

AGENDA ITEM DETAILS

Subject: *Consideration of Quarterly Report from Chief Investment Officer

Background

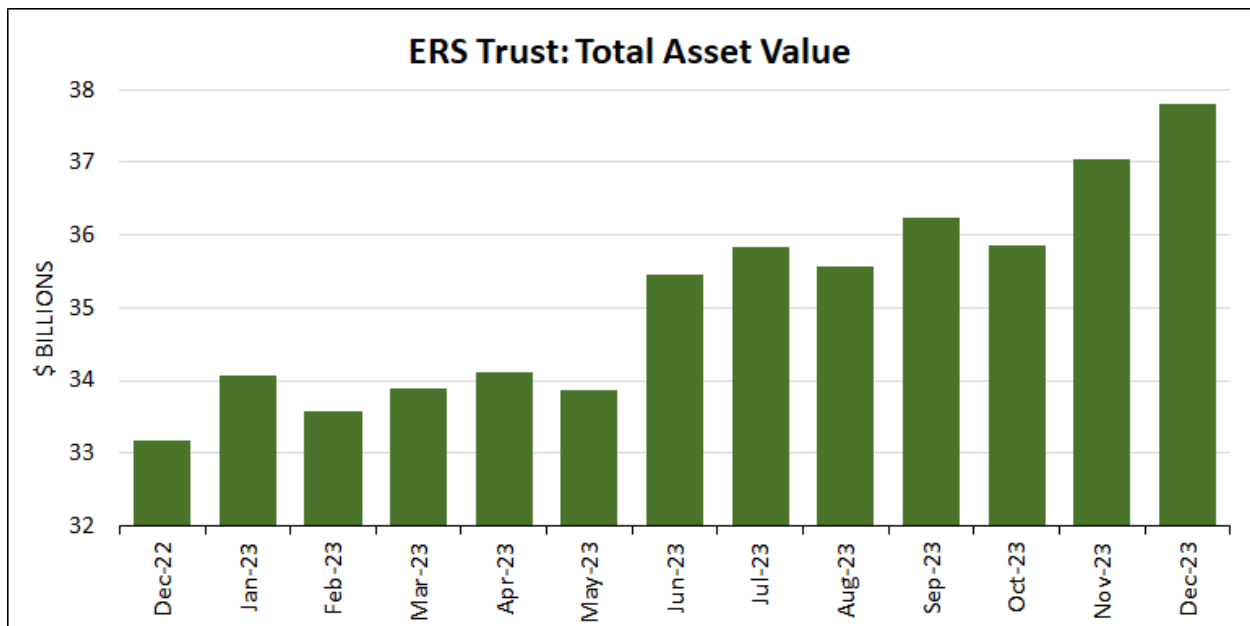
As required by the ERS Investment Policy Statement (IPS), this agenda item provides a report from the Chief Investment Officer regarding the performance of Trust investments (the Trust). Unless otherwise specified, the figures cited here represent annualized returns net of external investment expenses 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 the System. 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.

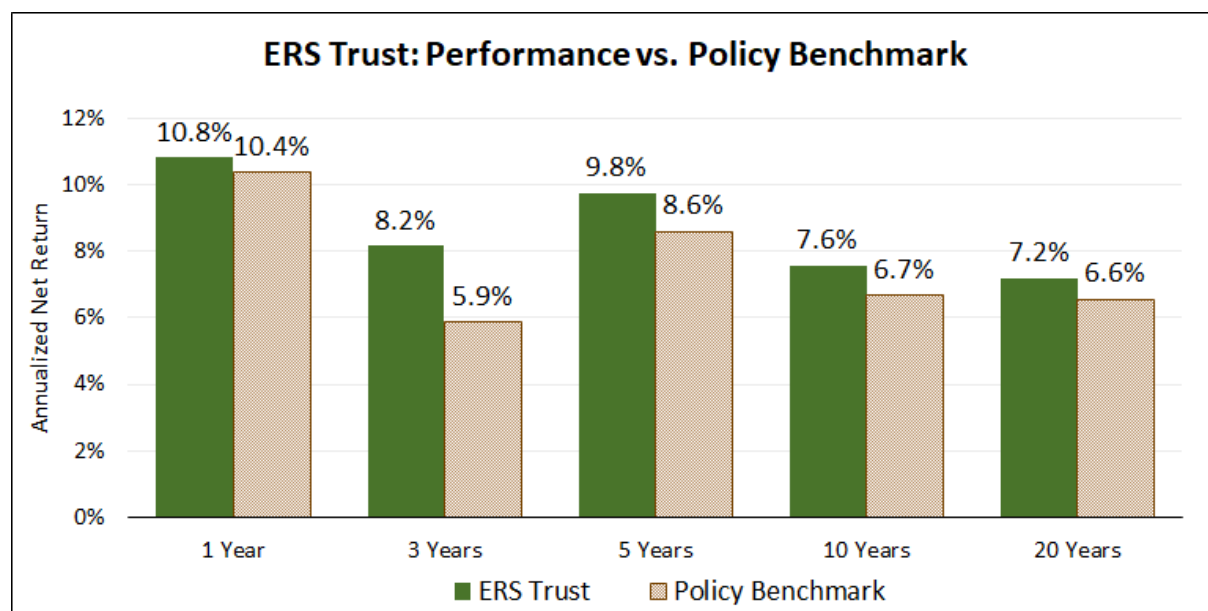
Investment Performance for 2023

During 2023, the total value of the Trust climbed from \$33.2 billion at the end of 2022 to almost \$38 billion at the end of 2023. The increase was due to strong underlying investment returns and more than \$2 billion appropriated by the Texas Legislature to the ERS retirement plans.



As shown in the chart below, Trust investments returned +10.8% for the full year, +43 basis points (bps) better than the policy benchmark. These gains contributed to the historical outperformance of the Trust, including +229 bps over a trailing three-year period and +116 bps over the trailing five-year period. Over

longer horizons, the Trust has outperformed the policy benchmark by +90 bps annually over the last 10 years and +63 bps over the last 20 years, adding billions of dollars of incremental funding to the Trust.

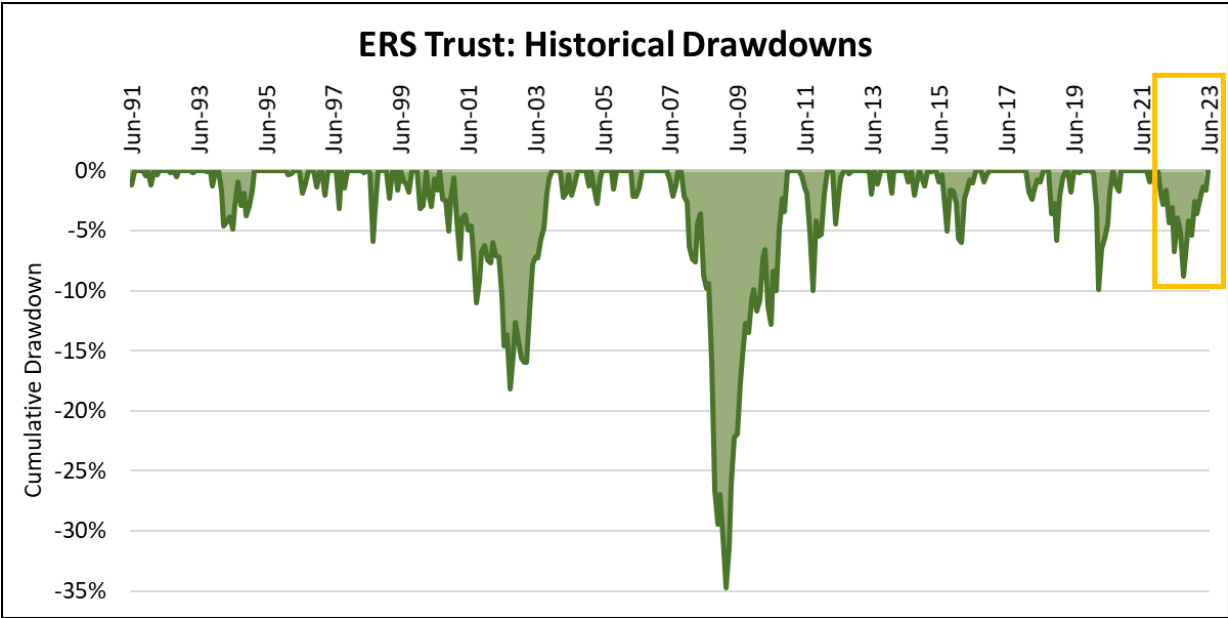


Such strong performance has placed the Trust among the top 10% of its peers across 11 of the 16 relevant periods during 2023, including top 1% rankings in the last two quarters for trailing three-year returns.

Investment Performance Peer Ranking (1 = best, 100 = worst)

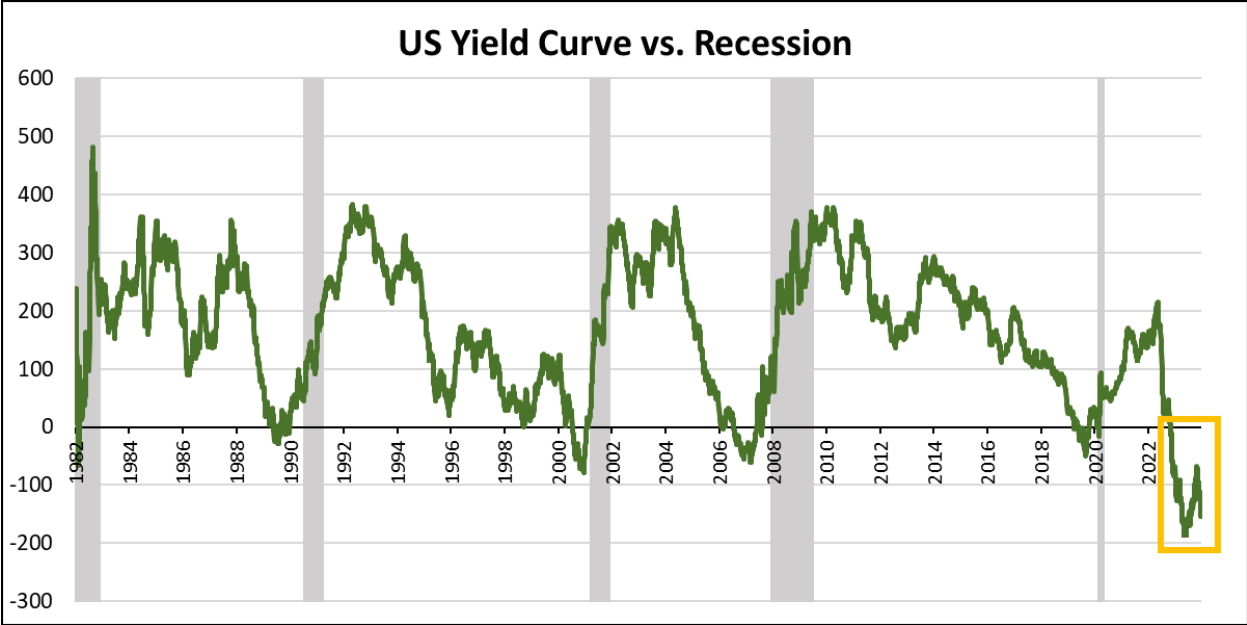
As of date	ERS Trust				Policy Benchmark				Passive Index			
	1 Year	3 Years	5 Years	10 Years	1 Year	3 Years	5 Years	10 Years	1 Year	3 Years	5 Years	10 Years
2023-1Q	3	12	3	6	11	86	45	56	90	21	56	48
2023-2Q	55	5	5	11	52	60	43	49	1	43	38	39
2023-3Q	76	1	2	6	89	28	24	35	1	68	28	37
2023-4Q	72	1	5	6	80	15	42	31	1	55	4	25

This performance allowed the Trust to recover by mid-2023 from the 8.8% drawdown that troughed in September 2022. As depicted in the chart below, this drawdown was the fifth worst in recent history.

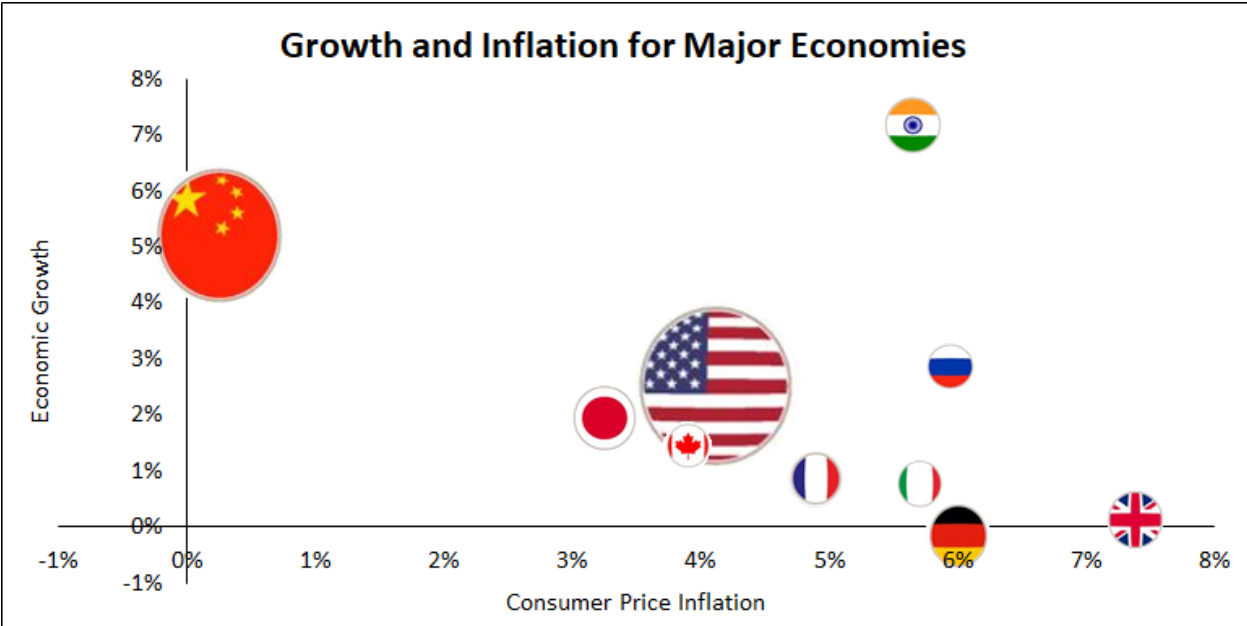


Investment Strategy During 2023

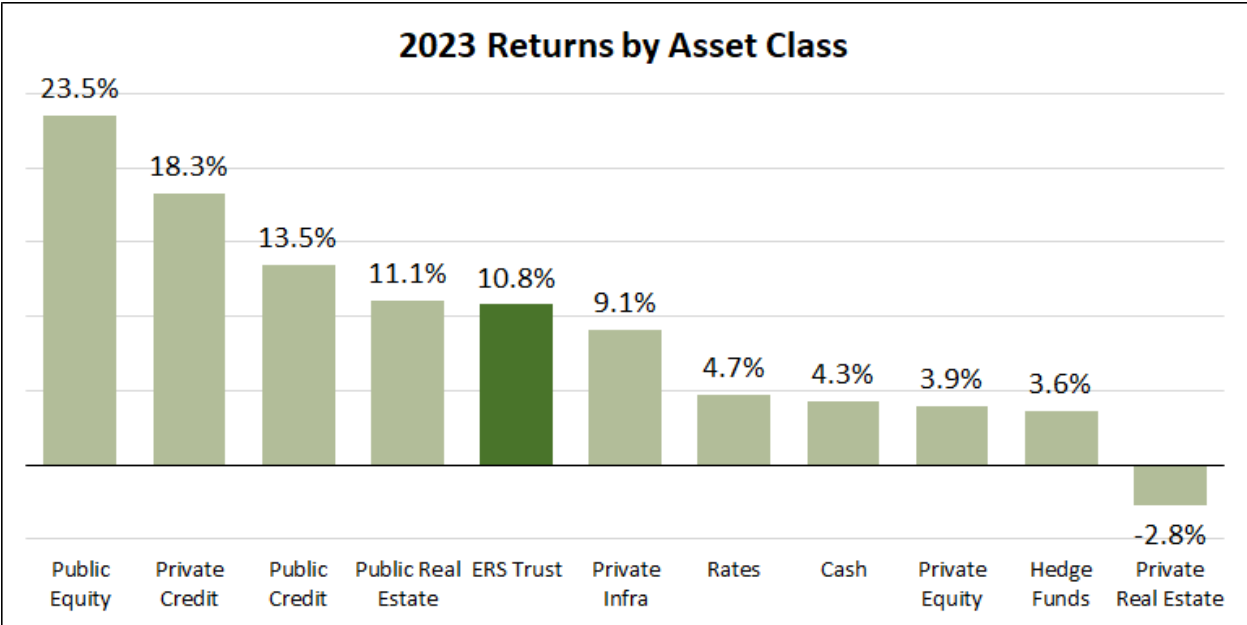
The biggest story during 2023 was what did *not* happen, which was the U.S. recession that was widely forecasted and anticipated. Key indicators that have historically been highly reliable were flashing warning signs that turned out to be false. For example, the U.S. yield curve remained deeply inverted for the entire year, which, as shown in the chart below, is typically a harbinger of recession.



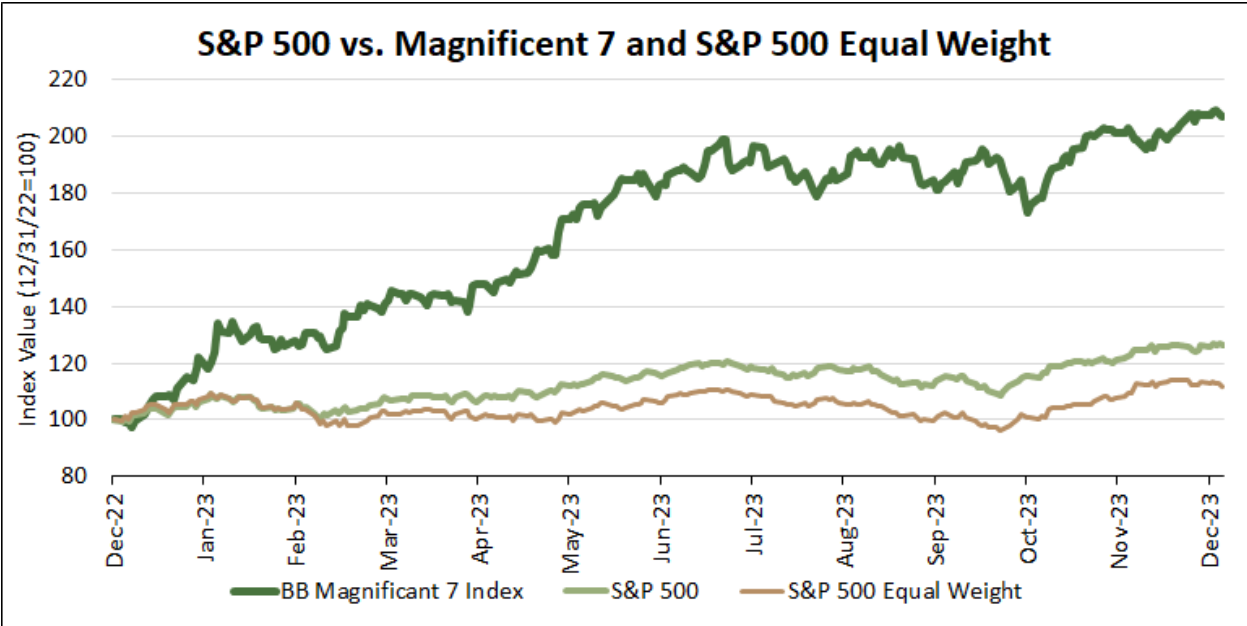
Even so, economic growth remained strong across most major economies. As shown in the chart below, the U.S. economy expanded at a 3% average pace amid inflation that averaged 4%. Economies in Asia grew the fastest while those in Europe were sluggish, including a negative reading in Germany. Inflation was elevated in most economies except for China, which suffered bouts of mild deflation.



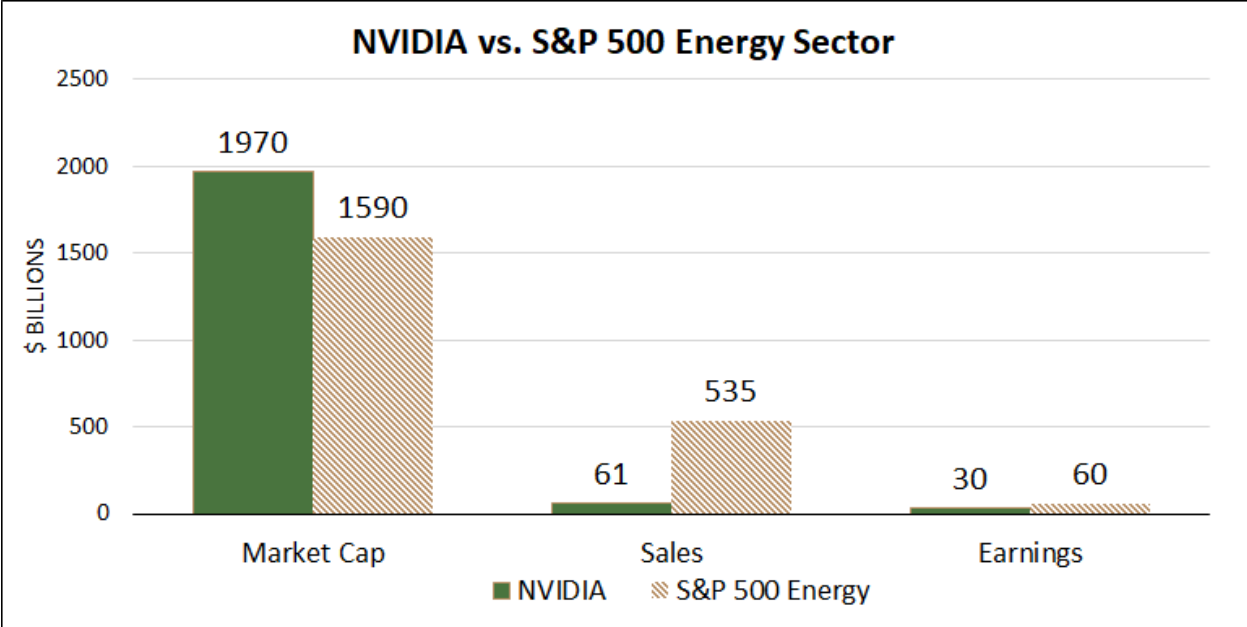
Such resilience in economic activity led to positive performance for the year across most major asset classes, including a gain of 23.5% in the ERS public equity portfolio and double-digit gains in private credit and public credit. Notably, public equity outperformed private equity by 19.6% during the year and public real estate outperformed private real estate by 13.9%, both of which represented headwinds to relative returns for the Trust.



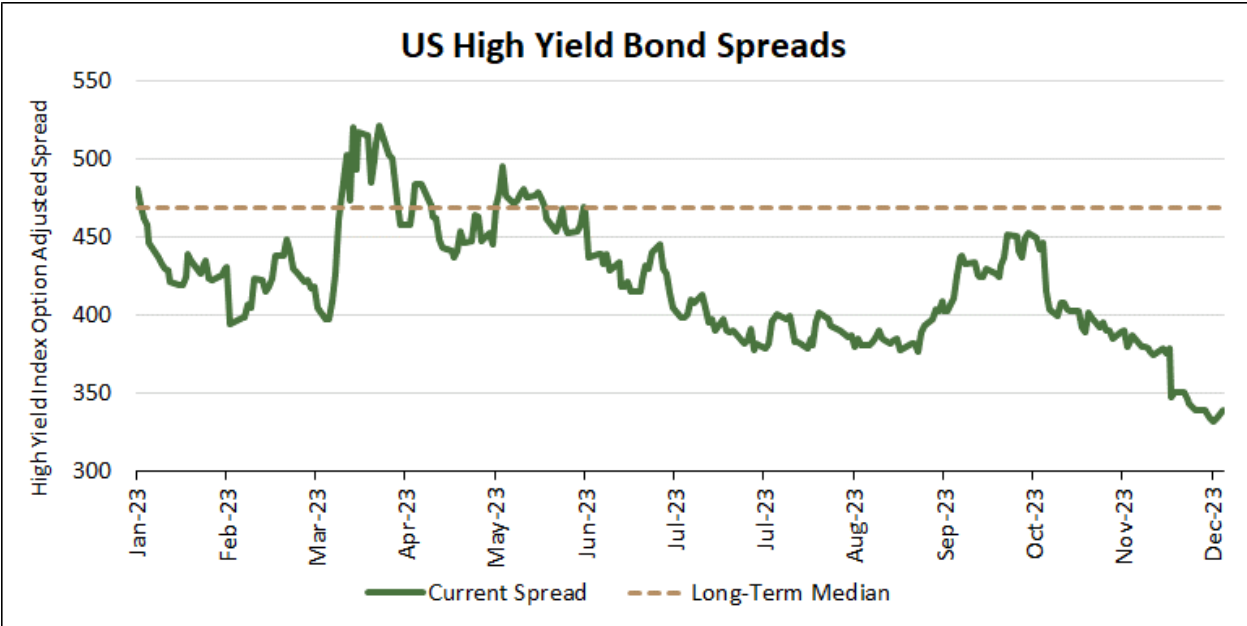
Such strong performance by U.S. equity markets was driven by only a handful of stocks. As shown in the chart below, average gains of more than 100% by the “Magnificent Seven” stocks (i.e., Alphabet, Amazon, Apple, Meta, Microsoft, NVIDIA, and Tesla) far eclipsed the 12% returns of the average stock in the S&P 500 index. Enthusiasm over the outlook for artificial intelligence, which received a significant boost in November 2022 from the launch of ChatGPT, has driven much of these gains.



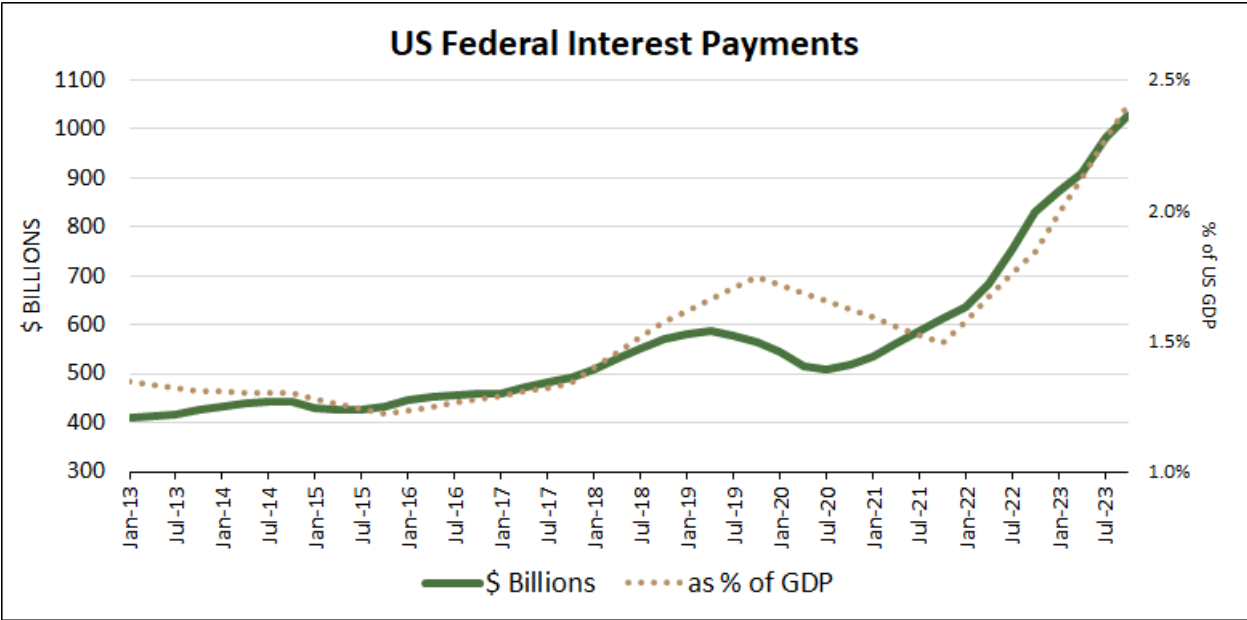
As a result, single stocks have become worth more than entire sectors or even countries. As shown in the chart below, the total market value of NVIDIA shares now exceeds that of the S&P 500 energy sector despite the fact that the latter currently generates far more revenue and profits. However, unprecedented demand for high performance computer chips has led to a fourfold increase in sales for NVIDIA in just the last 18 months. Analysts expect demand for these chips to climb further still, causing revenue for NVIDIA to double from current levels within two years and deliver earnings greater than those of the U.S. energy sector.



Strong risk appetite within financial markets has seen the spread on high yield bonds over comparable risk-free assets narrowed to well inside historical median levels. High yield spreads tightened in every industry except telecommunications, with spreads in retail tightening the most of any sector on stronger than anticipated U.S. consumer spending. Such behavior is indicative of robust economic conditions and signals very little recessionary stress.



An underappreciated source of support for the U.S. economy has been the significant rise in the interest expense of the U.S. government. Historically, interest payments were \$500-600 billion per year, but have increased to above \$1 trillion or more than 2% of US gross domestic product (GDP) due in large part to rising interest rates. Government data suggests that federal interest expense will soon rise to more than 3% of GDP, a level that would eclipse what the country currently spends on defense.



The Congressional Budget Office estimates that the federal budget deficit will amount to 6% of GDP in coming years. This fact means that net issuance of Treasuries is likely to remain elevated for some time to come as the government seeks to finance this deficit, which could place upward pressure on risk-free rates. Since those bonds would compete with the borrowings of the private sector, such an outcome could crowd out investment in private industry and raise the cost of capital for corporations.

Organizational Update for 2023

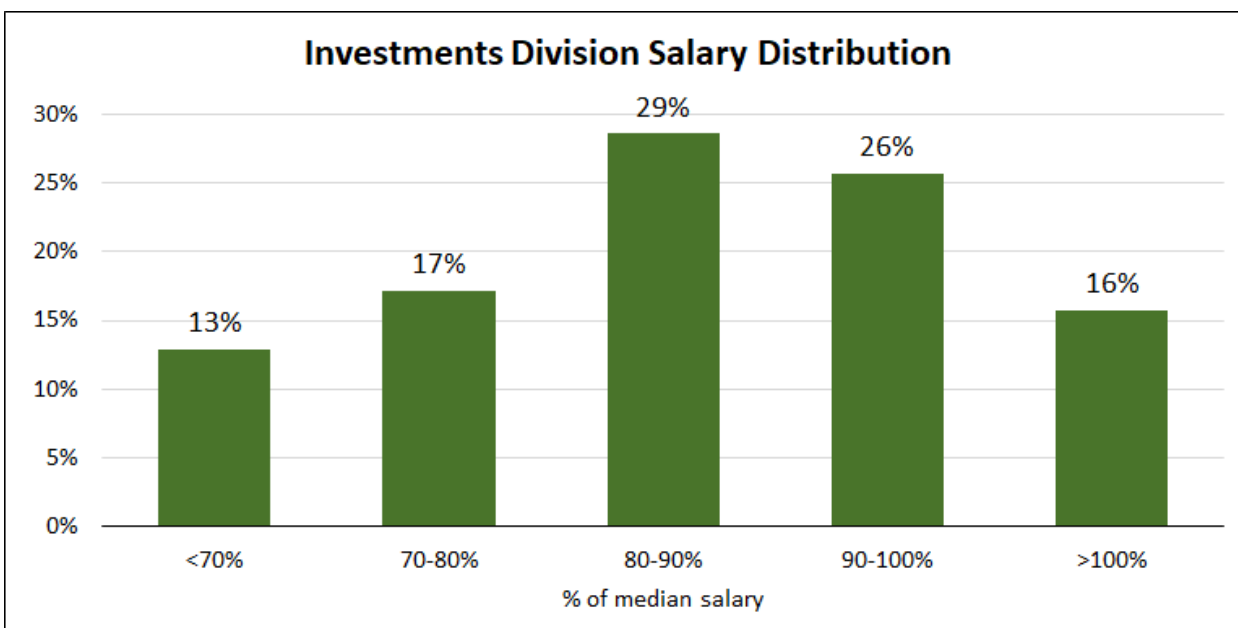
In many ways, 2023 was a transformative year for the Investments division. To build upon the strong foundation that has been established in recent decades, significant initiatives were pursued to make the organization even more effective.

- Talent Management.** The ability to attract and retain capable investors remains the single most important factor to sustain superior performance over the long term. To address the vacancies created by the turnover seen during 2022, the division ramped up external recruiting and worked with Human Resources to complete the hiring process more quickly. Currently the division has four open positions and the teams are actively interviewing candidates with the goal of filling these roles soon.

During the year the organization saw significant change, including the departure of several colleagues and the arrival of many others. Many professionals within the division were given new responsibilities and others hit the one-year mark in new assignments, highlighting the dynamic nature of the organization in providing ample opportunities for professional growth.

Departures	Arrivals	New Roles	One-Year Mark
Admin	Admin	Director – Risk	Admin
Director – Risk	IA – Hedge Funds	Director – Strategy	Budget Analyst
PM – Public Equity	IA – Public Equity	PM – Portfolio Mgt	Chief of Staff
PM – Real Estate	IA – Public Equity	PM – Public Equity	Contract Specialist
	IA – Public Equity	PM – Public Equity	Director – Public Equity
	IA – Real Estate	PM – Public Equity	MD – Portfolio Mgt
	IT Business Analyst		MD – Treasury & Trading

- Compensation Survey.** The year also saw meaningful progress on maintaining competitive compensation, which was helpful with retention in a challenging labor market. The 2023 Compensation Survey for the Investments Division was completed in the second quarter, and the data found that a significant portion of the division was 20% or more below the peer median for their salary group as shown in the table below.



The compensation survey data was used to develop a two-year strategic plan for compensation within the division that would move salary levels in the division overall toward 100% of the peer

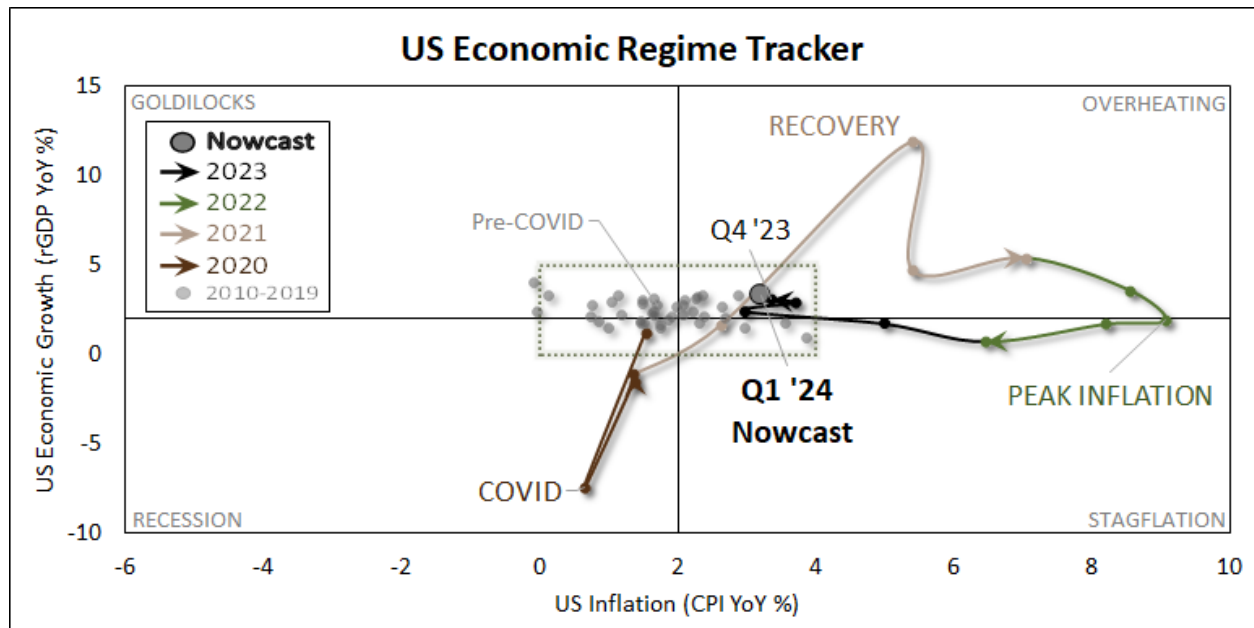
median. Phase one of this plan was reflected in the ERS annual budget for FY24 that was approved by the Board in August, and which allowed a significant number of associated personnel actions to be processed during November and December.

The gains were across the organization and helped deliver meaningful improvements to a number of salary groups, particularly among junior personnel. Updates to the Incentive Compensation Plan (ICP) that were approved by the Board during 2023 have also benefited talent management. For plan year 2024, earned awards are no longer subject to forfeiture after three years of nonpositive performance for the Trust or upon retirement from ERS.

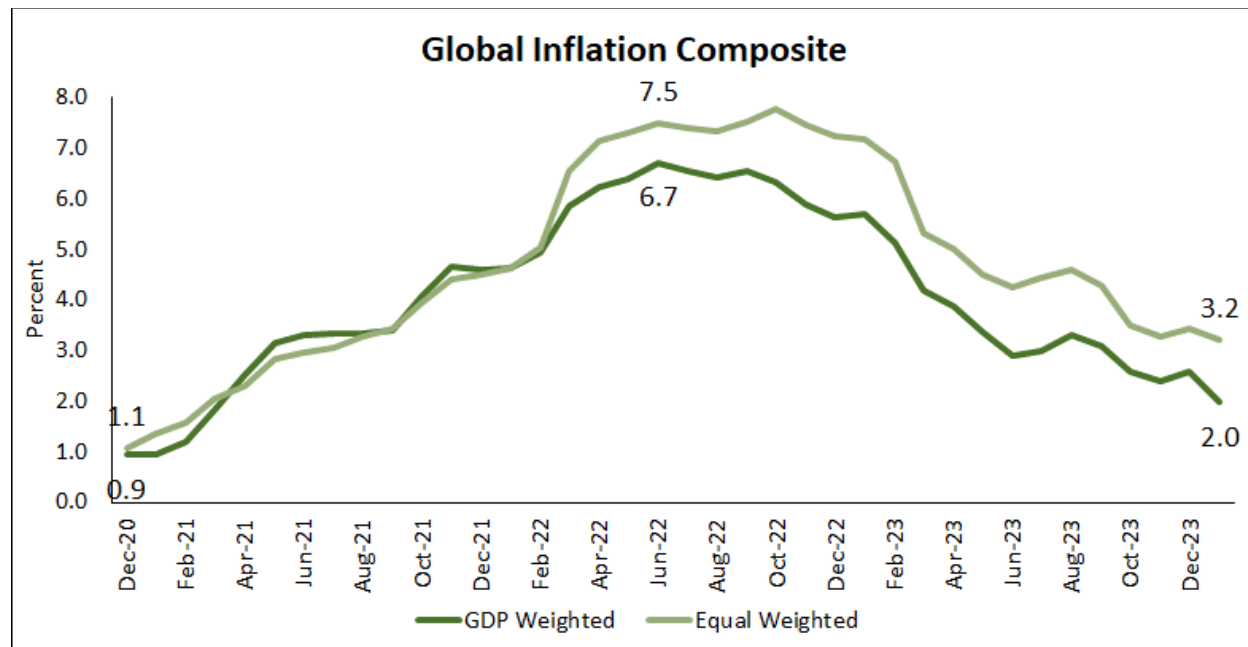
- **Portfolio Management:** Increasing the investment returns derived from asset allocation remains an important strategic effort, and additional resources were transferred to the Portfolio Management group effective September 1, 2023 in support of that aim. The group remains under the leadership of John McCaffrey and was restructured as outlined below:
 - Tim Reynolds and Paul Knight joined the group from Public Equity to serve as Director of Investment Strategy and Senior Market Strategist, respectively. Together they work with Rick Xu to manage and improve upon the framework that informs decisions regarding the positioning of the Trust within the asset allocation parameters established by the Board.
 - Meagan Larson was promoted to become the Director of Risk Management. In this recently reconfigured and expanded role, she oversees both the Investment Risk Management (working with David Law and a pending new hire) and Operational Risk Management (working with Mallory Ligon and Brendi Romick) teams.
- **Divisional Relocation:** In September, the Investments division relocated from its longtime home on the 2nd floor of the 200 East 18th Street building to the newly renovated 5th floor. The move has been a success from an operational perspective and staff has responded positively to the upgraded work environment. A few minor items remain to be completed in the months ahead.

Looking Ahead to 2024

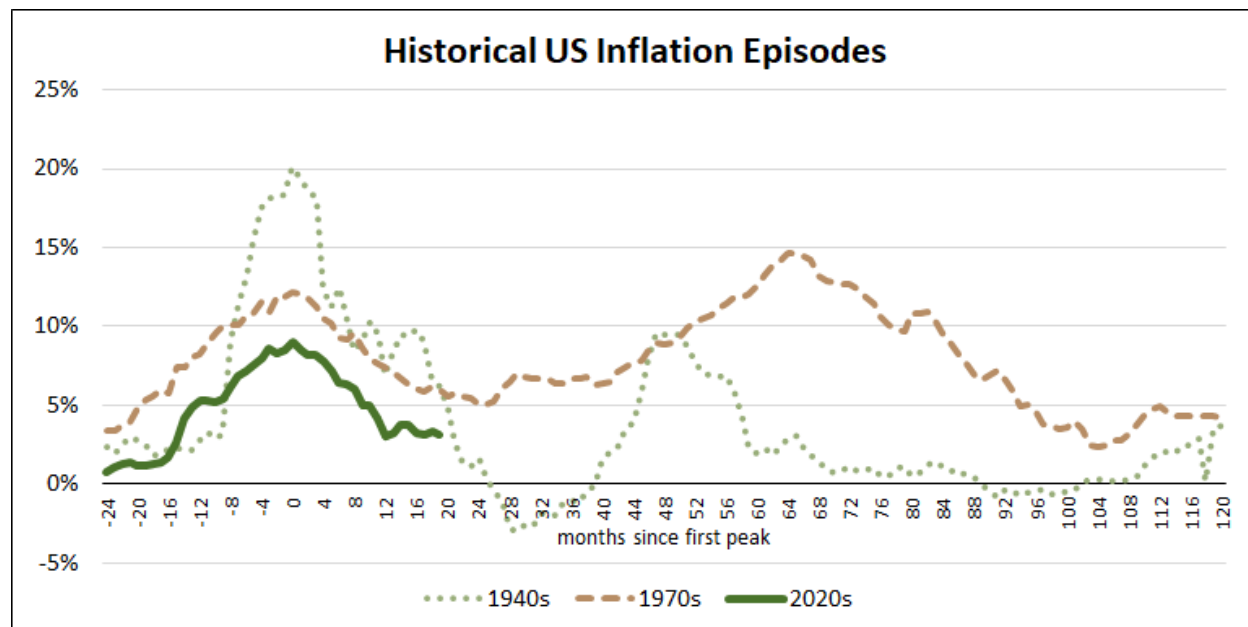
The asset allocation framework for the Trust suggests that economic conditions continue to normalize, particularly in the United States. During 2023 the U.S. economy moved back into pre-COVID conditions with stable and moderate readings for growth and inflation. As shown in the chart below, growth and inflation in the U.S. are both estimated to be running around 3% at present.



During 2023 it became clear that inflation is subsiding across the globe. As shown in the chart below, global inflation peaked in mid-2022 at 7-8% globally, and since then has fallen to 2-3%. The outliers in this process have been China, where deflation has taken hold recently with a 1% decline in prices, and Russia, where inflation has reaccelerated to above 7%.

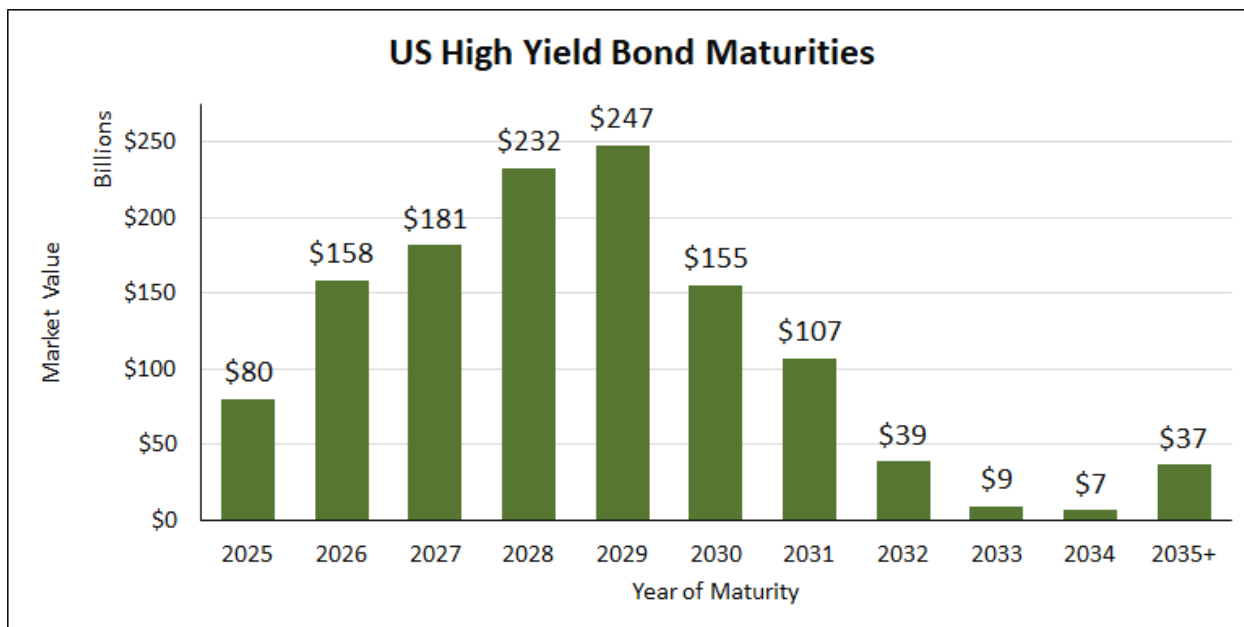


However, a study of history from the 1940s and 1970s offers a stark reminder that inflation risk can reassert itself. As shown on the chart below, inflation has historically come in waves, such as during the 1970s when the first wave troughed 24 months after peaking, and then reaccelerated to new heights over the next three years. If such a scenario were to happen again, the Federal Reserve would likely respond by deferring the interest rate cuts it has signaled recently or perhaps even hiking rates further.

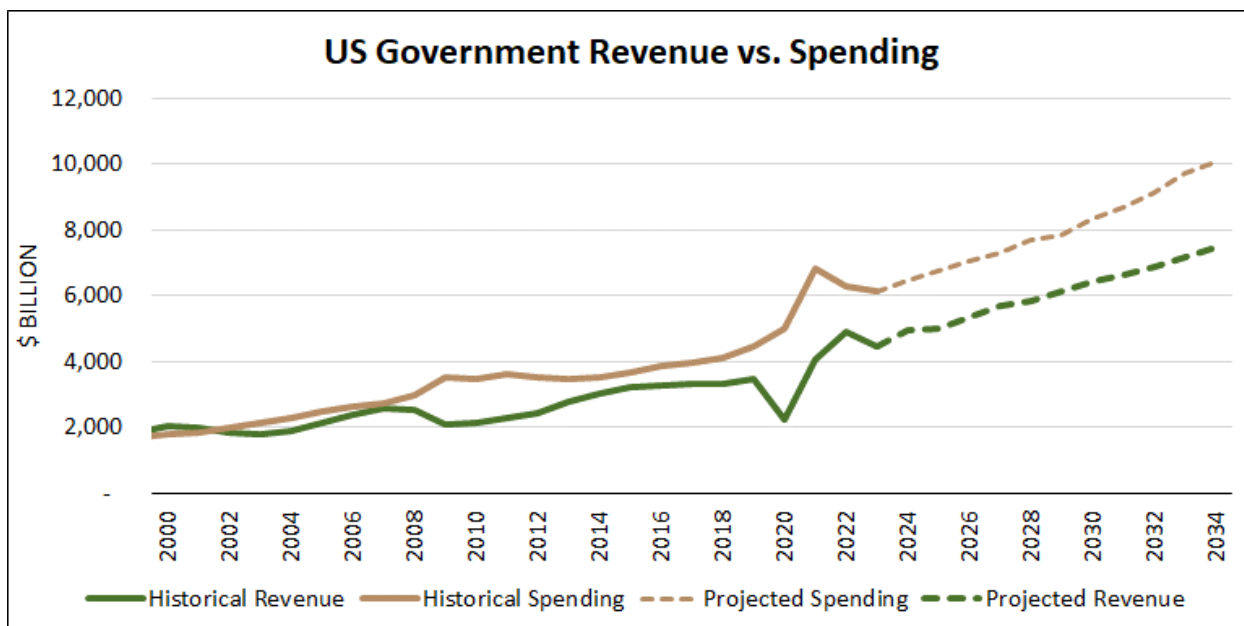


Since the bond market is anticipating a Fed target rate of around 4.5% by year end, such a deferral would serve to increase interest rates even if no actual rate hikes were implemented. However, for the near term, U.S. corporates do not need to raise significant amounts of capital. The chart below shows that

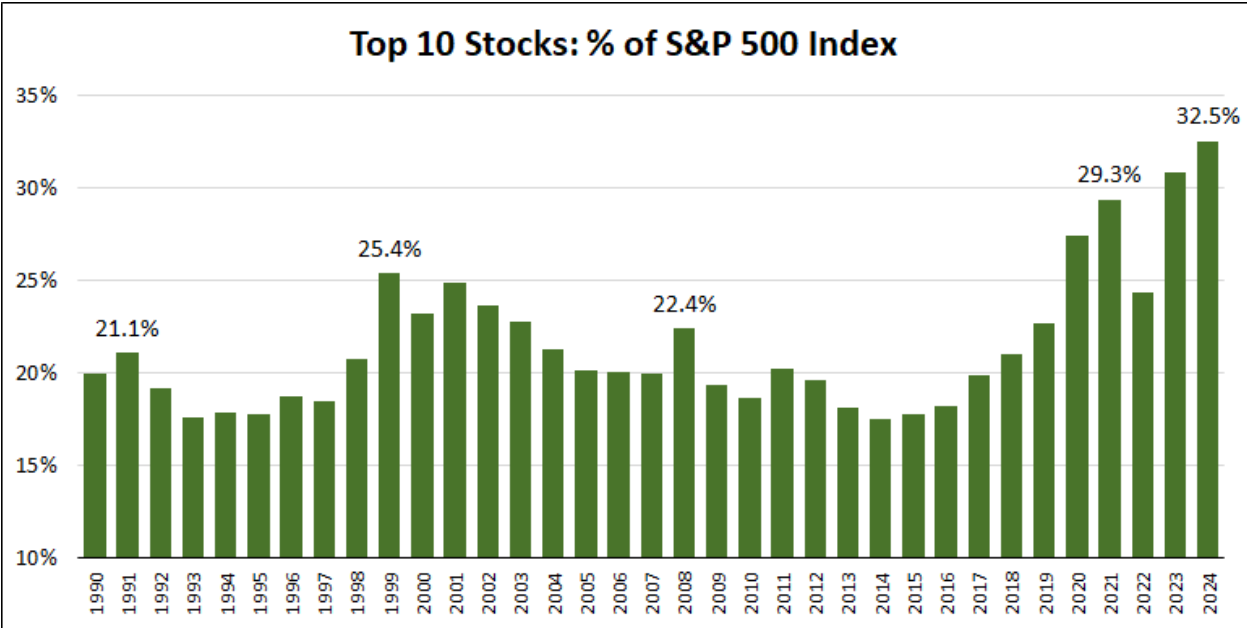
relatively low amounts of debt refinancing are required in coming years, which in part is attributable to companies having borrowed aggressively in previous years when rates were low.



On the flip side, the significant and sustained deficits of the U.S. government (see chart below) are likely to require significant funding at a time when more price-sensitive investors are becoming the marginal buyers of Treasuries. The Federal Reserve is currently reducing its holdings of Treasuries, while commercial banks and foreign reserve managers are not adding to their positions. Private investors such as pension funds and households are key to absorbing this supply in an environment of economic uncertainty and rising rates, making the financing outlook more tenuous than before.



Another important risk to equity markets is record levels of concentration in a handful of stocks. As shown in the chart below, strong recent gains by the “Magnificent 7” stocks have resulted in the most highly concentrated U.S. equity market in recent history, with the shares of the 10 largest companies making up almost 34% of the index. Longer term studies suggest that such peaks tend to coincide with major tops in equity markets, as was the case in prior episodes including 1999 and 2008.



Such concentration is typical of “bubble” behavior, where stocks rise rapidly in price in a way that is disconnected to the fundamental value of the underlying companies. Indeed, a look back at similar episodes in US financial market history raises some concern.

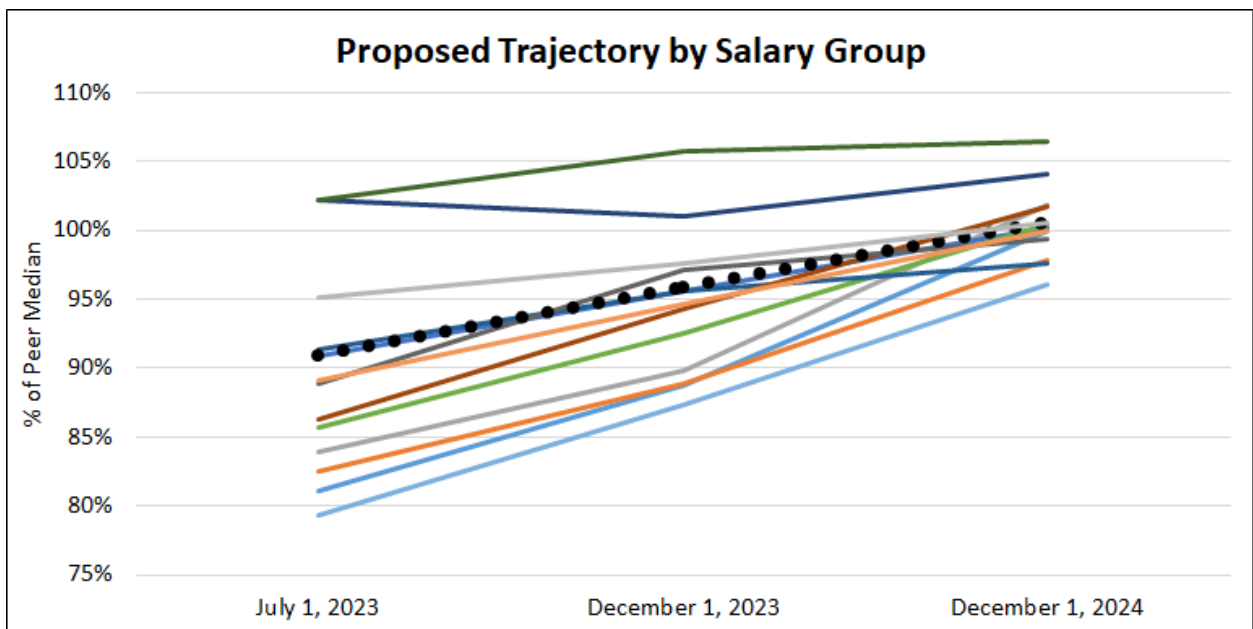
- 1920s: enthusiasm for electricity, telephones and other new technologies caused the Dow Jones Industrials to soar more than 300% before losing 89% in the next three years.
- 1960s: enthusiasm for electronics and other new technologies caused the “Nifty Fifty” stocks to soar before crashing in the decade to follow (Polaroid down 91%, Xerox down 71%, etc.).
- The 1999-2000 “dot com” bubble blossomed on excitement about Internet, which caused the NASDAQ index to rise 800% in five years, only to fall 78% over the next three years.
- The current “Magnificent 7” stocks have been boosted by expectations of widespread productivity gains from artificial intelligence, with gains of 208% for NVIDIA alone and 83% for the Magnificent 7 during 2023.

Such bubbles typically go on for many years but tend to burst eventually as rising interest rates and changing economic dynamics lead to a significant (and often sudden) market correction. Staff is concerned about the potential effect that such a dynamic could have on the outlook for returns from U.S. equity markets overall and continues to monitor the concentration risk in the public equity portfolio.

Organizational Priorities for 2024

During 2024, the Investments division will continue to build upon the successes of 2023 by taking additional actions in the year ahead to make the organization even more effective.

Compensation Survey. The compensation survey data was used to create a two-year strategic plan for compensation within the division that would move salary levels in the division overall toward 100% of the peer median. Phase two of this plan will be reflected in the ERS annual budget for FY25 for approval by the Board in August, which would allow the associated personnel actions to be processed during November and December.



- **Investment Practices and Performance Report:** Section 802.109 of the Texas Government Code requires ERS to engage an independent consultant every three years to conduct an evaluation of the appropriateness, adequacy and effectiveness of its investment policies, procedures and practices. Such reports cover five evaluation topics that are broadly defined in statute:
 - An analysis of any investment policy or strategic investment plan adopted by the System;
 - A review of the System’s strategic asset allocation, including the associated methodologies;
 - A review of the appropriateness of investment fees and commissions paid by the System;
 - A review of the System’s governance processes related to investment activities; and
 - A review of the System’s investment manager selection and monitoring process.

NEPC conducted the first such review in 2019 and delivered the associated report to the Board in March 2020. The findings of that report were systematically addressed by staff and the results reported to the Board in subsequent meetings.

The process for the current report began in January 2023 with NEPC reviewing key documents and interviewing a number of employees. NEPC will present its findings to the Board/IAC during the March 2024 meeting and deliver the final report to ERS in the second calendar quarter of 2024. The report is due to the Pension Review Board (PRB) on June 1, 2024. Staff expects to review the recommendations and develop implementation strategies to benefit the Trust as appropriate.

- **Investment Consulting RFQ:** The current contract with the general investment consultant (NEPC) expires on December 31, 2024. This relationship is a critical component of the ERS governance model in that this role serves as a strategic advisor to the Board. In addition, the contracts for several of the current asset class consultants will expire within two years. These relationships are also a key component of the ERS governance model in that they provide investment due diligence reports that inform the Asset Class Investment Committee (ACIC) process and help in the development of capital plans for each of the private market asset classes.

ERS is developing a Request for Quotation (RFQ) related to investment consulting services, which will include one contract for general investment consulting, five for asset class consulting, and one for governance reviews. Taken together, these contracts are currently valued at more than \$3 million annually, and staff seeks to achieve service level improvements and cost savings by procuring the entire suite of services in one process. Staff expects to make a recommendation to the Board in December 2024 in a way that allows for an orderly transition if necessary.

CONCLUSION

Investment performance continues to deliver well on the overall objectives for the Trust, including strong absolute returns that support the provision of earned benefits. High levels of excess returns and top rankings among peers across most time horizons are indicative of effective implementation. The Trust remains properly positioned for the current market environment, and staff continues to monitor the key risks to the long-term outlook. To sustain this success in the years to come, the organization continues to make investments in its people and processes that are made possible by support from key stakeholders.

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

** ERS is accredited by the State Pension Review Board (PRB) as a Minimum Educational Training (MET) sponsor for Texas public retirement systems. This accreditation does not constitute an endorsement by the PRB as to the quality of our MET program. This agenda item may be considered in-house training provided by ERS to board trustees and the system administrator for purposes of fulfilling the MET program requirements. ERS is an accredited sponsor of MET for its system administrator and trustees for continuing education.*

ATTACHMENTS:

1. Exhibit A – Current version of ERS Investment Policy Statement (effective 2023-09-01)
2. Exhibit B – Current version of ERS Investment Implementation Plan (effective 2024-01-23)
3. Slides – Chief Investment Officer Update