AGENDA ITEM DETAILS

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

BACKGROUND

The ERS Investment Policy Statement (IPS) requires staff to provide the Board a written summary of the Trust's performance on a quarterly basis. These reports shall include relative returns, peer benchmarking, performance attribution analysis, and portfolio risk. Such reports help the Board maintain oversight of the investment program and make strategic decisions. The General Investment Consultant also assists the Board in its oversight function, including the monitoring of adherence to the guidelines set forth in the IPS.

Unless otherwise specified, the figures cited here represent annualized returns net of external investment expenses for pension fund investments as of December 31, 2023, as reported by the custodian.

Investment Objective

The overall objective of the investment program is to invest prudently in securities at a reasonable and predictable cost to deliver performance that supports the current and future provision of earned benefits for beneficiaries of the Trust funds managed by ERS. To that end, the IPS specifies the following performance objectives for the Trust: (1) obtain returns in excess of the adopted benchmark or the stated return objective, and (2) achieve returns commensurate with the amount of active risk assumed. Performance is to be measured primarily over rolling five-year periods net of investment expenses.

SUMMARY OF TRUST PERFORMANCE (from NEPC)

The ERS Trust returned 5.22% in the 4th quarter of 2023, underperforming its policy benchmark by 0.54% (refer to Table 1). The Trust's investment policy asset classes had mixed results relative to their respective benchmarks for the quarter. Public Equity and Cash were the largest detractors from ERS' performance (-0.2% each), while Global Credit and Rates were the largest contributors (0.1% each).

In the three-year period ended December 31, 2023 (refer to Table 1), the Trust return of 8.15% outperformed the policy benchmark by 2.29% and ranked in the 1st percentile of peers. On a risk-adjusted basis (refer to Table 2), the Sharpe Ratio and Sortino Ratio outperformed the policy benchmark, indicating that active investment management benefited the Trust. The Trust's Sharpe Ratio ranked in the 3rd percentile and the Sortino Ratio ranked in the 4th percentile of peers. All asset classes besides Cash performed in excess of their benchmarks during this time period with Private Credit leading in outperformance, followed by Private Real Estate and Private Equity.

In the five-year period ended December 31, 2023 (refer to Table 1), the Trust return of 9.75% outperformed the policy benchmark by 1.16% and outperformed the actuarial rate of return which is currently 7.0%. The Trust's five-year return ranked in the 5th percentile of peers. Referring to Table 2, active investment management benefited the Trust as indicated by the Sharpe Ratio and Sortino Ratio outperforming the benchmark. In this timeframe, the Sharpe Ratio ranked in the 1st percentile and the Sortino Ratio ranked in the 3rd percentile of peers. The asset classes with the largest contributions to outperformance were Private Credit and Private Real Estate.

Table 1: Performance Summary ended December 31, 2023

	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Trust	5.22 (88)	10.81 (72)	8.15 (1)	9.75 (5)	7.55 (6)
Policy Benchmark	5.76 (79)	10.38 (80)	5.86 (15)	8.59 (42)	6.65 (31)
Passive Index	9.80 (1)	18.34 (1)	4.35 (55)	9.85 (4)	6.88 (25)
Public DB > $1B Median	6.62	11.70	4.55	8.03	6.23

Table 2: Risk, Return, and Risk-Adjusted Returns Summary

3 Years Ending December 31, 2023				
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Total Trust	8.15 (1)	6.92 (6)	0.86 (3)	1.34 (4)
Policy Benchmark	5.86 (15)	7.56 (14)	0.51 (14)	0.77 (13)

5 Years Ending December 30, 2023				
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Total Trust	9.75 (5)	7.87 (6)	0.98 (1)	1.55 (3)
Policy Benchmark	8.59 (42)	8.47 (12)	0.79 (12)	1.25 (11)

Table 3: Asset Allocation Compliance

Asset Allocation as of December 31, 2023				
Asset Class	Current Value	Current Positioning	Strategic Target	Tactical Range
Public Equity	$12,754,962,054	33.7%	35.0%	25.0% - 45.0%
Private Equity	$6,563,469,908	17.4%	16.0%	11.0% - 21.0%
Public Credit	$2,667,535,305	7.1%	9.0%	4.0% - 14.0%
Private Credit	$1,445,329,835	3.8%	3.0%	0.0% - 8.0%
Real Estate - Public	$717,241,555	1.9%	3.0%	0.0% - 13.0%
Real Estate - Private	$3,922,546,870	10.4%	9.0%	4.0% - 14.0%
Infrastructure	$2,277,355,670	6.0%	5.0%	0.0% - 10.0%
Rates	$3,461,319,169	9.2%	12.0%	7.0% - 17.0%
Cash	$1,809,114,273	4.8%	2.0%	1.0% - 10.0%
Hedge Funds	$2,072,878,469	5.5%	6.0%	0.0% - 11.0%
Special Situations	$113,246,412	0.3%	0.0%	0.0% - 5.0%
Total	$37,804,999,519	100%	100%	

Capital Market Review

Global Equities

On the heels of a Fed pivot, equities rallied in December to finish the year strong. Buoyed by dovish statements from the Federal Reserve, markets experienced a Santa Claus rally late in the year. For the three months ended December 31, the S&P 500 Index gained 11.7%, finishing the year up 26.3%.

Both large-cap and small-cap stocks reacted favorably. The Russell 1000 Index returned 12.0% and the Russell 2000 Index returned 14.0% for the quarter. For the year, large-cap equities outperformed small-cap equities by 9.6%, as investors favored large- and mega-cap stocks for their perceived safety in a high interest rate environment.

Meanwhile, in international markets, the MSCI EAFE gained 10.4% in the fourth quarter. Emerging market equities also had strong performance for the quarter, albeit behind developed markets, returning

7.9%. For the year, both developed non-U.S. and emerging market equities lagged U.S. equities. The MSCI EAFE returned 18.2% for the year, while the MSCI EM returned 9.8%.

According to PitchBook, U.S. private equity dealmaking is still struggling to find a bottom, with deal value finishing the year roughly 29% lower year over year. Deal value is now at its lowest point since 2017, not including the pandemic lockdown in 2020. Meanwhile, exit activity during the fourth quarter was the weakest for the year after bouncing up and down throughout the year, hitting a decade low. Specific to the U.S. venture capital market, deal counts came in strongly for the fourth quarter, although deal value has continued to decline from its historic high. The exit environment was very weak, hitting a decade low by year-end.

<u>Global Fixed Income</u>

The interest-rate moves in December were unprecedented with yields lower across the curve in the U.S. During this period, Treasury yields dropped sharply with both the 10- and 30-year yields falling 48 basis points. Credit spreads tightened with risk premiums on investment-grade debt narrowing by five basis points and high-yield spreads lower by 47 basis points – both comfortably within their median-spread levels.

Fixed income markets benefited as investors priced in the perceived change in monetary policy. For the three months ended December 31, the Bloomberg U.S. Aggregate Index returned 6.8% and the Bloomberg U.S. Corporate High Yield Index returned 7.2%. For the year, high yield bonds outperformed investment grade bonds.

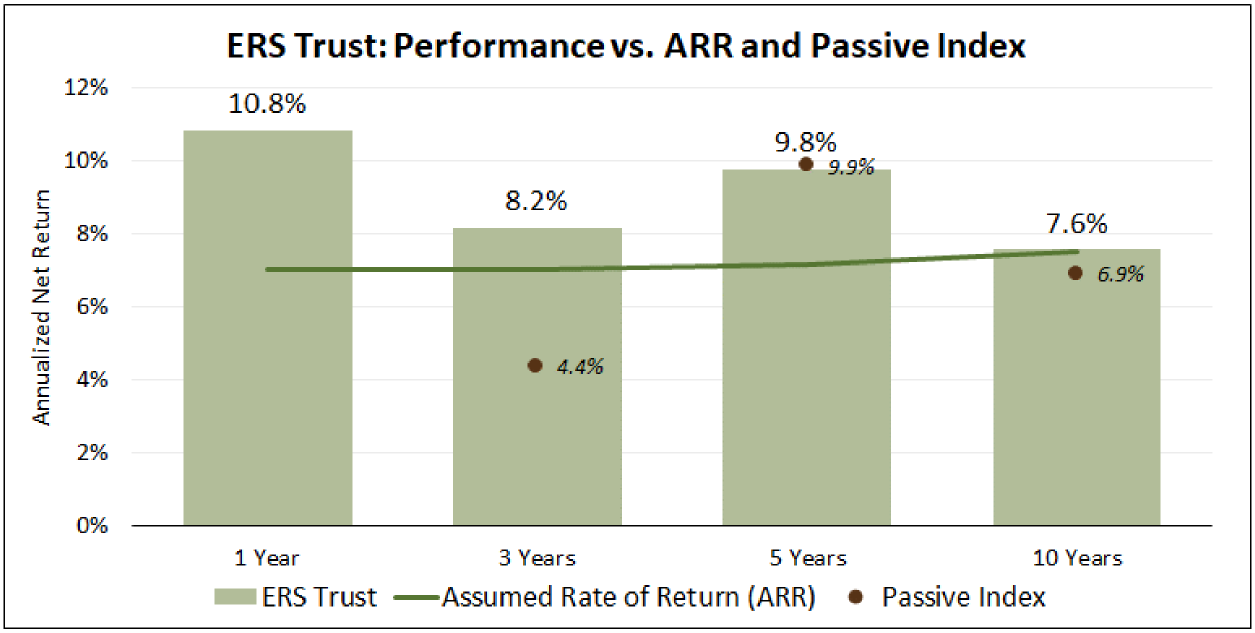
<u>Real Assets</u>

In real estate, the FTSE NAREIT Equity REITs Index returned 16.2% for the quarter and 13.7% for the year. The majority of sectors ended the year strongly and had positive returns for the full year, in contrast to calendar year 2022, when the majority of sectors posted negative returns. The office sector was the best performing sector in the fourth quarter, returning 23.5%. For the year, the office sector had a modest positive return of 2.0%. The retail sector also had strong results for the quarter, returning 21.4%. For the full year, the retail space returned 10.6%.

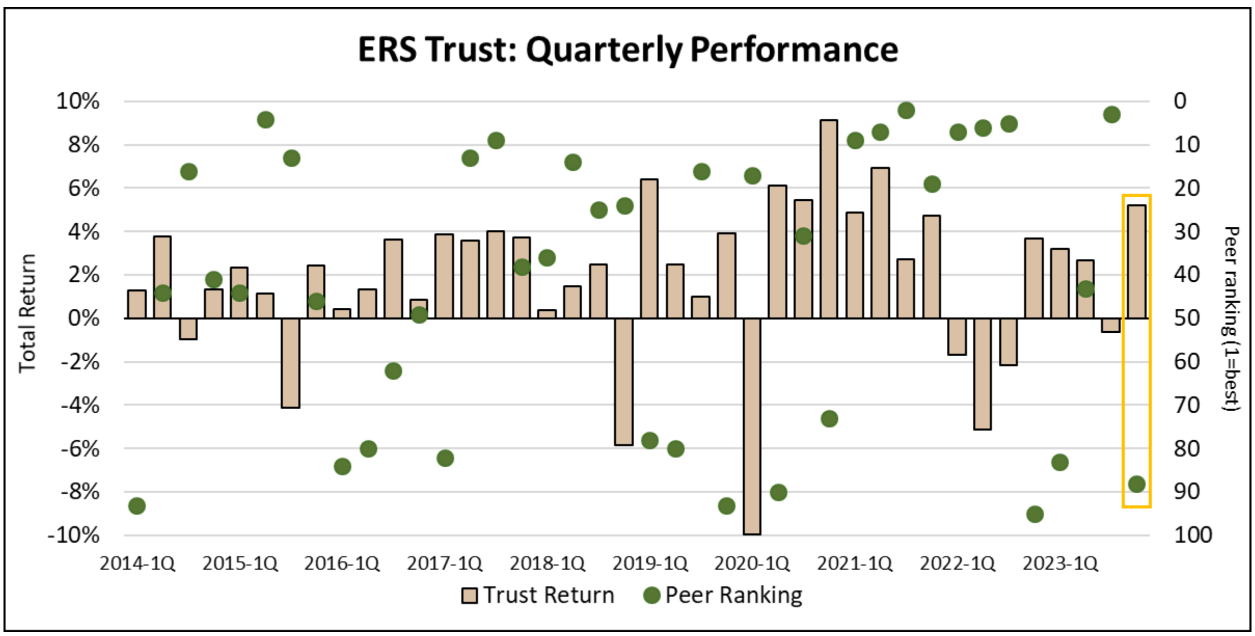
STAFF ANALYSIS OF TRUST PERFORMANCE

Absolute Returns

Trust investments, currently valued at $37.8 billion, have fulfilled their strategic purpose for the System by performing well over the long term. Returns of 9.8% over the trailing five-year period outperformed the actuarially assumed rate of return by 2.62%. These gains represent a 7.9% premium over risk-free returns and 0.1% below the return of 9.9% for a passive public markets portfolio. These figures indicate that the Trust is receiving high rewards for bearing market risk and significant value from the implementation efforts of the Board, IAC and staff.

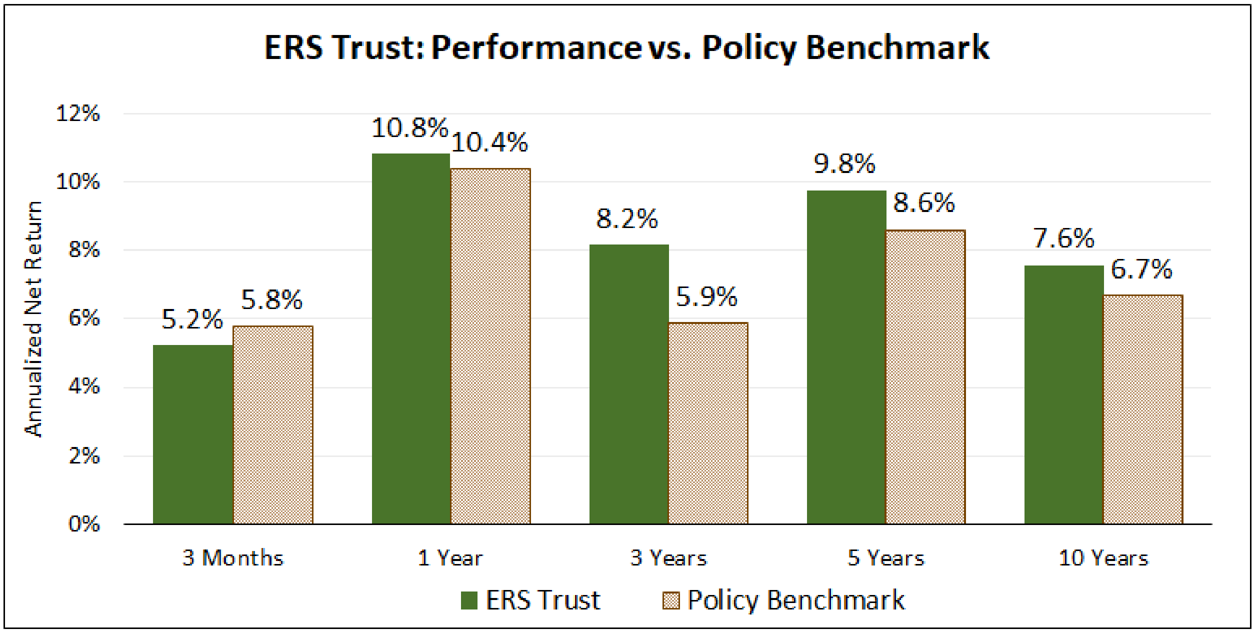


Trust performance for 4Q23 was a gain of 5.22%, which marks the the fourth quarter of positive returns out of the last five. As shown in the chart below, this performance ranked in the 88th percentile of peers. During the quarter the Policy Benchmark, the blended performance of the Trust's constituent asset classes weighted by target allocation, returned -0.96% and ranked in the 79th percentile of peers. The Passive Index, which mirrors the returns of a passive liquid 80/20 mix of global stocks and bonds, fell -2.81% on a broad decline in public markets to rank in the 1st peer percentile.

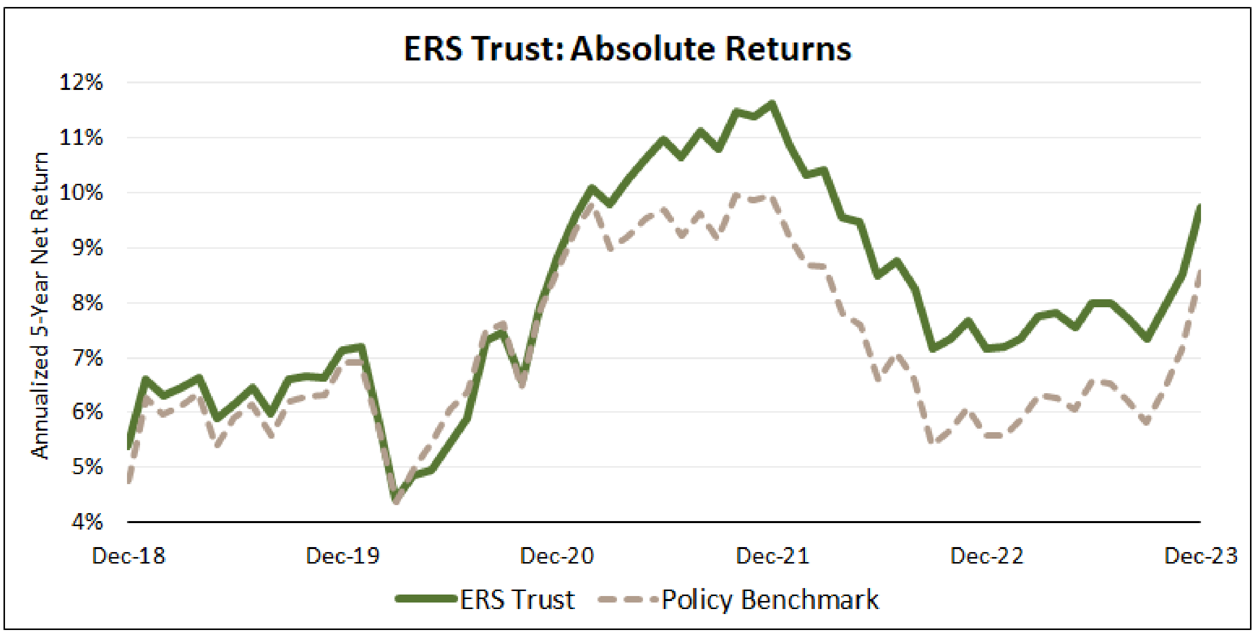


Relative Returns

Performance for Trust investments has remained well above the Policy Benchmark across all pertinent longer time horizons. On a rolling five-year basis, the Trust has delivered +116 basis points of excess return net of external management expenses annually. Attribution analysis shows that much of the value was added by the overweight to private equity and strong security selection within that asset class, as well as excellent security selection within the Real Estate and Credit portfolios.

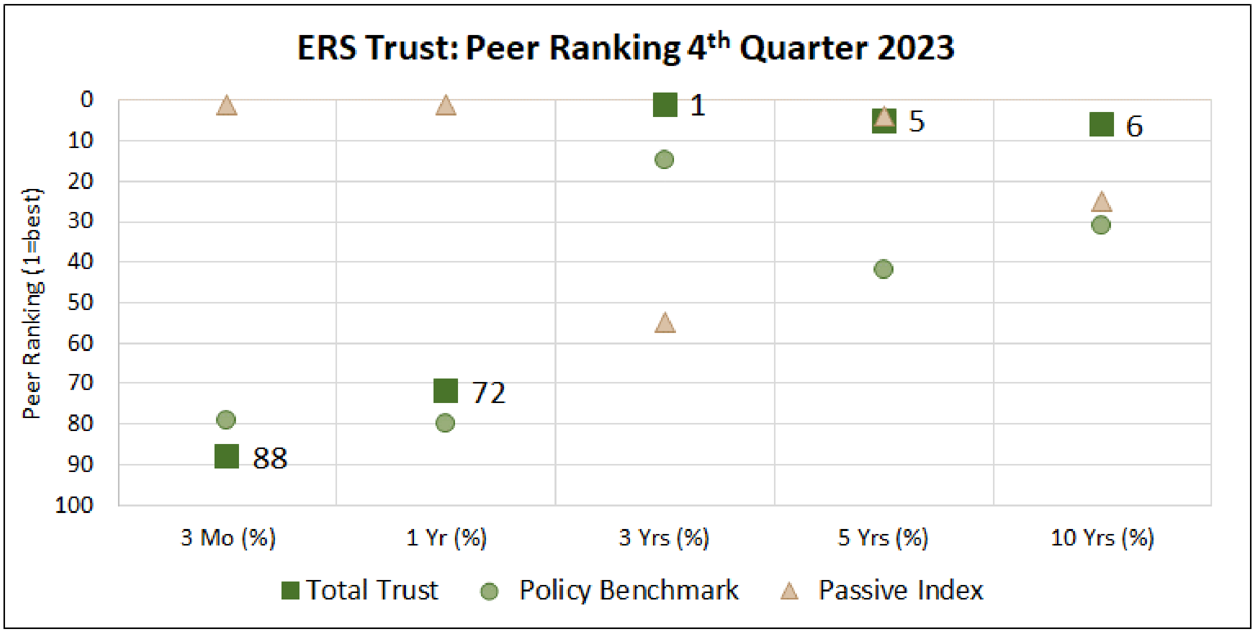


The chart below provides context for this level of outperformance by depicting the rolling five-year absolute returns of the Trust and the Policy Benchmark. The current level of +116 basis points of excess return (9.75% for the Trust vs. 8.59% for the Policy Benchmark) is well above the 20-year average of +42 basis points and is among the highest level during this period. Such strong performance translates into more than $2 billion of additional value for the Trust over the last five years, including roughly $700 million over the last three years.

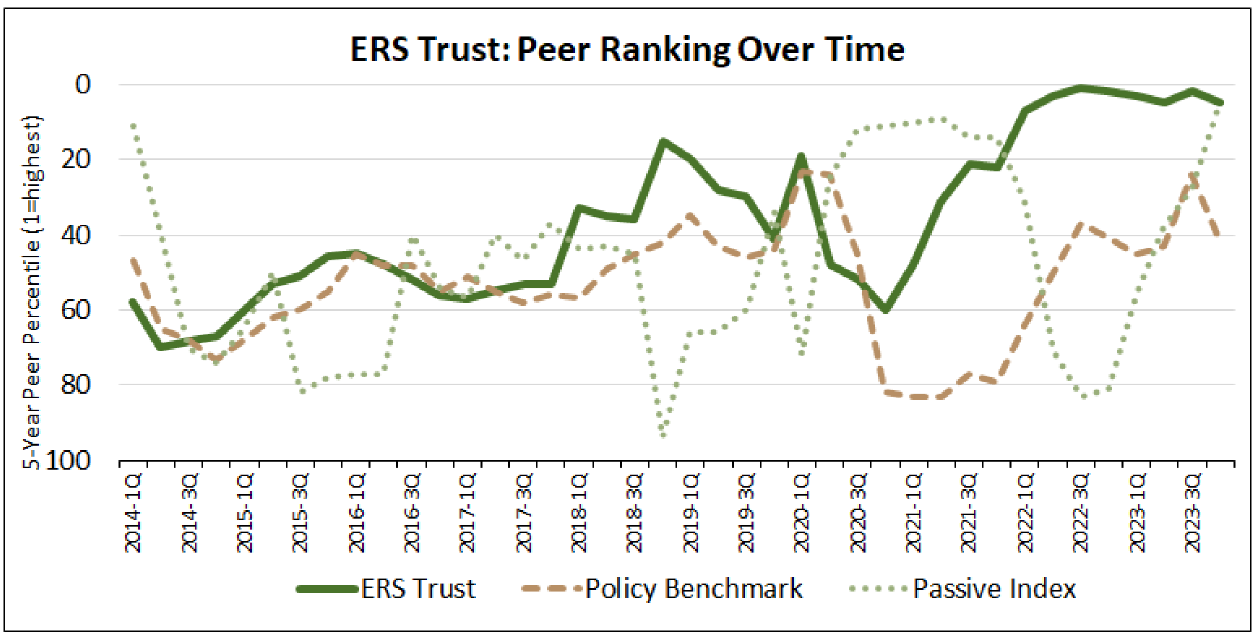


Peer Comparisons

These high levels of excess returns have also resulted in strong peer comparisons over longer time horizons. As shown in the chart below, NEPC ranks the ERS Trust among the top 5% of its peer group of 40+ funds on a trailing three-year and five-year basis, including the fourth time in six quarters with a top 1% ranking on a trailing three-year basis. On a trailing 10-year basis, the Trust is in the top 6% of its peers, outperforming the median peer fund by 132 basis points annually and thereby adding around $3 billion of value over that time. It is also notable that over the last ten years, the returns of the Trust have been an average of 67 basis points per year above those of the Passive Index (tan triangles).

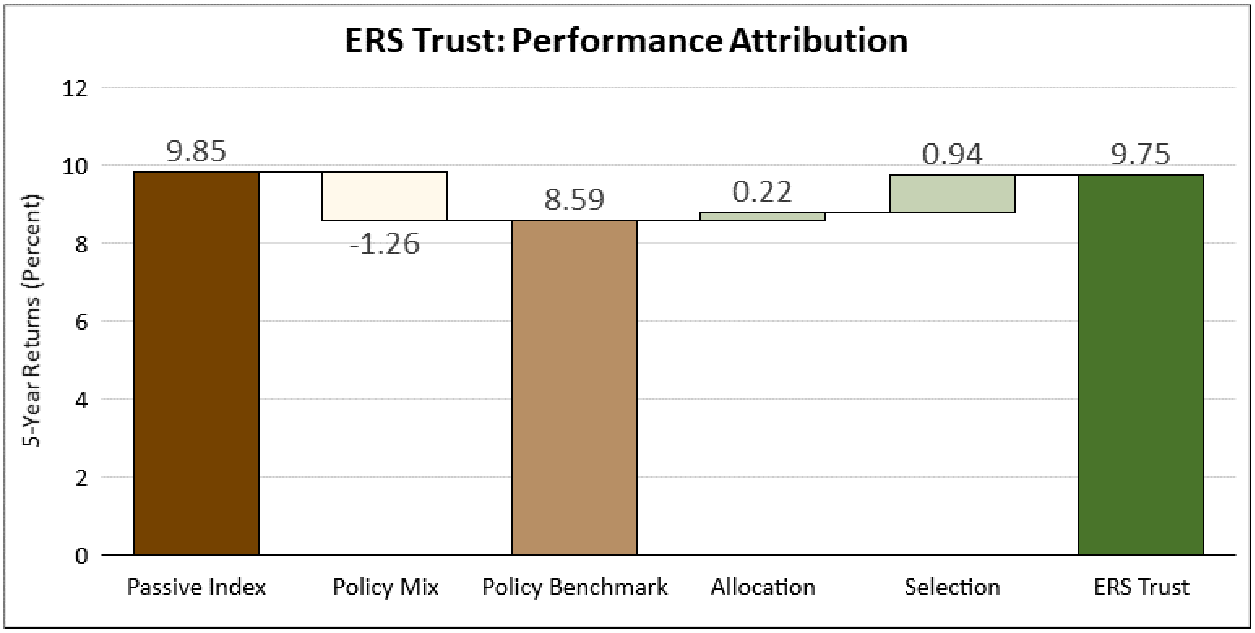


The outperformance of the Trust and the Policy Benchmark versus the Passive Index over time indicates that the move toward an asset mix that includes significant exposure to private markets has helped the Trust achieve higher returns relative to a portfolio more concentrated in public market assets. The chart below shows the steady progression of the Trust from the bottom quartile of its peers during 2014 to the top quartile in recent quarters, including top decile rankings in the most recent quarters.

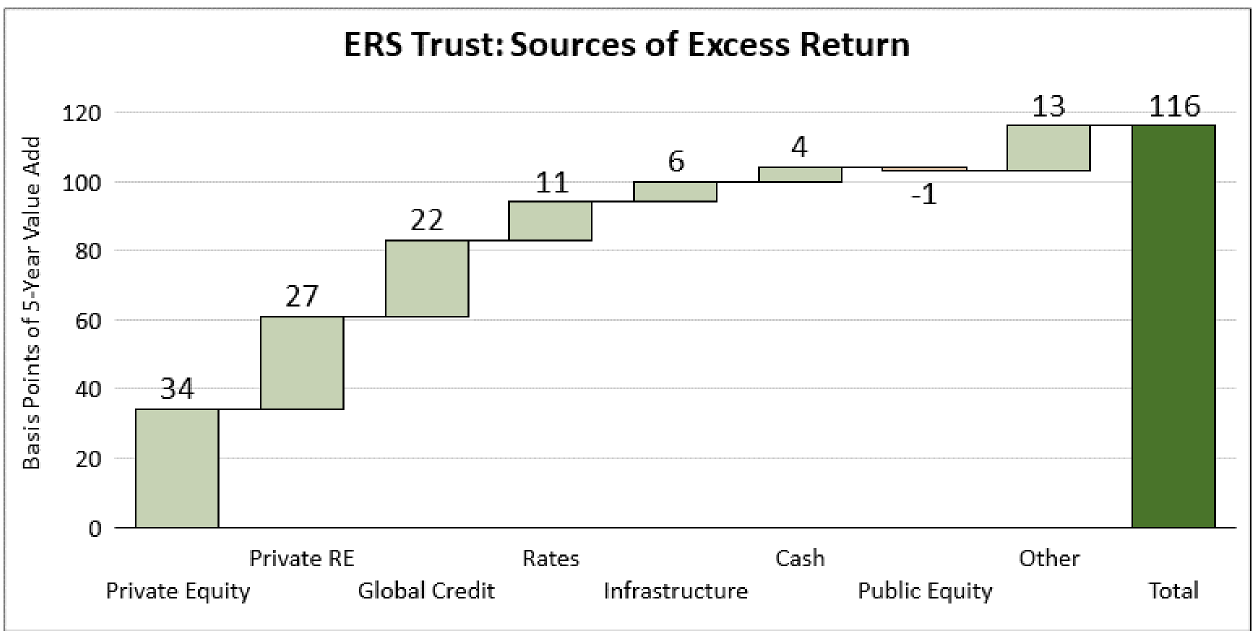


Attribution Analysis

Attribution analysis is a method for identifying the key sources of excess return. As shown in the chart below, the +116 basis points of excess return for the Trust versus the Policy Benchmark over the last five years has come primarily from security selection, which has accounted for +128 basis points of that amount or 87% of the total. Allocation within the established tactical ranges has also contributed significantly, representing +23 basis points of value added over the period. The chart also shows that the Policy Benchmark has outperformed the Passive Index by +32 basis points annually over this period. Overall, this analysis suggests that the efforts of staff in implementing the strategic asset allocation parameters established by the Board and IAC are adding significant value to the Trust.

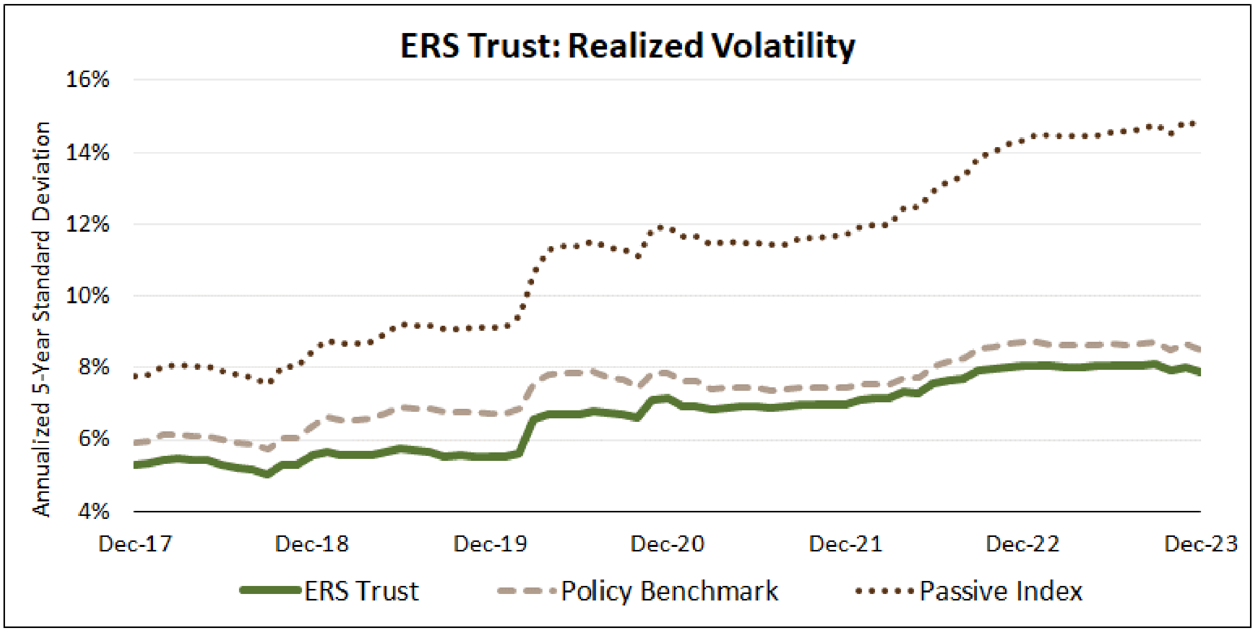


The chart below breaks down the +116 basis points of five-year excess return by asset class, including +22 basis points from asset allocation. Private equity represents the single largest contributor to the excess return, contributing +34 basis points to Trust-level excess returns during this period including +11 basis points from security selection. Strong contributions also came from private real estate (+27 basis points), credit (+22 basis points), rates (+11 basis points), and infrastructure (+6 basis points).

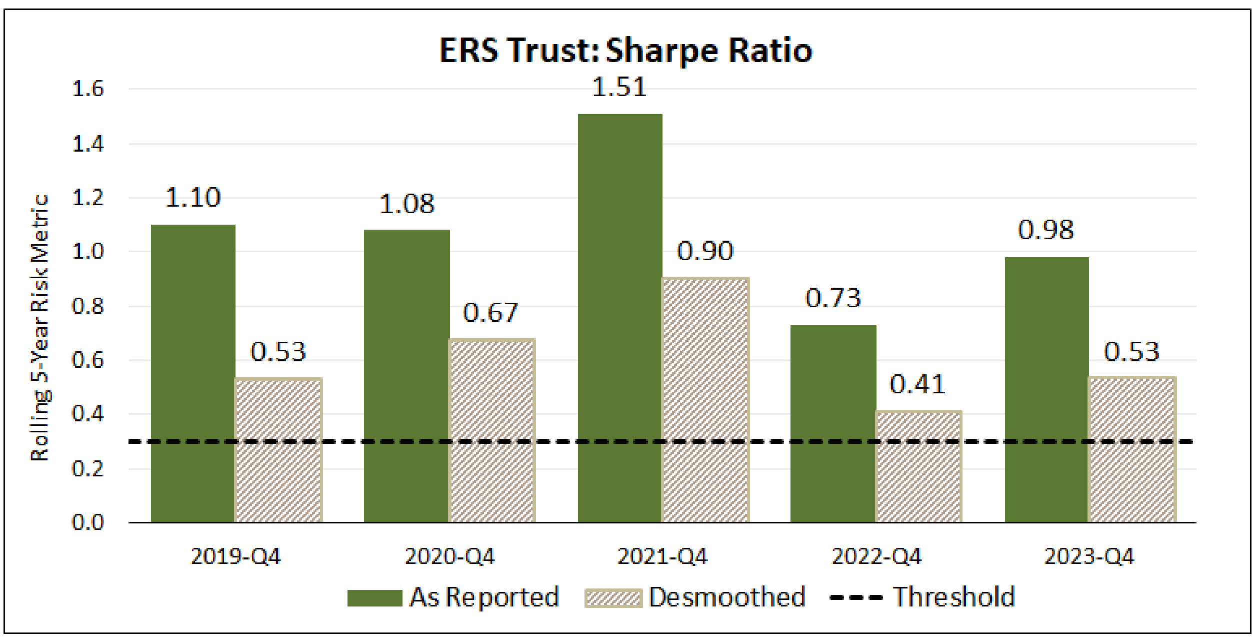


Risk Measures

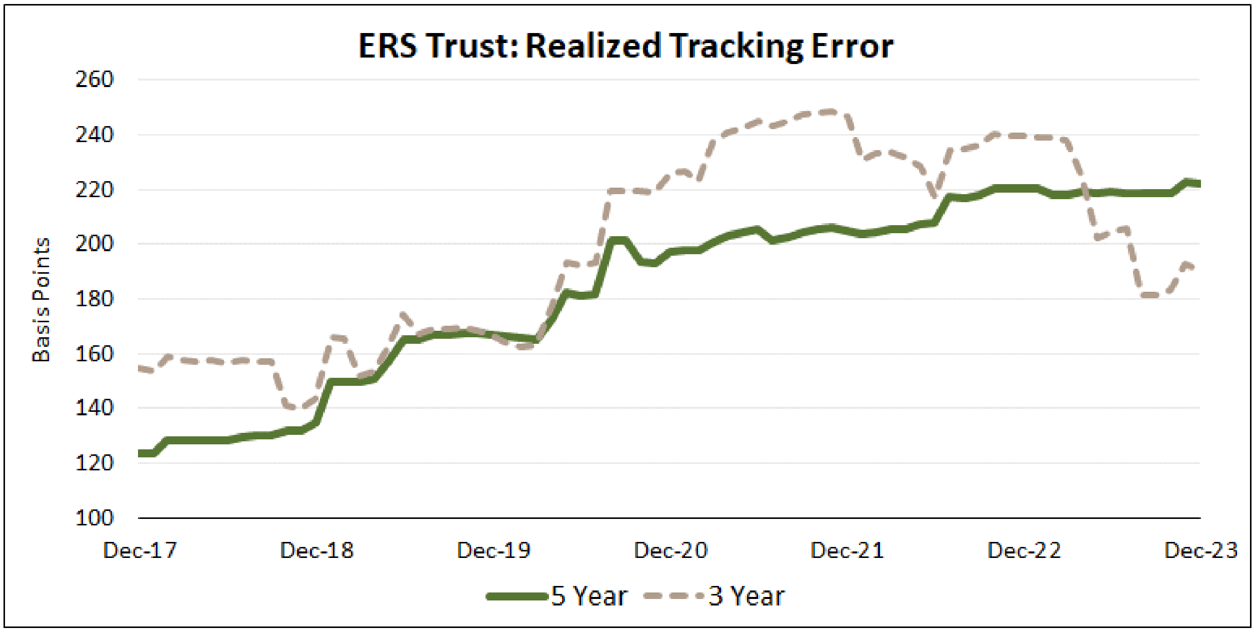
Absolute risk for the Trust as measured by realized volatility has risen significantly over the last three years and now stands at 7.9%. Volatility (also called standard deviation) is the most commonly used measure of absolute risk and aims to quantify the amount of variability in the historical return stream of a portfolio. Though this level represents an increase from pre-pandemic levels of 5-6%, it is in line with the long-term average of 8%. This metric for the Trust remains below the realized volatility of the Policy Benchmark and, due primarily to the smoothing effects of private market valuations, well below the levels of above 14-15% observed for the Passive Index.



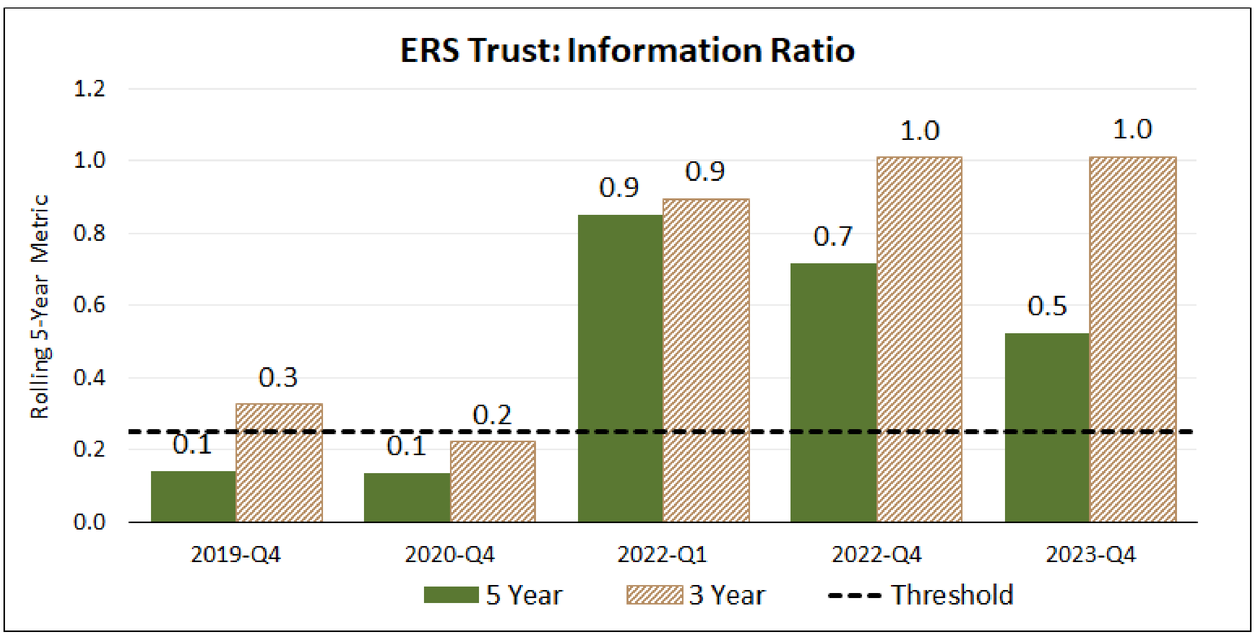
As measured on a risk-adjusted basis using Sharpe ratios, Trust performance has been good. (Recall that the Sharpe ratio calculation takes the returns of the portfolio above the risk-free rate and divides them by the volatility of the portfolio). The Sharpe ratio as measured over the last five years was 0.98, which compares favorably to the target threshold of 0.30. After adjusting for the smoothing effects from private market valuations (i.e., "desmoothing" the return stream by using the realized volatility of the Passive Index as the denominator in the calculation), the Trust has exhibited a five-year Sharpe ratio of 0.53.



Relative risk (also commonly called active risk) for the Trust, as measured by realized tracking error, remains at a new, higher plateau. Tracking error aims to quantify how different a return stream has been, or is expected to be, from that of its benchmark. The current realized level of 222 basis points on a trailing five-year basis is above the historical average of 105 basis points, which reflects greater allocations to private markets where implementation differs materially from the benchmark. The three-year level has declined significantly to 191 basis points as the market volatility created by the onset of the COVID-19 pandemic in March 2020 drops out of the measurement period.

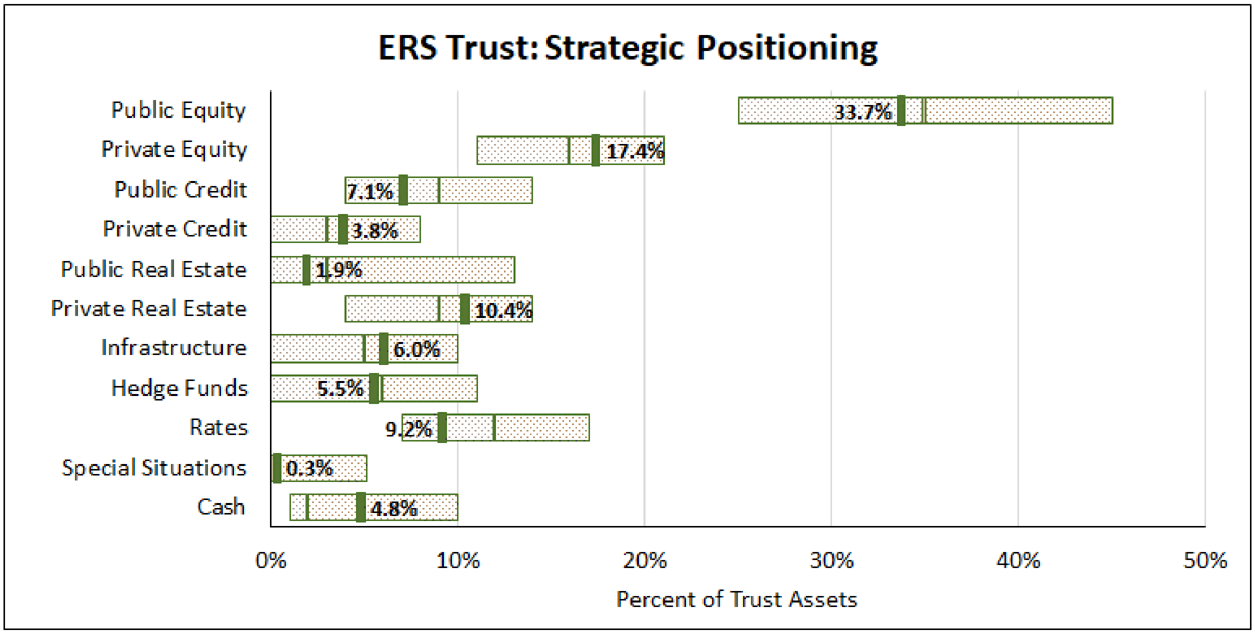


The relative performance of the Trust versus the Policy Benchmark has been good for the level of active risk taken. As measured over the last five years, the information ratio was 0.52 at the end of the quarter, among the highest levels in recent history. The strong relative performance of asset classes, including private equity, helped produce these results. The smoothing of returns implicit in private market valuations also affects these metrics, though often for the worse, since less frequent marks can produce higher tracking error, even though the underlying economic exposures may be similar.



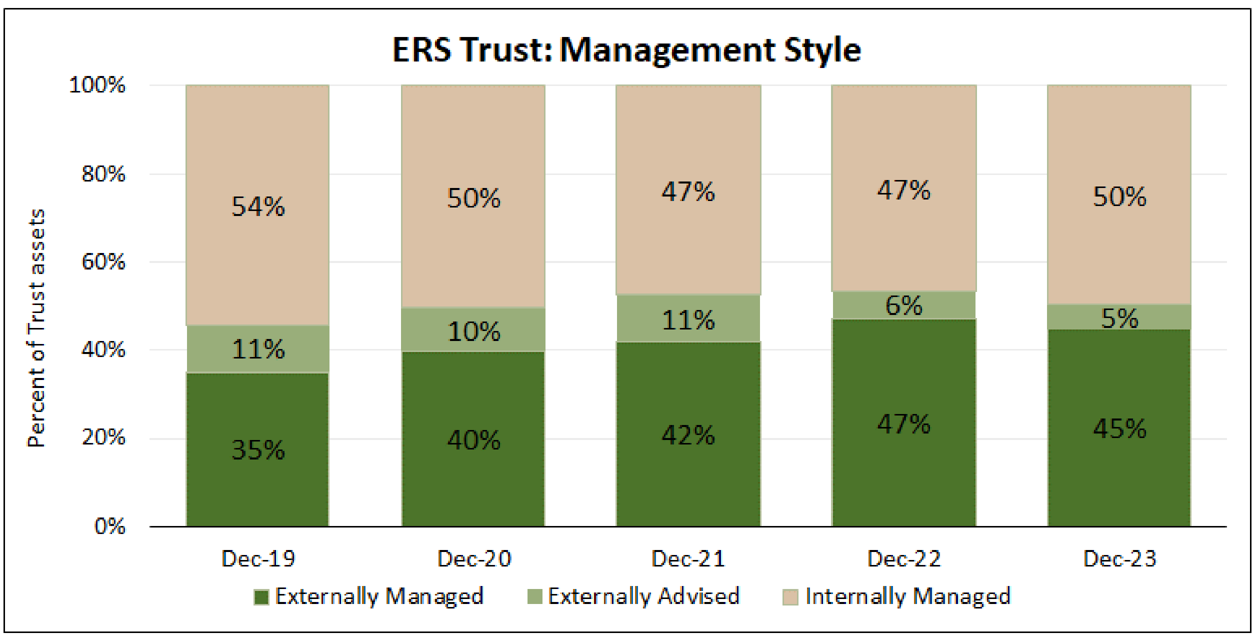
Strategic Positioning

At quarter end, the Trust was positioned within the asset allocation parameters established in the IPS. Private equity is currently 17.4% of Trust assets, which is above the 16% long-term target but below the 21% policy maximum. Cash was 4.8% of the Trust at quarter end, which positioned the Trust well to preserve capital and provide ample liquidity amid a turbulent market environment in recent quarters.

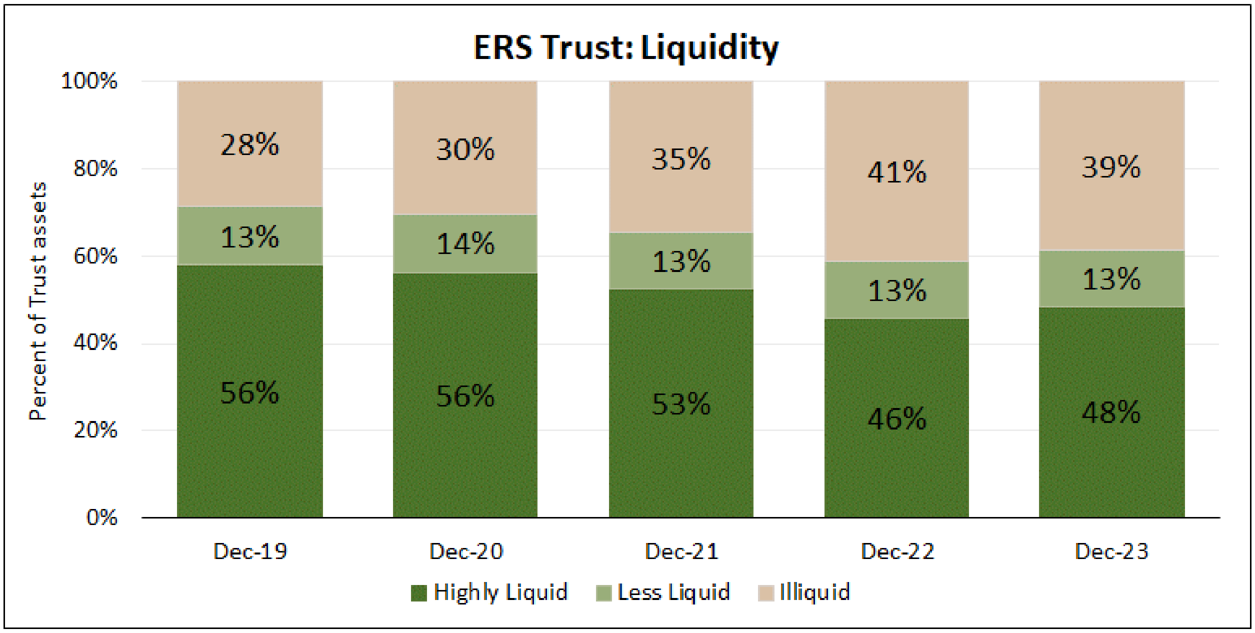


Management Style and Liquidity

Due in large part to a recent mix shift toward private markets, the proportion of Trust assets that are externally managed has steadily risen over time. The subtantial increase in the value of the Trust's private market assets during 2021 caused this figure to reach 50%, but recent increases in value among publicly traded assets has caused that level to fall back to 45%.



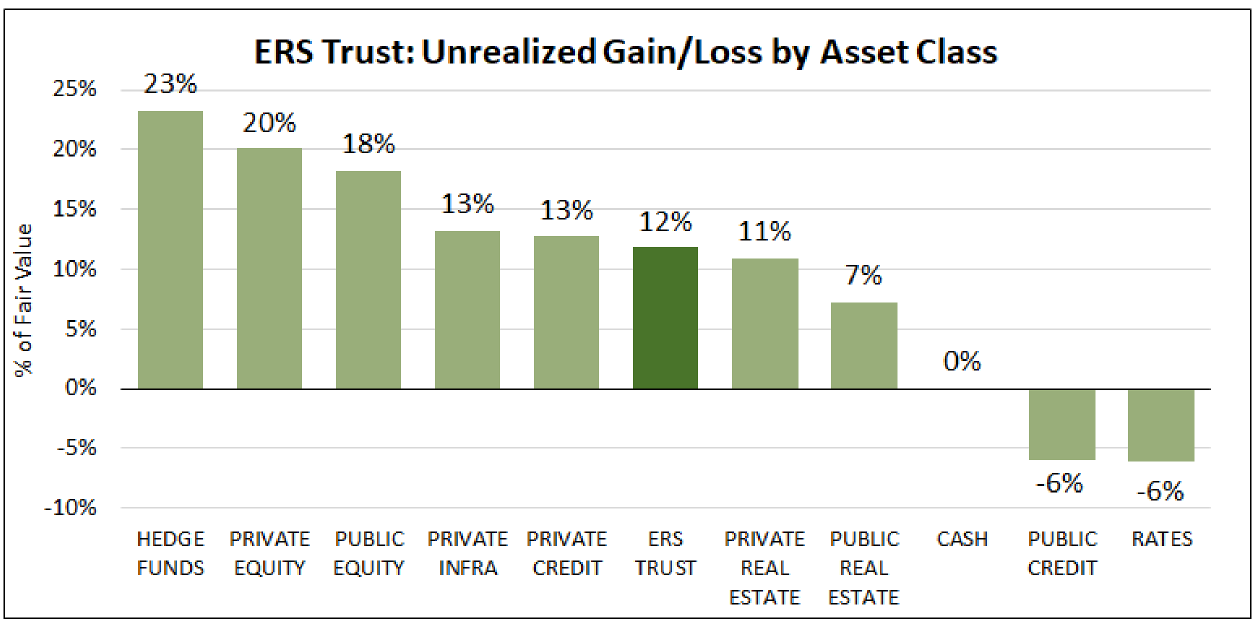
The mix shift over time toward private market investments has also reduced liquidity for the Trust. In earlier years, the Trust allocated around 60% to liquid strategies (defined as assets where access to the invested capital would take less than 30 days) and this figure has dipped below 50%. Currently, the Trust allocates 39% to illiquid assets such as private equity and private real estate along with 13% to strategies such as hedge funds and high yield bonds that exhibit less liquidity than public equities.



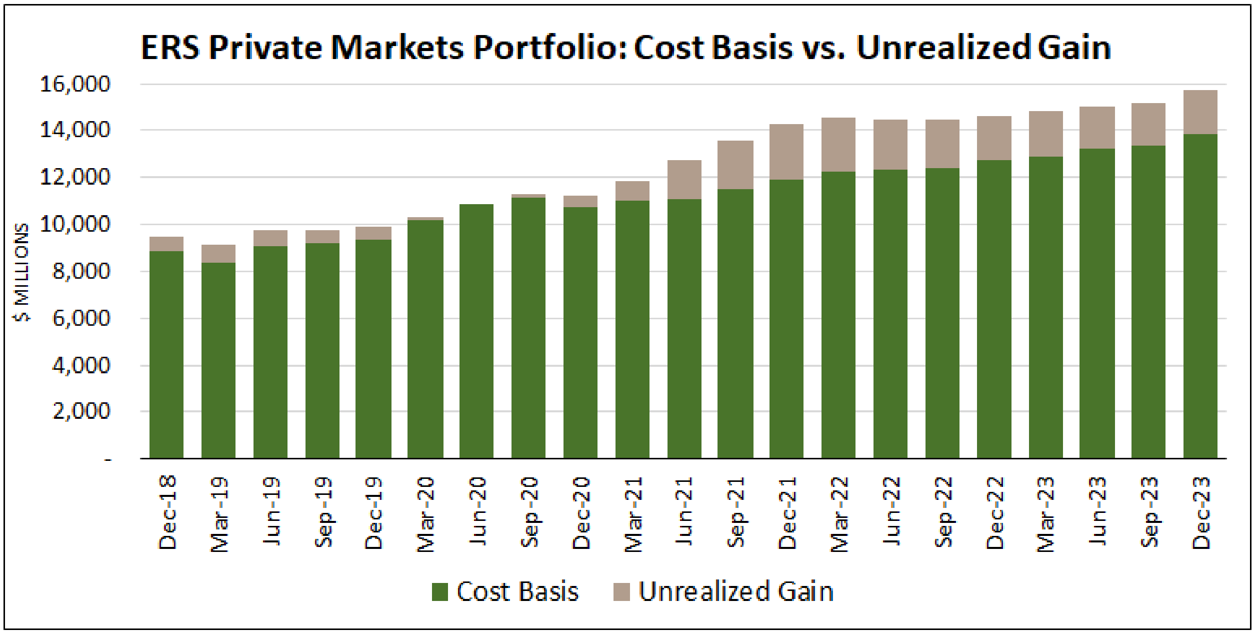
The allocation to liquid assets is considered in view of the Trust's liquidity needs, and staff believes the ability of the Trust to meet short-term liquidity needs remains healthy. The Trust maintains a 13.9% allocation to the Rates portfolio and Cash portfolio combined, which equates to more than three years of expected net outflows for retirement benefits.

Investment Valuation

Rising values for public market assets during the quarter increased the level of unrealized gains within the Trust from $3.0 billion to $4.6 billion. Comparing the accounting values of current holdings to their historical cost basis provides the snapshot below within each asset class and the Trust overall. This chart shows the Trust overall has an unrealized gain of 11.8%, with hedge funds, private real estate, private equity, and public equity accounting for most of that dollar amount.

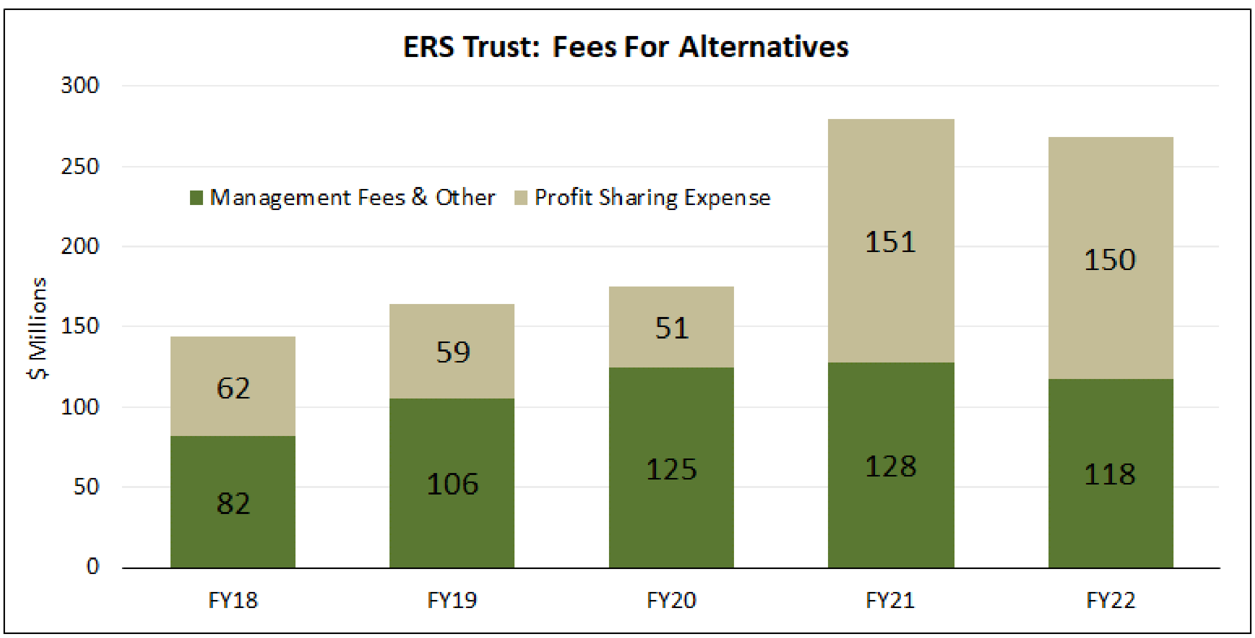


Below is a chart of the evolution of the private markets portfolio (which includes Private Equity, Private Real Estate, Private Infrastructure, and Private Credit) over time, broken out into its cost basis and any unrealized gain/loss. Over the last five years, the porfolio has grown from $9.5 billion of total net asset value to $15.7 billion today. Over that time, the unrealized gain/loss within the portfolio has ranged from a low of -2% in June 2020 to a high of 16% of the portfolio value in December 2021. Today this figure sits at 12% as compared to an average of 10% over the last five years.



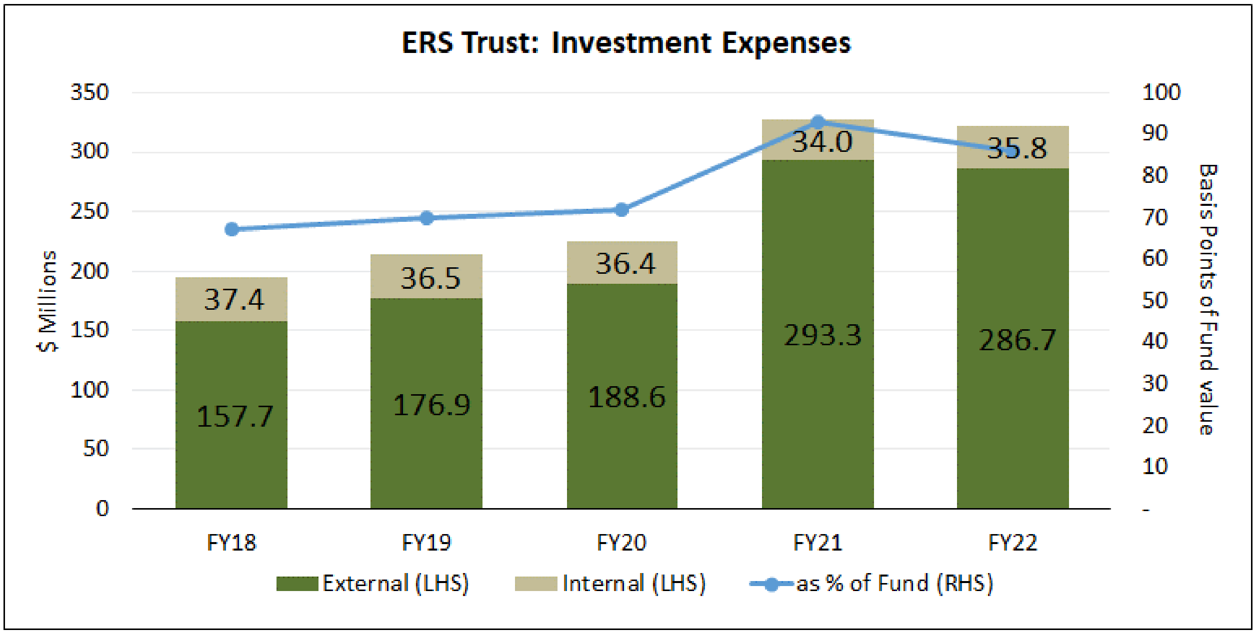
Investment Expenses

The significant gains in the private markets portfolio in recent years coincides with an associated increase in investment expenses. From 2016 through 2019, investment expenses for the Trust averaged 70 basis points of Trust assets, a figure that rose toward 80 basis points in 2020 due to the mix shift toward private markets. During this time, expenses within private markets ranged from 160-190 basis points of those assets. Much of these expenses come from shared profits, where the manager and the Trust share revenue once the investment has met a required hurdle rate. ERS verifies these figures only at the end of a fiscal year; for all other periods they are estimated by staff.



Exceptionally strong returns significantly increased the amount of profit share expense during FY21, and the weak absolute returns experienced more recently have caused overall fee levels to moderate.

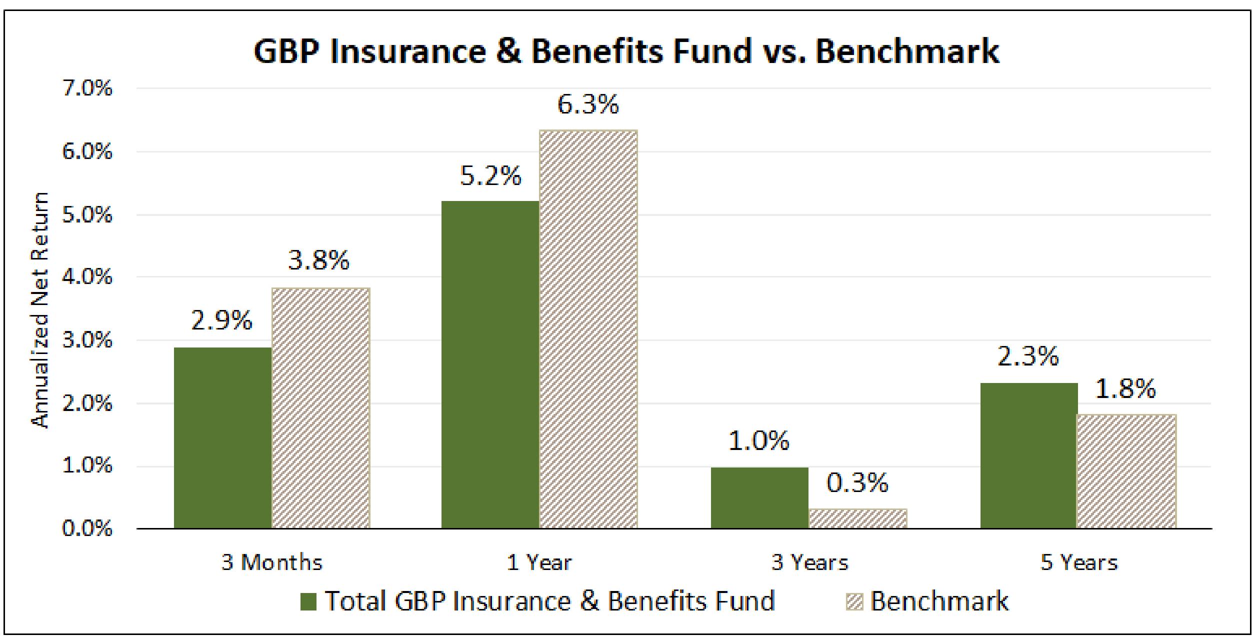
Investment expenses totaled $322 million during FY22, which represented an average of 86 basis points of total Trust investments for the period. For 2023, the absolute dollar figure is believed to have fallen further as the Trust continued to grow, such that fees will represent 80-85 basis points of Trust assets.



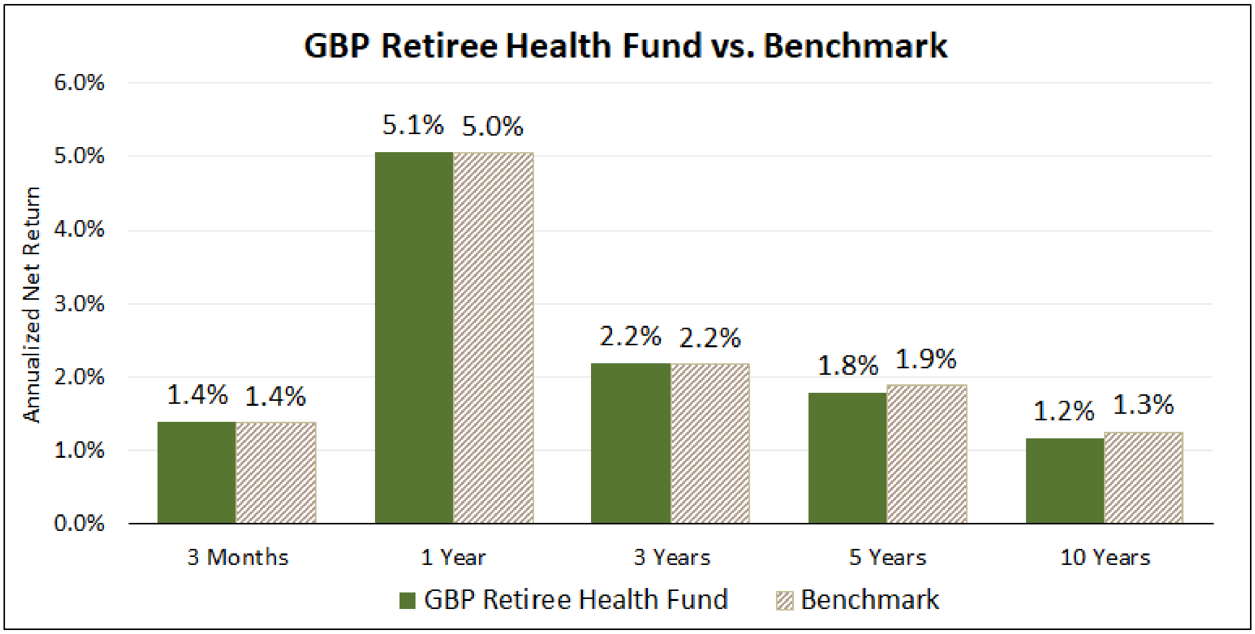
The forecasted expense amounts in the chart above should be considered dynamic estimates that depend heavily on the trajectory and timing of returns within the asset classes. As previously noted, returns above or below the actuarially assumed rate of 7% annually would change the estimate of investment expenses significantly, particularly as it relates to the profit share component.

TEXAS EMPLOYEES GROUP BENEFITS PPROGRAM (GBP) FUNDS

The Insurance & Benefits Fund (IBF) totaled $3.45 billion at quarter end, up from $3.17 billion last quarter due primarily to net inflows. The asset mix was 56.6% cash, 33.8% rates, and 9.6% public credit, figures that are within policy ranges. As shown below, returns have been above the benchmark over longer periods.



The Retiree Health Fund (RHF) totaled $19 million at the end of the quarter. The asset mix was 100% cash, in line with the long-term target. As shown below, the returns on this capital have been in line with the assigned benchmark over various periods with a difference that has averaged -3 basis points.



This is not an action item and is intended for discussion purposes only.

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ATTACHMENTS:

1. Slides – Quarterly Review of Investment Performance