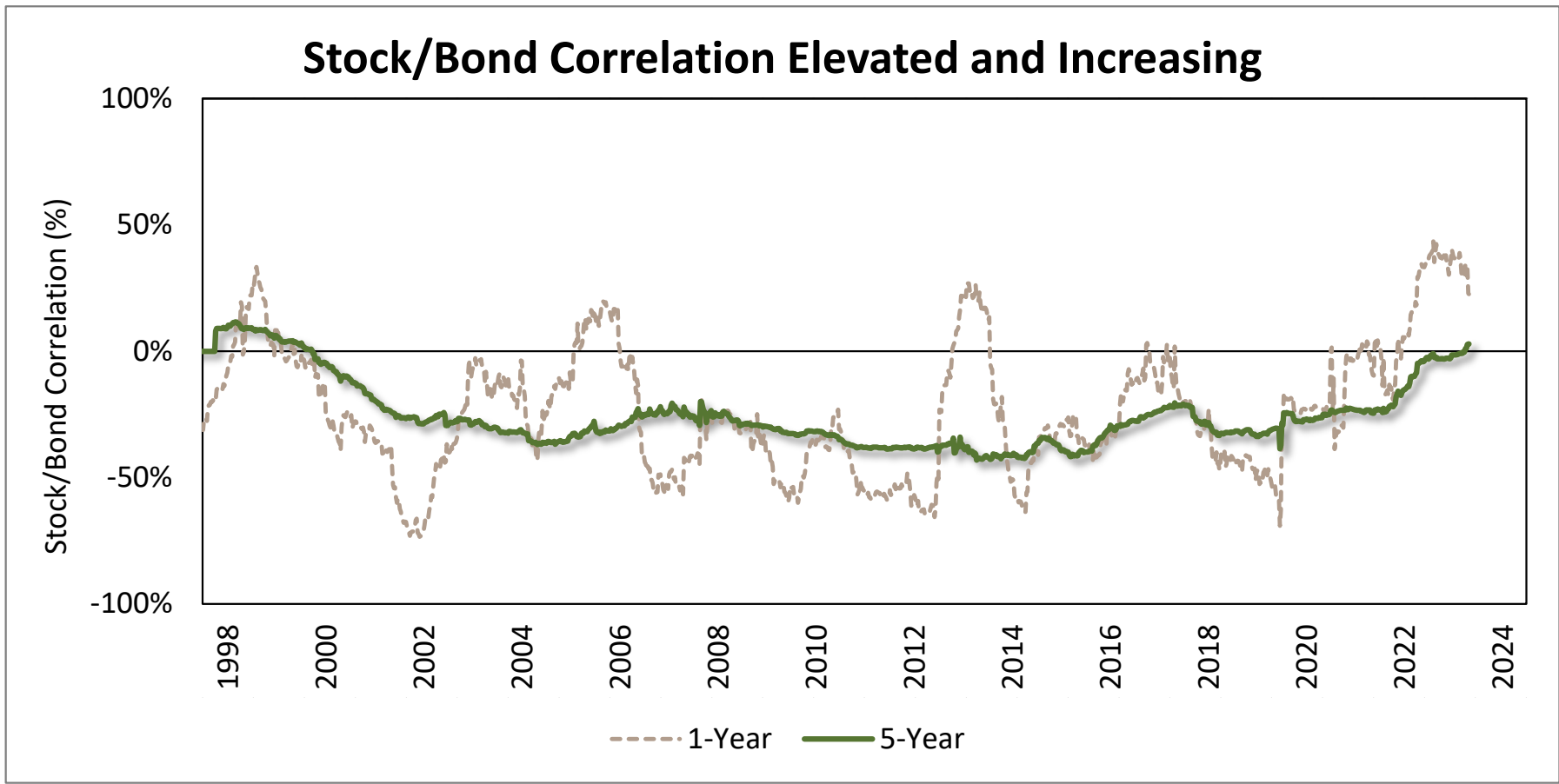
Volatility



Source: Bloomberg, MSCI Inc., as of November 14, 2023

Market Conditions

Correlations



Source: Bloomberg, MSCI Inc., as of November 19, 2023

Market Conditions

Summary Review



- Economic growth has remained robust while inflation has moderated thus far
- U.S. consumption has been strong but faces potential challenges ahead
- Fed Governors project higher rates for longer while markets signal cuts coming sooner
- Elevated volatility and rising correlations indicate a higher-risk, more challenging environment for diversified portfolios
- Overarching objective: position the portfolio appropriately within this environment to support the ongoing provision of earned benefits

Discussion

Public Agenda Item #7

Consideration of Quarterly Report from Chief Investment Officer

December 5, 2023

David T. Veal, CFA, CAIA, FRM

Investment Performance

Mission & Objectives



Prudently maintain a high-performing, well-diversified, and cost-effective portfolio to support the provision of earned benefits.



Add value vs. benchmarks
over rolling five-year periods



Earn appropriate returns
for the risks assumed

Retirement Fund Performance

Performance Dashboard



- Meaningful amounts of value added vs. key benchmarks over long-term time horizons

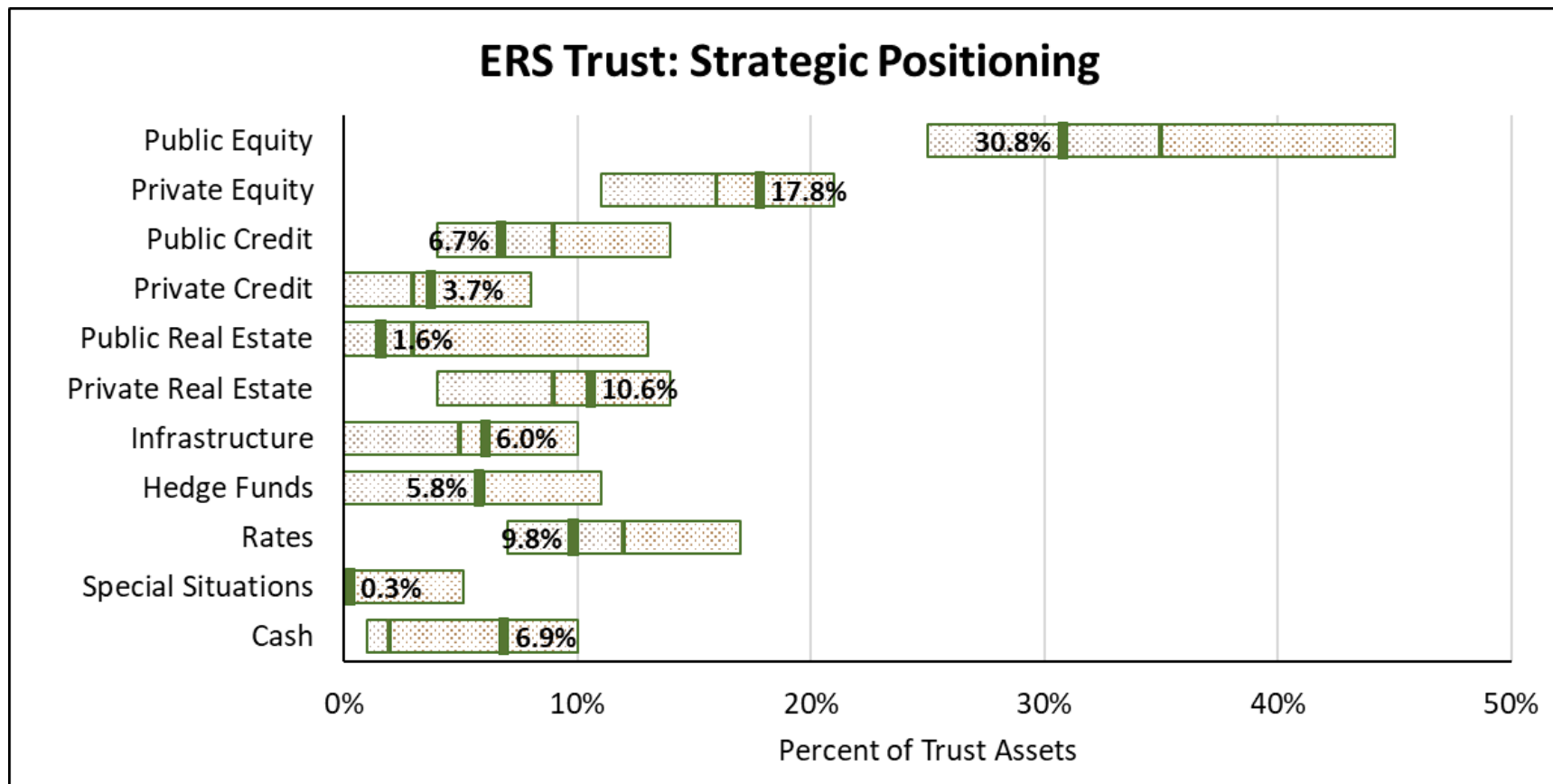
	3 Years		5 Years		10 Years	
ERS Trust	9.5%		7.3%		7.5%	
Assumed Rate	7.0%	+2.48%	7.2%	+0.18%	7.5%	-0.03%
Policy Benchmark	6.5%	+3.00%	5.8%	+1.51%	6.5%	+0.95%
Passive Index	5.2%	+4.27%	5.5%	+1.82%	6.5%	+1.01%
Median Peer	5.9%	+3.55%	5.5%	+1.82%	6.1%	+1.38%

Retirement Fund Performance

Asset Class Positioning



- \$1.38B received in September from the State of Texas allocated to Cash portfolio

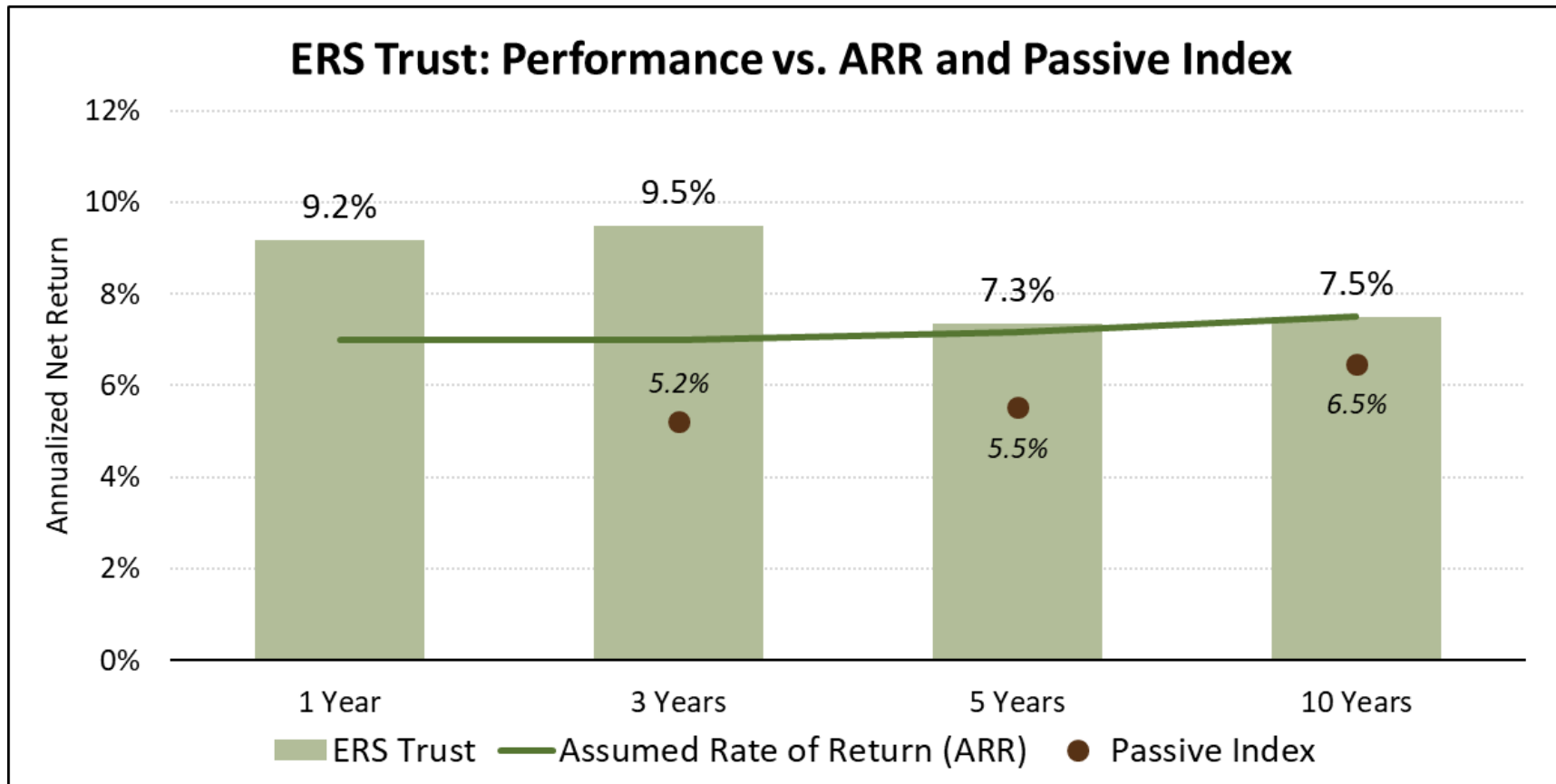


Retirement Fund Performance

Absolute Return



- Meeting strategic objectives despite weak returns in passive public market portfolios



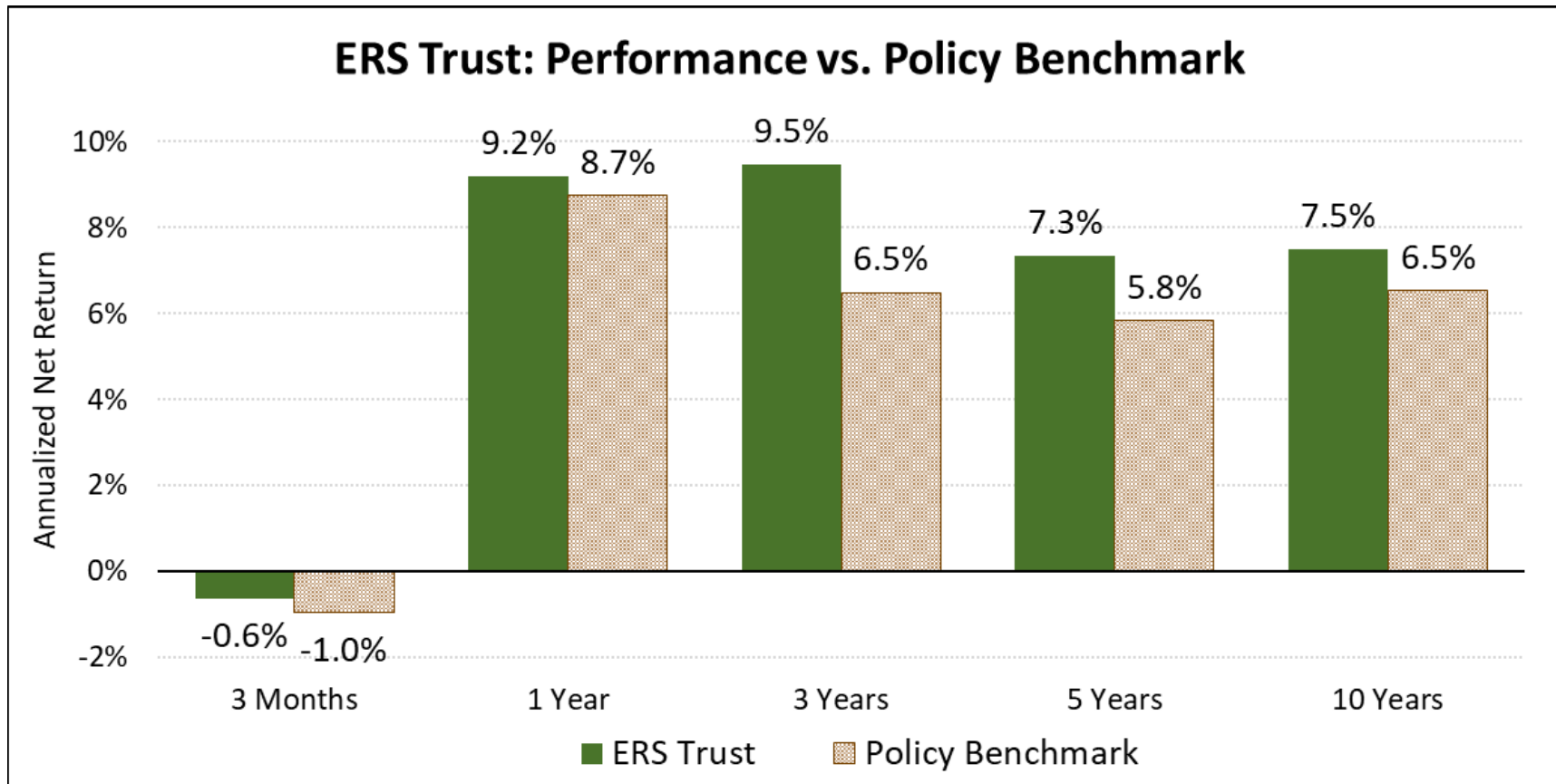
As of September 30, 2023

Retirement Fund Performance

Relative Return



- Strong performance vs. Policy Benchmark, including +151 bps on a 5-year basis



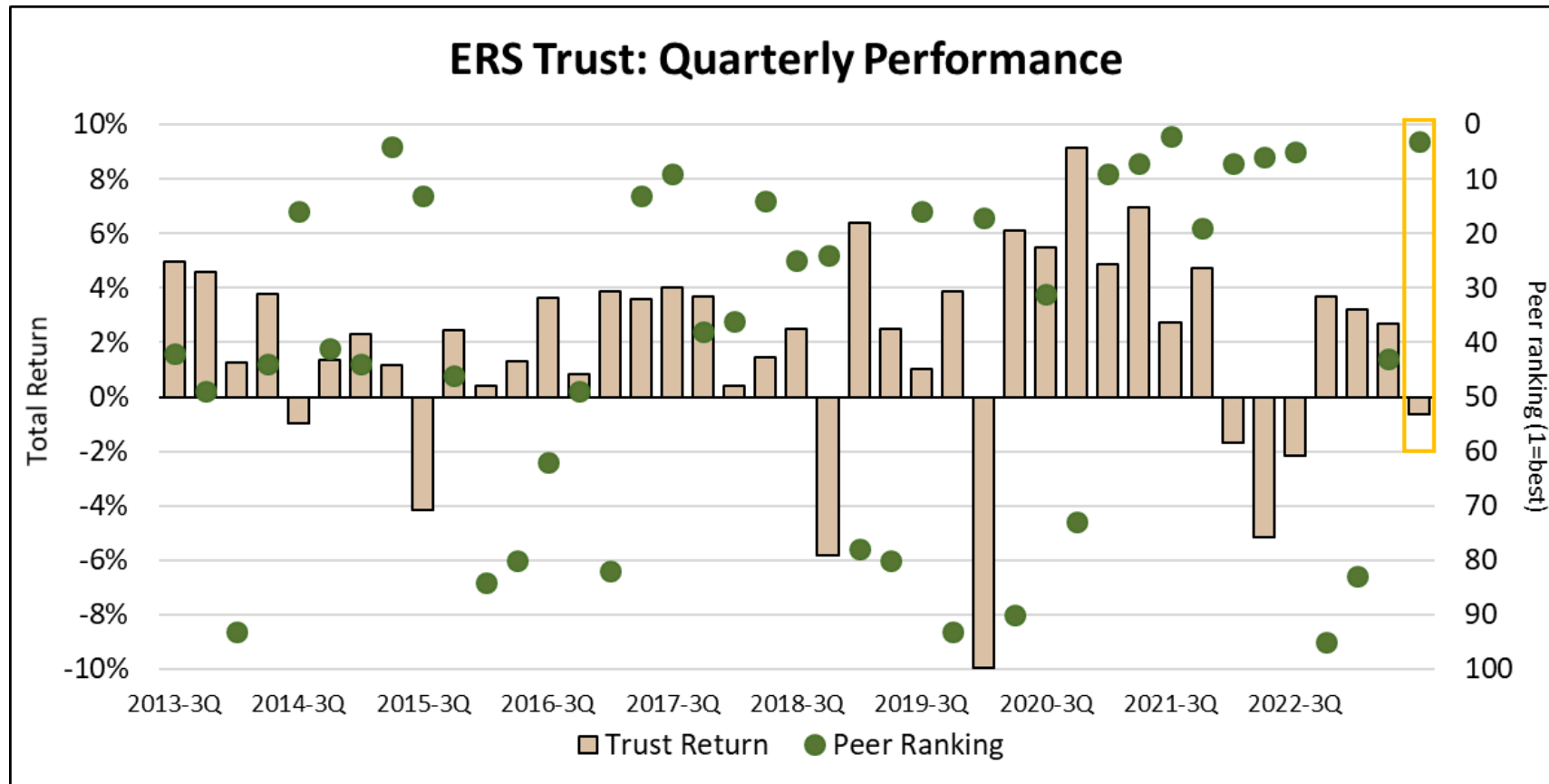
As of September 30, 2023

Retirement Fund Performance

Quarterly Performance



- Negative absolute returns for first quarter in four, with peer ranking in 3rd percentile

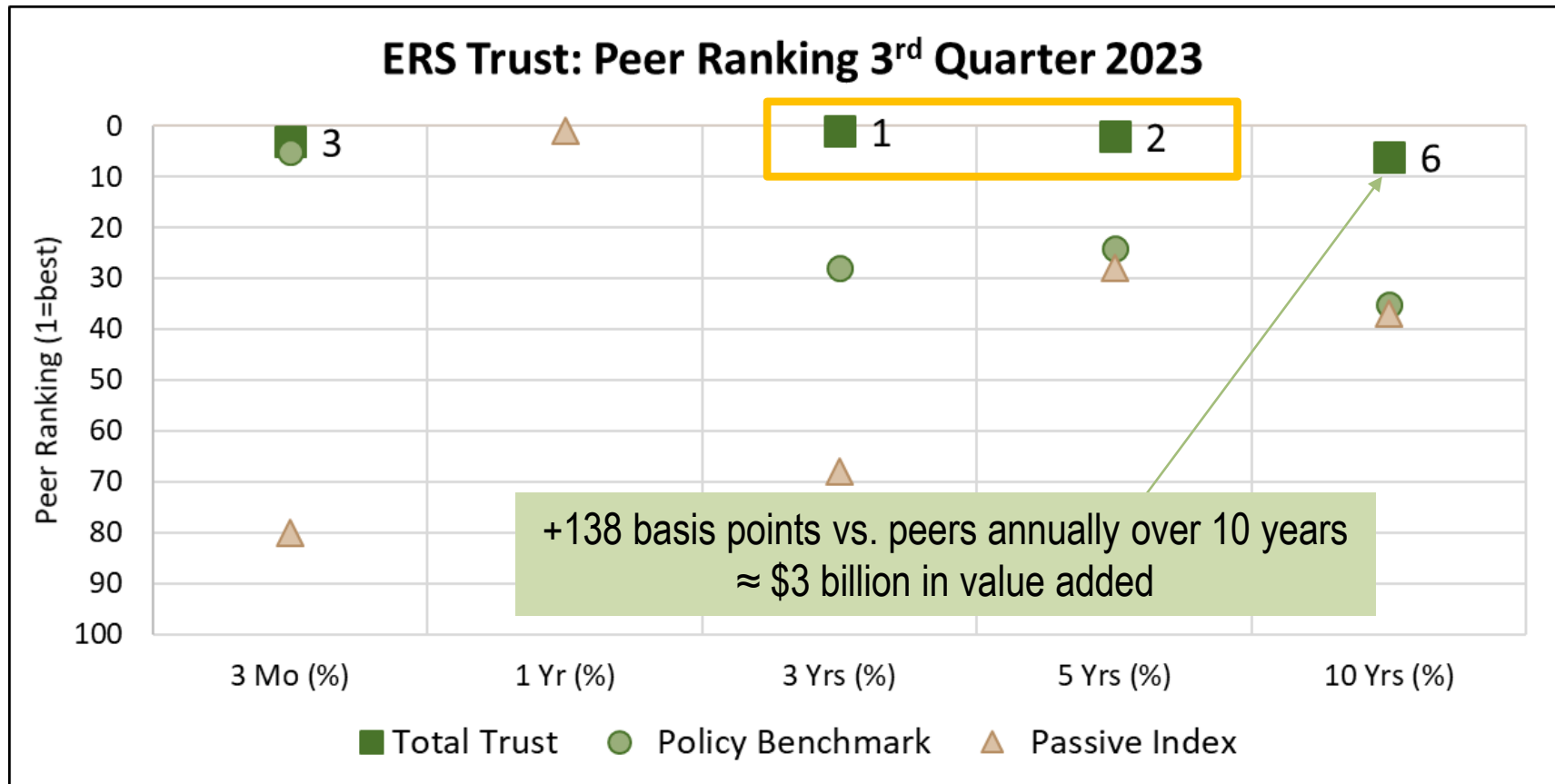


Retirement Fund Performance

Peer Rankings for Current Quarter



- Superior performance over long horizons, including top 1% over last three years



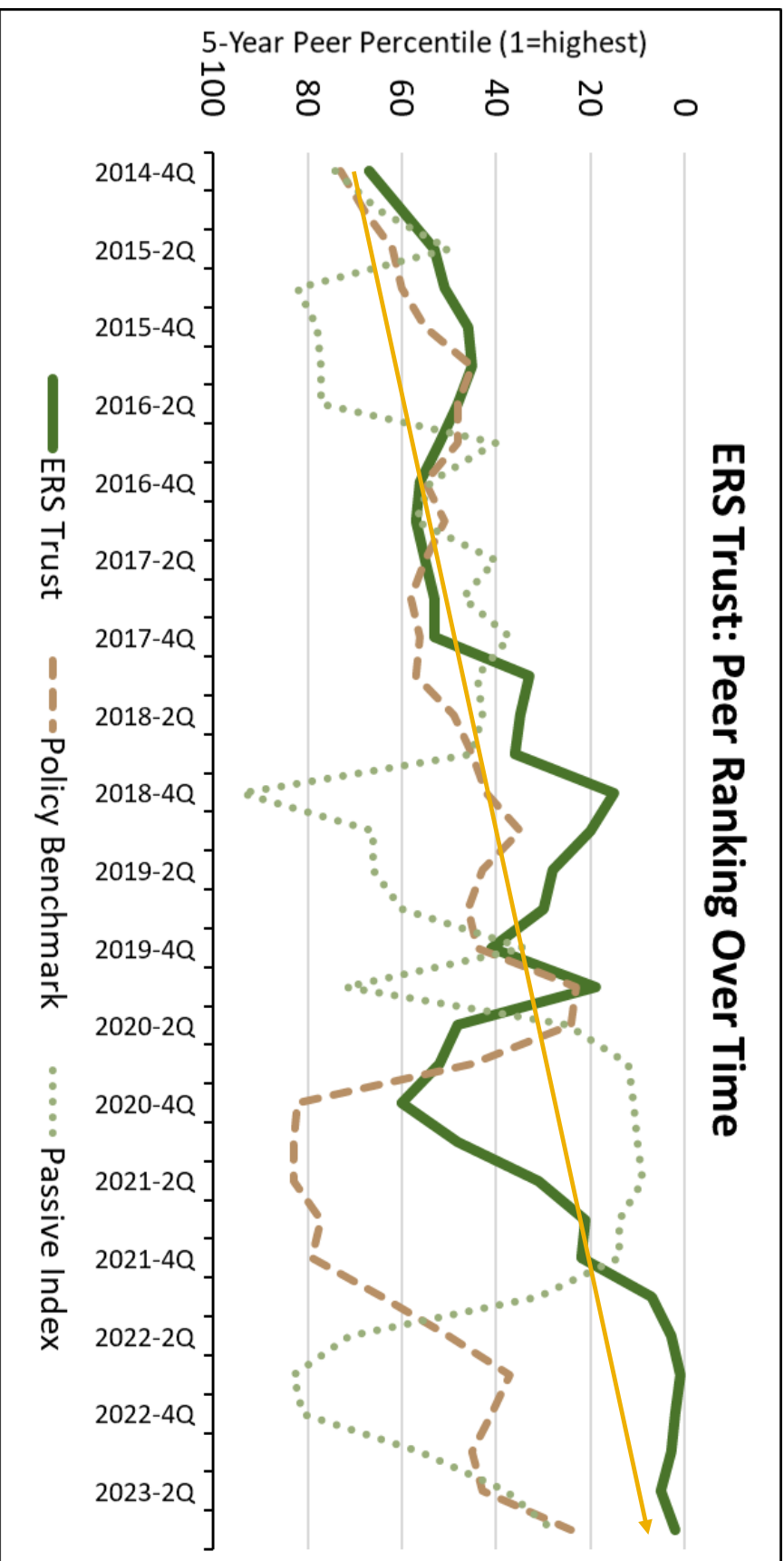
As of September 30, 2023


Retirement Fund Performance

Peer Ranking Over Time



- A decade of progress culminates in a top performing fund over long time horizons





Top 10%

3 year

5 year

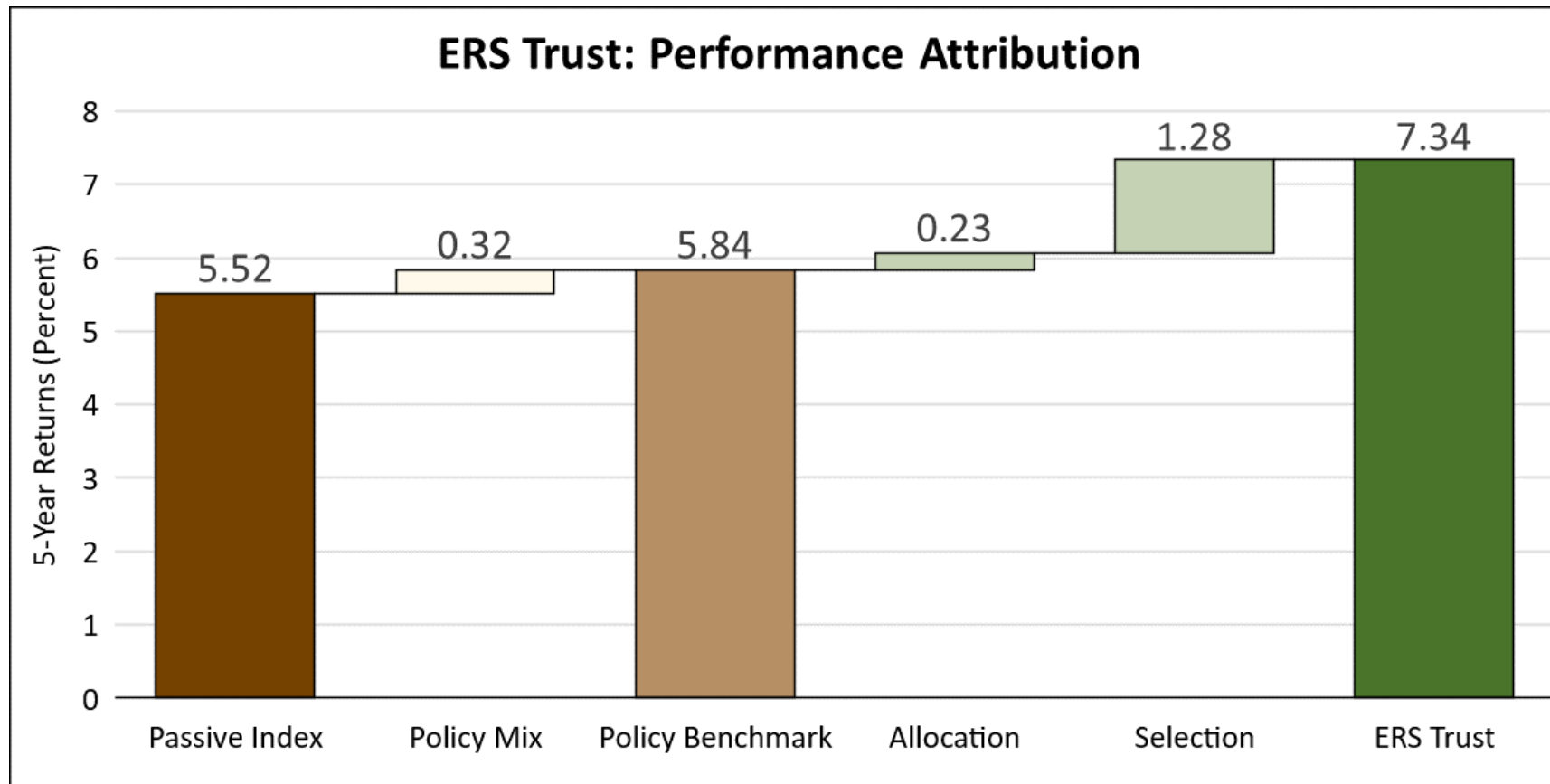
10 year

Retirement Fund Performance

Attribution Analysis



- Meaningful excess return from both asset allocation and security selection



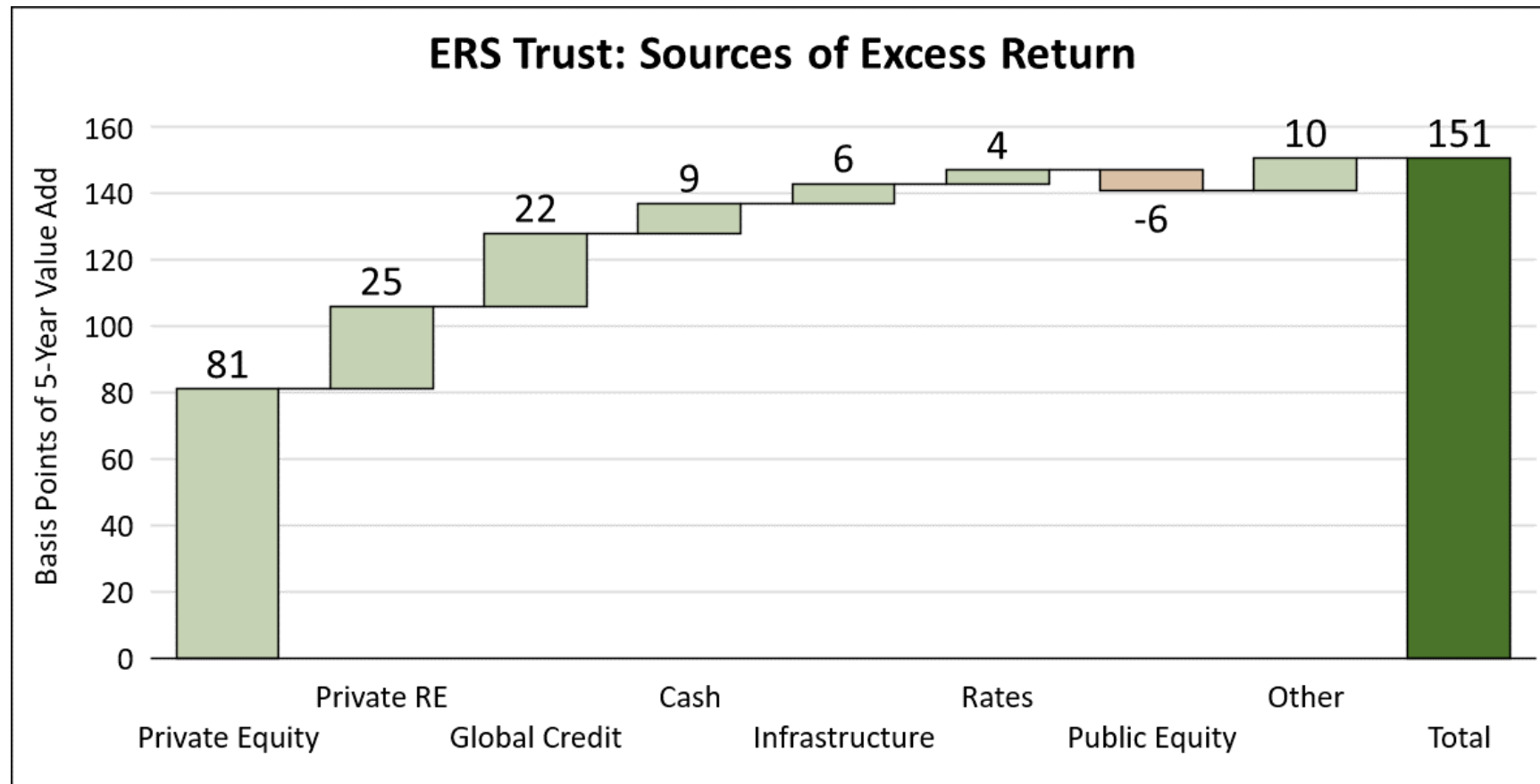
As of September 30, 2023

Retirement Fund Performance

Attribution Analysis



- Private equity, private real estate, and credit represent 90% of five-year value add



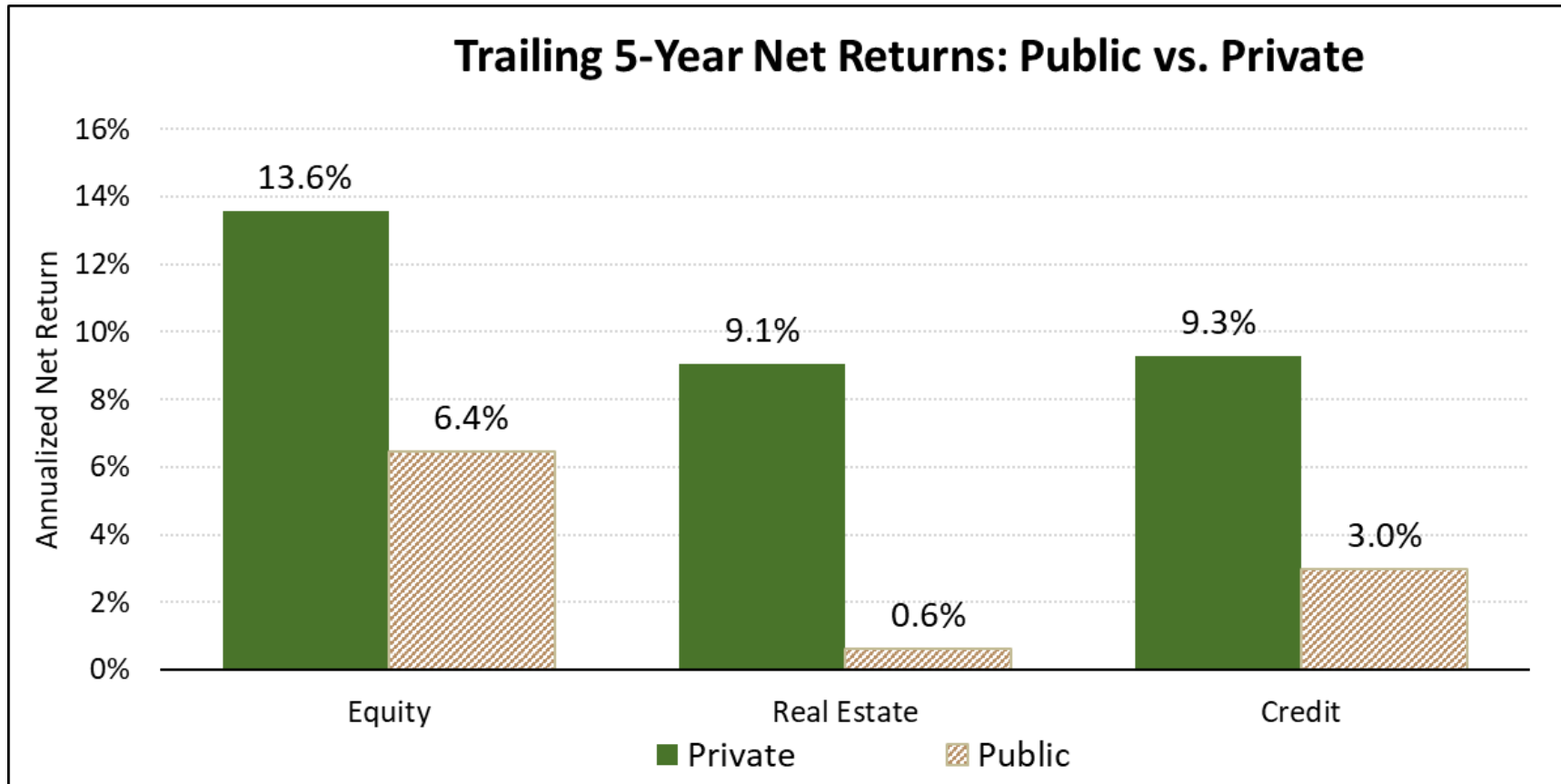
As of September 30, 2023

Retirement Fund Performance

Attribution Analysis



- ERS has earned 6-9% more annually from private markets than public markets



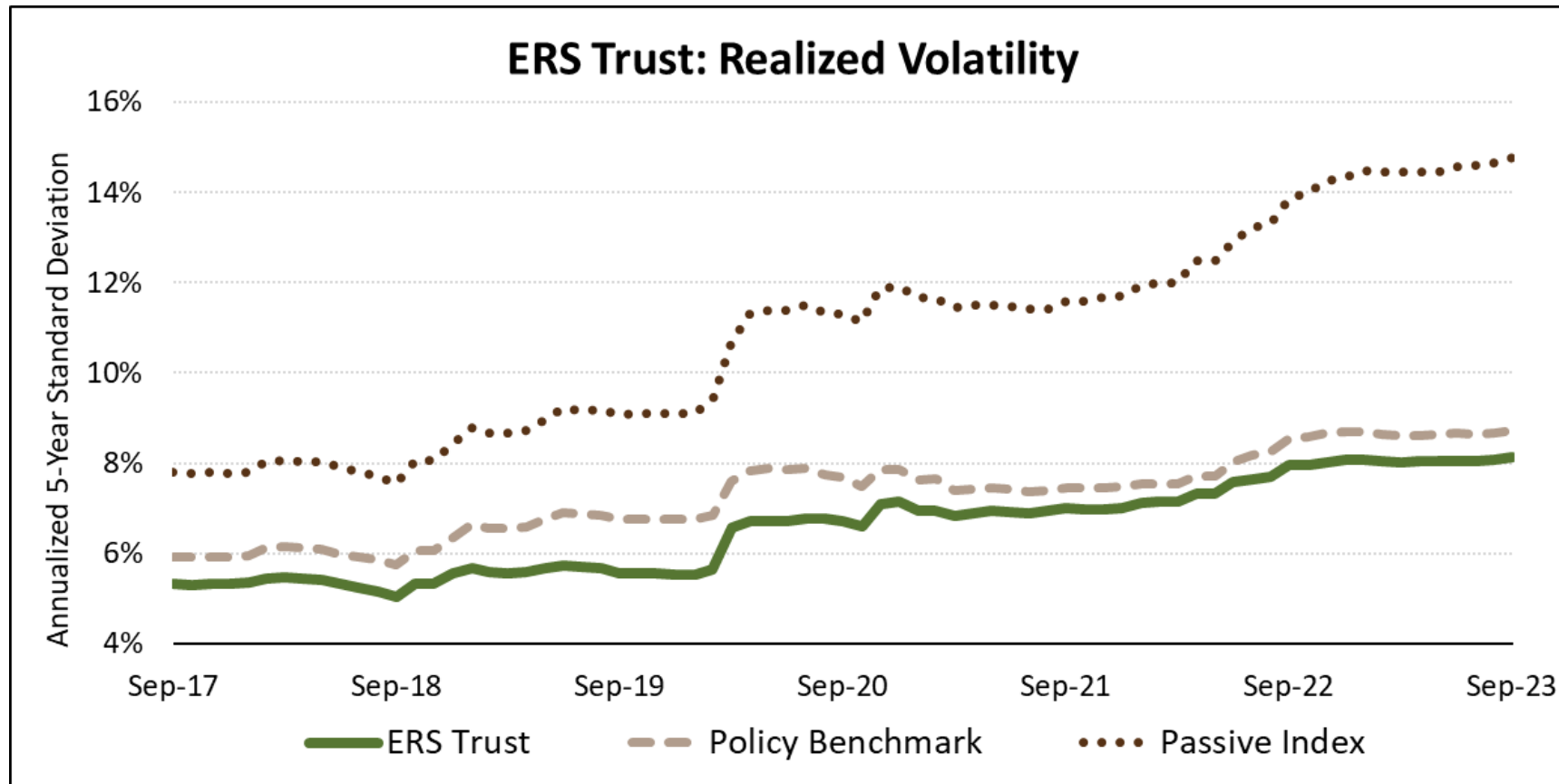
As of September 30, 2023

Retirement Fund Performance

Risk Metrics



- Trust risk has almost doubled from five years ago, but leveled out recently



Developments & Initiatives

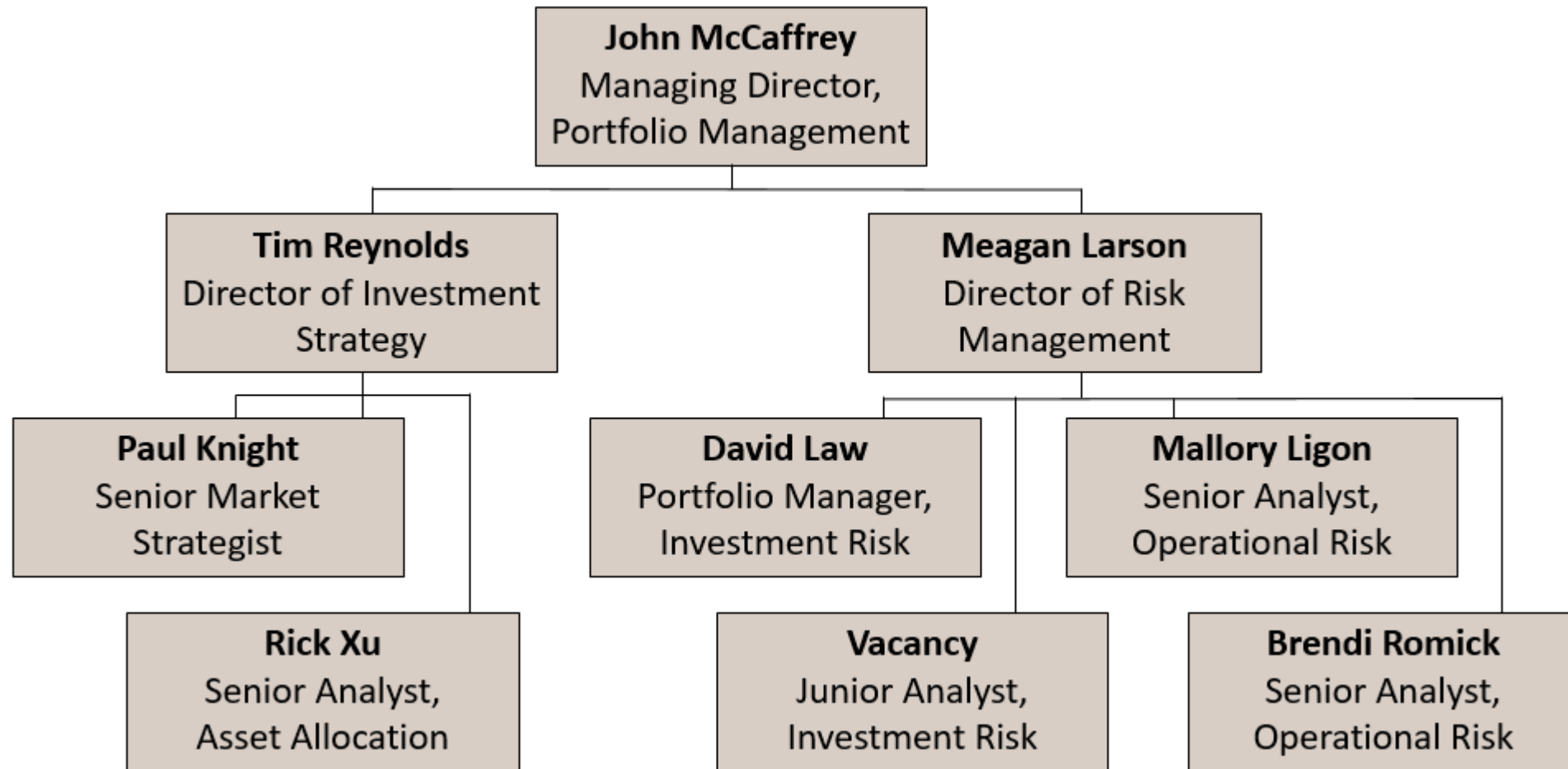
Investments Division



- Focus on attracting and retaining talent
- Strategic investments in asset allocation capabilities
- Divisional relocation to 5th floor of legacy building
- RFQ for all seven investment consulting roles
- Investment Practices Review with NEPC

Developments & Initiatives

Portfolio Management Team



Investment Practices Review

Working Timeline



- Texas Gov't Code § 802.109 requires a report every three years

Time Period	Activity
January 2023	Staff and NEPC begin engagement
May 2023	NEPC meets with key members of Staff
August 2023	NEPC provides initial findings on IPS
Fall 2023	NEPC conducts follow up meetings as needed
December 2023	NEPC provides initial findings to staff
March 2024	NEPC delivers final report to ERS
June 2024	Report due to Pension Review Board

Discussion

Public Agenda Item #8

**Annual Ethics Training*

December 5, 2023

Cynthia Hamilton, General Counsel

Sherron Watkins, Ethics Professor and Enron Whistleblower

Lessons from the Enron and Arthur Andersen Scandals

With a Focus on the Board of Directors and New Whistleblower Protections



The whistle-blower...
V.P. SHERRON WATKINS ALERTS THE NATION

Her memo to Kenneth Lay made it obvious that Enron brass knew there were problems long before the scandal exploded

IF ANYONE deeply involved in the Enron scandal can walk away with their head held high, it's Sherron Watkins - the whistle-blowing company CPA who first spoke out against the company's shady accounting practices.

Watkins' now famous memo to former CEO Kenneth Lay is a key piece of evidence that the Enron brass was clearly informed of the highly questionable business practices long before the scandal made headlines.

"Has Enron become a risky place to work?" Watkins writes in the August 19 document. "For those of us who didn't get rich over the last few years, can we afford to stay?"

"I am incredibly nervous that we will implode in a wave of accounting scandals."

"My eight years of Enron work history will be worth nothing on my resume, the business world will consider the past successes as nothing but an elaborate accounting hoax. 'Skilling is resigning now' for 'personal reasons' but I would think he wasn't having fun, looked down the road and knew this stuff was undesirable and would rather abandon ship now than weigh in shame in two years."

It was a bold move. A few months later, Enron executive Cliff Baxter called Watkins' memo "a masterpiece."

Watkins' courage surprised one who personally knew her - the 42-year-old Houston wife and mother of a 2-year-old who grew up in nearby Tomball, Texas.

"She was incredibly direct and incredibly articulate and incredibly thoughtful in what she said," said Jessica Uhl, a close friend of Watkins from Enron.

"It just a part of her personality. She spoke her mind."

"Sherron has a unique combination of skills, and that makes her one of the best people in the company to do this. She has the background. She is a CPA, she worked for Arthur Andersen. So she completely gets what was going on in a way other people might not."

"She also had the personality. She had the sense of conviction to do what she did, and the ability to articulate what needed to be said."

The daughter of two educators, Watkins spent her childhood working in a grocery store owned by an uncle, and attending Lutheran school. Later in public high school she was a devoted student and a member of the National Honor Society.

In 1982 after getting both her bachelor's and master's degrees from the University of Texas she went to work for the prestigious accounting firm of Arthur Andersen in New York City, returning to Texas to work for Enron in 1993.

"She has the background. She is a CPA, she worked for Arthur Andersen. So she completely gets what was going on in a way other people might not."

"She also had the personality. She had the sense of conviction to do what she did, and the ability to articulate what needed to be said."

But in the spring of last year, while working for Andrew Fastow, Enron's chief financial officer, Watkins couldn't help noticing difficulties in the company books.

Specifically, she saw that the numbers didn't add up - the company was concealing a mountain of debt.

In the seven-page memo to Lay, Watkins spelled out her concerns, eventually triggering the chain of events that led to the company's collapse.

Now, as the finger-pointing continues and a federal investigation unfolds, Watkins is one of the few Enron executives who will emerge unblemished.

And unlike former chief Jeffrey Skilling and Kenneth Lay, Watkins is still employed by Enron.

"I'm incredibly nervous that we will implode in a wave of accounting scandals"

ENRON STOCK

The Enron Corporation at its peak

- The Most Innovative Company in America
- 7th Largest Public U.S. Company based on Total Revenues
- Stock Price High of \$90/share, Market Cap of \$60 billion
- A leading provider of electricity, natural gas and financial risk management (energy trading).

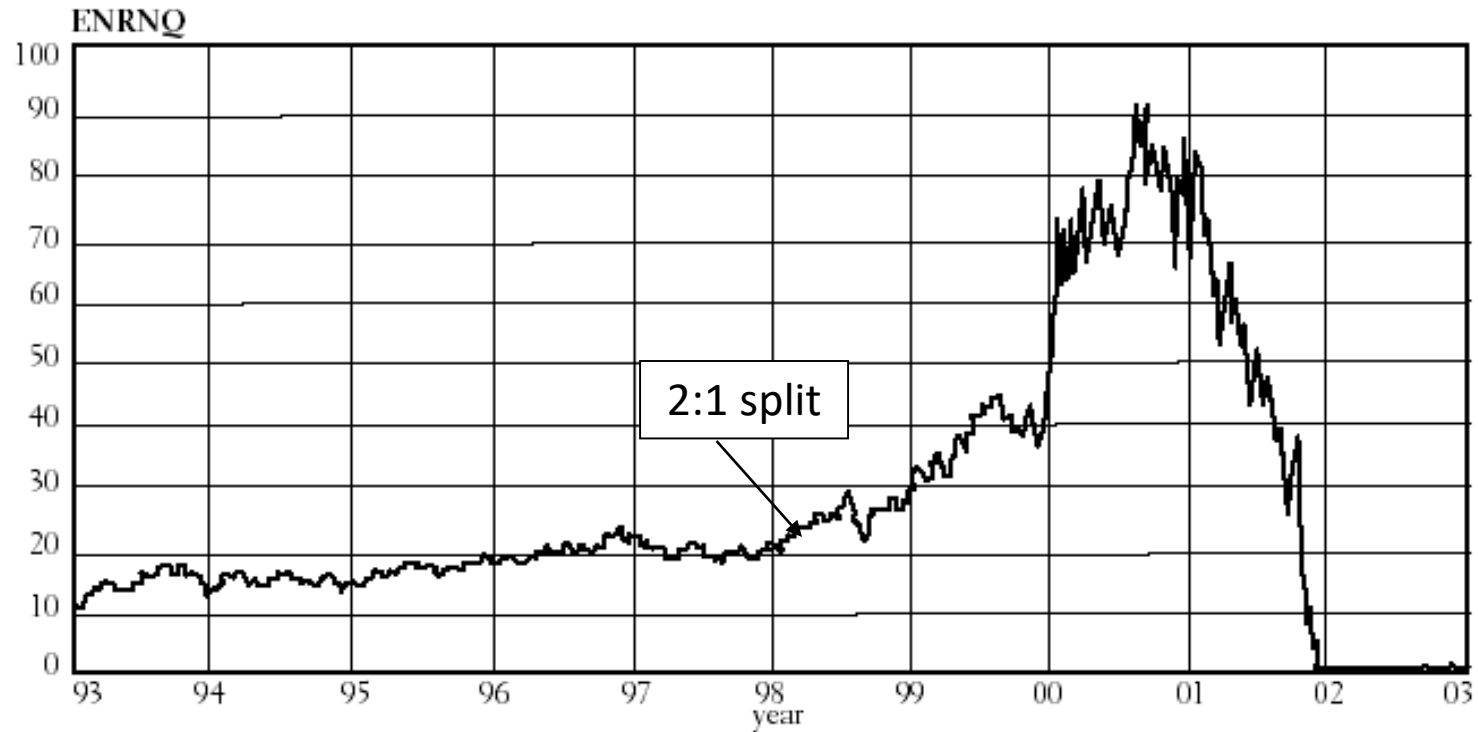


Houston, Tx HQ Buildings >

< One of many trading floors



Enron's stock price, 1993 – 2001

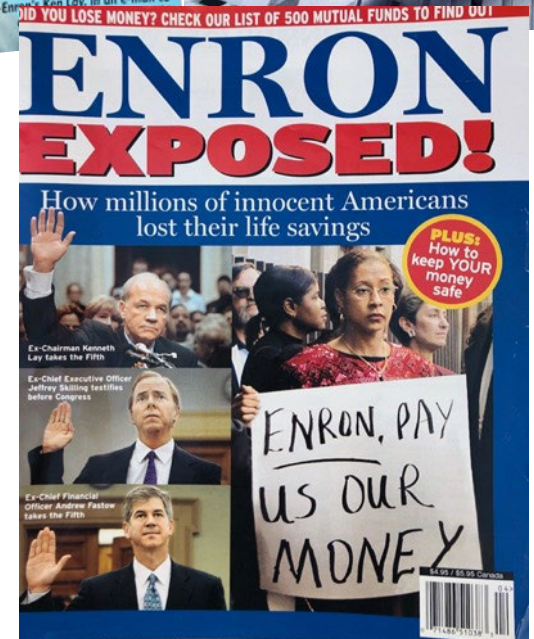
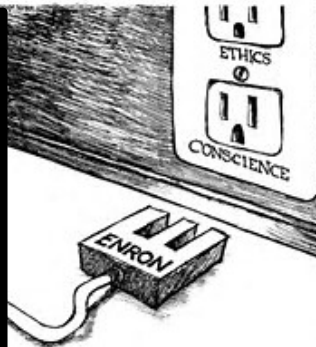
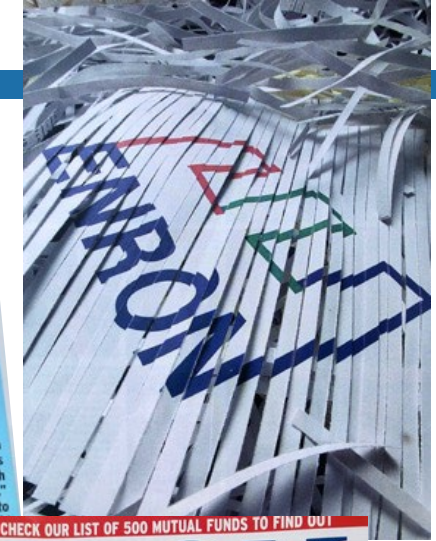
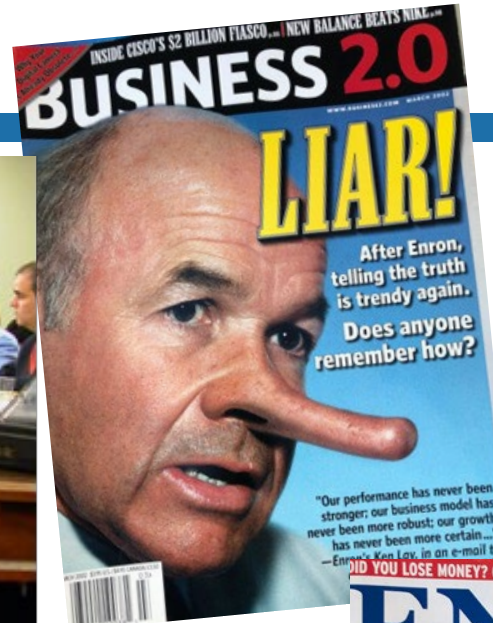


Enron's Last Mission Statement "To be the World's Leading Company"
In a way, it has become true – Enron is the leading scandal - we are now in the "post-Enron era"

\$1.1 Billion in Insider Sales of Stock from 1998 to 2001

<u>Enron Employee (* person on felon/problem list)</u>		<u>Amount</u>
Ken Lay* (excludes loans repaid in stock)	CEO	\$ 101,346,951
Jeff Skilling* (incomplete \$\$'s)	CEO/COO	66,924,028
Joe Sutton	Vice Chairman	40,093,346
Andy Fastow*	CFO	30,463,609
Ken Rice*	Business Unit Head	72,786,034
Lou Pai	Business Unit Head	353,712,438
Rick Causey*	Chief Accounting Ex	13,329,896
Rick Buy (head of control)	Risk Control Head	4,325,309
Joe Hirko*	Business Unit Head	35,168,721
Jeff McMahon* (incomplete \$\$'s)	Treasurer	2,739,226
Cliff Baxter	M & A Head	35,200,808
James Derrick	General Counsel	12,656,238
Rebecca Mark	Business Unit Head	79,526,787
Mark Koenig*	Investor Relations	9,110,466
6 Other Enron Executives	Various Departments	113,507,251
9 Board Members	Directors	\$ 171,746,910
Total sales reported in SEC filings from 29 insiders		<u>\$ 1,102,544,672</u>

The Enron Scandal



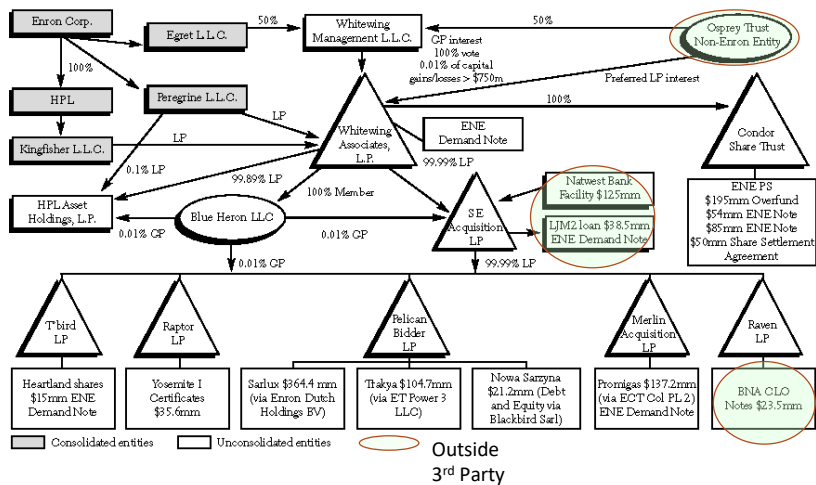
Investigations into Enron's Collapse



- 11 Congressional committees launch investigations
- Enron's board created a special committee, Chair is the University of Texas law school dean Bill Powers. New committee told to investigate accounting allegations. Results – the Powers Report
- Over two dozen lawsuits are brought against Board members, executives, accounting firms, banks, and law firms
- SEC, FBI and Department of Justice form Enron Task Force to pursue criminal and civil violations
- California grand jury investigates trading operation and energy market manipulation
- Bankruptcy Court authorizes a Bankruptcy Examiner – The Batson Reports

Board Approved Off Balance Sheet Debt and LJM Conflict of Interest

Enron's "Highly Structured" off balance sheet vehicles
(Debt made to look like an asset sale)



Enron Corp.
CFO: Andy Fastow

LJM
\$500 Investment Fund
GP: Andy Fastow



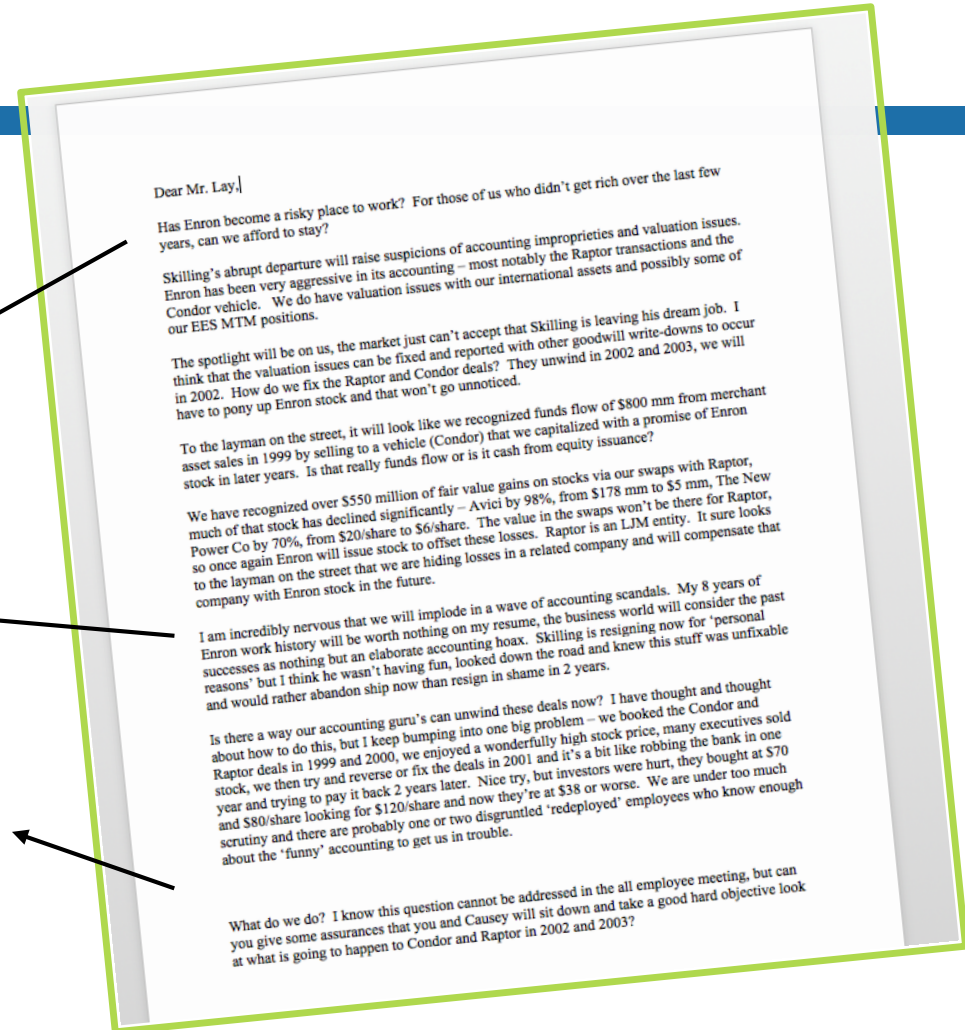
My “Anonymous” Letter

Dear Mr. Lay,

Has Enron become a risky place to work? For those of us who didn't get rich over the last few years, can we afford to stay?

I am incredibly nervous that we will implode in a wave of accounting scandals.

What do we do? I know this question cannot be addressed in the all-employee meeting, but can you give some assurances that you and Causey [Chief Accounting Officer] will sit down and take a good hard objective look at what is going to happen to Condor and Raptor in 2002 and 2003?



What happened to those who spoke up at Enron?

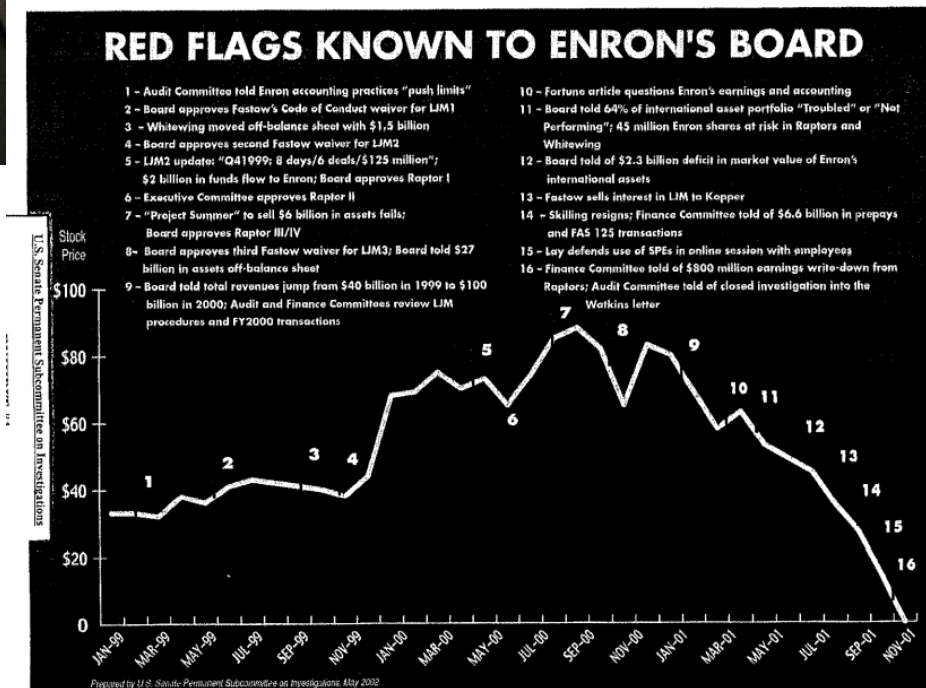
<u>Person</u>	<u>Action</u>	<u>Result</u>
Jeff McMahon, Treasurer	Met with COO Skilling	Demoted
Vince Kaminski, VAR Risk Head	Protested, refused to approve deals	Demoted
Jordan Mintz, Lawyer	Attempted to get Skilling signatures	Ignored
Jordan Mintz, Lawyer	Attempted to get the GC attention	Ignored
Cliff Baxter	Complained to COO Skilling	Resigned
Board of Directors	Inquired as to Fastow's LJM compensation	Ignored
Sherron Watkins, M&A	Met with Ken Lay, CEO	Ignored, Demoted
Sherron Watkins, M&A	Contacted Andersen	Somewhat Ignored

What happened at Enron?

- *“We do not err because truth is difficult to see. It is visible at a glance. We err because this is more comfortable.”*Alexander Solzhenitsyn
- *“Everyone has a plan until they get punched in the mouth.”*Mike Tyson
- *“Our lives begin to end the day we remain silent about things that really matter.”*Dr. Martin Luther King, Jr.*



Red Flags Known to Enron's Board



Warning Signs at Enron



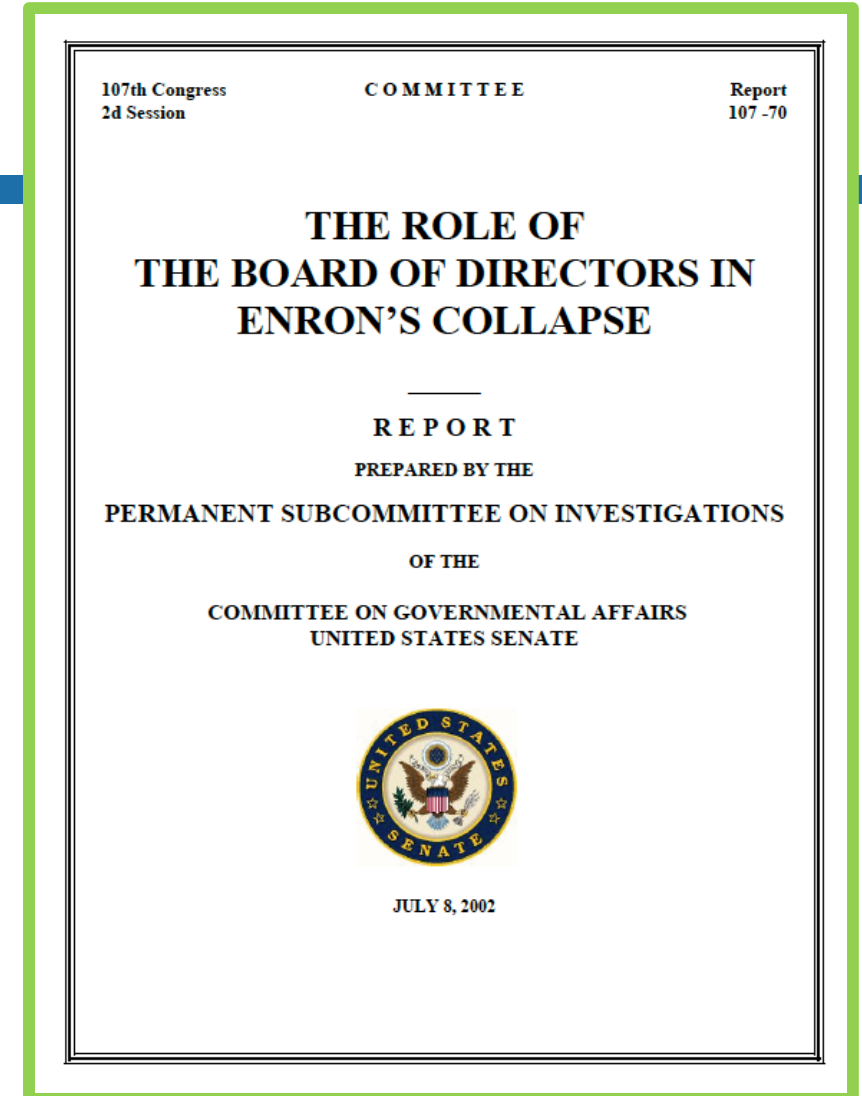
- *Fortune* magazine article by Bethany McLean, published on March 5, 2001, *Is Enron Overpriced?*
- Turmoil within Enron's major new divisions
 - Enron Energy Services (retail power)
 - Enron Broadband
 - Enron International
- CEO Jeff Skilling's behavior
 - June analyst call with profanity directed at balance sheet question
 - Unexpected resignation in August

Enron's Board of Directors



Senate Found Fiduciary failure by Enron's Board

- Allowed Enron to engage in high risk accounting
- Allowed inappropriate conflicts of interest
- Allowed extensive undisclosed off-the-books activities
- Allowed excessive executive compensation
- Board witnessed questionable practices over several years and chose to ignore them



Senate Investigation into Enron Board's Role in Collapse of Enron

Hearing Exhibit: AA Report to Enron's Board as early as 1998

Accounting Judgements
Disclosure Judgements
Rule Changes

Off balance sheet debt

**Selected Observations
1998 Financial Reporting**

Category	Risk Profile			Comment
	Accounting Judgements	Disclosure Judgements	Rule Changes	
Highly Structured Transactions				
Energy Asset Securitizations	(H)	(H)	(H)	<ul style="list-style-type: none"> Judgement Relates To General Applicability of Model And Any Retained Control Features Significance of Earnings Heightens Need for Disclosure Ongoing Rulemaking Activity Could Drastically Limit Model
Other Income Related	(H)	M	M	<ul style="list-style-type: none"> Judgement Usually Relates To Extent of Any Continued Involvement And/Or Contingency Exposures
Commodity and Equity Portfolio				
Commodities (MTM) and Merchant Investments (Fair Value)	(H)	(H)	M	<ul style="list-style-type: none"> Inherent Judgement Around Methodologies Significance of Merchant Earnings Heightens Need For Disclosure
Prudency	(H)	(H)	L	<ul style="list-style-type: none"> Assessment and Documentation Relationship
Purchase Accounting	(H)	M	L	
Balance Sheet Issues				
Equity Investments	(H)	(H)	M	
Portfolio Monetizations	(H)	M	(H)	
Other				

U.S. Senate Permanent Subcommittee on Investigations
(Source: February 7, 1999, Andersen Presentation to Audit Committee)
EXHIBIT #2a

AAHFC (2) 02762.9

David Duncan of Andersen
to Enron Audit Committee
(Feb. 7, 1999)

"Obviously, we are on board with all of these, but many push limits and have a high 'others could have a different view' risk profile."

What is the meaning of “Others could have a different view” risk profile?

David Duncan of Andersen
to Enron Audit Committee
(Feb. 7, 1999)

“Obviously, we are on board with all of these, but many push limits and have a high ‘others could have a different view’ risk profile.”

1. I’ve got no clue.
2. Accounting is complicated.
3. Enron is using cutting edge accounting.
4. A different auditing firm would conclude the Financials are misleading.

Portion of Cspan Senate Hearing



Questions for Board Directors to Consider

Do I have all of the information I need? Ask for details.

Does this advance our short and long-term goals? Explain the business purpose to this transaction.

What do you want me to know? Is there anything else critical to my understanding of this?



In Summary: What went wrong?

- Diffusion of responsibility
 - Board level - too large (17), relied on outside experts
 - Executive level – Compensation review system (PRC)
 - “What have you done for the company lately?”
- Lack of open dialogue
 - CLM (career limiting move) for control personnel to say no
 - Skilling’s standard response to ?’s : “he/she doesn’t get it”
 - Various messengers were shot, discouraging others
- Rationalizing fraudulent behavior
 - The end result justifies the means by which we get there (it’s the stock price)
 - Group think - everyone else is doing it; it’s expected
 - Form over substance compliance with GAAP (generally accepted accounting principles)
- Never outsource your Internal Audit/Control/Investigations Department



The Department of Justice and SEC investigations

<u>Enron Employee</u>	<u>Position</u>	<u>Legal Status</u>	<u>Prison Terms</u>
1. Ken Lay	CEO	Convicted*	Died July 5, 2006
2. Jeffrey Skilling	CEO/COO	Convicted	14 years (was 24 years)**
3. Andy Fastow	CFO	Pled guilty	6 years
4. Rick Causey	Chief Acctg Officer	Pled guilty	5.5 years
5. Ben Glisan Jr.	Treasurer	Pled guilty	5 years
6. Michael Kopper	Finance MD	Pled guilty	3 years, 1 mo.
7. David Delainey	Business Unit Head	Pled guilty	2.5 years
8. Kevin Hannon	Business Unit Head	Pled guilty	2 years
9. Ken Rice	Business Unit Head	Pled guilty	2 years, 3 mos.
10. Mark Koenig	Investor Relations MD	Pled guilty	18 mos, 2 yrs prob.
11. Dan Boyle	Finance VP	Convicted	3 years, 10 mos
12. Lea Fastow	Wife of CFO	Pled guilty	1 year

* Erased after death, since sentencing and appeal had not yet occurred.

** Initially sentenced to 24 years, and some months; reduced on appeal/in negotiation in 2013 to 14 years.

The Department of Justice and SEC investigations, continued

<u>Enron Employee</u>	<u>Position</u>	<u>Legal Status</u>	<u>Punishment</u>
13. Paula Rieker	Investor Relations MD	Pled guilty	Felon, Probation 2 yrs
14. Tim Belden	Energy Trader	Pled guilty	Felon, Probation 2 yrs
15. Tim DeSpain	Asst. Treasurer	Pled guilty	Felon, Probation 2 yrs
16. Jeffrey Richter	Energy Trader	Pled guilty	Felon, Probation 2 yrs
17. John Forney	Energy Trader	Pled guilty	Felon, Probation 2 yrs
18. Larry Lawyer	Finance Director	Pled guilty	Felon, Probation 2 yrs
19. Chris Calger	Energy Trader	Pled guilty	Successfully reversed
20. Kevin Howard	Business Unit CFO	Pled guilty	Felon, Home prison, 9 mos.
21. Jeff McMahon	Treasurer	SEC NCNDW*	Public Officer Ban 5 yrs, \$\$
22. Ray Bowen	Finance MD	SEC NCNDW*	Public Officer Ban 5 yrs, \$\$
23. Wes Colwell	Business Unit CAO	SEC NCNDW*	\$500k, cooperation

* Accused of securities law violations by SEC; settled with the SEC,
“Neither confirming nor denying wrongdoing”

The DOJ, SEC and Tx CPA Board actions, continued

<u>Executives</u>	<u>Position</u>	<u>Legal Status</u>	<u>Punishment</u>
2	Enron Lawyers (Rogers/Mintz)	SEC settlement	Fine and Ban
2	Enron Broadband Ex's	Pled guilty*	Both pled guilty*
4	Merrill Lynch Ex's	Convicted	Partially overturned
3	Nat West Bankers	Pled guilty	Prison, 37 mos.
One Firm	Arthur Andersen	Convicted	Overtured on appeal
David Duncan	Andersen Partner	Pled guilty	Successfully reversed
7	Andersen Ptr/Mgr/Staff	Tx State Board	Disciplinary Action
42	Total Enron related business persons under formal action		
3	Acquittals of Enron executives		
in the 100's	Enron personnel targeted, possible subjects, co-conspirators		

* After mixed results at trial, Joe Hirko, EBS CEO, pled in 2009, was sentenced to 16 months of prison and fined \$8.7 mil; Rex Shelby received 2 years probation with 3 months in halfway house and 3 months of home confinement and a fine of \$2.6 mil on March 28, 2011, close to 10 years after Enron's collapse.

Civil Penalties and Congressional Investigations

<u>Action</u>	<u>Entity/Person</u>	<u>Result</u>
SEC charges	Citibank, Chase, CIBC	\$316 million fines
SEC charges	Numerous individuals	Fines, Bans
Shareholder suits	Citibank, Chase, CIBC	\$6.6 billion settlement
Shareholder suits	Numerous others	\$1.1 billion settlement
Department of Labor	Enron & 21 persons	\$ settlements
Bankruptcy Examiner	100's deposed	4 primary reports, 12 appendixes
Congressional Investigations	Enron Board; Executives	Various reports of wrongdoing
Congressional Investigations	Bankers	Various reports of wrongdoing
Congressional Investigations	FERC	Various reports of wrongdoing
Congressional Investigations	SEC, Rating Agencies	Various reports of wrongdoing
Congressional Investigations	Accountants	Various reports of wrongdoing
Congressional Investigations	Lawyers	Various reports of wrongdoing



D&O Coverage at Enron

Coverage :

- \$300 million D&O policy that covered Enron officers and directors accused of wrong-doing, either civil or criminal
- Policy paid out \$100 million in legal fees for D&O defense work in 2002, 2003 and first half of 2004

Results :

- Extremely damaging evidence of fiduciary failure by board from Senate, Powers Report, and additional discovery
- Directors *personally* liable for shareholder losses exceeding \$60 billion
- Directors liable under Section 11 of the Securities Act of 1933 that allows shareholders to sue if filings contained material misrepresentation

\$1.1 Billion in Insider Sales of Stock from 1998 to 2001 (Board Emphasis)

Enron Director/Employee (* person on felon/problem list)		Amount
Ken Lay* (excludes loans repaid in stock)	CEO, Chairman	\$ 101,346,951
Jeff Skilling* (incomplete \$\$'s)	CEO/COO, Director	66,924,028
Rebecca Mark-Jusbasche	EI CEO, Director	79,526,787
Ken Harrison	PGE CEO, Director	75,211,630
Robert Belfer	Director	51,080,967
John Duncan	Director	2,009,700
Norman Blake	Director	1,705,328
Joe Foy	Director	1,639,590
Charles LeMaistre	Director	841,768
Robert Jaedicke	Director	841,438
Ronnie Chan	Director	337,200
Wendy Gramm	Director	276,912
6 Other Executives (with * problems)	Various Departments	163,597,952
11 Other Executives	Various Departments	557,204,573
Total sales reported in SEC filings from 29 insiders		<u>\$ 1,102,544,824</u>

D&O Coverage for the Board



- Kathy Patrick of Gibbs & Bruns, LLP represented Enron's board
 - Insurance company can prefer one insured party over another
 - Pace of litigation slow and defense cost burn rate high
 - Offer to plaintiffs: \$200 million remainder of policy for board settlement
- Agreement reached Oct 6, 2004 between board and plaintiffs
 - \$200 million balance of policy is paid on behalf of Enron Board to shareholder class
 - \$13 million paid from personal assets of 10 directors: Belfer, Blake, Chan, Duncan, Foy, Gramm, Jaedicke, LeMaistre, Mark-Jusbasche and Harrison
 - No settlement with defendants Ken Lay, Jeff Skilling or Andy Fastow as the settlement resolves litigation against those directors who faced liability under the strict liability provisions of Section 11 of the Securities Act of 1933, not the fraud provisions of Section 10(b) of the '34 Act
 - Settlement covered 18 current and former board members

Enron and other 2002 Corporate Scandals birthed the Sarbanes-Oxley Act

- The Sarbanes-Oxley Act - passed in July 2002 - providing protection against retaliation for corporate whistleblowers, among other things.
- Strong push back ensued, with corporate lobbying efforts aimed at the Department of Labor, OSHA department, which was tasked with implementing the new whistleblower protections.
 - From 2002 to 2008, Labor ruled in favor of whistleblowers only **17 out of 1,273 cases. 841 of the cases were dismissed on the technicality that the employees did not work for the publicly traded parent, but only for a subsidiary.**
 - Corporate conferences to address “how to handle” whistleblowers increased.
- Senators Patrick Leahy (D) and Senator Charles Grassley (R) countered the Dept of Labor that there was no basis for reading the law this narrowly.
- Advocacy Groups supporting whistleblowers grew in the years since SOX

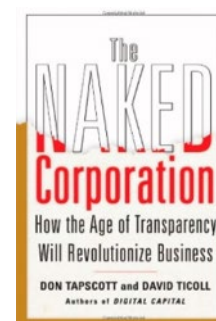
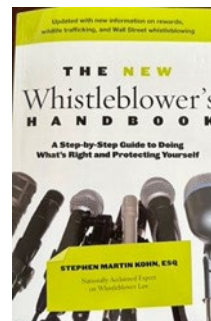
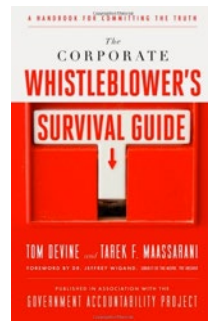
The Dodd-Frank Wall Street Reform and Consumer Protection Act, July 2010



- Dodd-Frank was passed in July 2010 providing a bounty program of 10 – 30% of amounts recovered in fines by the SEC for specific, timely and credible information that leads to negative findings against a company.
- Bounty program attracts lawyers to the cause of the whistleblower who will work on a contingency basis. Without that support, a whistleblower will spend \$10,000 to \$20,000 and more to get a case through to successful completion, often many years later.
- Despite the whistleblower hotlines and procedures required by SOX and the new bounty programs under Dodd-Frank, corporations continue to view employees who report wrong doing as trouble makers.

Resources in the U.S. for Whistleblowers

- The Government Accountability Group is a 35 year old not-for-profit – www.whistleblower.org
GAP litigates whistleblower cases, actively promotes government and corporate accountability. Since its founding, GAP has helped over 6,000 whistleblowers.
- GAP published “The Corporate Whistleblower’s Survival Guide” in 2011
- Increased legal support by way of the National Whistleblower Center and their “Whistleblower’s Handbook” www.whistleblowers.org & www.whistleblowersblog.com
- Several legal firms specializing in support for whistleblowers now exist – with websites that use helpful urls: www.hb-whistleblower.com; www.secwhistlebloweradvocate.com; and more.



Moral Hazard = People Doing Bad Things

“The Economics of Corruption”

Yale University, 1970

The SEC’s Office of the Whistleblower has significantly increased the “Likelihood of Being Caught”

$$MH = f \left(\frac{\text{Reward}}{\text{Penalty}}, \frac{\text{Likelihood of being Successful}}{\text{Likelihood of Being Caught}}, \frac{\text{Urgency of Need/Greed}}{\text{Personal Moral Ethic}} \right)$$

Component A: Risk/Reward Component B: Probability of Success Component C: Personal Inclination

Source: *Platts Energy Business and Technology*, July/August 2003, by Dunham L. Cobb, entitled “Moral Hazard: The Assassin Lurking Within Energy Trading Organizations.”

My new passion: Building and Maintaining Great Cultures



- Leaders must have pristine ethics
- Channels for bad news must exist and be robust
- Ethically-challenged employees must go
- Exception reporting must be outside the chain of command
- Compliance should be with spirit of existing laws and regulations
- Fight form over substance compliance
- For individuals: use the 3M test and seek peer support if it fails (Mentor, Media Mother)
- Be prepared to act. Quickly.
- For leadership and risk managers: develop informal channels of communication within the organization

Research on Robust Internal Whistleblowing Systems

- There is a correlation between use of internal reporting systems and improved business performance – the more active the hotline reporting activity, the higher the ROA.
- Return on Assets (ROA) was 2.8% higher for companies with higher levels of hotline utilization.
- Fewer material lawsuits and lower litigation costs.
- Fewer external whistleblower reports.
- Lower hotline usage correlated to higher discretionary accruals (earnings manipulation) and poor corporate governance practices

¹ Stubben, Stephen and Welch, Kyle T., Evidence on the Use and Efficacy of Internal Whistleblowing Systems (October 26, 2018). Available at SSRN: <http://ssrn.com/abstract=3273589>

Conclusion: All you need is love (and courage)



- When leaders love the organization, self interest is in last place
 - Care and respect for employees breed loyalty and ownership
 - Workplace enjoyment and pride will safeguard assets
 - Listening skills generate positive ideas and prevent problems
- Be courageous when confronted with unethical behavior
- Be prepared to act.

Discussion

Public Agenda Item #9

Consideration of Annual Gain Sharing Interest Adjustments for Group 4 Members and Annuitants

December 5, 2023

Bernie Hajovsky, Director of Enterprise Planning

Robin Hardaway, Director of Customer Benefits

Group 4 Gain Sharing



New Legislation in 2021

- The Texas Legislature passed legislation that shifted the ERS pension plan from a path toward depletion to being 100% funded by 2054
 - Established an annual Legacy Payment to retire the Trust's unfunded liabilities
 - Created a new cash balance benefit for employees beginning state service on or after September 1, 2022 who do not already have a retirement account with ERS (aka Group 4)
 - Includes a gain sharing feature

Group 4 Gain Sharing



What is Gain Sharing?

- Statutory provision that allows Group 4 members and annuitants to share in the investment returns generated by the ERS Trust
- Gain sharing is distributed when the average return on investments over a 5-year matched performance period ending August 31 exceeds 4%

Group 4 Gain Sharing



How Does Gain Sharing Work?

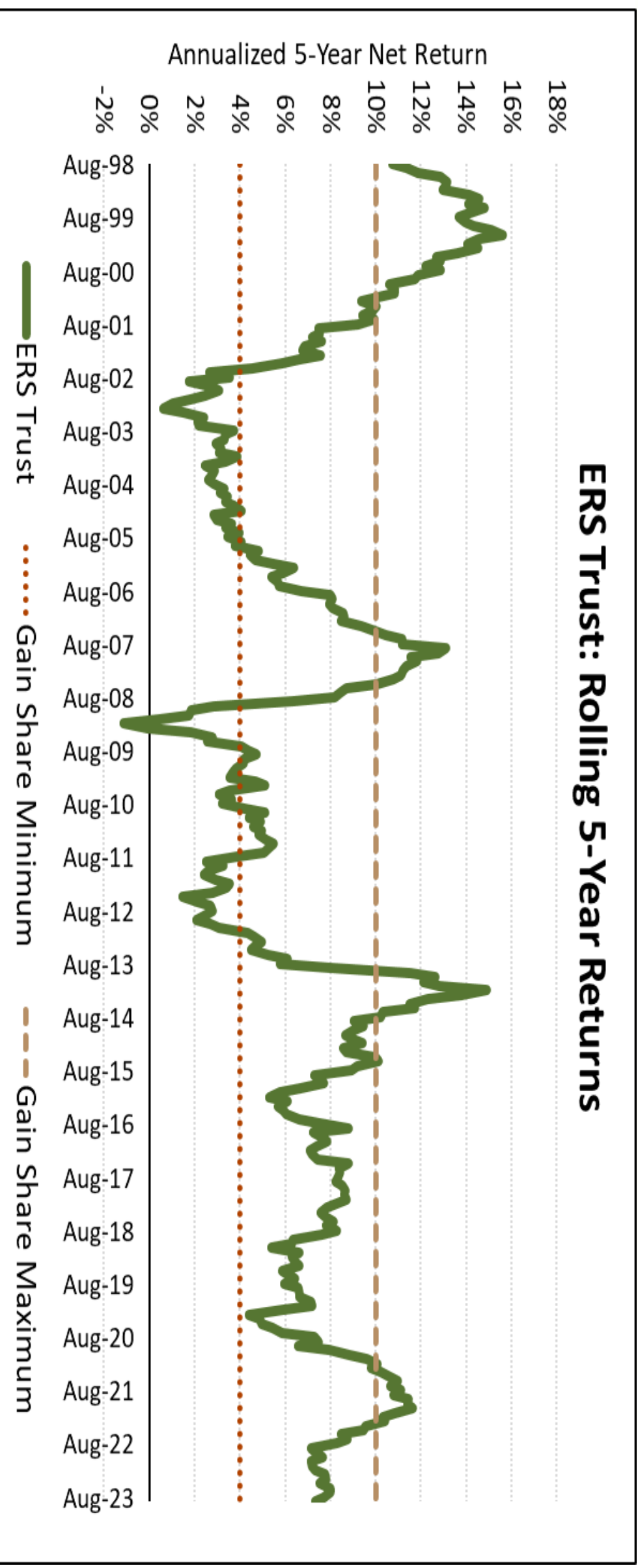
- The ERS Trust and Group 4 members and annuitants equally split the excess returns when the average return on investments over a 5-year matched performance period ending August 31 exceeds 4%
 - No gain sharing adjustment is applied if the 5-year matched performance $\leq 4\%$
 - The max gain sharing adjustment in a given year for Group 4 members and annuitants is capped at 3% per statute

Group 4 Gain Sharing



Rolling 5-Year Returns for ERS Trust Since 1998

ERS Trust: Rolling 5-Year Returns



Group 4 Gain Sharing



How is Gain Sharing Calculated?

- Based on the average return on the ERS Trust over a 5-year matched performance period as of August 31 of each fiscal year
 - Public market assets are valued daily (valuations as of August 31)
 - Private market assets are valued quarterly (the books remain open through the end of September to include most of the June 30 valuations)
 - 5-year matched performance for period ending August 31, 2023 is **7.53%**
- Global Investment Performance Standards (GIPS) methodology is used
 - Best practices for performance reporting and disclosure
 - Reported performance is net of all internal and external investment expenses

Group 4 Gain Sharing



How is Gain Sharing Calculated? (cont'd)

- Formula to compute gain sharing interest rate (GSIR)

$$\text{(5-year matched performance – 4\% threshold)} \div 2$$

- The 5-year matched performance through August 31, 2023 is 7.53%
- The resulting GSIR is 1.77%
 - $\text{GSIR} = (7.53\% - 4\%) \div 2$
 - $\text{GSIR} = 3.53\% \div 2$
 - $\text{GSIR} = 1.765\% \rightarrow 1.77\%$ rounded up to the nearest basis point

Group 4 Gain Sharing



How is Gain Sharing Calculated? (cont'd)

- **Hypothetical examples**

- **Example 1:** 5-year matched performance is 3.48%

- $GSIR = (3.48\% - 4\%) \div 2$
- $GSIR = -0.26\%$ → cannot be negative
- *No gain sharing is applied when matched performance $\leq 4\%$*

- **Example 2:** 5-year matched performance is 11.12%

- $GSIR = (11.12\% - 4\%) \div 2$
- $GSIR = 3.56\%$ → cannot exceed 3% per statute
- *GSIR is capped at 3% when matched performance $> 10\%$*

Group 4 Gain Sharing



How and When is Gain Sharing Applied?

- If gain sharing > 0%, then the GSIR adjustment is applied to Group 4 accounts and annuities in December
 - Members
 - Adjustment is applied to the August 31 balance
 - Posts to accounts in ERS Online by December 31
 - As of August 2023 = ~24,000 contributing and ~5,000 non-contributing
 - Annuitants
 - Adjustment is applied to the gross monthly payment amount beginning with the December 31 payment
 - Fewer than 10 annuitants as of November 2023

Group 4 Gain Sharing



How and When is Gain Sharing Applied? (cont'd)

- **Hypothetical examples**

- **Member**

- August 31 balance x GSIR = GSIR adjustment
- $\$88,223 \times 1.77\% = \$1,561.55$

- August 31 balance + GSIR adjustment = Adjusted account balance
- $\$88,223 + \$1,561.55 = \$89,784.55$

- **Annuitant**

- November 30 payment x GSIR = GSIR adjustment
- $\$2,624 \times 1.77\% = \46.44

- November 30 payment + GSIR adjustment = December 31 payment
- $\$2,624 + \$46.44 = \$2,670.44$

Group 4 Gain Sharing



Timeline of Key Milestones, September 2022 – September 2023

Enrollment
of Group 4
members
begins

1

Sep 2022

Group 4 member's
account balance as
of August 31 is
used for gain
sharing purposes

2

Aug 2023

ERS factors in all
investment-related
expenses for
annual financial
reporting purposes

3

Sep 2023

Group 4 Gain Sharing



Timeline of Key Events, October 2023 – December 2023

ERS' custodian bank provides matched performance results

ERS reports matched performance and gain sharing interest rate to the Board and in the Annual Comprehensive Financial Report

ERS calculates resulting gain sharing interest rate based on 5-year matched performance

ERS applies gain sharing adjustment to Group 4 member accounts and annuities by December 31

4

Oct 2023

5

Oct 2023

6

Dec 2023

7

Dec 2023

Discussion

Public Agenda Item #10

**Consideration of Annual Review of Public Equity Program*

December 5, 2023

Lauren Honza, Managing Director of Public Equity

Keith Lyons, Director of Global Internal Equity

Public Equity Program

Program Overview



- **Strategic Purpose**

- Return seeking allocation providing long-term growth and liquidity
- Program inception in November 1996, restructured in 2022

- **Implementation Objective**

- Outperform global equity benchmark over rolling five-year periods
- Maintain compliance with portfolio guidelines

Public Equity Program

Key Characteristics



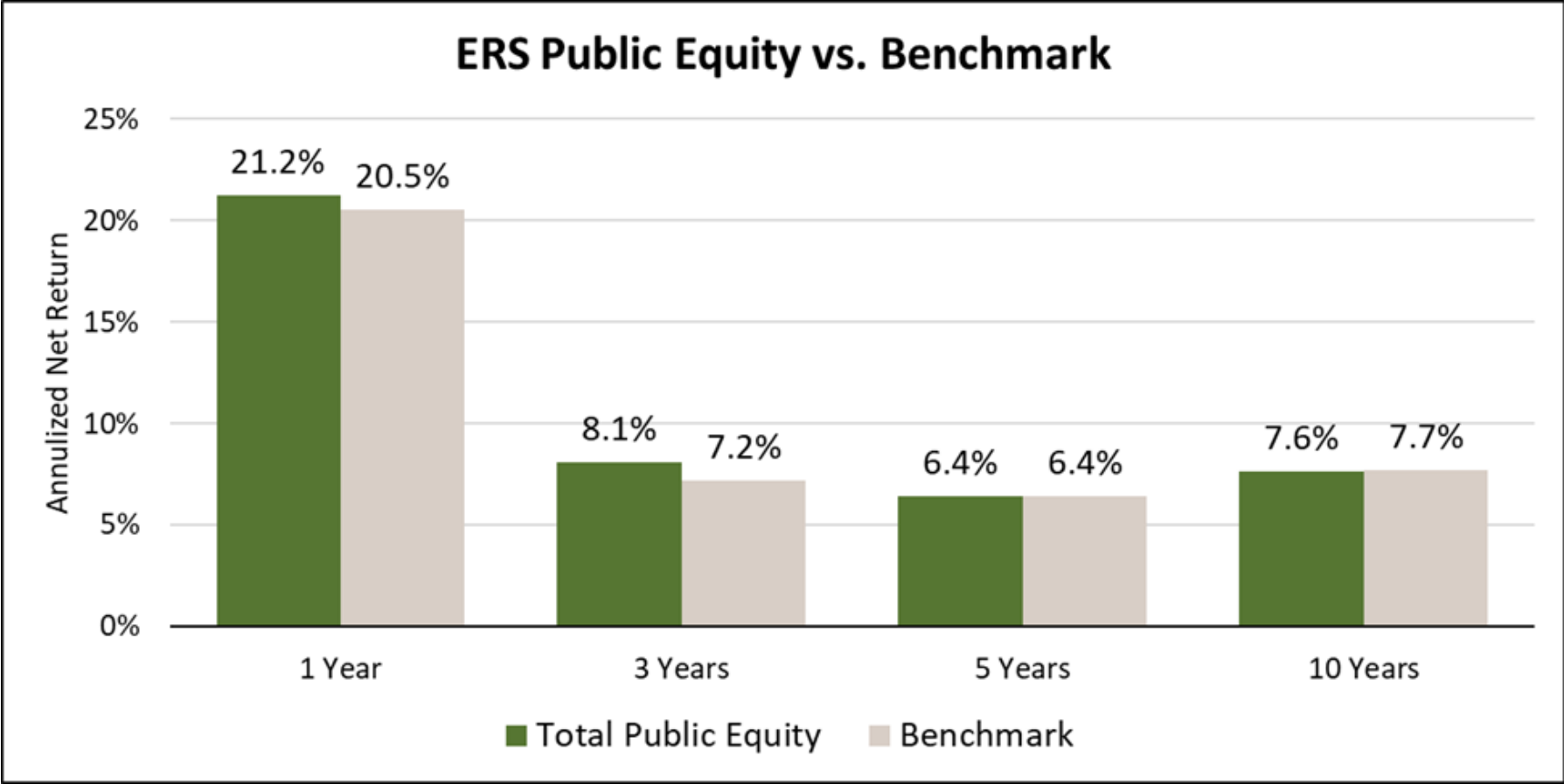
Attribute	Public Equity Portfolio
Type of Allocation	Return Seeking
Policy Allocation	Target weight of 35%, range from 25% to 45%
Performance Objective	Exceed return of MSCI ACWI IMI index
Management Style	Internally and externally managed funds
Risk Budget	Tracking error: target 150 bps, limit 300 bps
Expected Information Ratio	0.25 or better
Investment Expenses	~50 bps overall including 11 bps internal, 44 bps external

Public Equity Program

Performance Snapshot



- Strong performance since restructuring of Program; flat over long-term

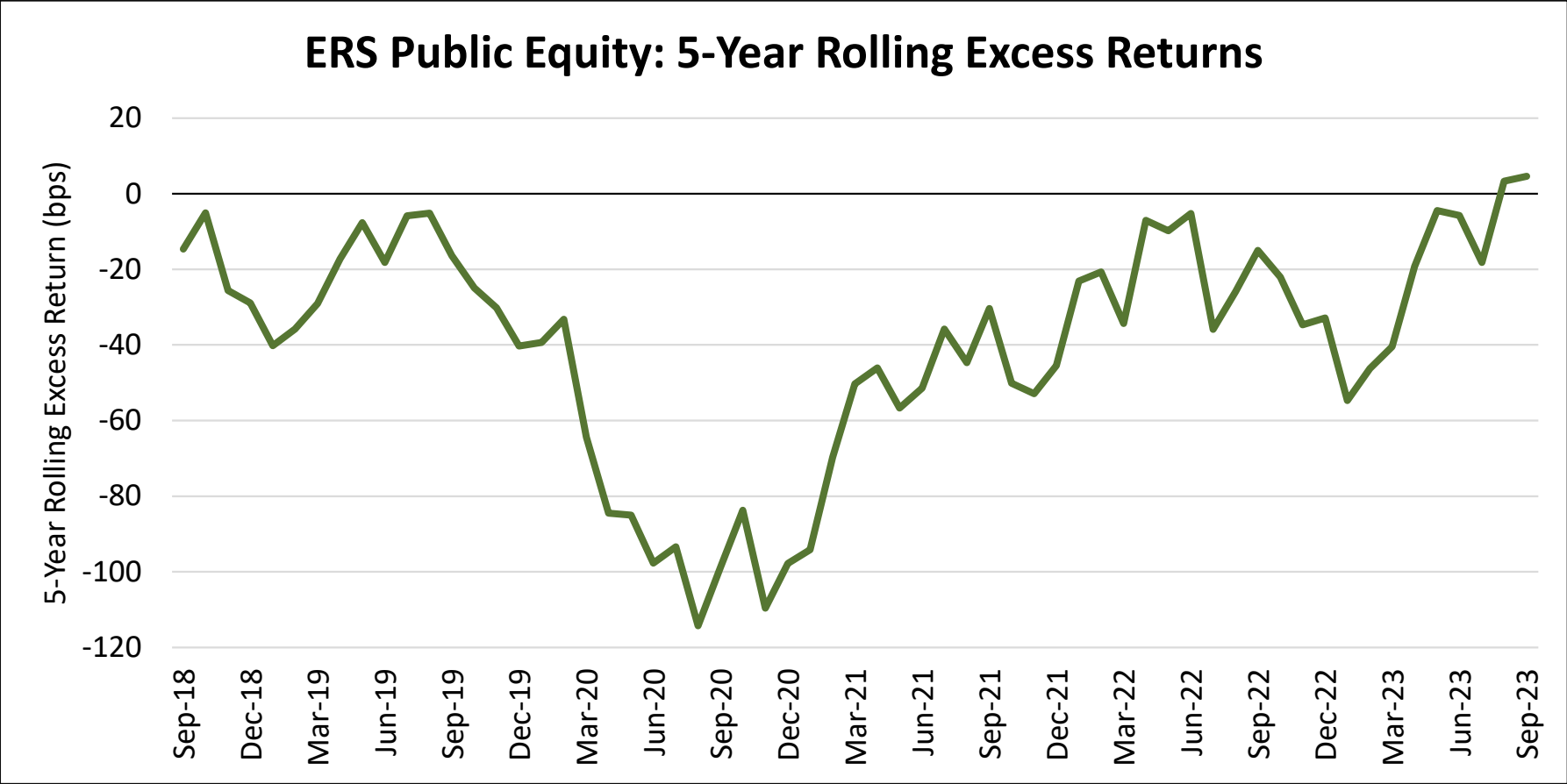


Public Equity Program

Historical Performance



- Five-year rolling return slightly into positive territory

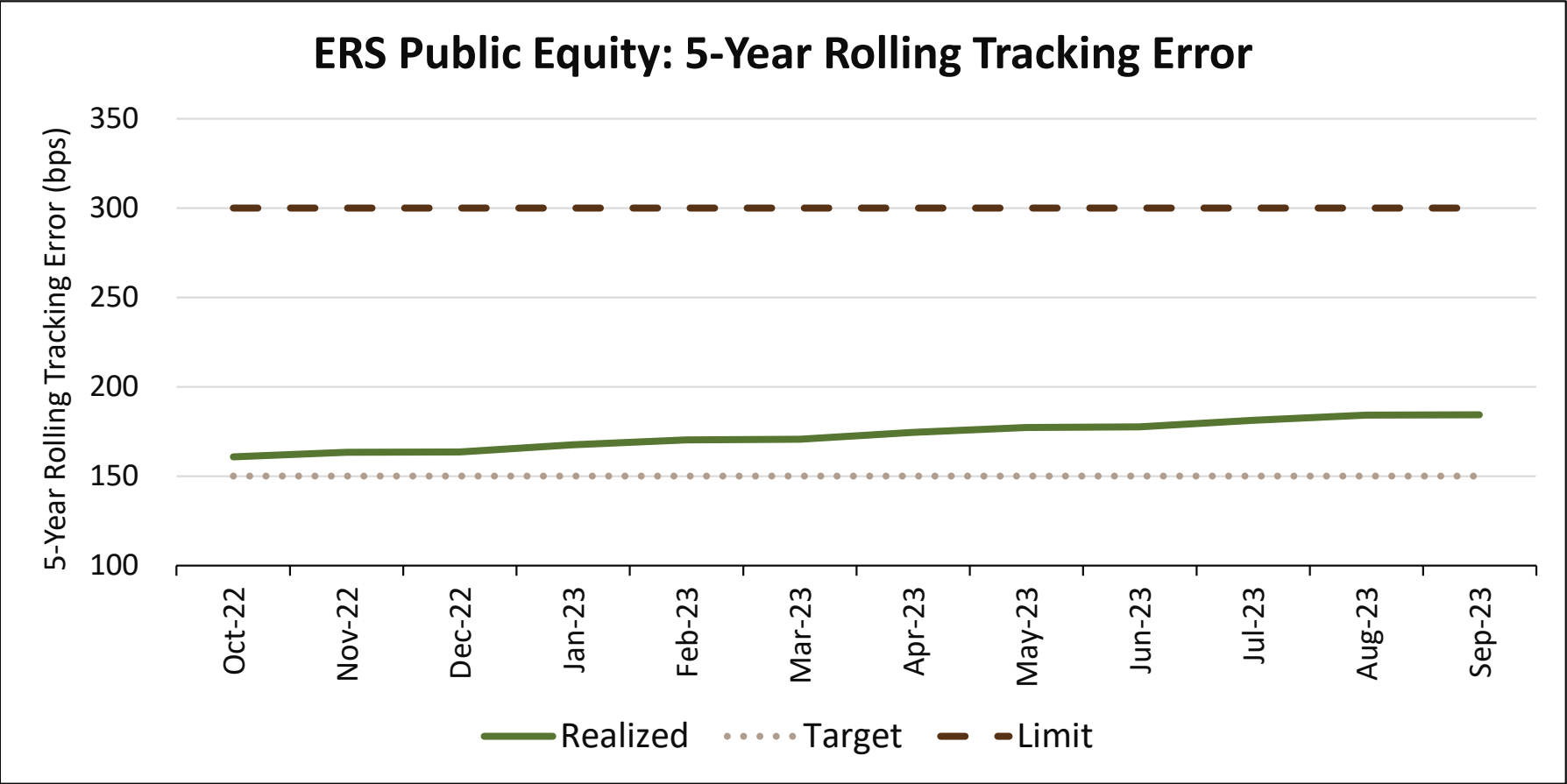


Public Equity Program

Historical Risk



- Tracking error up slightly on higher volatility, less portfolio complexity

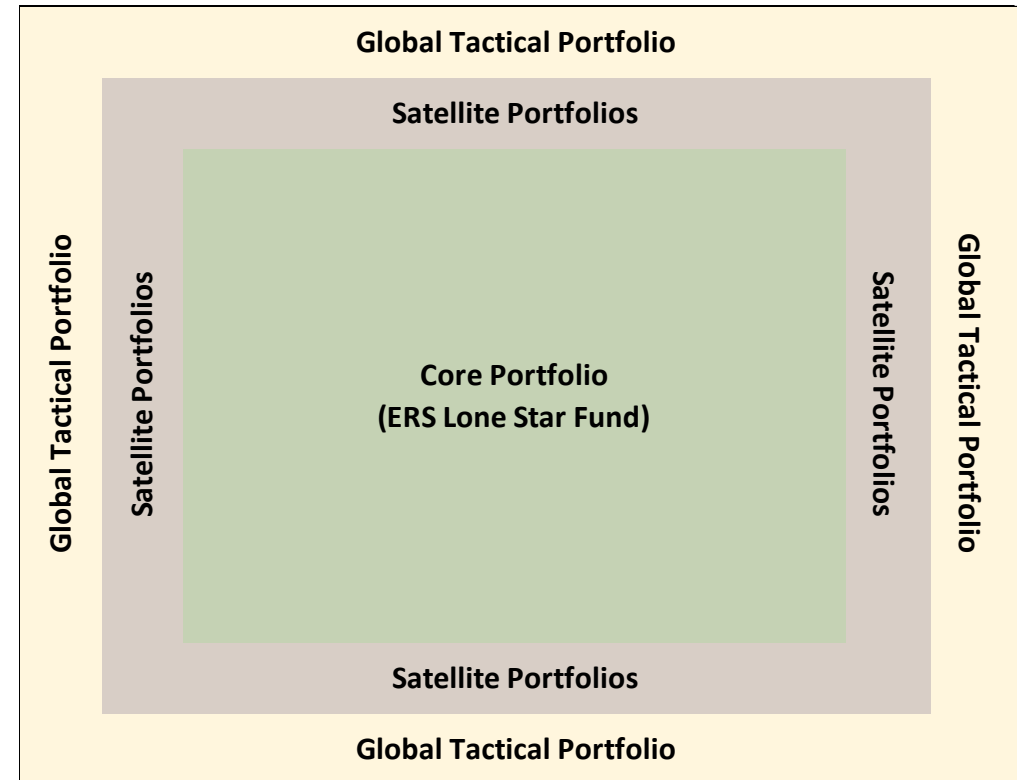


Public Equity Program

New Architecture Effective September 1, 2022



- Internal public equities serves as the centerpiece of the portfolio
- Team identifies complementary exposures and strategies
- Liquidity & allocation overlay allows for more rapid rebalancing and tilts



Public Equity Program

Goals of Restructuring



- Improve risk-adjusted performance
- Simplify portfolio structure
- Enhance allocation capabilities
- Improve alignment of interests

Public Equity Program

Before and After Restructure



	June 30, 2022	September 30, 2023
Internal Portfolios	8	1
Satellite Portfolios	18	11
Total Holdings / Internal Holdings	2,342 / 1,259	1,321 / 162
Tracking Error	140 basis points (5Y)	222 basis points (1Y)
Excess Returns	-5 bps last 5 years	+140 bps since inception
External Advisor Fees	\$18.3 million	\$11.1 million

Public Equity Program

Current Allocation as of September 30, 2023



- Program currently in line with long-term target

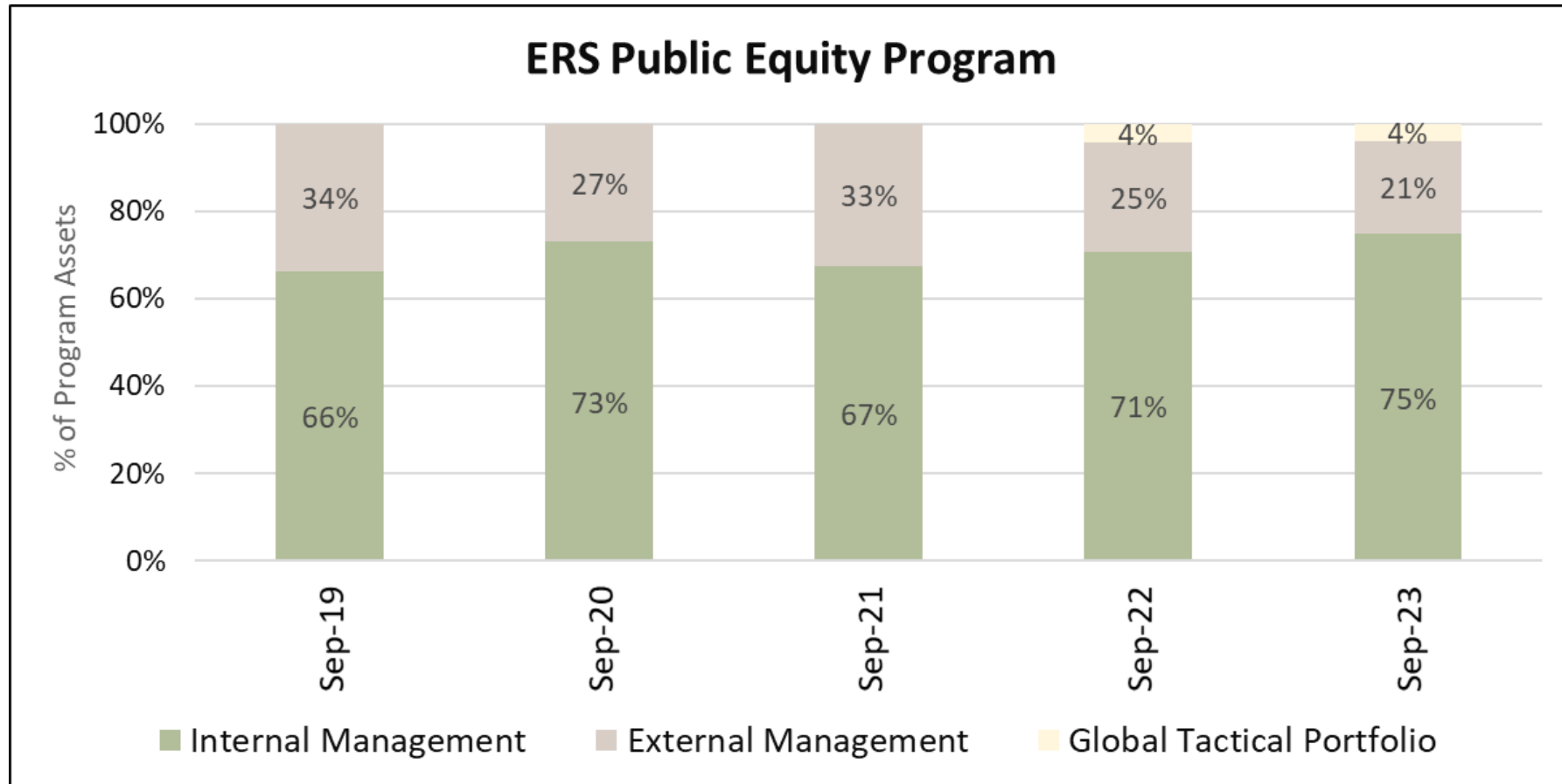
	Assets	% of Trust	Long-Term Range
Core Portfolio (Lone Star Fund)	\$ 8,343,929,772	74.8%	70% ± 20%
Satellite Portfolios	\$ 2,369,470,252	21.2%	25% ± 20%
Global Tactical Portfolio	\$ 443,379,325	4.0%	5% ± 5%
Total Public Equity Program	\$ 11,156,779,349	100.0%	100.0%

Public Equity Program

Historical Composition

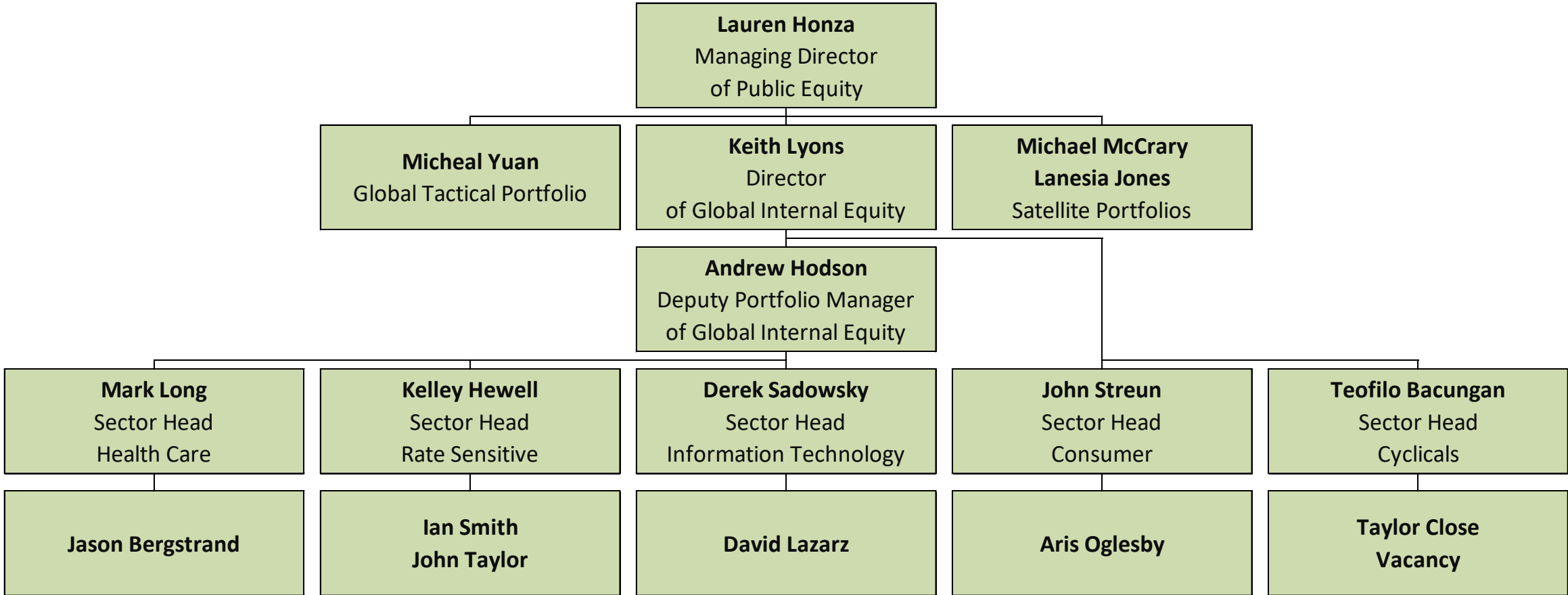


- 70% internal management historically, tactical portfolio adds 4-5%



Public Equity Program

Organizational Chart



Public Equity Program

ERS Lone Star Fund



- Objective: Core portfolio for Public Equity
- Internally managed
- Benchmark: MSCI ACWI ex-China
- Region/Sector neutral
- Stock selection key driver of long-term returns

Public Equity Program

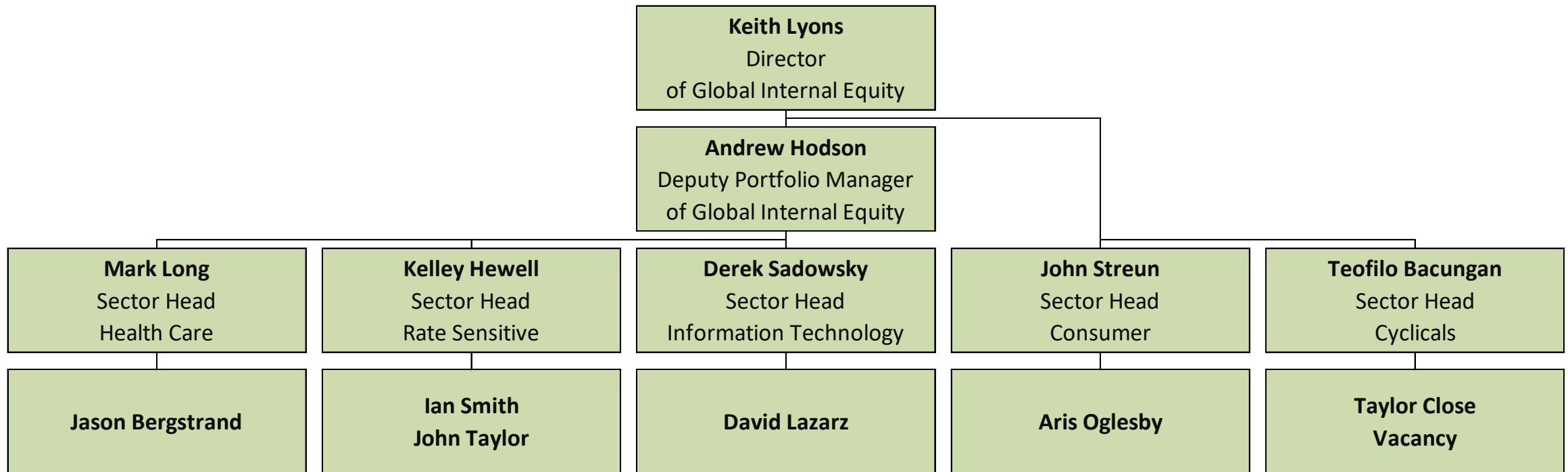
ERS Lone Star Fund



- Process
 - Fundamental company analysis drives stock selection
 - Ownership and accountability
 - Knowledge sharing
 - Prudent risk-taking behavior
 - Repeatable process

Public Equity Program

Lone Star Organizational Chart

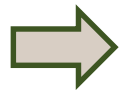


Public Equity Program

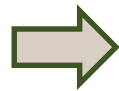
ERS Lone Star Fund



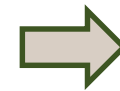
Idea
Generation



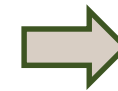
Tear
Sheet



Sector
Head



Investment
Committee



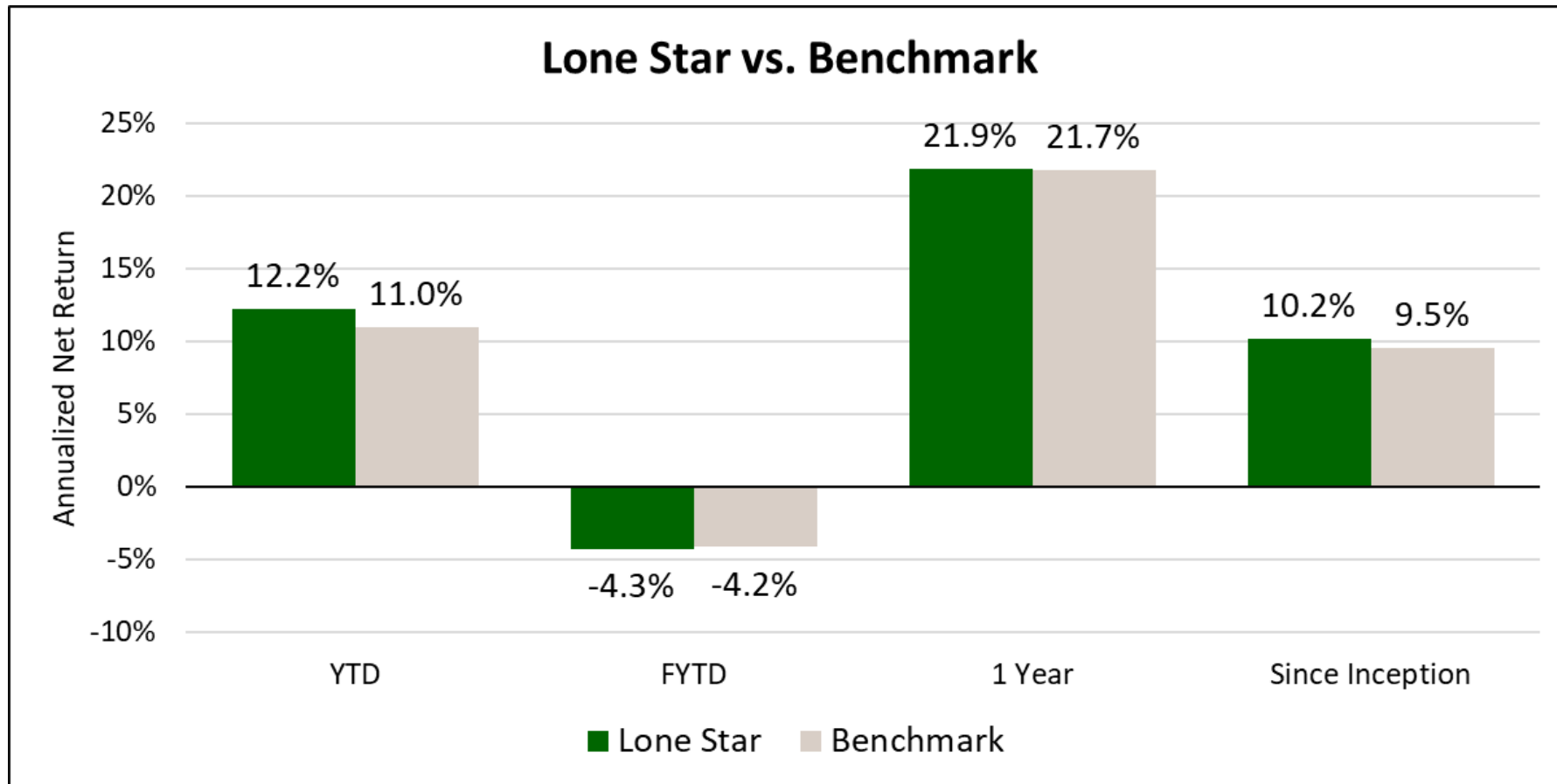
Lone Star
Portfolio

Public Equity Program

Lone Star Fund Performance Snapshot



- Strong performance since launch of a single internal portfolio



As of September 30, 2023

Public Equity Program

Satellite Portfolios



- Objective: Provide complementary exposures
- Externally managed/advised
- Diversification benefits through increased returns and/or risk reduction
- Differentiated strategies
- Selected in accordance with applicable policies
- Approved for Select Pool by Asset Class Investment Committee

Public Equity Program

Satellite Portfolios



Item	Details
Total Funded	11 strategies
Select Pool	19 strategies
Funded FY23	1 strategy
Defunded FY23	4 strategies
RFA	Calendar Year 2024

Public Equity Program

Global Tactical Portfolio



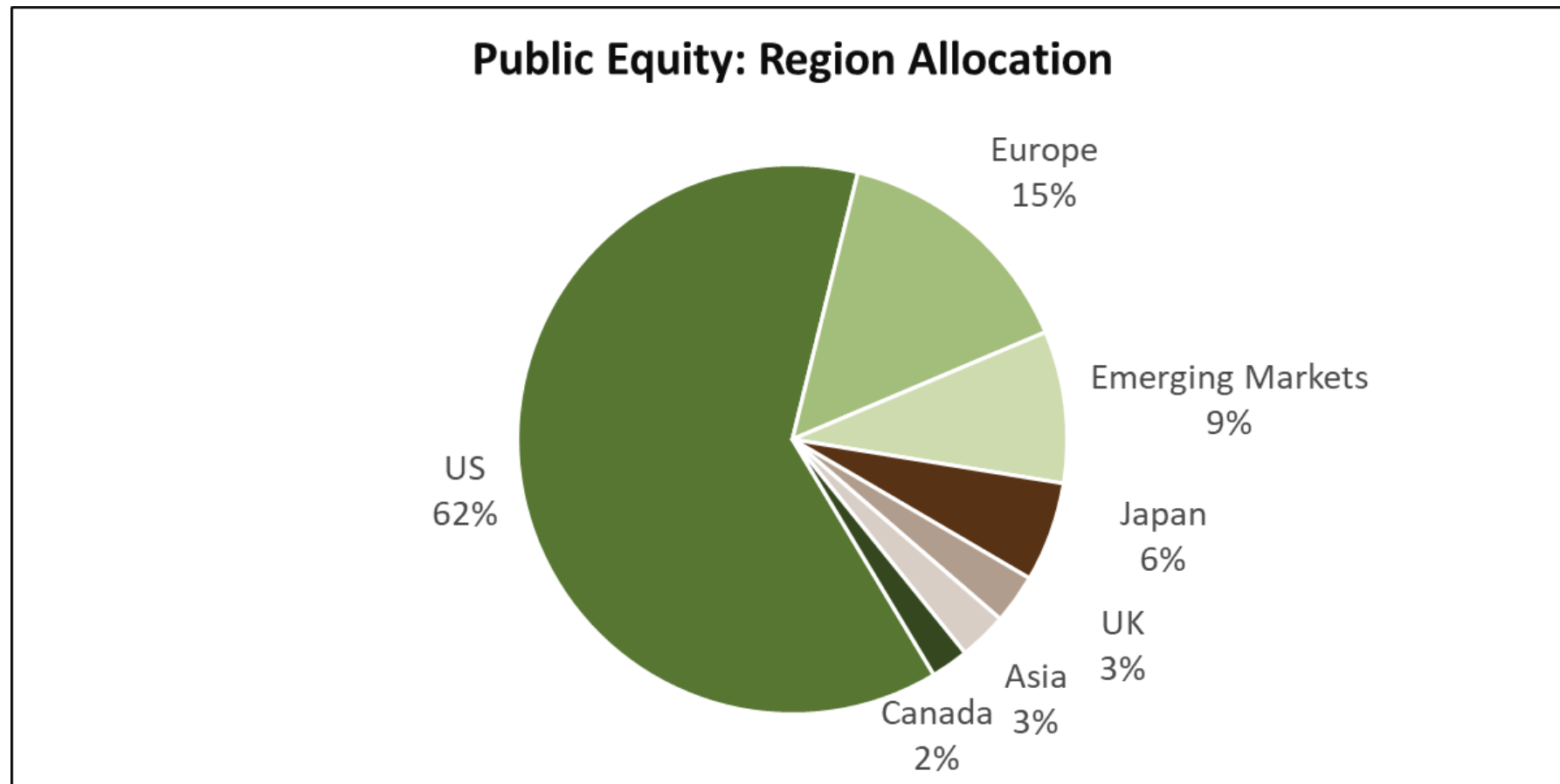
- Objective: Efficient exposure to markets, factors, and strategies
 - Ability to express tactical views
 - Ready funding for liquidity needs
 - Minimize cash drag
 - Lower transaction costs
 - Effective and efficient rebalancing tool in volatile markets
 - Less disruptive to managers when rebalancing

Public Equity Program

Composition by Region



- Portfolio remains well-diversified across geographies and within guidelines

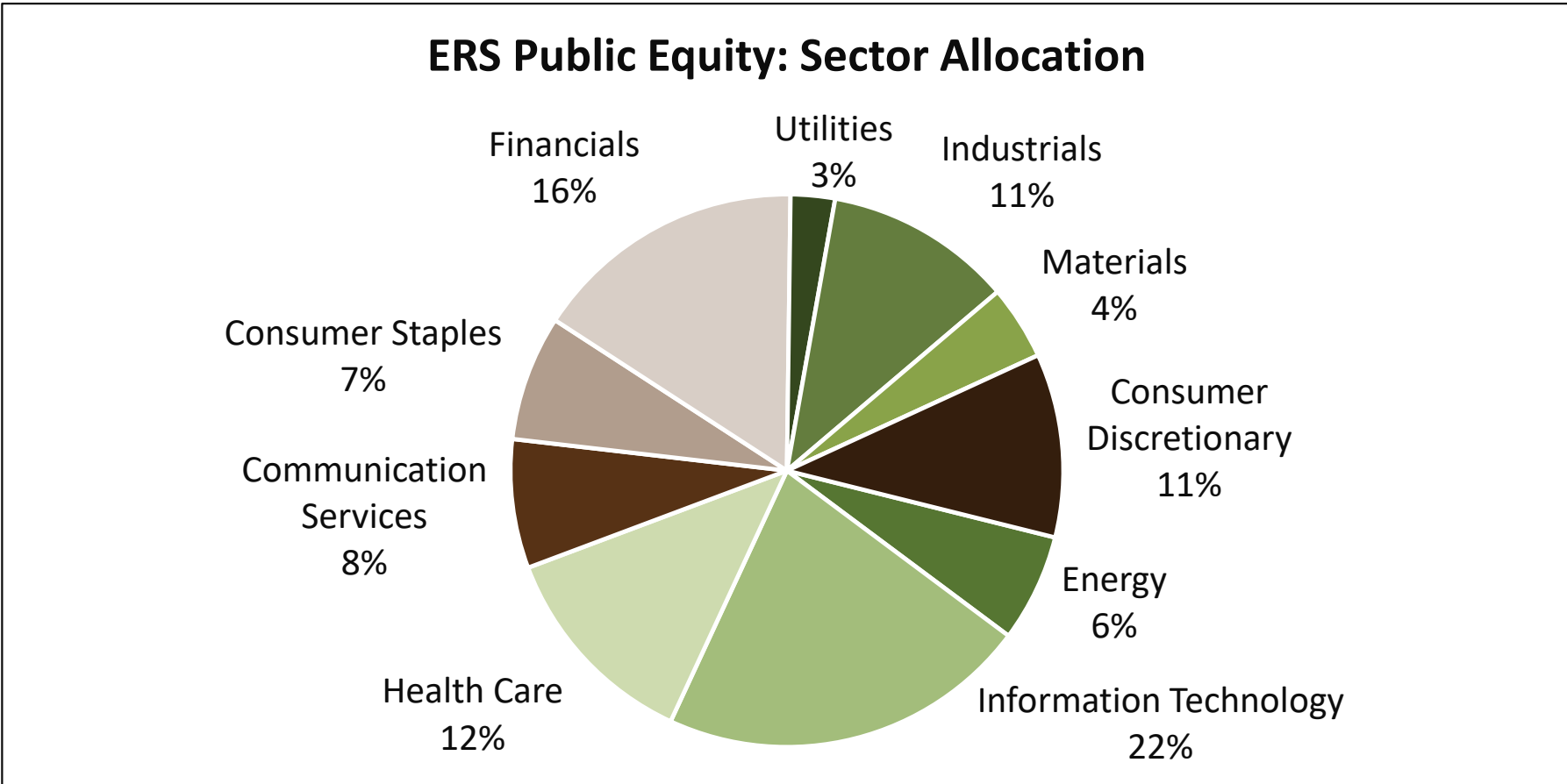


Public Equity Program

Composition by Sector



- Portfolio remains well-diversified across sectors and within guidelines



Public Equity Program

Initiatives



- Continue to implement and refine investment process
- Identify and diligence complementary equity strategies
- Enhance portfolio construction process
- Continue to develop and implement robust monitoring process
- Review software and tools
- Develop skills and provide opportunities for growth

Discussion

Public Agenda Item #11

** Consideration and Annual Review of Emerging Manager Program*

December 5, 2023

David T. Veal, Chief Investment Officer

Lauren Honza, Director of Emerging Manager Program

Lanesia Jones, Investment Analyst, Emerging Manager Program

Emerging Manager Program

Statutory Definition



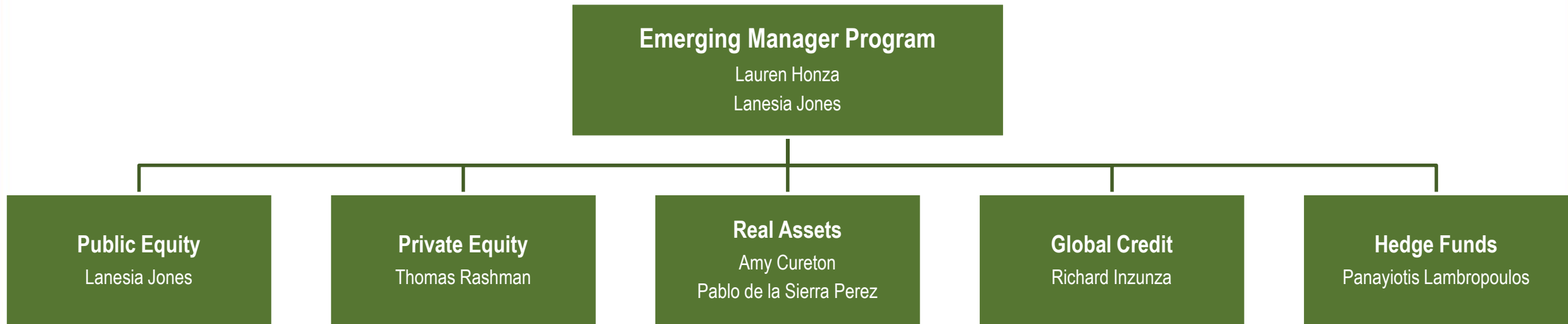
- Texas Government Code § 815.301 (g), (h) and (i) requires ERS to make a good faith effort to acquire financial services from emerging managers.
- The statute defines emerging managers as private professional firms with **less than \$2 billion in assets under management** who provide pension fund management, consulting, investment advising, brokerage services, hedge fund management, private equity management, and real estate investment.

Emerging Manager Program

Team



- Integration within asset classes represents a significant success factor



Emerging Manager Program

Approach



- ERS External Advisor Website
- Managers of Emerging Managers
- Investment Consultants
- Industry Outreach

Emerging Manager Program

Event Highlights



- Real Estate Emerging Manager (REEM) Summit (January 10–11, 2024)
- TRS/ERS Emerging Manager Conference (February 22, 2023)
- TRS/ERS Emerging Manager Conference (February 28, 2024)

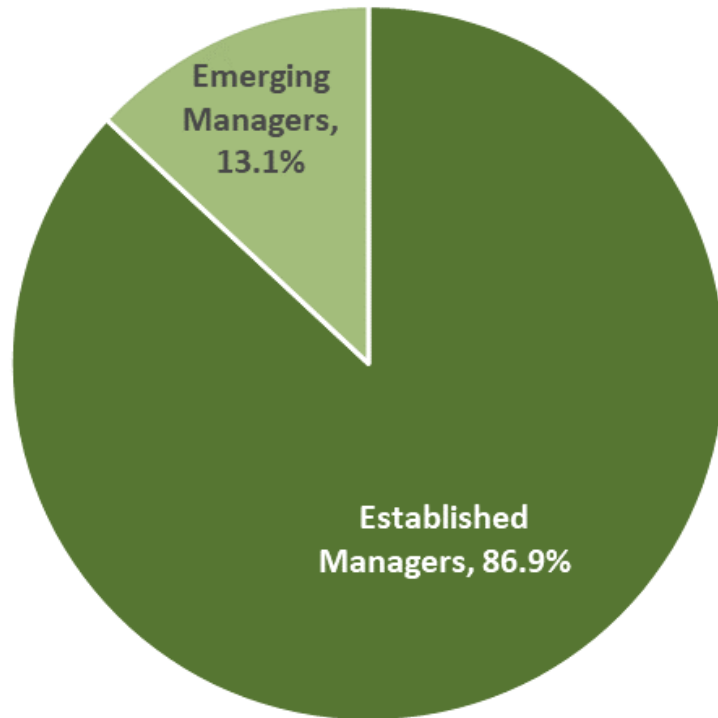
Emerging Manager Program

Investments as of September 30, 2023

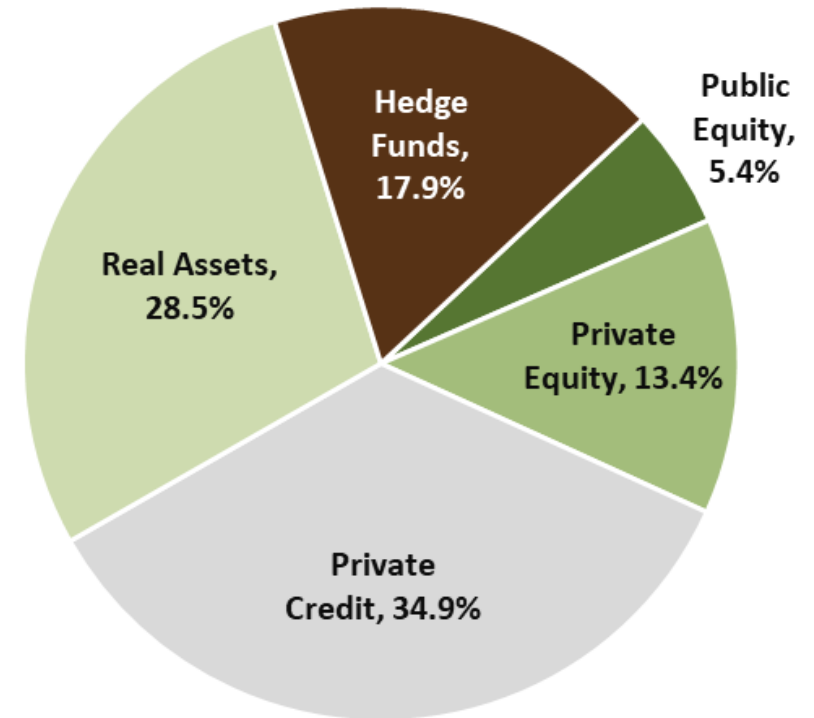


- \$2.4 billion in total assets = 13% of external assets

Externally Managed/Advised Assets \$18.4 billion



Emerging Manager Program \$2.4 billion



Emerging Manager Program

Public Equity



- Total Market Value: \$130 million
- Fund of Funds: 1
- FY23 Commitments: \$100 million

Public Equity (as of 09/30/23)	Since Inception
Legato Emerging Markets Portfolio (Inception: November 1, 2019)	-0.37%
<i>MSCI Emerging Markets Index</i>	<i>1.21%</i>

Emerging Manager Program

Private Equity



- Total Commitments: \$586 million
- Direct Relationships: 3
- Fund of Funds: 3
- FY23 Commitments: \$25 million

Private Equity (IRR as of 06/30/23)	Since Inception
Total Emerging Manager Portfolio (Inception: November 2010)	14.76%
<i>Total Private Equity Portfolio</i>	<i>13.37%</i>

Emerging Manager Program

Real Assets – Private Real Estate



- Total Commitments: \$990 million
- Direct Relationships: 12
- Fund of Funds: 3
- FY23 Commitments: \$55 million

Private Real Estate (IRR as of 06/30/23)	Since Inception
Total Emerging Manager Portfolio (Inception: December 2010)	15.67%
<i>Total Private Real Estate Portfolio</i>	<i>11.56%</i>

Emerging Manager Program

Real Assets – Infrastructure



- Total Commitments: \$132 million
- Direct Relationships: 2

Infrastructure Assets (IRR as of 06/30/23)	Since Inception
Total Emerging Manager Portfolio (Inception: August 2017)	6.31%
<i>Total Infrastructure Portfolio</i>	<i>8.69%</i>

Emerging Manager Program

Global Credit – Private Credit



- Total Commitments: \$1.2 billion
- Direct Relationships: 5
- FY23 Commitments: \$75 million

Private Credit (TWR as of 08/31/23)	Since Inception
Total Emerging Manager Portfolio (Inception: October 2017)	9.08%
<i>LSTA Leveraged Loan Index + 150</i>	4.46%

Emerging Manager Program

Hedge Funds



- Direct Relationships: 1
- PAAMCO Prisma Launchpad total commitment: \$348 million
 - \$150 million original commitment in May 2018
 - \$23 million additional commitment in July 2020
 - \$175 million additional commitment in April 2021

Hedge Funds (TWR as of 09/30/23)	Since Inception
ERS Launchpad (Inception: September 1, 2019)	2.94%
<i>Launchpad Benchmark</i>	3.31%

Emerging Manager Program

Calendar Year 2024 Initiatives



- Maintain goal of 10% of external assets with emerging managers
- Focus on relevant direct relationships with existing managers
- Continue to collaborate with fund-of-funds
- Promote best practices by working with other programs
- Host 2024 Emerging Manager Conference

Discussion



Public Agenda Item #12

** Consideration and Annual Review of Stewardship Program*

December 5, 2023

David T. Veal, Chief Investment Officer

Ben Schuman, CFA, Stewardship Committee Chair

Investments Stewardship

Program Overview



- Primary Stewardship functions
 - Committee meets monthly since May 2022
 - Proxy Voting
 - Scrutinized Investments
 - Restricted Investments
 - Industry engagement on Stewardship matters

Annual Review of Stewardship Program



Overview of Proxy Voting

- ERS owns shares of 1,250+ companies globally
 - Voting gives shareholders a significant say in company management
 - Such votes occur seasonally around annual meetings in April-June
 - ERS contracts with a proxy advisor to cast these ballots

ERS FY23 Proxy Voting by the Numbers

15,776 proposals voted	1,233 meetings	52 countries
339 issues under consideration	97% voted automatically by proxy advisor	92% voted with management

Annual Review of Stewardship Program



ERS Proxy Voting Policy

- The ERS Investment Policy Statement (IPS) establishes the framework for the management of the Trust
- IPS includes the ERS Proxy Voting Policy
- Divides the subjects of these votes into six broad categories

Routine / Miscellaneous

Shareholder Rights & Defenses

Board of Directors

Compensation

Capital / Restructuring

Social / Environmental Issues

Annual Review of Stewardship Program



ERS Proxy Voting Philosophy

- Rooted in IPS language: *The right to vote proxies for securities held by the Trust has **economic value***
- Managing these voting rights is a **fiduciary act**
- Consider **only** factors related to the economic value of investments
- Cast all votes in accordance with the **economic best interest** of ERS

Annual Review of Stewardship Program

ERS Proxy Voting Guidelines



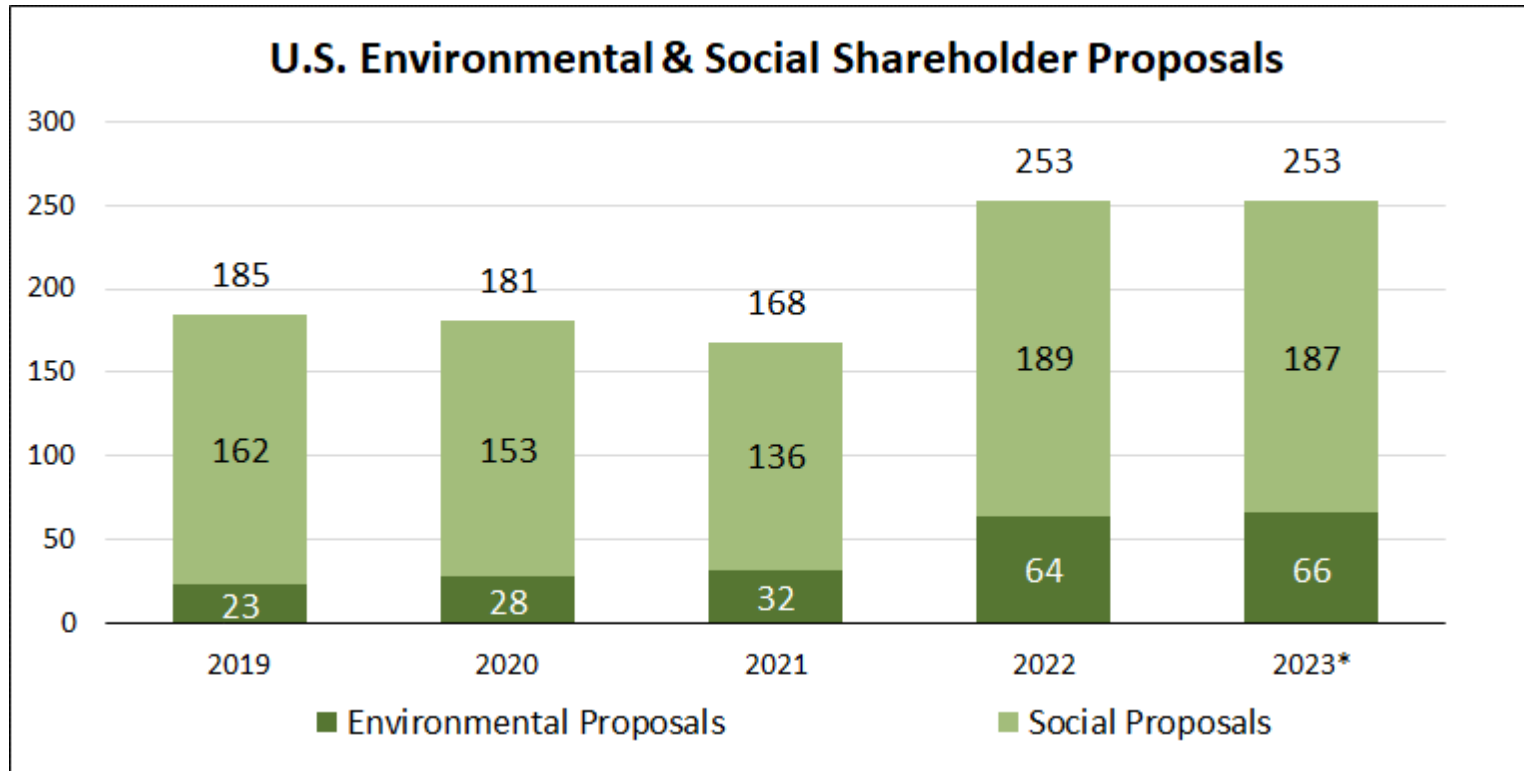
- Document guiding implementation of Proxy Policy
- Comprehensive update completed in FY 23
- Principles-based guidelines increased simplicity and reduce failure points
- 60 pages reduced to 10 with principles-based instructions
- Typically updated annually to coincide with start of annual meetings

Annual Review of Stewardship Program



Proxy Voting Environment

- Environmental & social shareholder proposals have leveled out



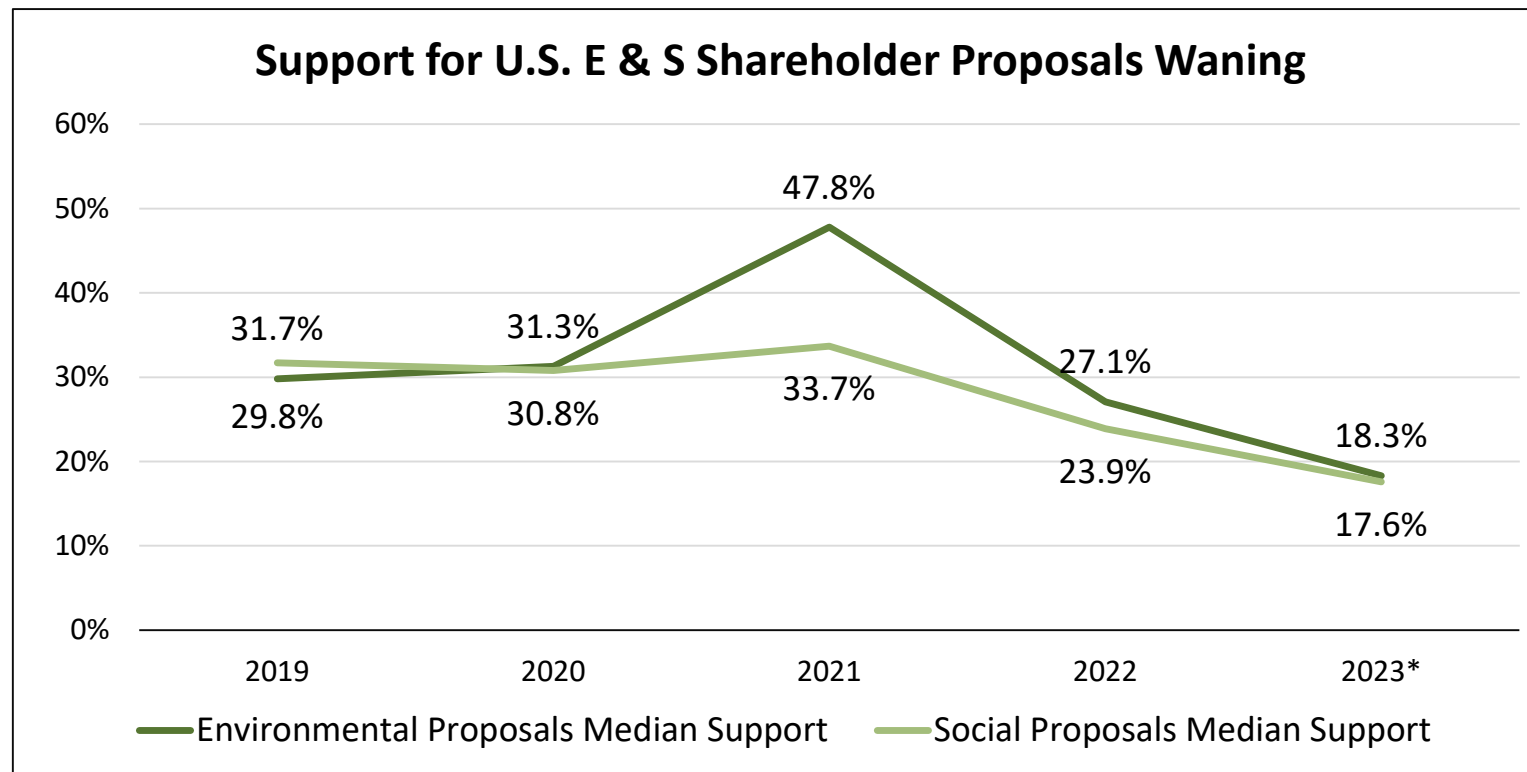
Source: ISS Proxy Insights. *2023 data through August 2023. U.S. represented by Russell 3000 constituents.

Annual Review of Stewardship Program



Proxy Voting Environment

- Declining shareholder support for environmental & social proposals



Source: ISS Proxy Insights. *2023 data through August 2023. U.S. represented by Russell 3000 constituents.

Annual Review of Stewardship Program



Proxy Voting Environment

- Introduction of new proxy advisor policies with fiduciary focus
 - Policies align with management on Environmental/Social proposals
 - ISS Global Board Aligned Policy, Glass Lewis Governance-Focused Policy, Egan Jones Wealth-Focused Policy
 - Staff evaluating as alternative to custom policy; adoption would require IPS change
- New universal proxy cards
 - Requires dissident directors on the same voting card as management
 - Lack of clarity from SEC prevented material impact in 2023

Annual Review of Stewardship Program



ERS Votes on Management Proposals in FY23

- Management proposals represented 95.1% of all proposals voted
- ERS voted with management 93% of the time

ERS Proxy Voting Results: Management Proposals			
Fiscal Year 2023			
Agenda Item Category	Total Voted Proposals FY23	% Voted With Management FY23	% Voted With Management FY22
Routine/Miscellaneous	1,665	96%	97%
Board of Directors	8,659	93%	94%
Shareholder Rights and Defenses	89	98%	94%
Capital/Restructuring	1,143	92%	90%
Compensation	1,801	86%	86%
Social/Environmental Issues	89	85%	98%
Other Management Proposals	1,558	94%	95%
Total for Management Proposals	15,004	93%	93%

Annual Review of Stewardship Program



ERS Votes on Shareholder Proposals in FY23

- Shareholder proposals represented only 4.9% of total proposals
- ERS voted with management 87.0% of the time, up from 66.4% in FY22
- Social/Environmental: 98% with management in FY23 vs. 72% in FY22

ERS Proxy Voting Results: Shareholder Proposals			
Fiscal Year 2023			
Agenda Item Category	Total Voted Proposals FY23	% Voted With Management FY23	% Voted With Management FY22
Board of Directors	181	78%	72%
Compensation	41	37%	28%
Social/Environmental Issues	388	98%	72%
Other Shareholder Proposals	162	83%	59%
Total for Shareholder Proposals	772	87%	66%

Annual Review of Stewardship Program



Overview of Scrutinized Investments

- Scrutinized Investments Policy specifically applies three Texas statutes
 - **Texas Government Code Chapter 2270.** PROHIBITION ON INVESTING PUBLIC MONEY IN CERTAIN INVESTMENTS – Iran, Sudan, Foreign Terrorist Organizations
 - **Texas Government Code Chapter 808.** PROHIBITION ON INVESTMENT IN COMPANIES THAT BOYCOTT ISRAEL
 - **Texas Government Code Chapter 809.** PROHIBITION ON INVESTMENT IN FINANCIAL COMPANIES THAT BOYCOTT CERTAIN ENERGY COMPANIES
- Lists of Scrutinized Companies provided by Comptroller at least annually
- Staff is responsible for evaluating fiduciary impact, compliance and reporting
- Requires significant coordinated effort among Investments, Legal, Audit & Executive Office

Annual Review of Stewardship Program



Overview of Restricted Investments

- Stewardship team works with Investments Operations to oversee restricted lists
 - Scrutinized Investments as outlined previously
 - Companies subject to U.S. Government ownership restriction
 - Possession of non-public information
 - Conflicts of interest on the part of staff, Trustees, or IAC members
 - Criteria deemed to carry excessive operational or investment risk
 - Currently cannabis-related businesses, restricted by custodian bank

Annual Review of Stewardship Program

Stewardship in 2024



- Update Proxy Voting guidelines ahead of U.S. voting season
- Ongoing evaluation of new proxy advisor policies
- Refine and formalize Scrutinized Investments procedures

Discussion

Public Agenda Item #13

Adjournment of the Joint Meeting of the Board of Trustees and Investment Advisory Committee

December 5, 2023

Public Agenda Item #14

Recess of the Board of Trustees -

*The Board of Trustees will reconvene on Wednesday, December 6, 2023
at 9:00 a.m. to take up the remaining agenda items.*

December 5, 2023