

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM
277 EAST TOWN STREET, COLUMBUS, OH 43215-4642
1-800-222-PERS (7377)
www.opers.org

NOTICE

1. The OPERS Board will meet on **Tuesday, January 14, 2025, at 10:00 a.m. and Wednesday, January 15, 2025, at 9:00 a.m.** in the offices of the Board.
2. The Personnel and Salary Committee will meet on **Wednesday, January 15, 2025, immediately following the Board meeting** in the offices of the Board.

Members of the public may view the live video of the Board meetings. Registration/sign in to access the meetings is available at the following link https://opersorg.zoom.us/webinar/register/WN_-4r6YJuQQy233Z0tHqsPZO. Once completed you will receive additional information regarding how to observe the meetings.

OPERS Board

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM
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Board Meeting January 14, 2025
10:00 A.M.
OPERS Office

A G E N D A

- I. Roll Call 10:00 a.m.

- II. Consent agenda: 10:00 – 10:05 a.m.
 - A. [Minutes](#) – November 19, 2024
 - B. [Disability report](#)

- III. Action Item: 10:05 – 10:10 a.m.
 - A. Board Chair and Vice Chair Selections

- IV. Discussion Items:
 - A. [Economic Outlook – Internal Economist](#) – Nick Kotsonis 10:10 – 11:10 a.m.
 - B. [Economic Outlook – External Economist](#) – Alison Adams 11:10 – 12:10 p.m.
Meketa

- Lunch
 - C. [Legislative Update](#) (State and Federal) and Kirk Schuring 12:20 – 1:20 p.m.
Resolution – Gordon Gatien, Anthony Tedesco-Nichols,
Jeannine Markoe Raymond and Leigh Snell

The Board will recess on Tuesday, January 14, 2025, and reconvene on Wednesday, January 15, 2025, at 9:00 a.m.

Action Item: [Board Vacancy Schedule](#) – Eric Harrell and Jenny Starr

- V. Discussion Items:
 - A. [Fiscal Year 2024 Preliminary Returns/2025 Outlook](#) 9:00 – 9:15 a.m.
Paul Greff
 - B. [Investment Market Outlook](#) – Meketa 9:15 – 10:15 a.m.
 - C. [2024 Preliminary Pension Funding Update](#) – Karen Carraher 10:15 – 10:45 a.m.
Craig Hallermann and Lai Woo
 - D. [Health Care Primer for 2025 Health Care Asset Liability](#) – Karen Carraher and Craig Hallermann 10:45 – 11:30 a.m.

- Lunch
 - E. [Health Care Asset Liability Study](#) – Meketa** 11:40 – 12:40 p.m.
 - F. [Compliance Report](#) – Eric Harrell 12:40 – 1:10 p.m.
 - G. Neil V. Toth Winner – Ciji Wilhelm 1:10 – 1:20 p.m.
 - H. [Executive Director Update](#) – Karen Carraher 1:20 – 1:30 p.m.

- VI. For Your Information:
 - A. [2025 Mileage Reimbursement Rate](#)
 - B. [2024 Annual Audit Committee Report to ORSC](#)
 - C. [2025 Board Schedule and Agenda](#)
 - D. [Investment Performance](#)

****COULD BE MOVED TO ACTION AT THE BOARD'S DIRECTION**

Board Meeting II.A

Minutes of the

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM

The monthly meeting of the Ohio Public Employees Retirement Board was held in the offices of the Board, Ohio Public Employees Retirement System building, 277 East Town Street, Columbus, Ohio at 12:30 p.m., Tuesday, November 19, 2024.

Members present: Ms. Julie Albers; Ms. Kathleen Madden; Mr. Scott Richter; Mr. Stewart Smith; Mr. Tim Steitz; Mr. Ken Thomas; Mr. Steve Toth; and Mr. Chris Mabe. (Mr. James Kunk entered the meeting after roll call.)

Members absent: Mr. Randy Desposito and Mr. Jim Tilling.

Also present: Ms. Tonya Brown, Deputy Executive Director; Ms. Karen Carraher, Executive Director; Mr. Allen Foster, Deputy Executive Director; Mr. Gordon Gatien, Director Government Relations; Mr. Paul Greff, Director, Investments; Ms. Lauren Gresh, Deputy Executive Director; Mr. Eric Harrell, General Counsel; Mr. Stephen Kell, Director Information Technology; Mr. Chuck Quinlan, Director Information Technology Strategy; Ms. Jenny Starr, Chief Financial Officer; Ms. Caroline Stinziano, Director Internal Audit; and Ms. Ciji Wilhelm, Director, Human Resources.

Mr. Thomas moved, Mr. Toth seconded, to approve the minutes of the meeting held October 15, 2024 (as amended), and the disability report (see Appendix to the Minutes for report).

Roll call vote was taken as follows: Ms. Albers, aye; Mr. Kunk, aye; Ms. Madden, aye; Mr. Richter, aye; Mr. Smith, aye; Mr. Steitz, aye; Mr. Thomas, aye; Mr. Toth, aye; Mr. Mabe, aye.

The motion passed with all ayes.

The Chair asked for the report of the Audit Committee.

Mr. Smith, Chair of the Audit Committee, reported that the Committee met on November 19, 2024, and provided a report out of the agenda items discussed as part of the meeting. During the Audit Committee meeting, Ms. Stinziano reviewed the following action items and recommended approval by the full Board:

- The Internal Audit related activities and Status of Prior Audit Recommendations and the proposed annual 2024 Audit Committee Report that is provided to the Ohio Retirement Study Council.
- The proposed 2025 six-month Internal Audit Plan for the period of January through June 2025.
- The Audit Committee and Internal Audit Charters.

The Committee also was presented the 2024 External Audit Plan by our external Auditors Plante Moran.

Mr. Smith moved, Mr. Richter seconded, to approve the Annual Audit Committee Report to be submitted to the ORSC, 2025 six-month Audit Plan (January-June), and the Audit Committee and Internal Audit Department Charters as recommended by the Audit Committee report.

Roll call vote was taken as follows: Ms. Albers, aye; Mr. Kunk, aye; Ms. Madden, aye; Mr. Richter, aye; Mr. Smith, aye; Mr. Steitz, aye; Mr. Thomas, aye; Mr. Toth, aye; Mr. Mabe, aye.

The motion passed with all ayes.

Ms. Lai Woo, Senior Financial Analyst, reviewed the 2025 employer rate contribution allocation.

Ms. Albers moved, Mr. Steitz seconded, to approve the allocation of the employer contribution rate to pension of 14%, and the allocation of the employer contribution rate to health care of 0%, effective January 1, 2025.

Roll call vote was taken as follows: Ms. Albers, aye; Mr. Kunk, aye; Ms. Madden, aye; Mr. Richter, aye; Mr. Smith, aye; Mr. Steitz, aye; Mr. Thomas, aye; Mr. Toth, aye; Mr. Mabe, aye.

The motion passed with all ayes.

Mr. David Sancewich from Meketa reviewed two asset allocation mixes they are recommending for the Defined Benefit Fund. They reviewed the pros and cons of each mix, as well as the preferred option of Meketa and Investment staff.

After discussion, Mr. Smith moved, Mr. Toth seconded, to approve the recommended target asset allocation mix presented by Meketa and Investment staff, Option C (see below):

U.S. Equity	21%
Equity ex-US	20%
Private Equity	15%
Core Private Real Estate	8%
Non-Core Private Real Estate	4%
Core Fixed Income	5%
Treasuries	2%
Private Credit	6%
Public Credit	4%
Inflation Assets	4%
Risk Parity	1%
Risk Mitigating	10%

Roll call vote was taken as follows: Ms. Albers, aye; Mr. Kunk, aye; Ms. Madden, aye; Mr. Richter, aye; Mr. Smith, aye; Mr. Steitz, aye; Mr. Thomas, aye; Mr. Toth, aye; Mr. Mabe, aye.

The motion passed with all ayes.

Mr. Lincoln Carnam provided an annual review of the OPERS Defined Contribution Fund. He reviewed the investment options, performance and expenses. He reviewed the key initiatives of the past year and what is planned for the upcoming year.

(Mr. Thomas left the meeting during Mr. Carnam's presentation.)

Ms. Alli Wallace Stone from Meketa reviewed quarterly investment performance.

(Mr. Thomas reentered the meeting during Ms. Stone's presentation.)

Mr. Sancewich and Mr. Jonathan Camp from Meketa reviewed their plan for a comprehensive review of the Health Care Fund asset allocation. This process will begin with an asset-liability study discussion, they reviewed the steps involved in this review and provided a draft timeline for the final approval of the target asset mix.

The Board recessed at 2:00 p.m. until Wednesday, November 20, 2024, at 9:00 a.m.

The Board reconvened at 9:00 a.m. November 20, 2024, and the Chair proceeded with the Board agenda.

All Board members from the previous day were present, except for Ms. Madden who entered the meeting later.

Ms. Debbie McCarthy, Government Relations Officer/Legal Counsel, reviewed proposed Rule 145-2-19, which grants the authority to aggregate service credit for retirement eligibility.

Mr. Smith moved, Mr. Richter seconded, to approve Rule 145-2-19 for submission to the Joint Committee on Agency Rule Review and the Legislative Service Commission, as reviewed with staff.

Roll call vote was taken as follows; Ms. Albers, aye; Mr. Kunk, aye; Mr. Richter, aye; Mr. Smith, aye; Mr. Steitz, aye; Mr. Thomas, aye; Mr. Toth, aye; Mr. Mabe, aye.

The motion passed with all ayes.

Mr. Christopher Doll from CEM reviewed the pension and investment benchmarking results for the period ending December 31, 2023.

(Ms. Madden entered the meeting during the CEM benefits presentation.)

Board members that are interested in running for Chair or Vice Chair need to submit their interest to Marsha Volpi by December 31, 2024.

The Board took a short break.

After the break, the Chair proceeded with the agenda.

Ms. Brown and Mr. Scott Lillie, Enterprise Risk Manager, provided an update on the Enterprise Risk Management (ERM) Program. They provided an ERM process overview, reviewed the key risk initiatives identified through risk discussions, provided risk register highlights, and an update on the member fraud program.

Mr. Gatien and Mr. Anthony Tedesco, Government Relations Officer, provided an update on legislative and regulatory activities of the 135th Ohio General Assembly, the 118th U.S. Congress, and federal agencies throughout 2024, and provided insight about what to expect in the next two years.

The Executive Director report was included in the meeting materials.

(Mr. Kunk left the meeting.)

Mr. Toth moved, Mr. Richter seconded, to enter executive session to discuss pending or imminent court action.

Roll call vote was taken as follows: Ms. Albers, aye; Ms. Madden, aye; Mr. Richter, aye; Mr. Smith, aye; Mr. Steitz, aye; Mr. Thomas, aye; Mr. Toth, aye; Mr. Mabe, aye.

The motion passed with all ayes.

By acclamation, the Board came out of executive session.

Ms. Albers moved, Mr. Toth seconded, the meeting be adjourned until the next regular meeting to be held Tuesday, January 14, 2025, at 10:00 a.m.

The motion passed without dissent.

The meeting adjourned at 12:40 p.m.

Board Meeting IV.A

Nick Kotsonis, CFA

Senior Investment Analyst/Economist, Ohio PERS



Nick Kotsonis, CFA graduated from Miami (OH) University in 2003 with a B.S. degree cum laude in finance and a minor in economics.

Nick began working for Summit Investment Partners, a subsidiary of Union Central Life Company, in Cincinnati, OH in the fall of 2003. In 2005 he became a Fixed Income Analyst and Equity Index Fund Analyst at Summit Investment Partners covering several investment grade corporate sectors while also managing the firm's eleven equity index funds. He was also responsible for hedging the parent company's index flex annuity products by executing customized options strategies.

In 2008, Nick was hired as a fixed income analyst by the Ohio Public Employees Retirement System (OPERS) and was responsible for covering investment grade corporate bond sectors including energy (oil & gas), midstream pipelines (MLP's), global mining, telecommunications, and media: cable. In late 2016, he was promoted to OPERS' in-house economist responsible for producing economic research for the internal investment staff along with continuing his responsibilities of analyzing five investment grade corporate bond sectors.

U.S. Economic Update: ‘Adjusting The Sails’

*“The pessimist complains about the wind;
the optimist expects it to change;
the realist adjusts the sails.”*
– William Arthur Ward

Nick Kotsonis, CFA
January 14, 2025



Today's Agenda

1 U.S. Economic Update: Growth

2 New Research: Why Was The 2023-2024 Recession Avoided?

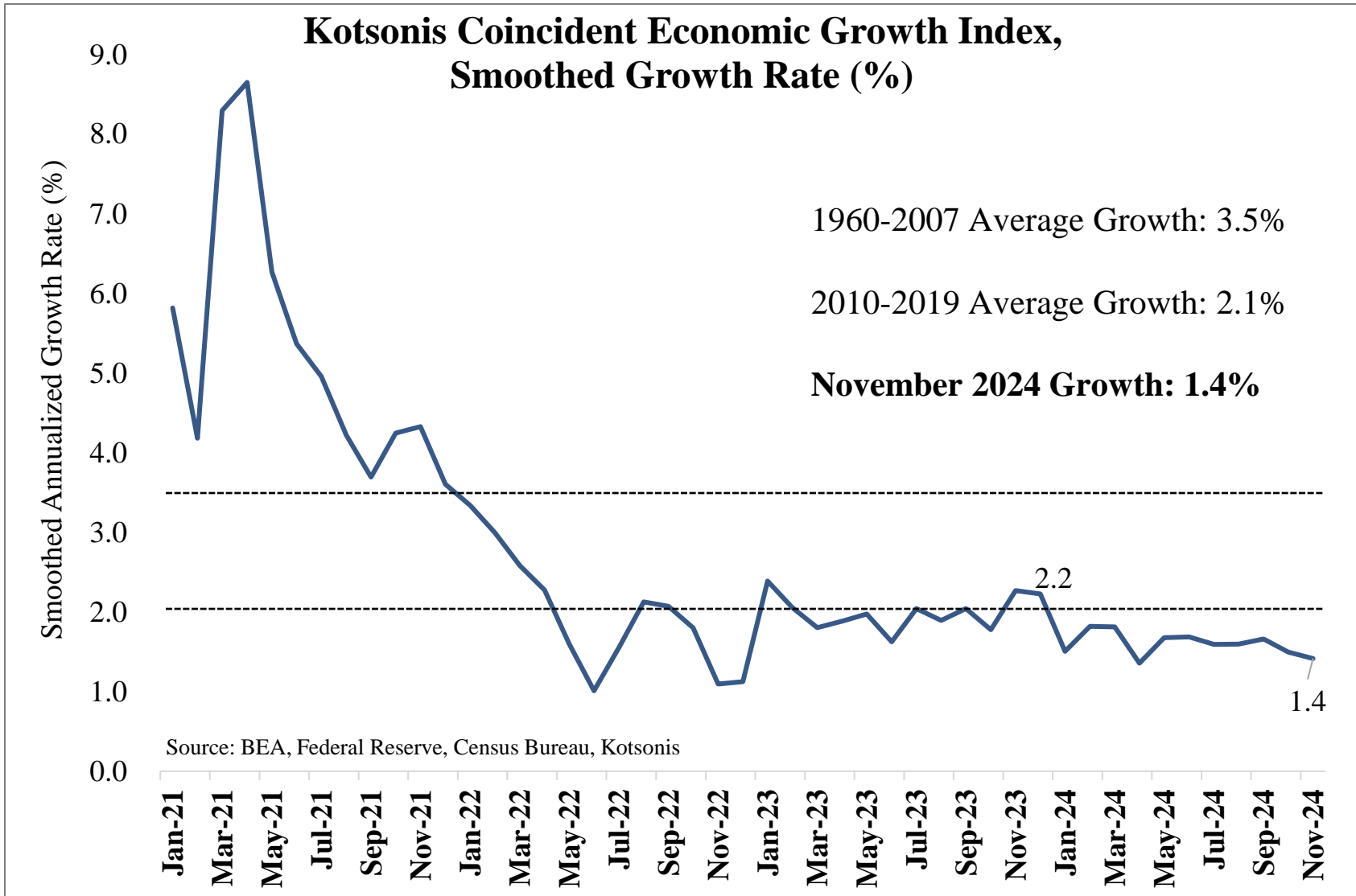
3 How Is Market Performance Linked To The Economy?

4 U.S. Economic Update: Labor Market

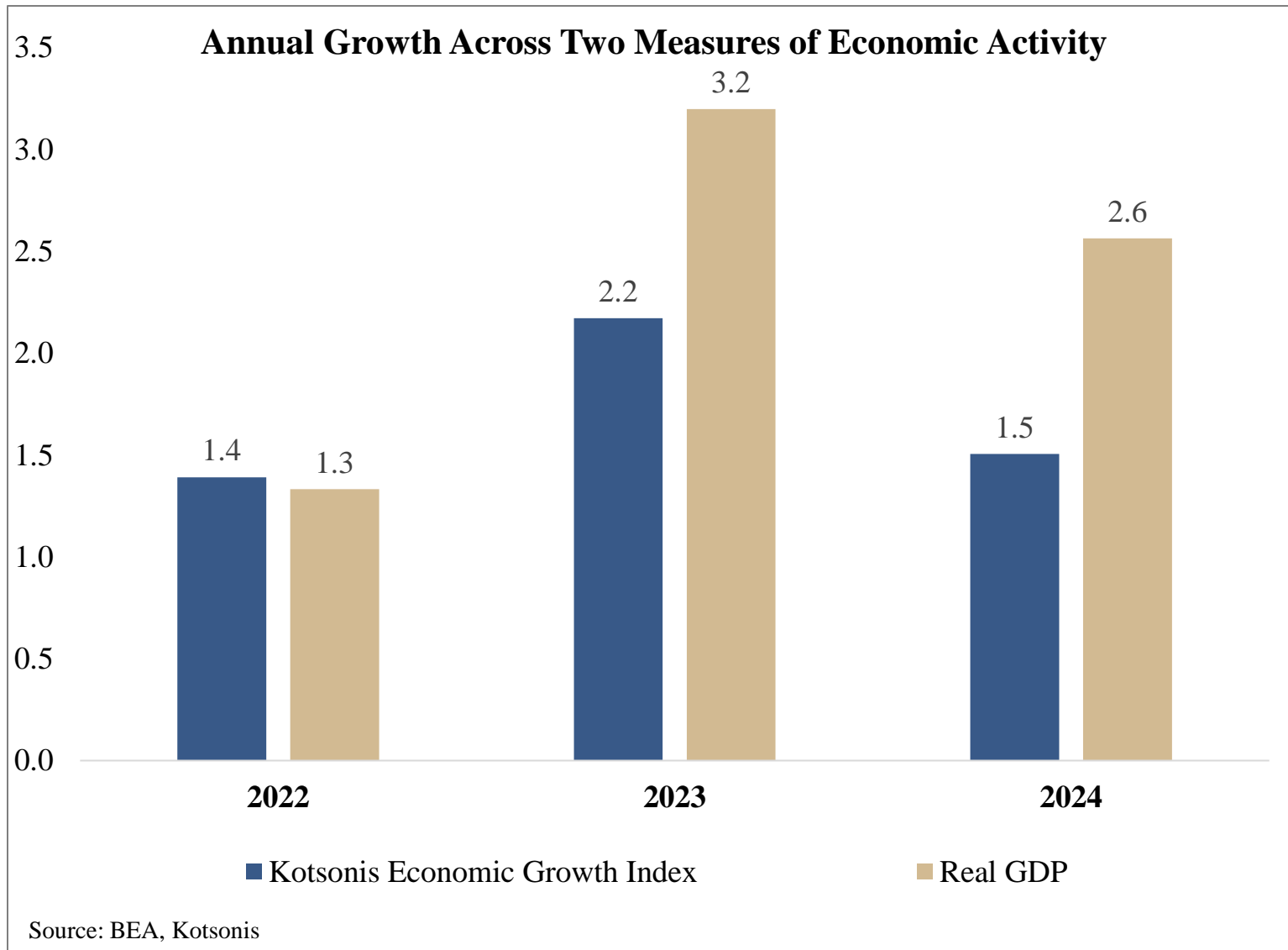
5 U.S. Economic Update: Inflation

U.S. Economic Update: Growth

Economic Activity Is Historically Weak

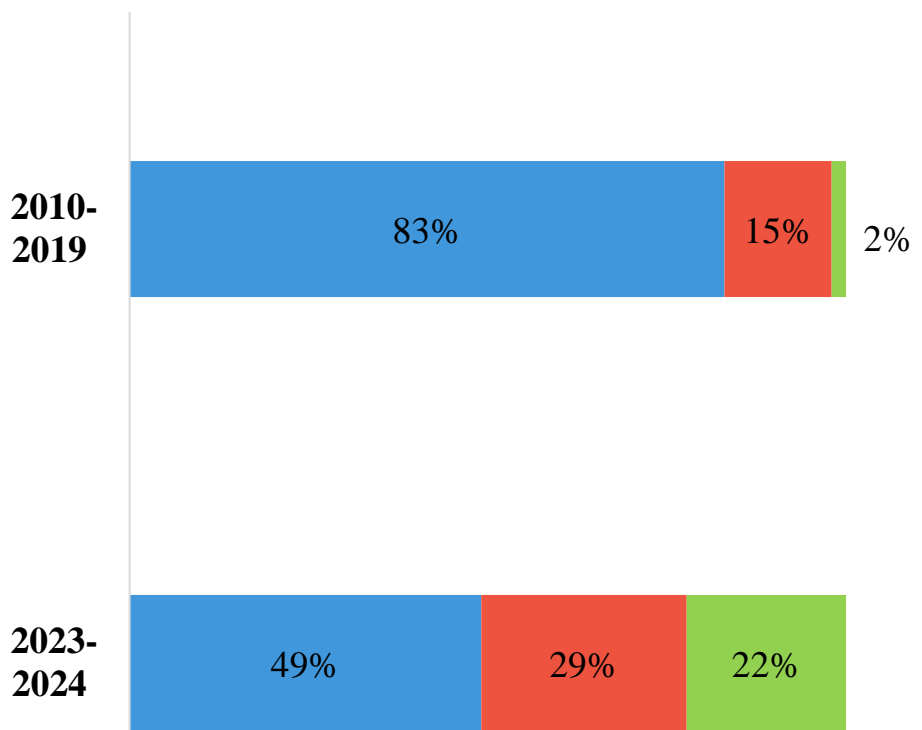


Real GDP Shows Much Stronger Growth



Healthcare & Government Spending Drove Majority Of Real GDP Growth In 2023-2024

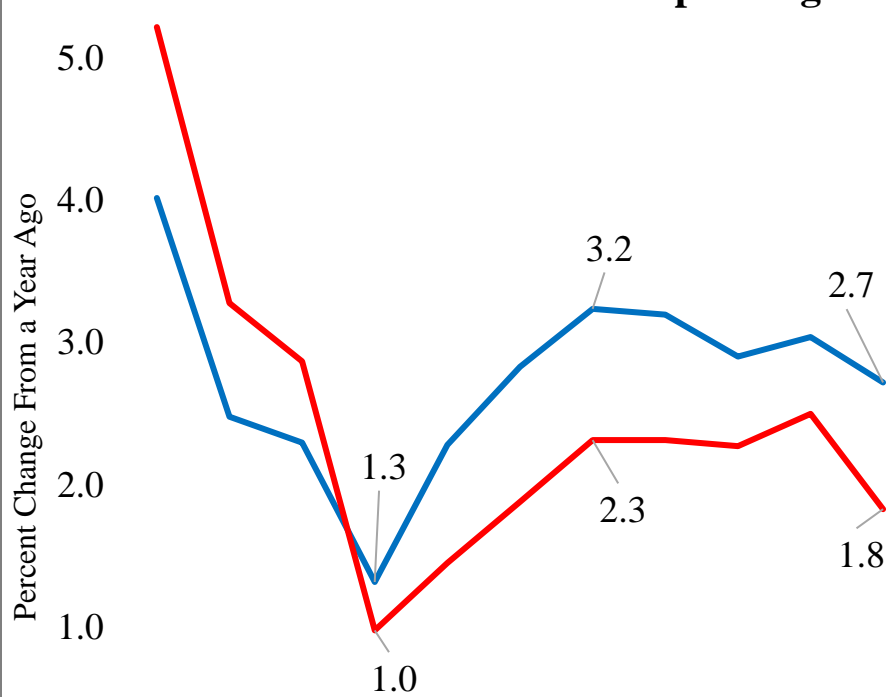
Contributions to Total U.S. Real GDP Growth



Source: BEA, Kotsonis

■ All Other ■ Healthcare Spending ■ Government Spending

Real GDP Growth Excluding Healthcare & Government Spending

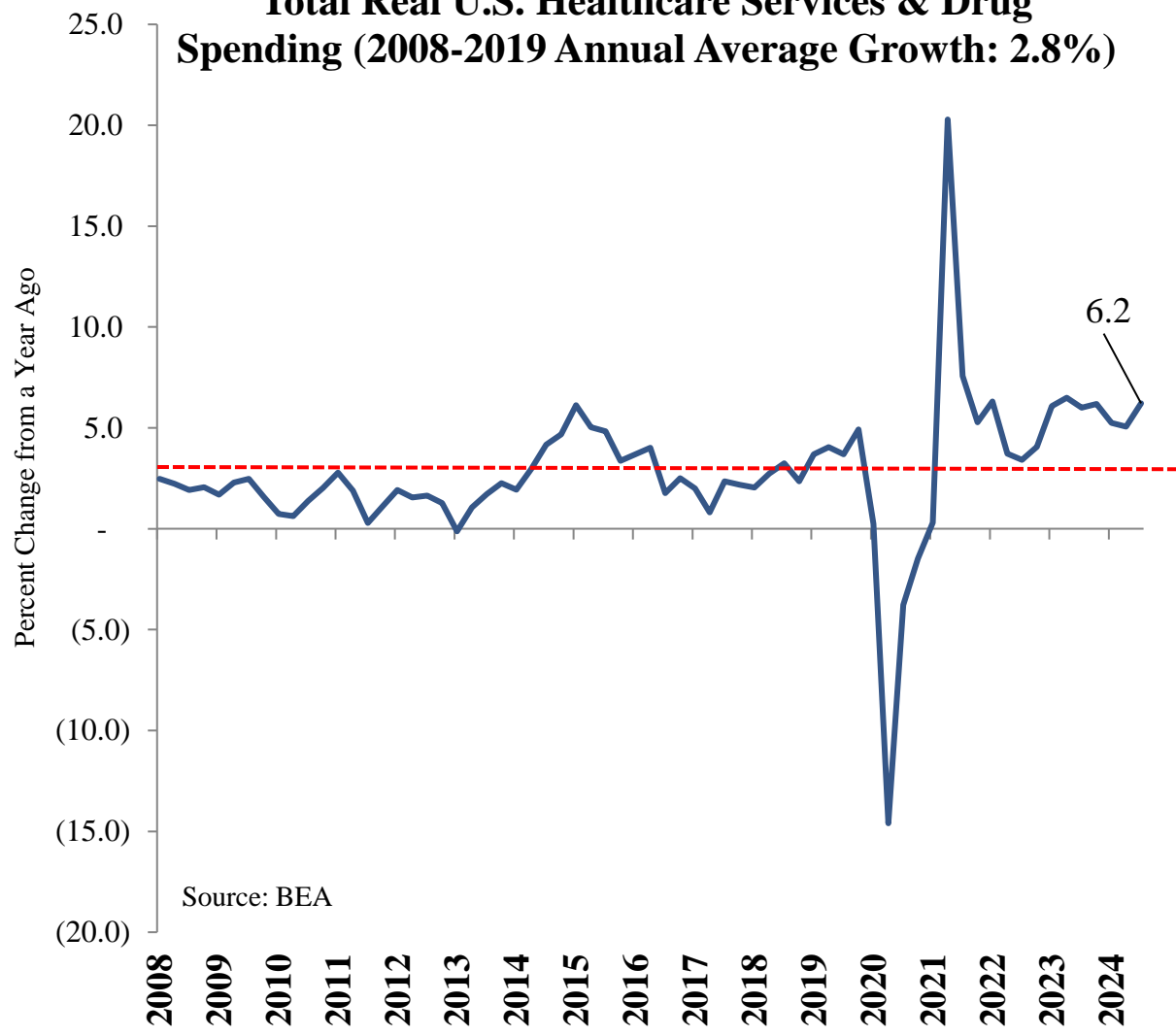


Source: BEA, Kotsonis

— Total Real GDP
— Real GDP excluding Healthcare & Government Spending

Healthcare Spending In 2023-2024 Grew More Than Twice As Fast Than The Prior Decade

Total Real U.S. Healthcare Services & Drug Spending (2008-2019 Annual Average Growth: 2.8%)



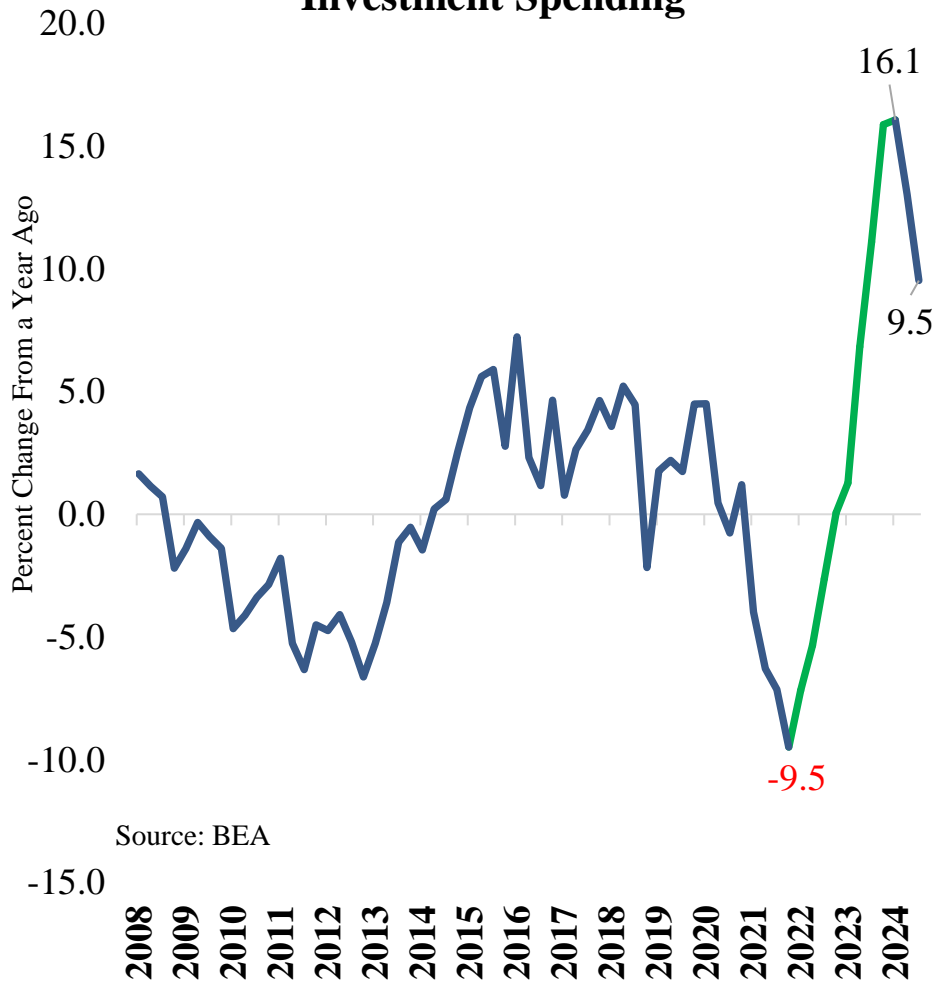
Source: BEA

Healthcare services and pharmaceutical drugs spending is now **15% of total annual U.S. GDP**, or \$3.5 trillion.

The U.S. healthcare industry by itself would be the world's 5th largest economy, larger than the annual GDP of France and the U.K.

Government Spending, Primarily State & Local, Accelerated Sharply In 2023-2024

Real State & Local Government Fixed Investment Spending



In July 2021, Congress passed the bipartisan \$550 billion Infrastructure Investment & Jobs Act

Pew

[TOPICS](#) [PROJECTS](#) [FEATURES](#) [ABOUT](#) [GET INVOLVED](#)

State Budgets Are Downsizing

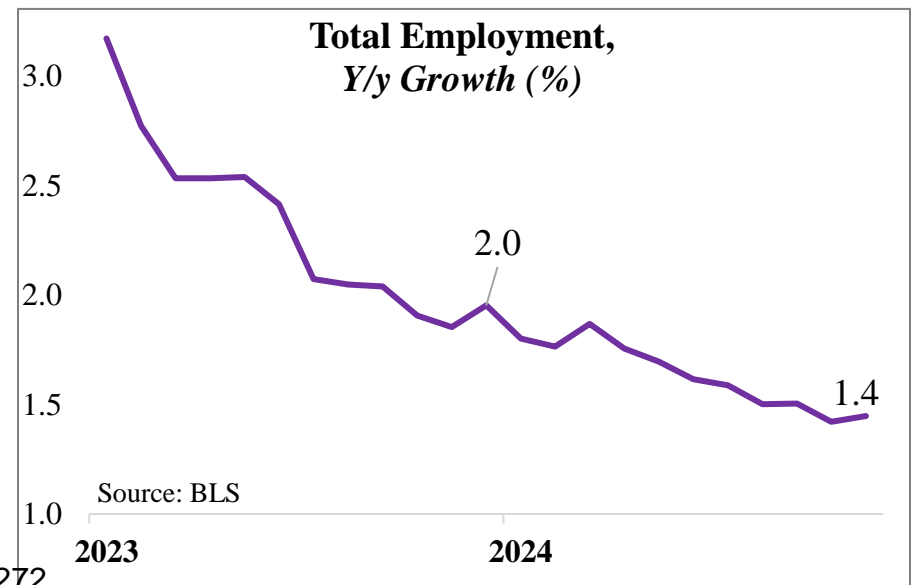
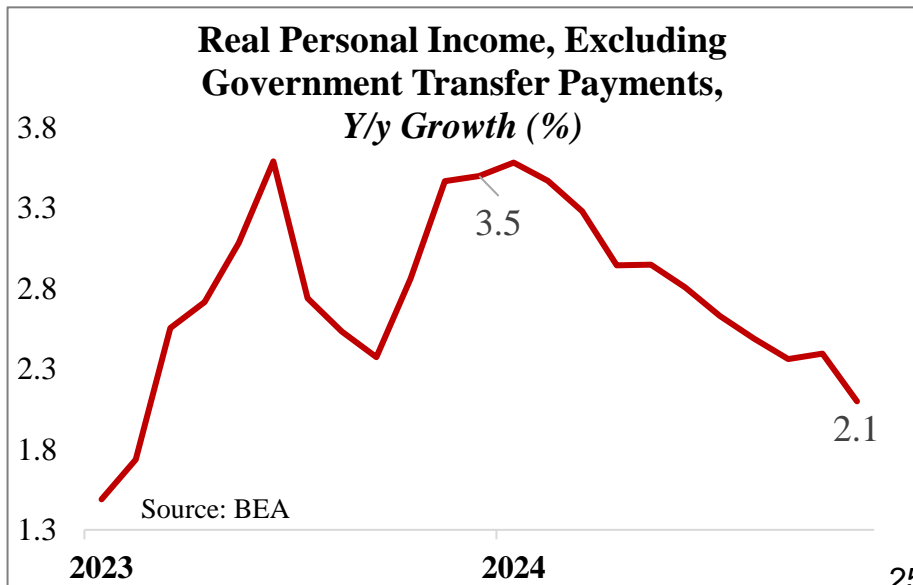
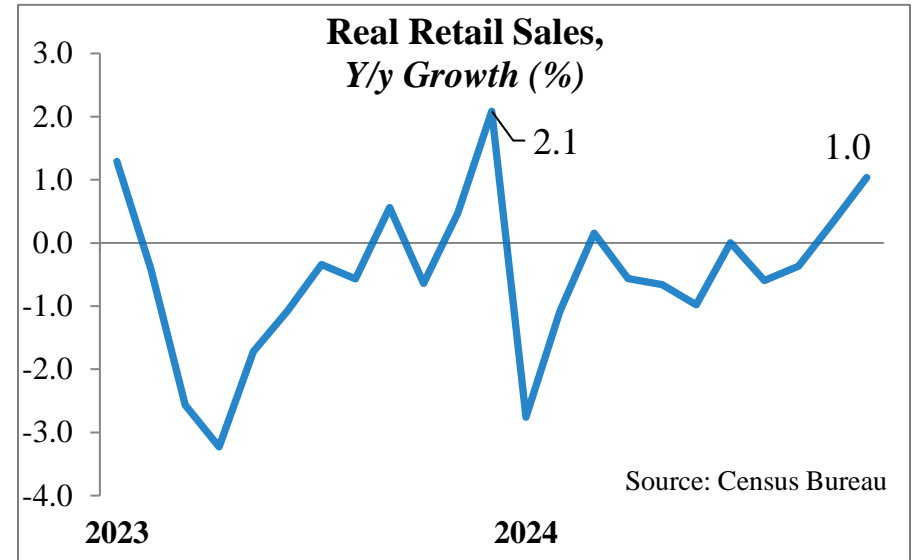
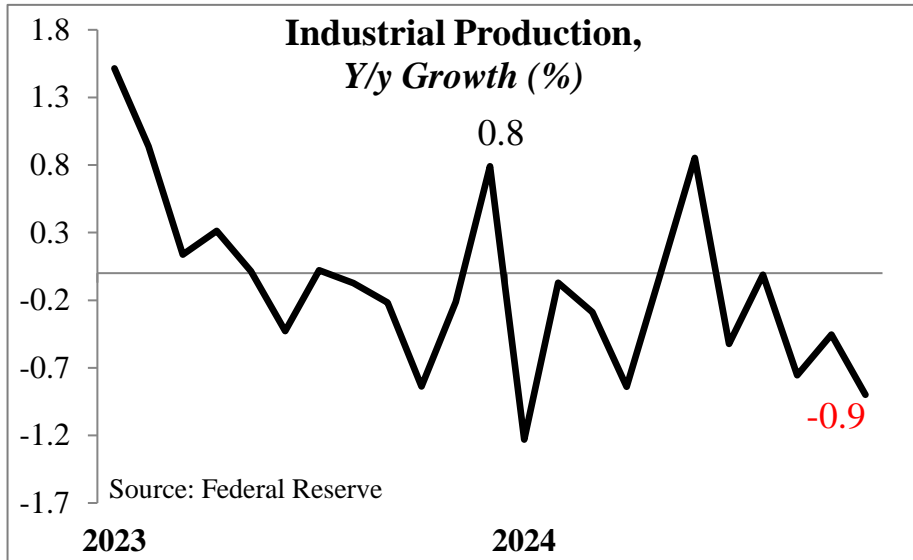
After several years of rapid growth, many states are curbing spending amid uncertain revenue conditions in fiscal 2025

ARTICLE | July 15, 2024 | By: Liz Farmer | Read time: 6 min

Projects: [State Fiscal Health](#)

(Pew) - State budgets are expected to shrink substantially in fiscal year 2025 as the post-pandemic era of surging revenue, record spending, and historic tax cuts comes to a close. According to new data released by the National Association of State Budget Officers, total general fund spending is expected to decline to \$1.22 trillion, a more than 6% drop from estimated levels in fiscal 2024, which ended for most states on June 30.

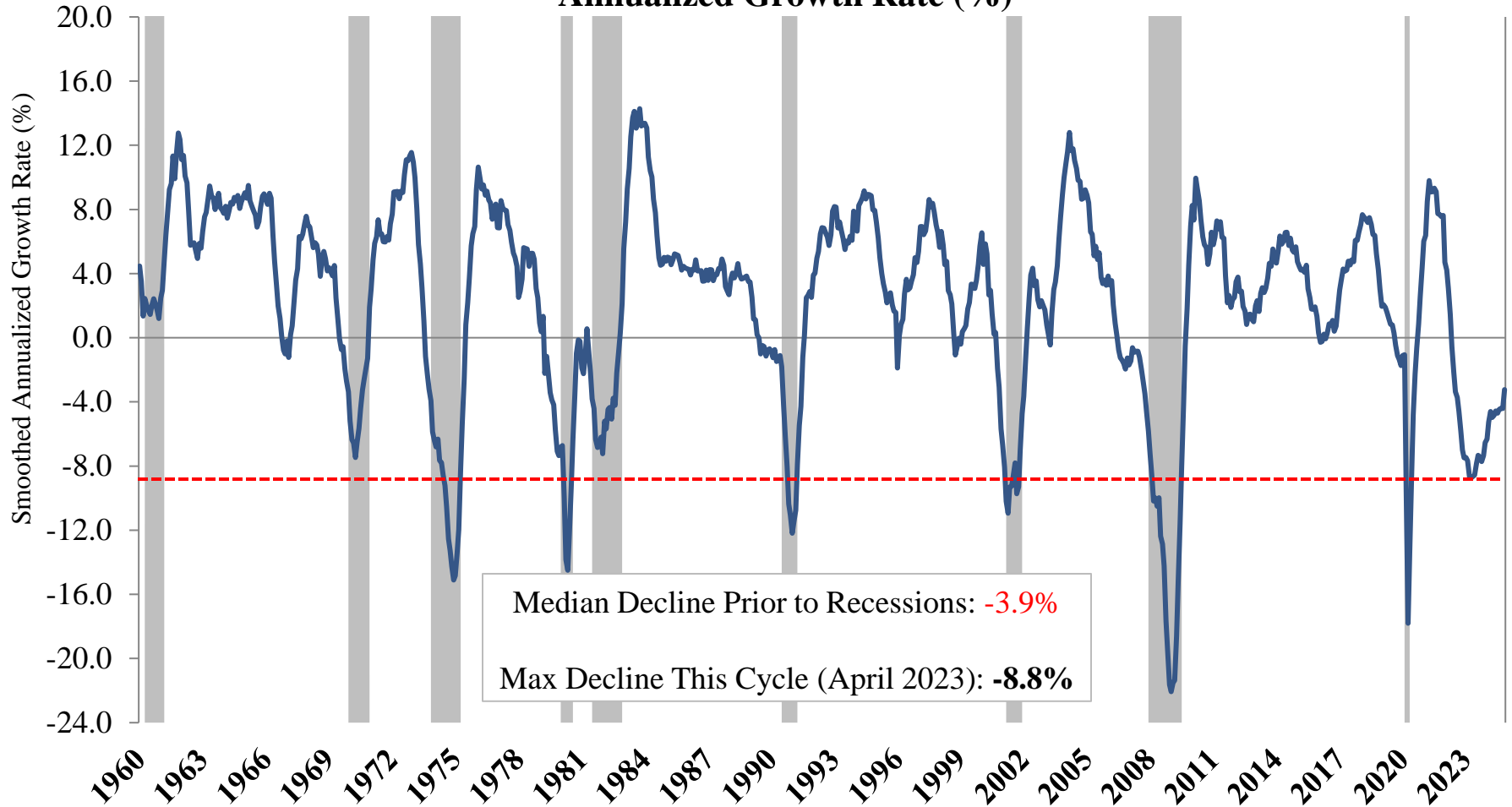
All Key U.S. Economic Growth Metrics Slowed In 2024



New Research: Why Was The 2023-2024 Recession Avoided?

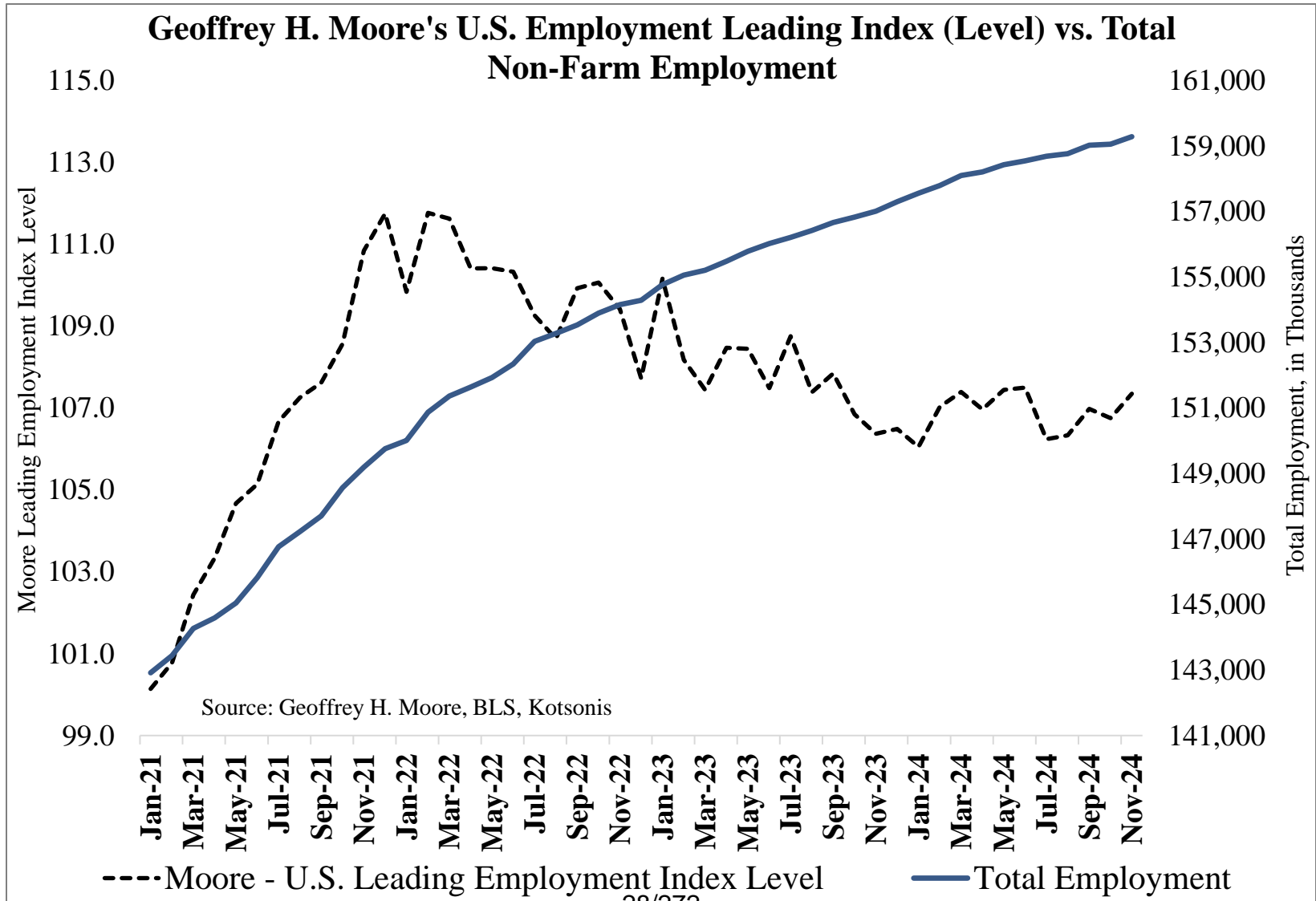
False Alarm: Leading Economic Indicators Warned Of Recession For Two Years

Conference Board's Leading Economic Index of Ten Indicators: Smoothed Annualized Growth Rate (%)



Source: Conference Board Leading Index of 10 Indicators

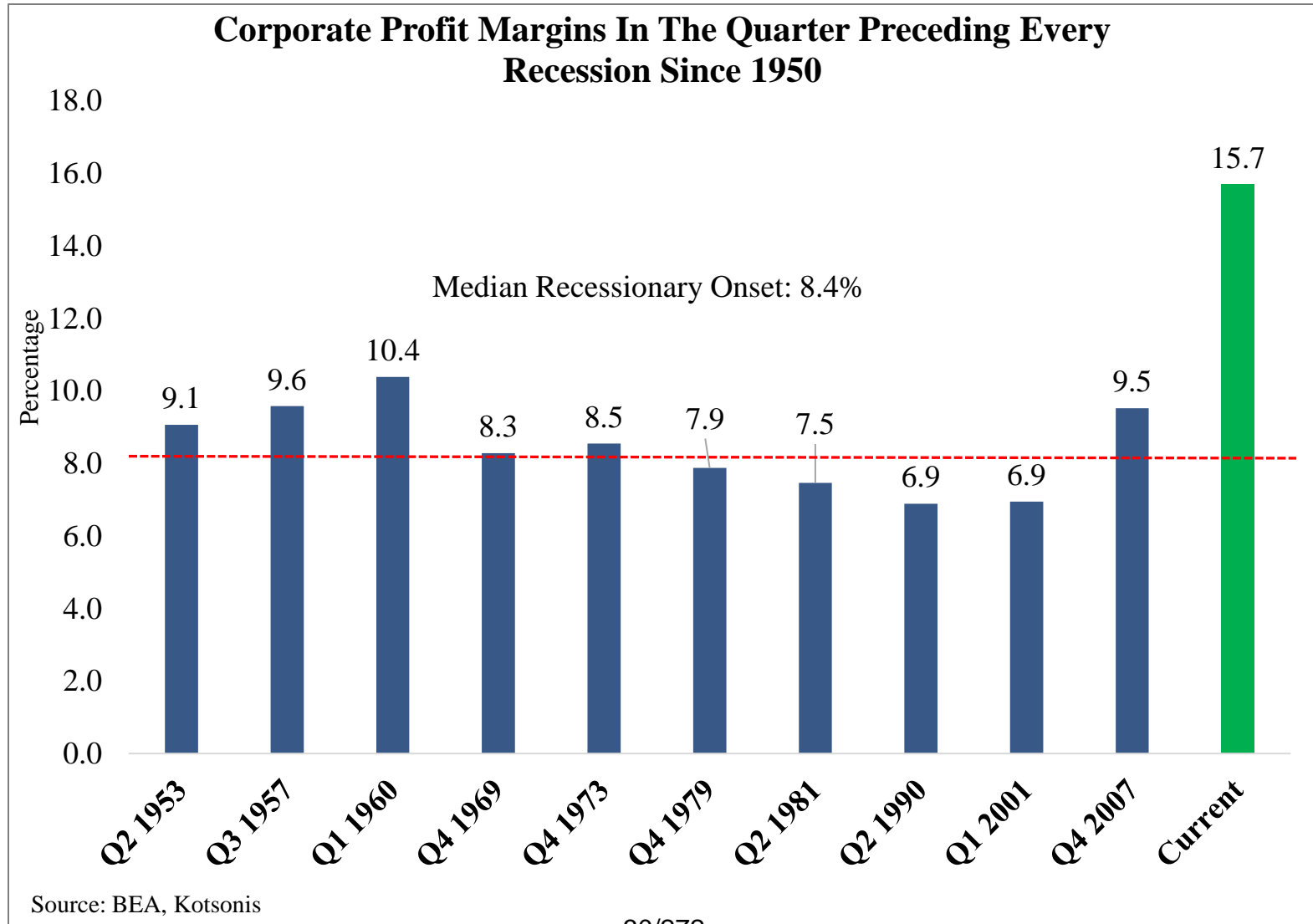
False Alarm: Leading Employment Indicators Also Warned Of Recession



No Mass Layoffs = No Recession

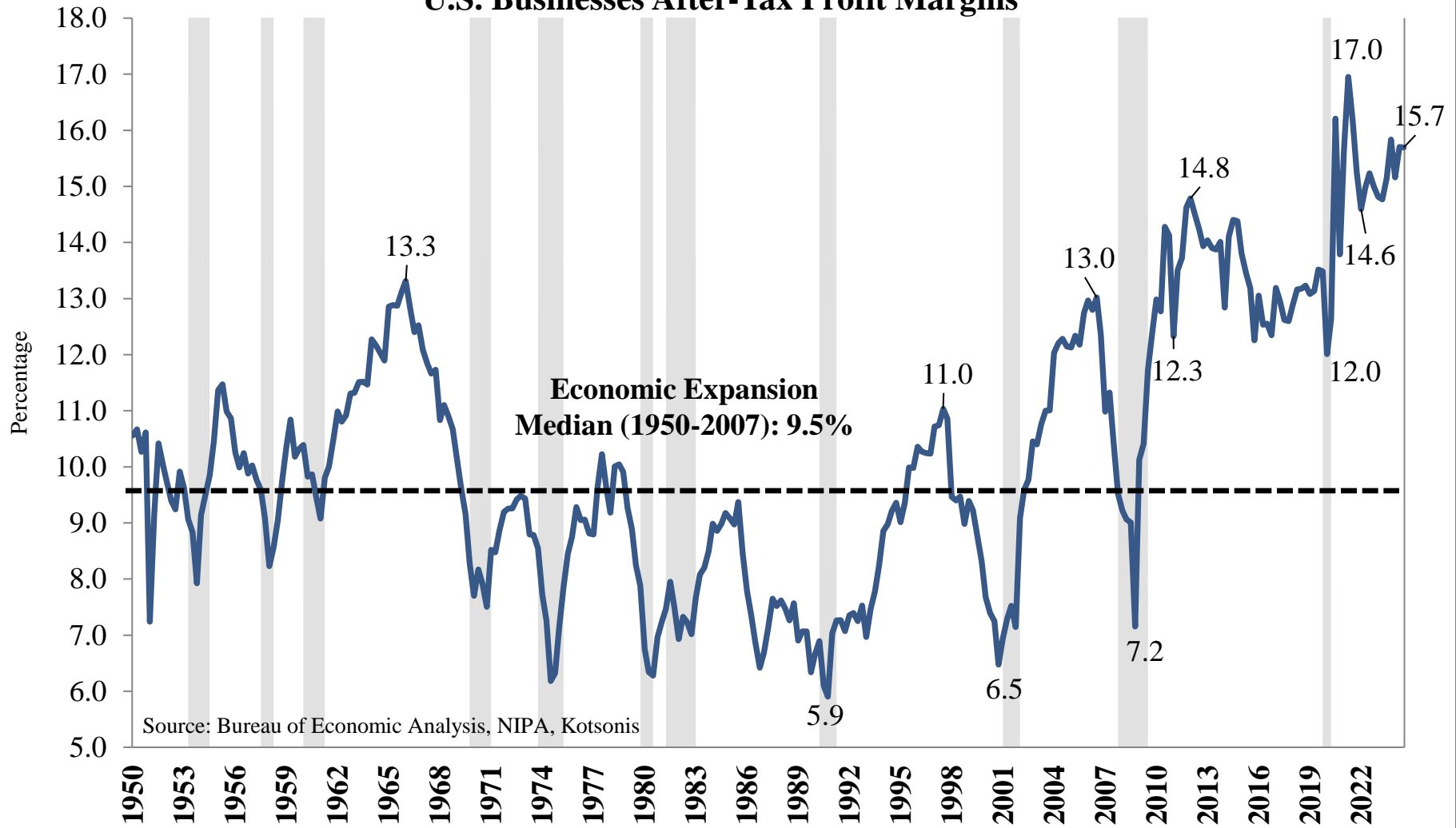


No Recession Because Business Profit Margins Are Near Record Highs



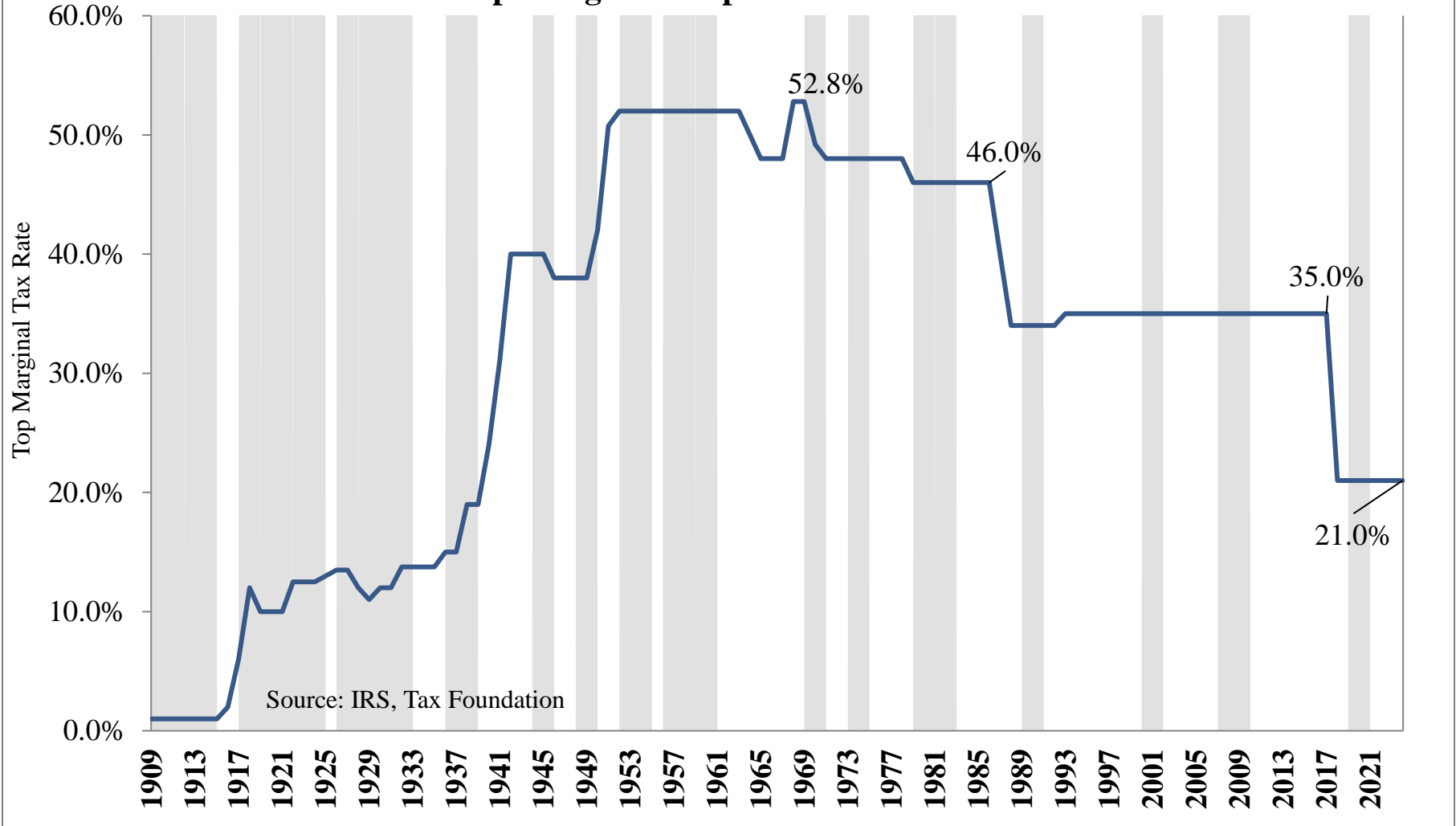
Is Capitalism In America Broken? Profit Margins Seemingly No Longer Mean Reverting

U.S. Businesses After-Tax Profit Margins

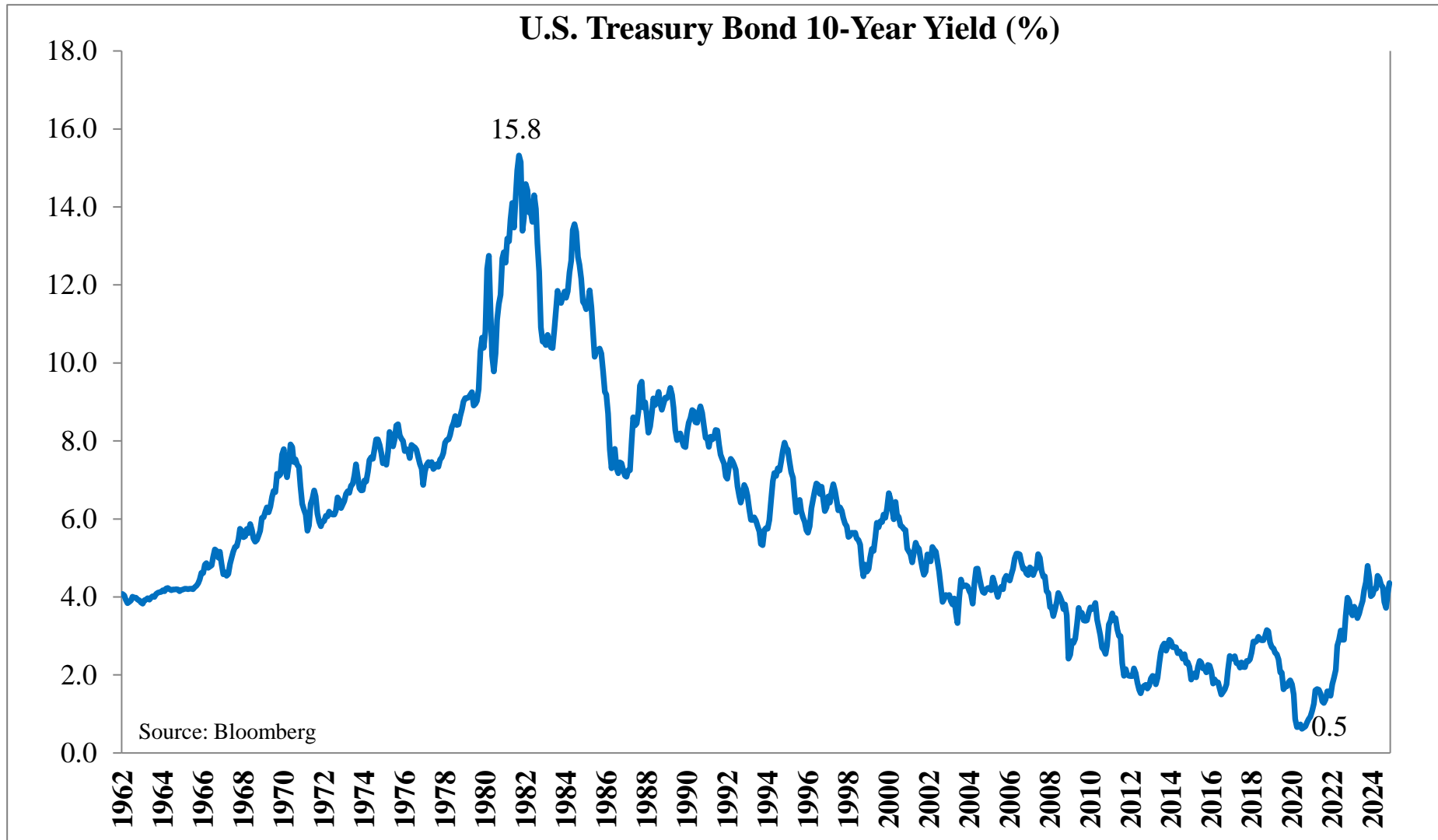


Falling Corporate Tax Rates Boosted Business Profit Margins

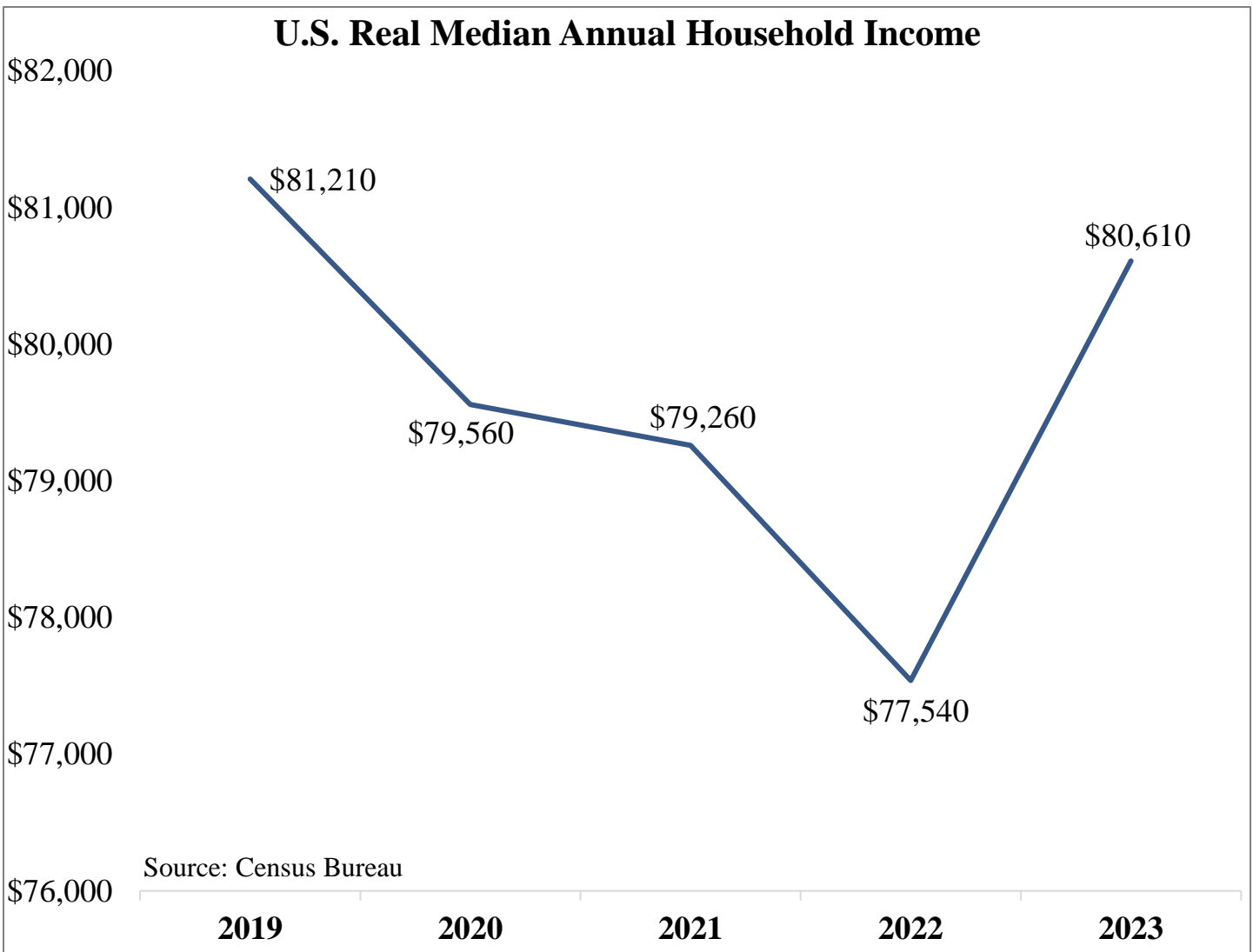
U.S. Top Marginal Corporate Income Tax Rate



Falling Interest Rates Also Boosted Business Profit Margins

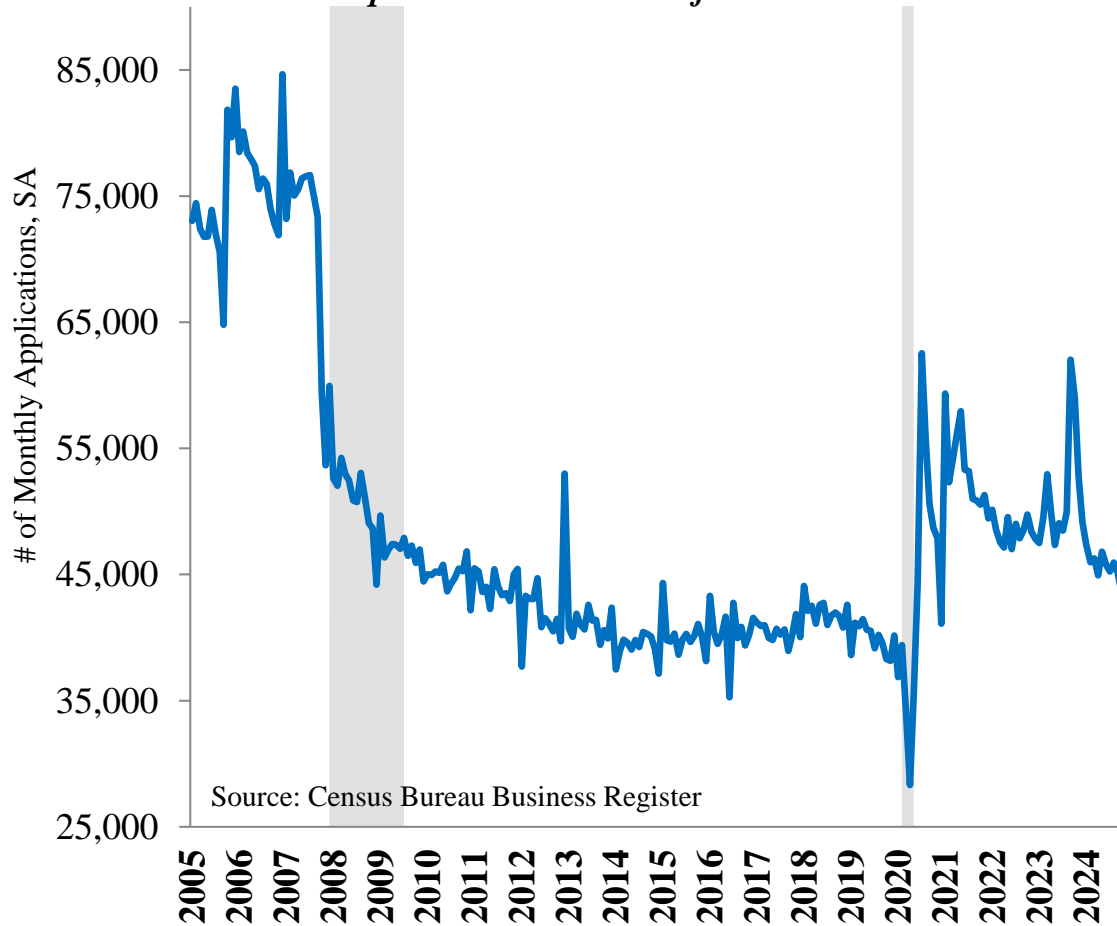


Wages Did Not Keep Up With Inflation During The Pandemic Boosting Business Profit Margins



Small Business Formations After The 2008 Financial Crisis Collapsed

Business Applications with Planned Wages: *High-propensity business applications that indicate first wages-paid date on the IRS form SS-4*



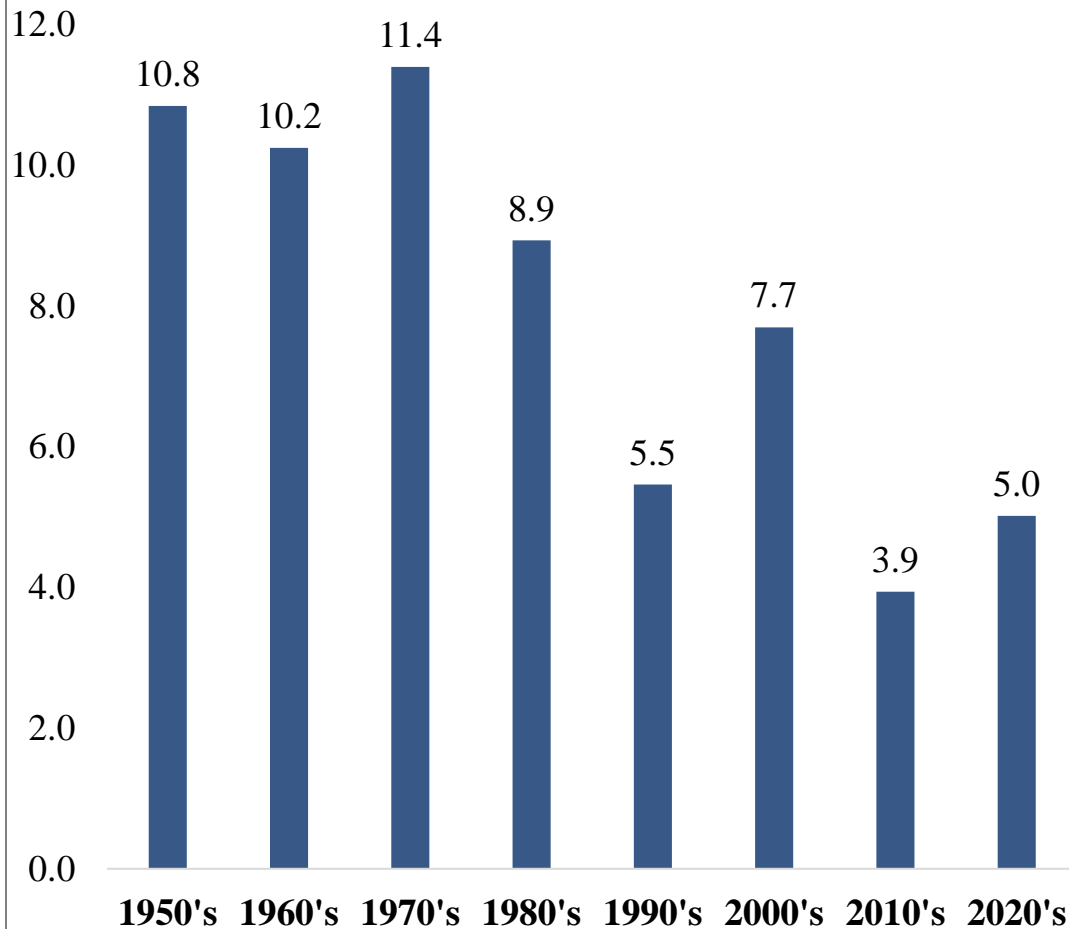
On average, between July 2004 and December 2007 ~74,000 IRS form SS-4's were filed per month.

Between 2009-2019 ~42,000 IRS form SS-4's were filed per month, a **-43%** monthly decline!

Without business competition profits margins do not mean revert.

Unintended Consequence Of Bank Regulations After The 2008 Financial Crisis

U.S. Commercial Bank Loan Growth By Decade (%)



Source: Federal Reserve

Bank For International Settlements: “The crisis ended a period of strong growth in banking sector assets in many advanced economies....a shrinking of banking sectors relative to economic activity in several countries directly impacted by the crisis....mainly through a reduction in business volumes rather than the exit of firms from the market.”

Dodd-Frank Wall Street Reform and Consumer Protection Act: This act, passed in 2010, requires banks to hold more financial reserves to limit risk-taking.

Basel III Accords: These accords were implemented to strengthen bank capital, liquidity, and leverage requirements.

Stress Tests: The Fed conducts an annual stress test each year to determine whether banks are adequately capitalized to withstand adverse economic conditions.

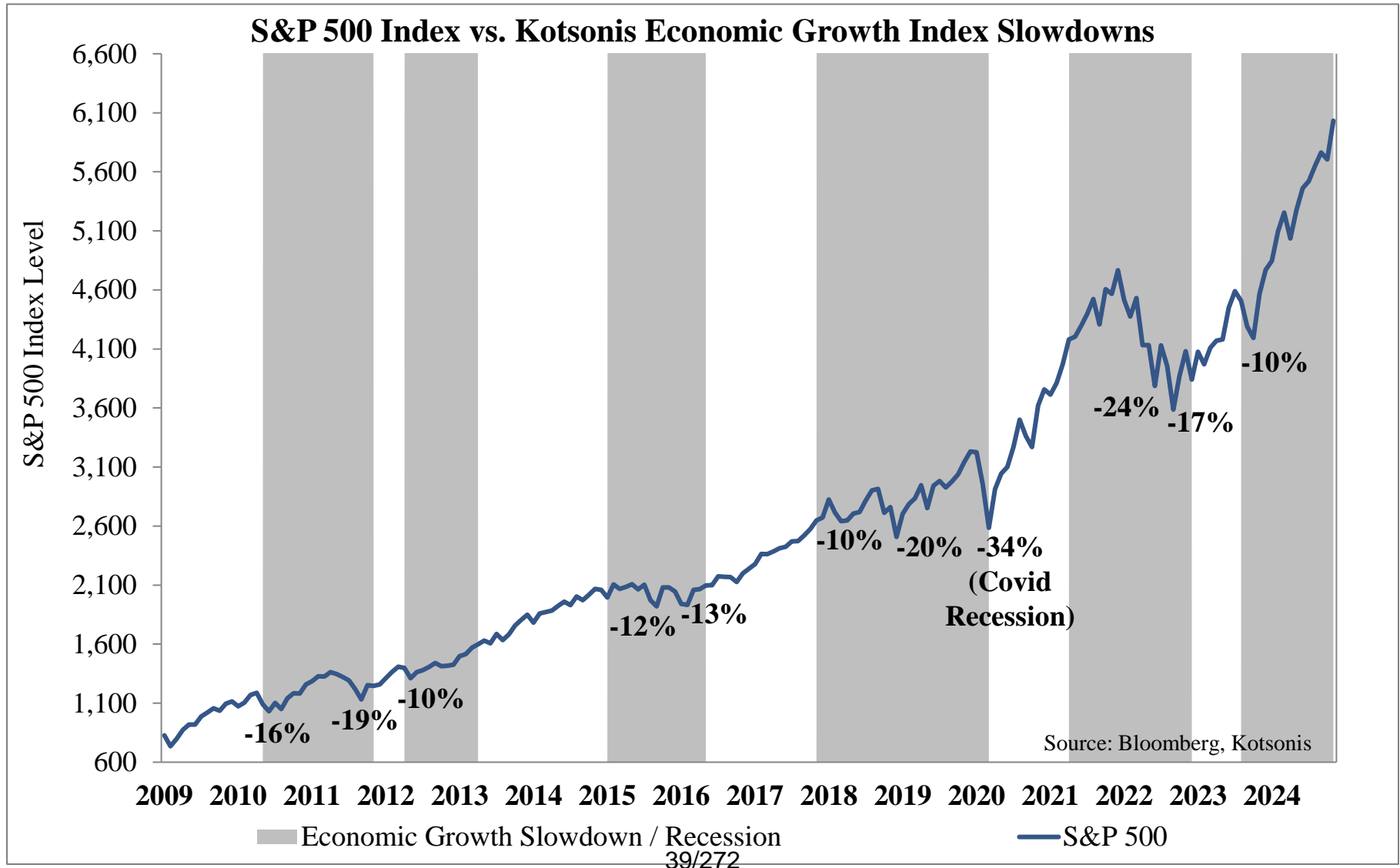
How Is Market Performance Linked To The Economy?

U.S. Economic Growth & Stock Market Returns Are Almost Always Positive

Kotsonis Economic Growth Index – 12 Months Trailing	# of Months	% of Months
Months in Expansion	672	87%
Months in Contraction	97	13%
Total from January 1960 to November 2024	769	

S&P 500 Index – 12 Months Trailing	# of Months	% of Months
Months Index Is Up	562	73%
Months Index is Down	207	27%
Total from January 1960 to November 2024	769	

Recessions Cause Bear Markets ---> Growth Scares Cause Corrections



Recessions Must Be Sidestepped By Investors

S&P 500 Index Returns vs. Expansions and Contractions in Kotsonis Economic Growth Index	Year-Over-Year Price Return
Return During Economic Expansions	10.6%
Returns During Economic Contractions	-18.8%
Return Difference	-29.6%

Investment Grade Spreads Since 1989 vs. Expansions and Contractions in Kotsonis Economic Growth Index	Average Spread (bps)
Average Spread During Expansions	115
Average Spread During Contractions	309
Spread Difference	194

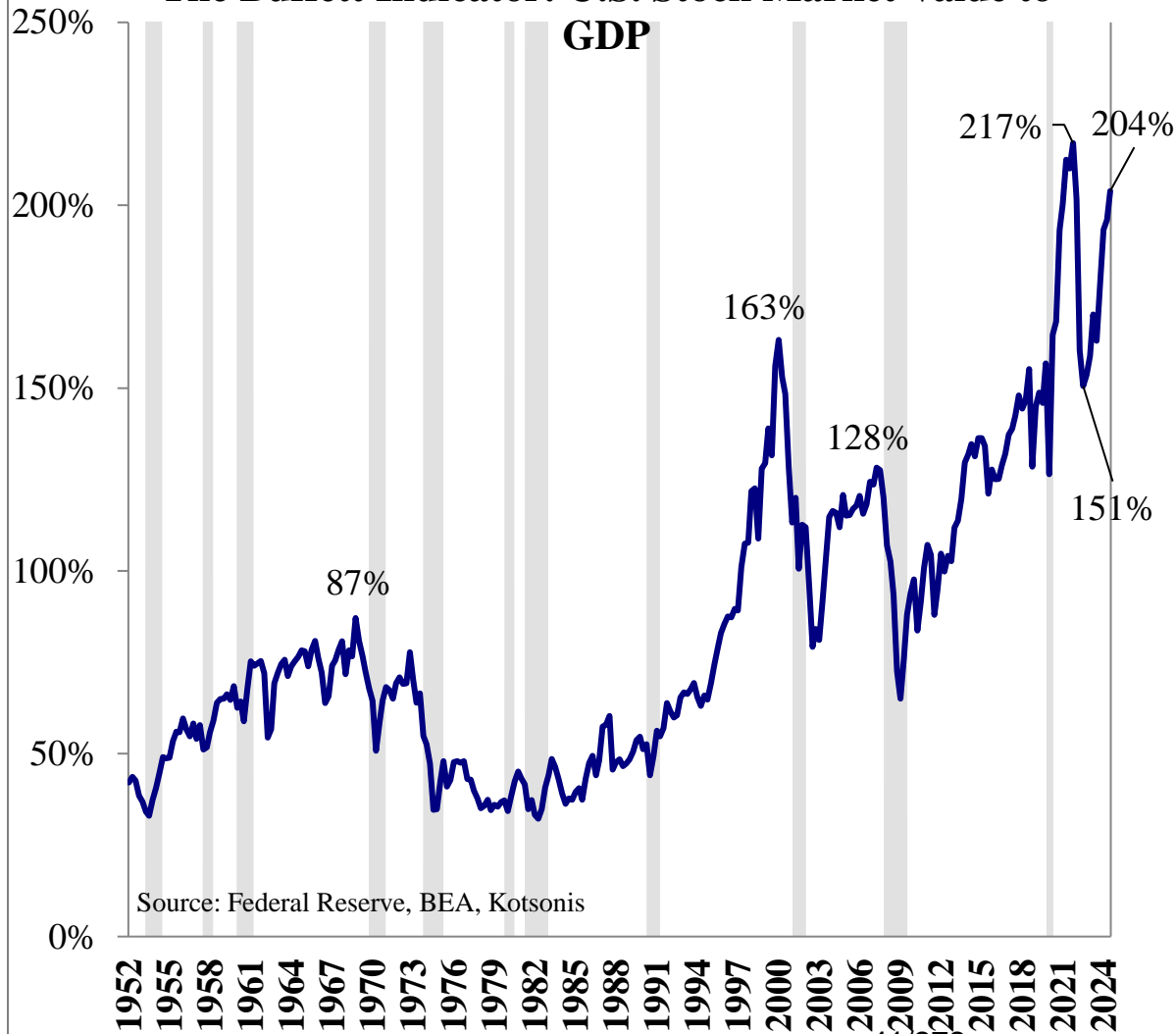
High Yield Spreads Since 1994 vs. Expansions and Contractions in Kotsonis Economic Growth Index	Average OAS (bps)
Average Spread During Expansions	439
Average Spread During Contractions	1,204
Spread Difference	765

Investment grade credit spread at year-end 2024 was +77 basis points meaning an average recession would result in a -16% price decline

High Yield credit spread at year-end 2024 was +280 basis points meaning an average recession would result in a -29% price decline

Richly Valued Markets Have Greater Downturns Than Fairly/Undervalued Markets

The Buffett Indicator: U.S. Stock Market Value to GDP

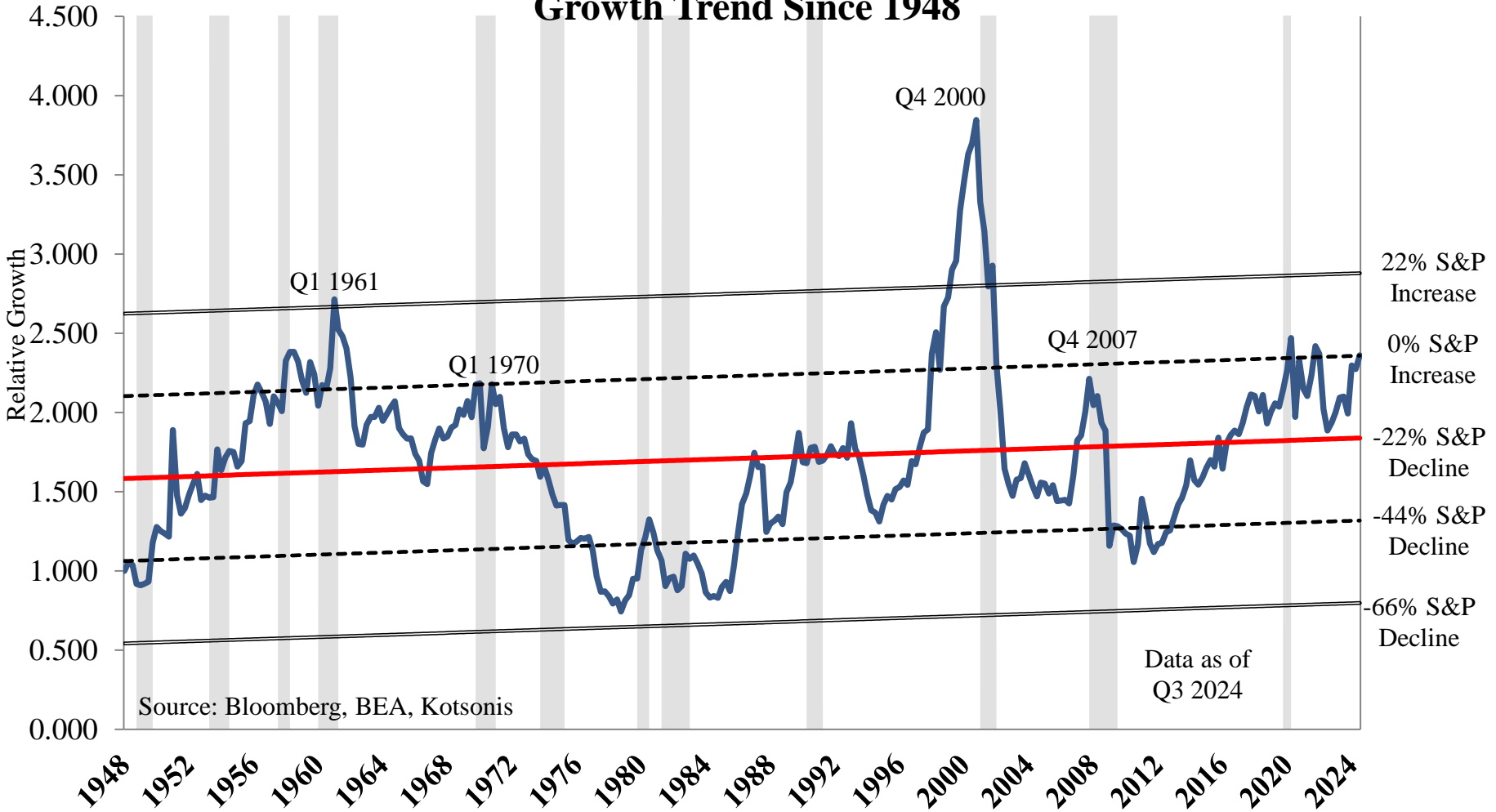


"This is probably the best single measure of where valuations stand at any given moment." - Warren Buffett in 2001 Fortune magazine interview

- **Moderately undervalued:** A ratio between 62% and 80%
- **Moderately overvalued:** A ratio between 98% and 115%
- **Significantly overvalued:** A ratio above 115%
- **Playing with fire:** A ratio approaching 200% (2001 Recession = -49% S&P 500 decline)

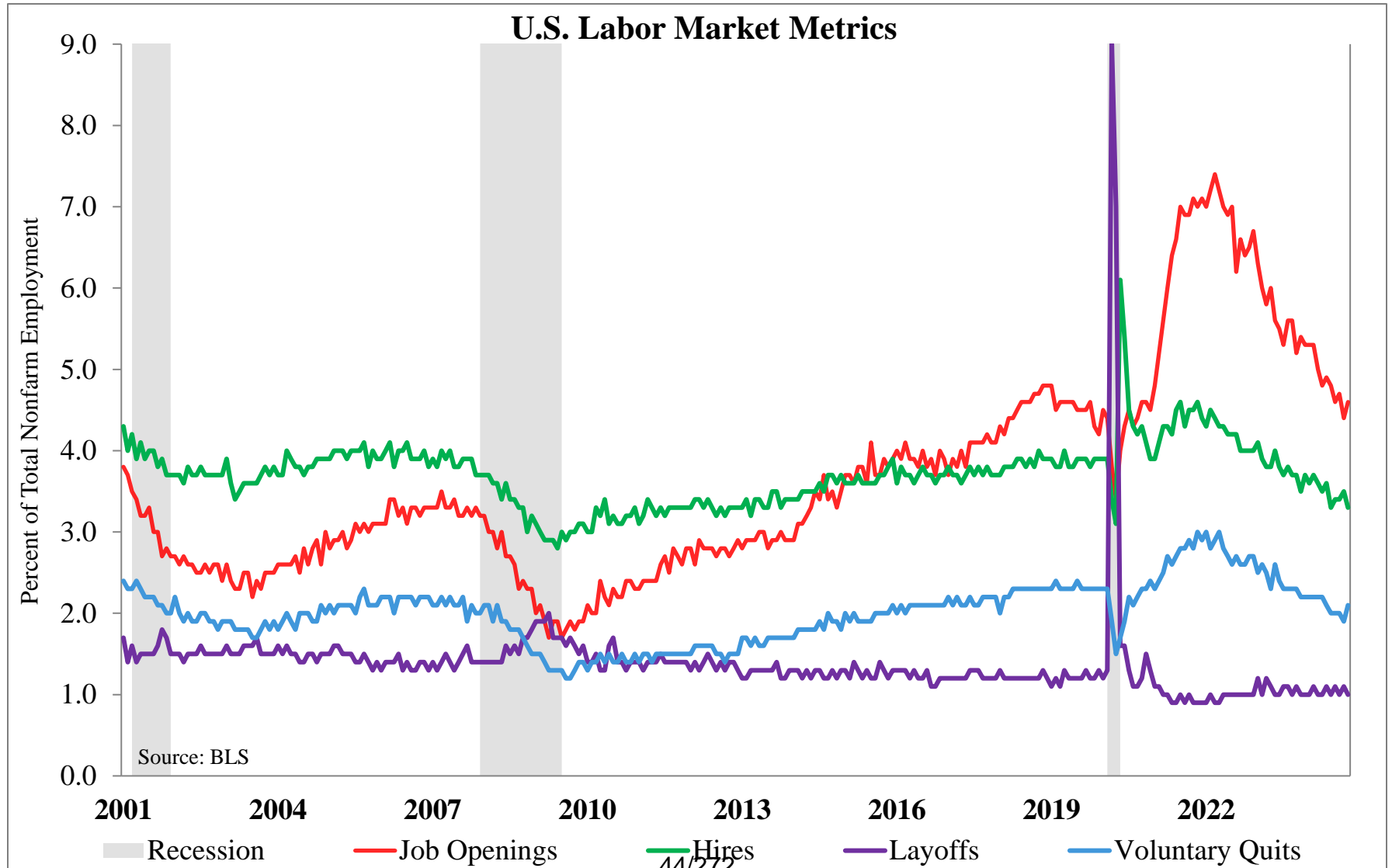
Equity Market Much More Overvalued vs. GDP Than Corporate Profits

S&P 500 vs. Gross Domestic Income: Total Business Profits Relative Growth Trend Since 1948



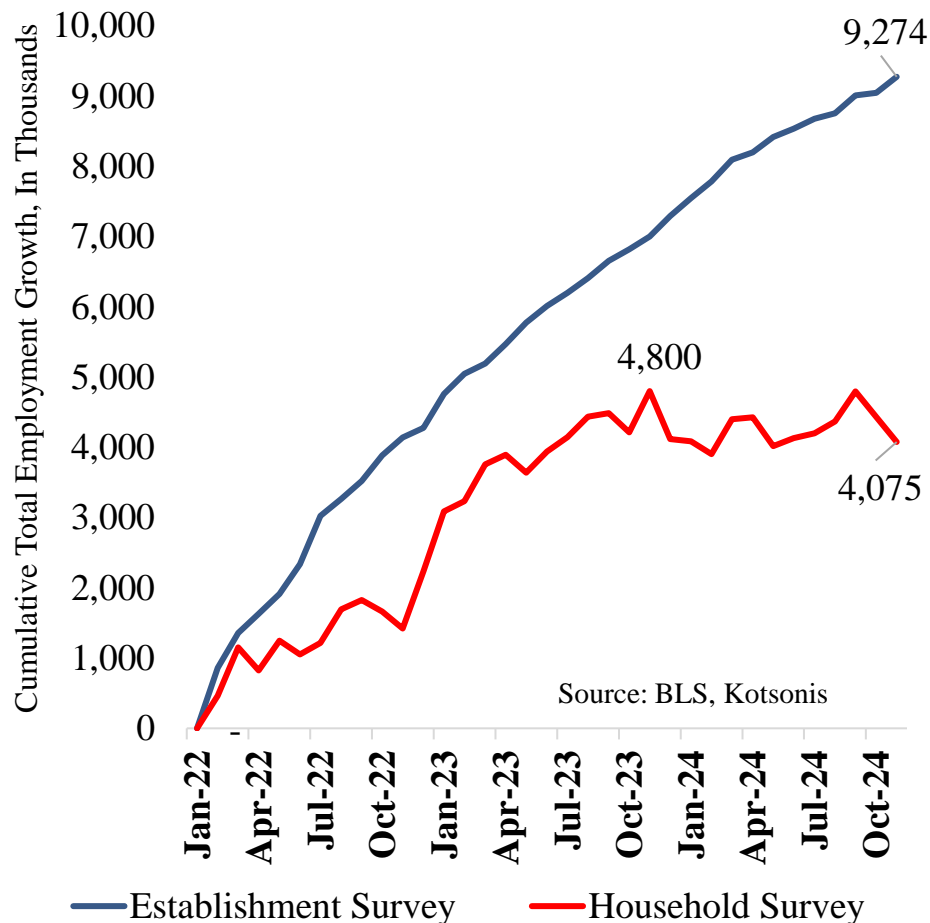
U.S. Economic Update: Labor Market

U.S. Labor Market Is Still Softening

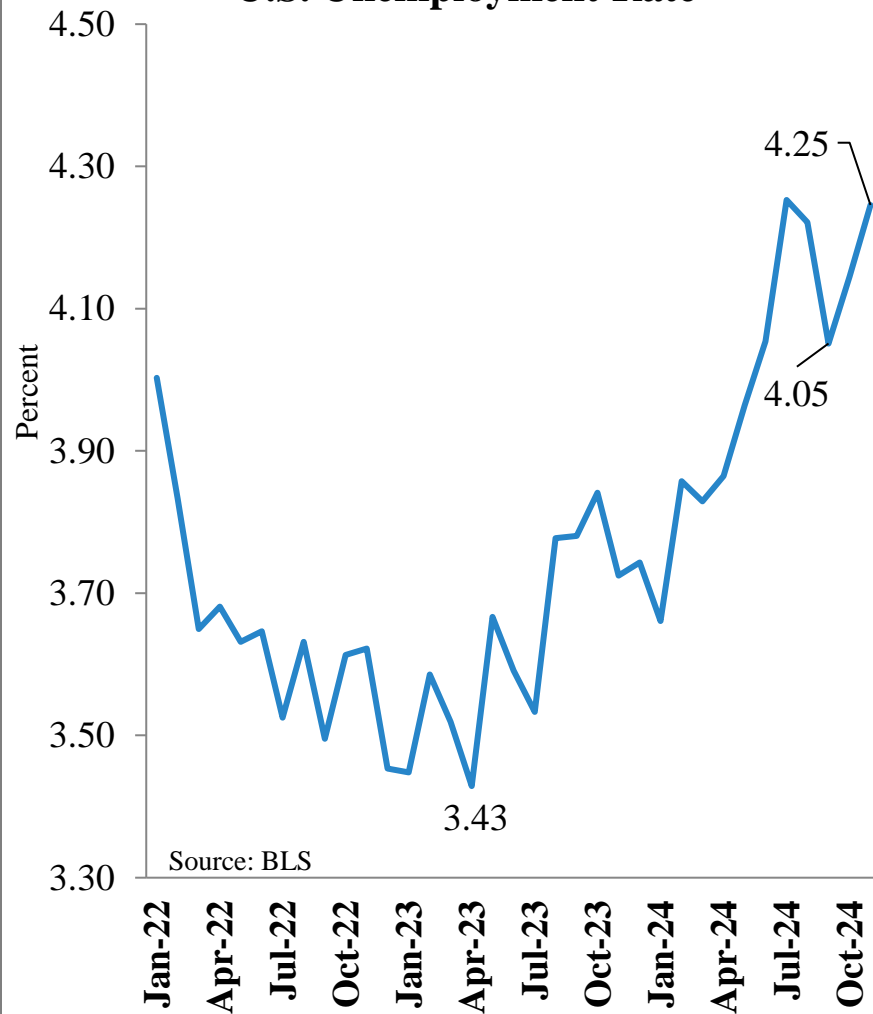


Unprecedented Divergence Between Two U.S. Employment Surveys

Total Cumulative Employment Growth Since 2022: Household Survey vs. Establishment Survey

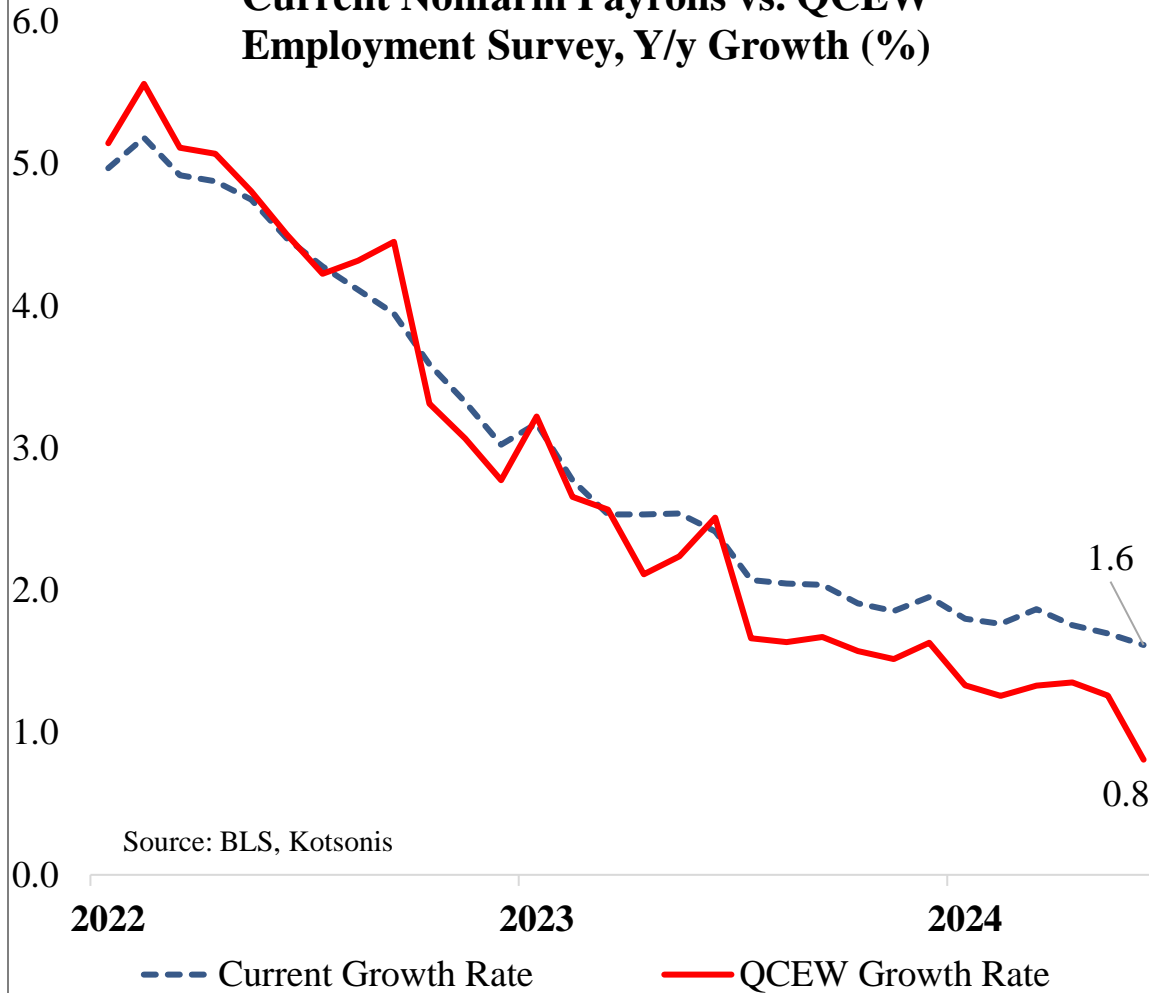


U.S. Unemployment Rate



Key Jobs Report Is Severely Overstating Employment Growth

**2022 - June 2024 Total Employment:
Current Nonfarm Payrolls vs. QCEW
Employment Survey, Y/y Growth (%)**

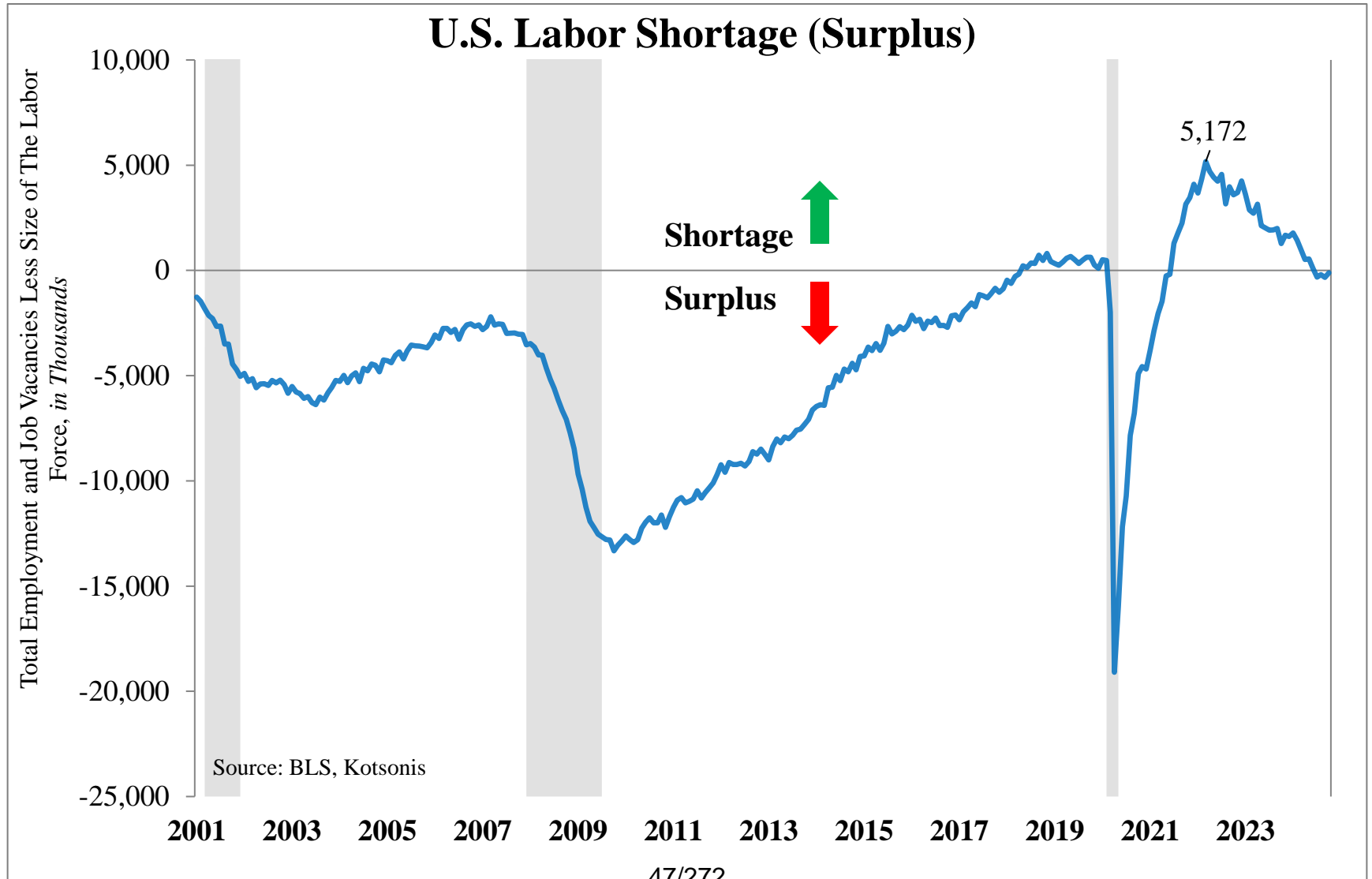


Trailing 12 months ended
June 30, 2024:

Nonfarm payroll report (establishment survey) shows **2.521 million job growth** (210,000 per month).

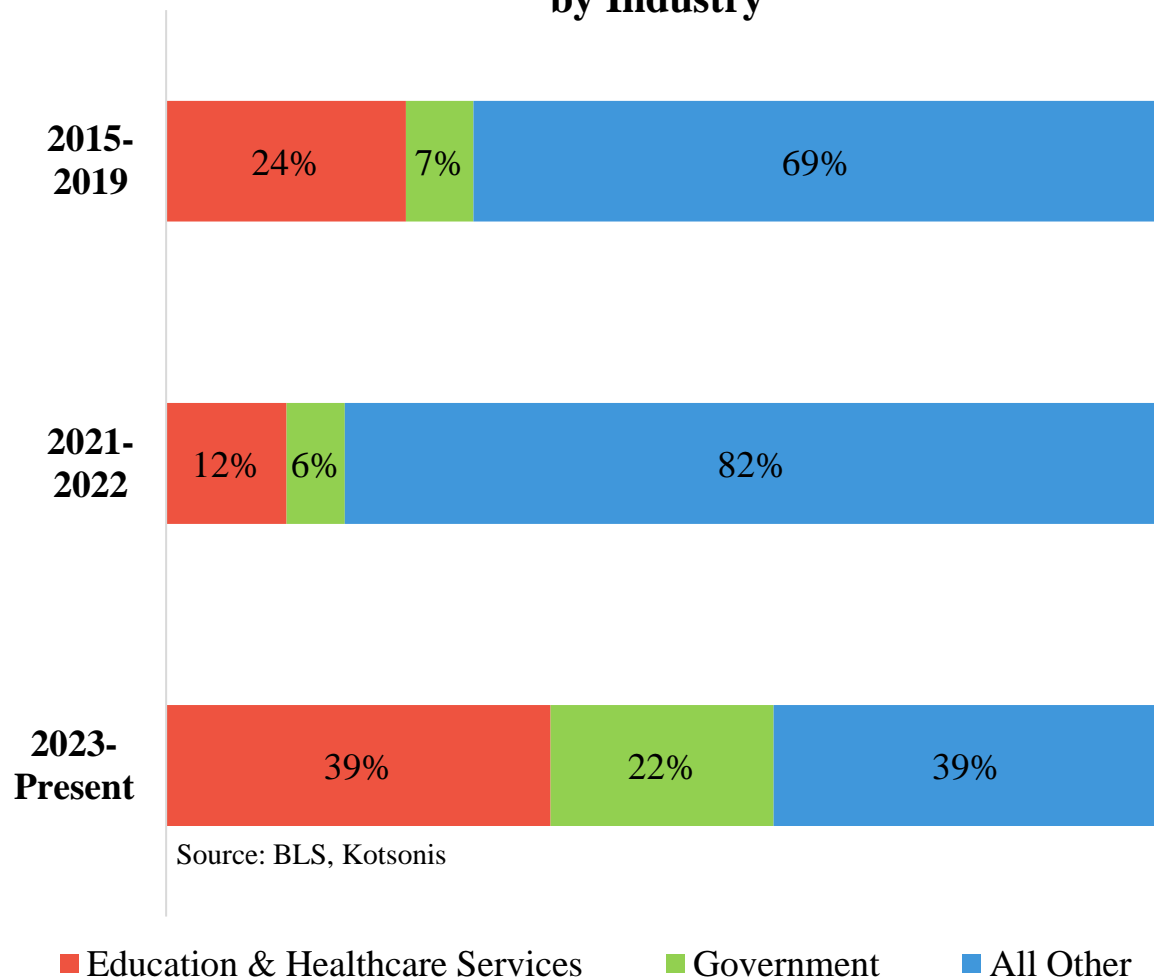
Quarterly Census of Employment & Wages (QCEW) report shows **1.251 million job growth** (104,000 per month).

Post-Pandemic Labor Shortage Is Gone, Labor Market Is Balanced



Employment Growth Mostly Concentrated In Government & Healthcare Industries

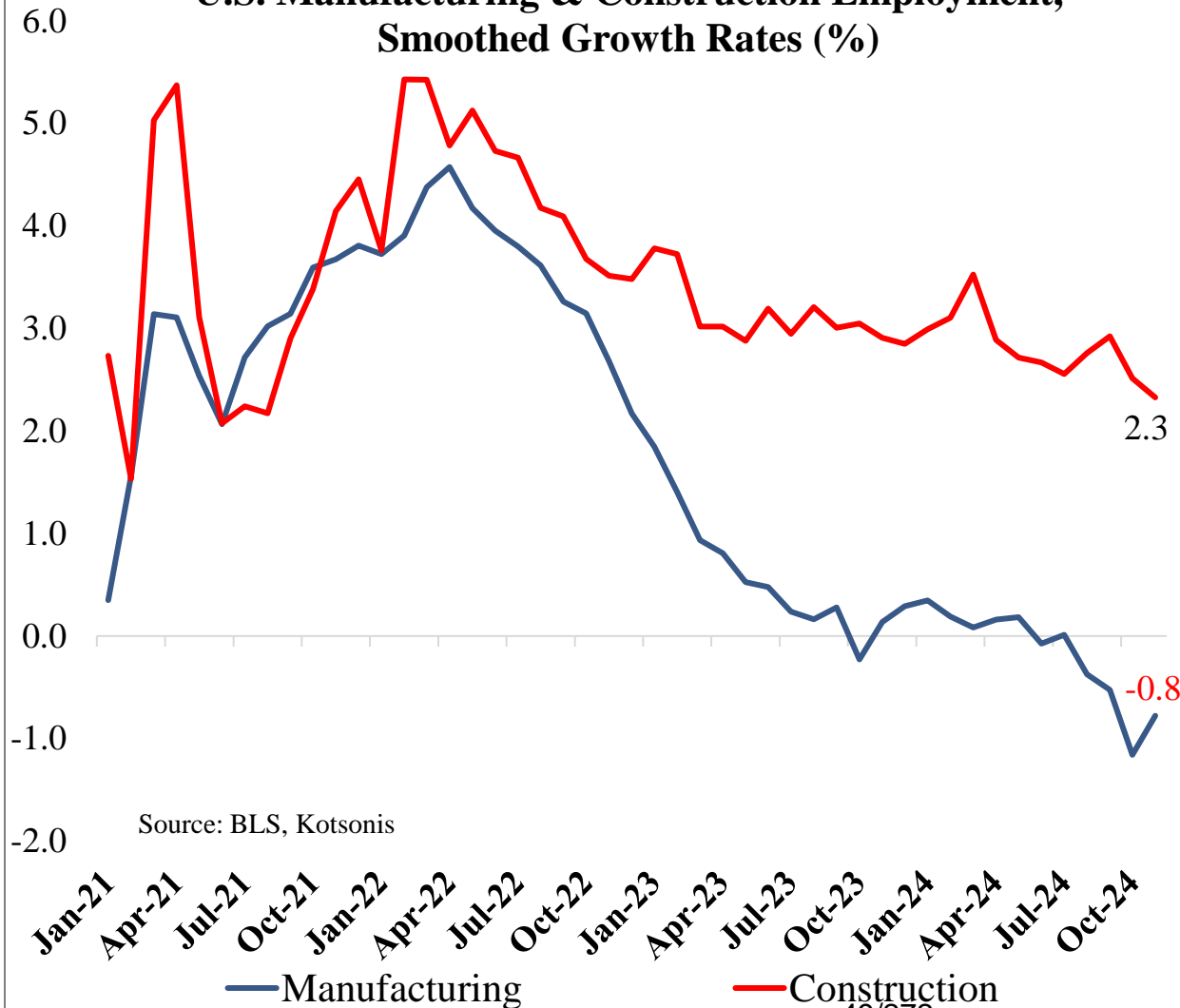
Nonfarm Payroll Employment Growth Distribution by Industry



Education, healthcare services, and government sectors **employ 32% of American adults**, but have contributed **61% of the hiring** in 2023-2024.

Recessions Are Born In The Manufacturing & Construction Sectors

U.S. Manufacturing & Construction Employment, Smoothed Growth Rates (%)



There were 12 recessions between 1945-2009 totaling 28.8 million job losses.

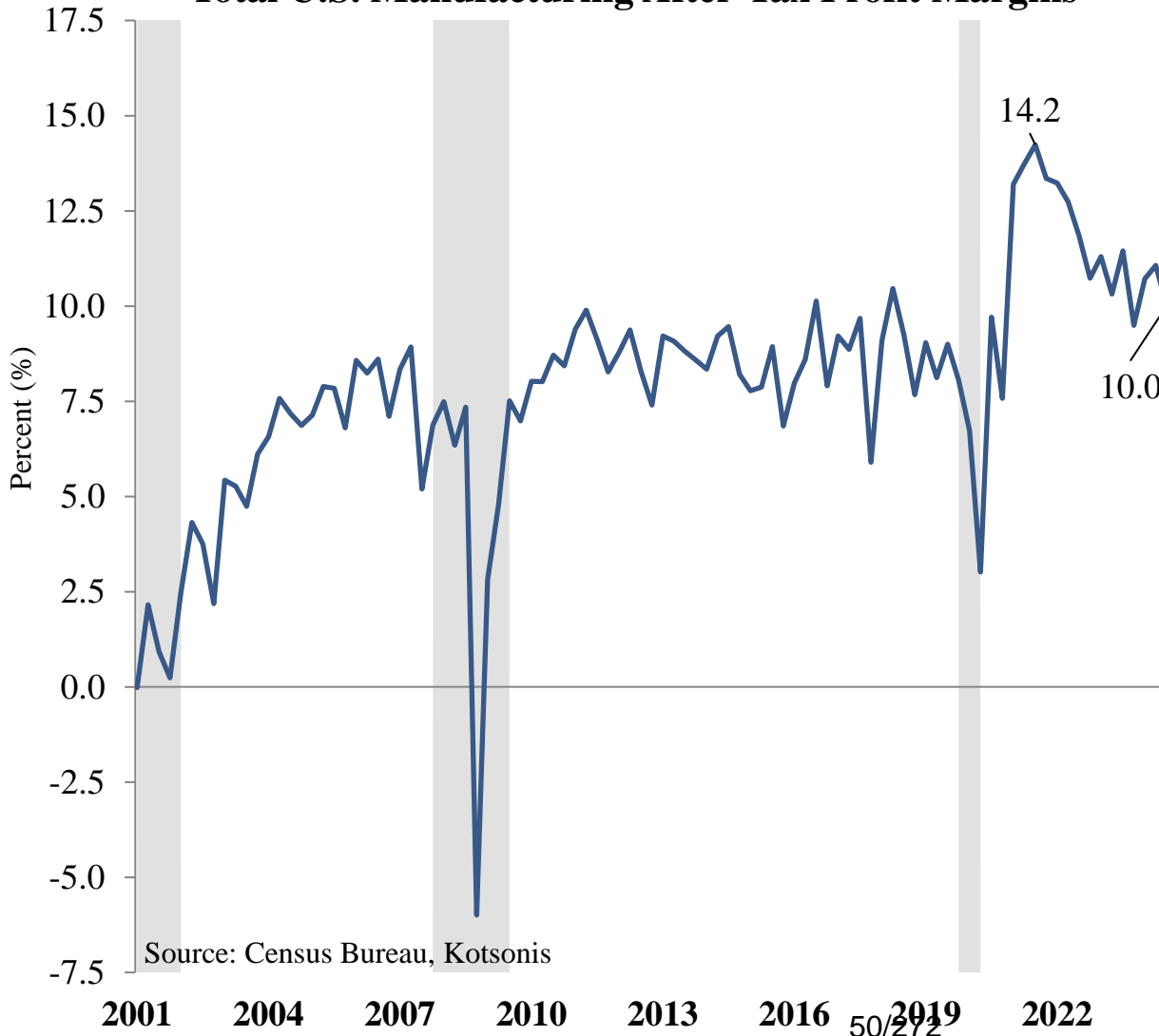
22.5 million job losses were in manufacturing (78% of total).

4.9 million job losses in construction (17% of total).

~95% of all recessionary job losses are from the manufacturing and construction sectors.

Manufacturing Sector Experiencing Weak Demand & Margin Pressure

Total U.S. Manufacturing After-Tax Profit Margins



U.S. Manufacturing Health:

Falling Output (Peaked in October 2022)

No New Orders

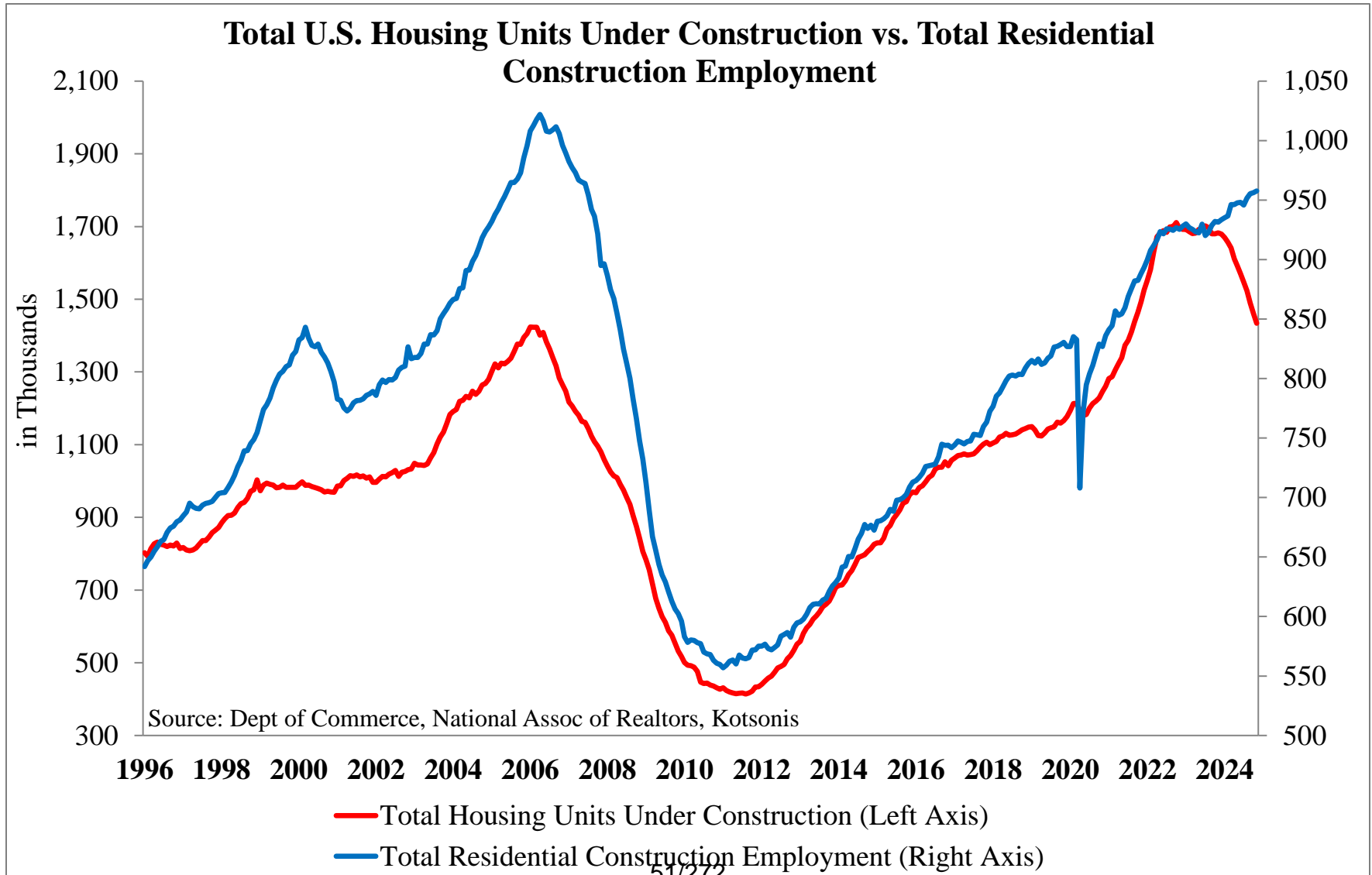
Pandemic era backlogs are gone

Reduced Employee Hours (shortest work week since 2010)

Weak Labor Productivity Growth (only 0.2% growth in the last six quarters)

Total employment has declined -79,000 from the January 2024 peak, but ~40,000 is due to worker strikes.

High Mortgage Rates Weighing On The Construction Sector



U.S. Economic Update: Inflation

Federal Reserve Admitted Having No Working Theory Of Inflation

Hutchins Center Working Paper #33

O c t o b e r 2 0 1 7

Monetary Policy Without a Working Theory of Inflation

Daniel K. Tarullo

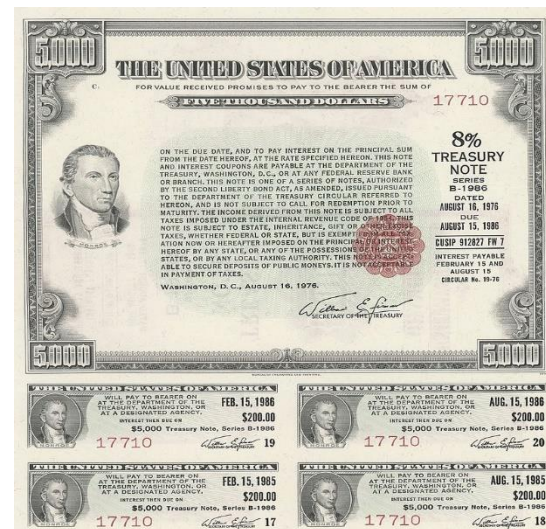
Former Governor, Federal Reserve Board

“The substantive point is that **we do not, at present, have a theory of inflation dynamics that works sufficiently well** to be of use for the business of real-time monetary policy-making.” – Daniel Tarullo

“I asked many businesses to describe their own method for establishing and changing prices. **‘What the market would bear’** always seemed to come out on top.” – Daniel Tarullo

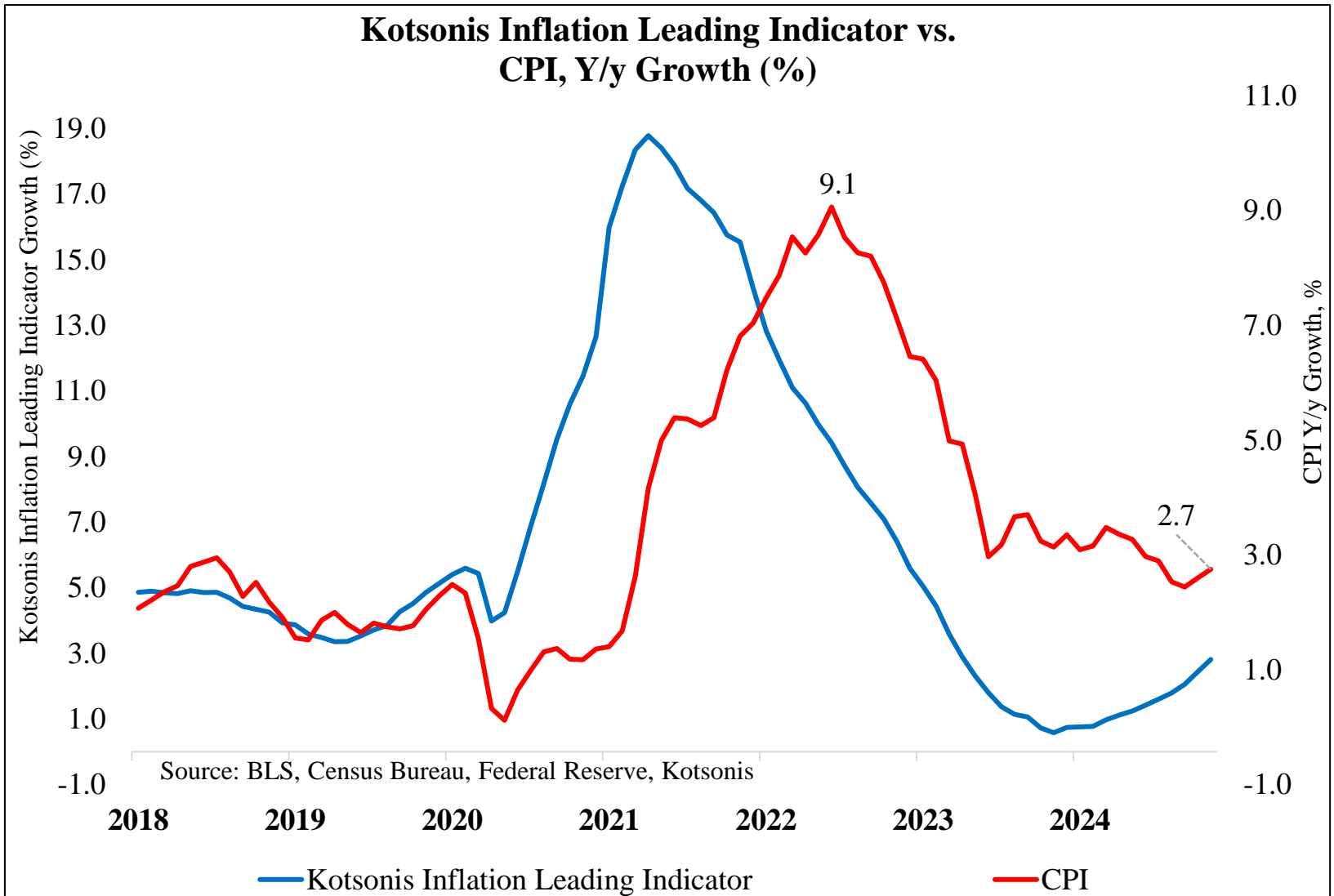
“What The Market Will Bear” Is A Function Of Money Supply Growth & Willingness By Consumers To Pay Current Prices

Over 90% of new money supply growth comes from banking sector activities: New Loans & Securities Purchases



U.S Treasury Bonds & Mortgage-Backed Securities

My Inflation Model Predicted Upturn & Downturn In Inflation



Unprecedented Fiscal Stimulus During The Pandemic Ignited Inflation

Fiscal Stimulus	Stimulus Authorized	Household Terms
First Round	March 27, 2020	\$1,200 Per Adult / \$500 Per Child
Second Round	December 27, 2020	\$600 Per Person
Third Round	March 11, 2021	\$1,400 Per Person

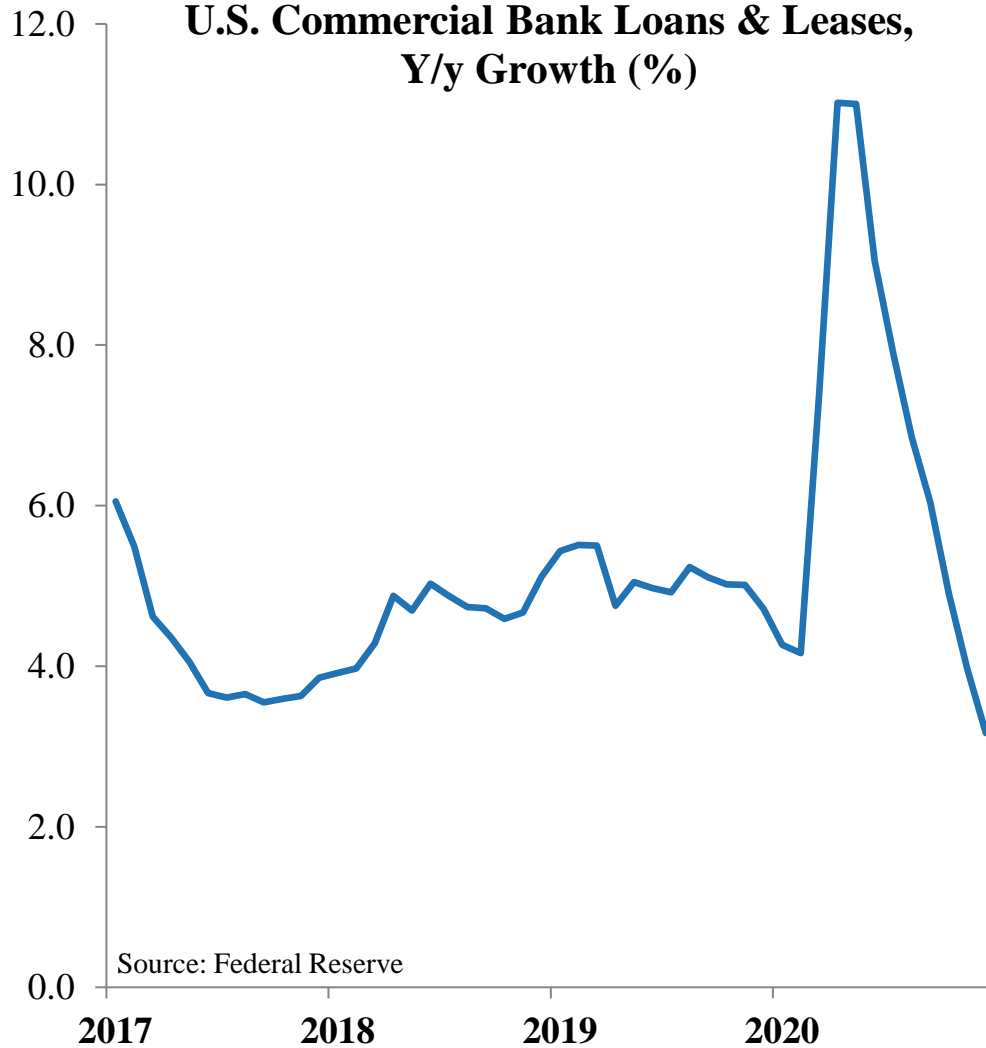
Fiscal Support	Total Amount of Support
Stimulus Checks	\$844 billion
Unemployment Insurance	\$836 billion
Other Pandemic-Related Assistance	\$548 billion
Child Tax Credits	\$181 billion
Paycheck Protection Program Loans to Nonprofit Institutions & Social Insurance Payments	\$67 billion
Total:	\$2.5 trillion

Source: Federal Reserve

Median family of 4 received \$11,400 in cash during the pandemic

Paycheck Protection Program Boosted Loan Growth (Money Supply) Too

**U.S. Commercial Bank Loans & Leases,
Y/y Growth (%)**



Source: Federal Reserve

The Paycheck Protection Program (PPP) loaned **\$793 billion to 11.5 million small businesses** to help keep their workforce employed during the pandemic.

The PPP became a chaotic free-for-all. Government officials acknowledge the program was rife with fraud.

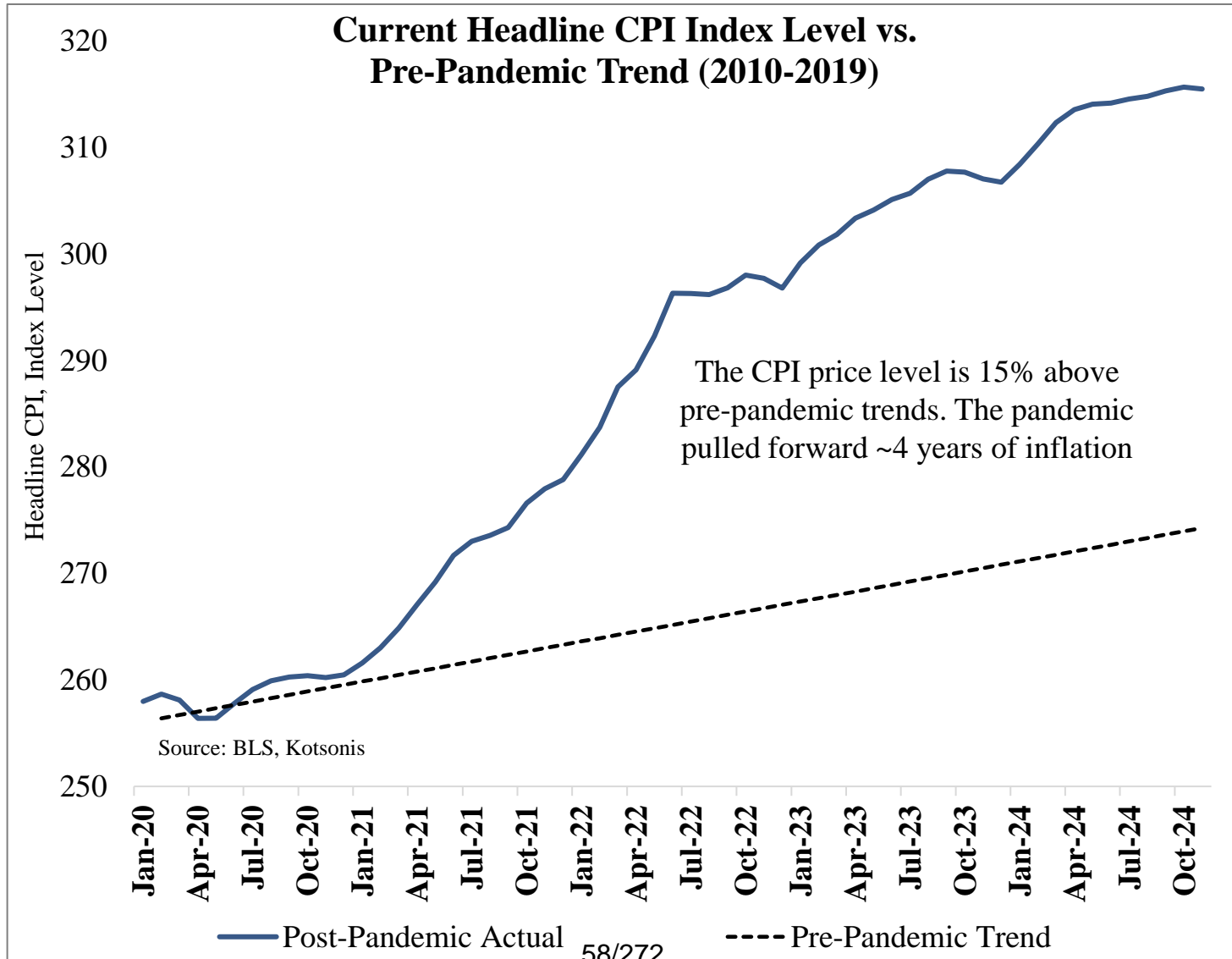
A Small Business Administration study found **92% of the loans issued have been granted full or partial forgiveness.**

Only 2% of the loans were audited.

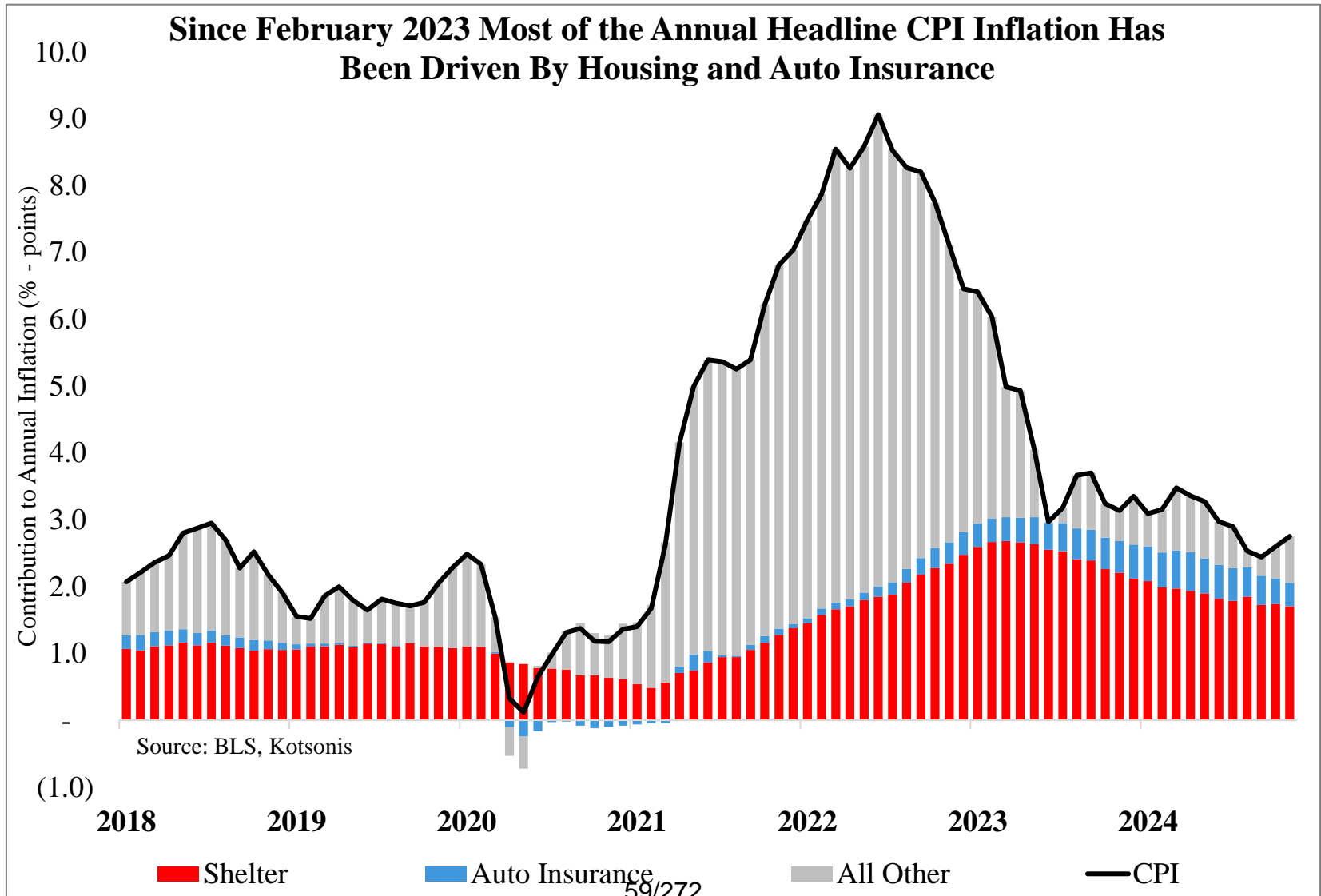
Average dollar amount forgiven: **\$72,100**

Source: Pandemic Response Accountability Committee

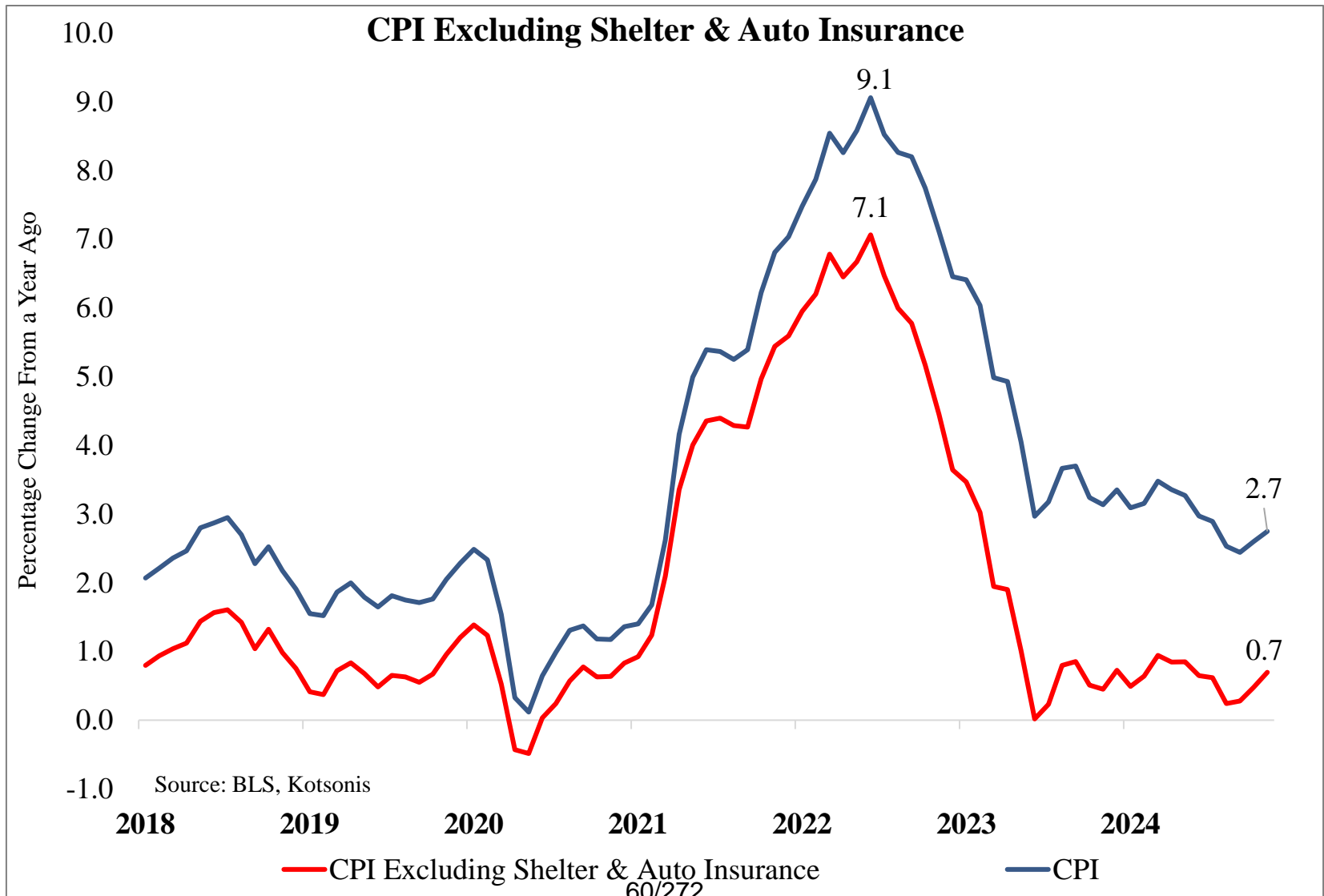
Paycheck Protection Program & Fiscal Stimulus Checks Ignited Inflation



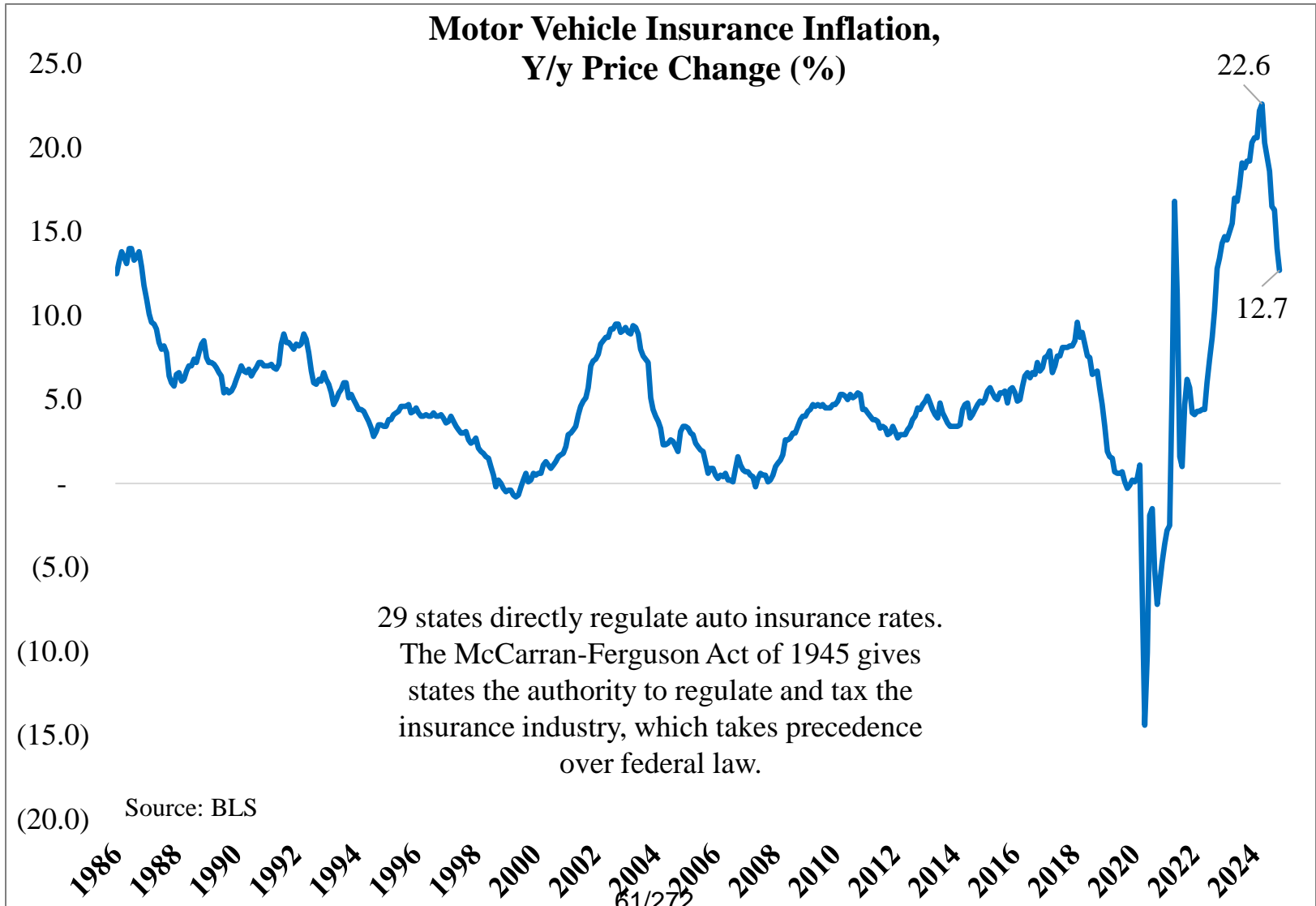
Inflation Surge Is Over; Auto Insurance & Shelter Inflation Remain Elevated



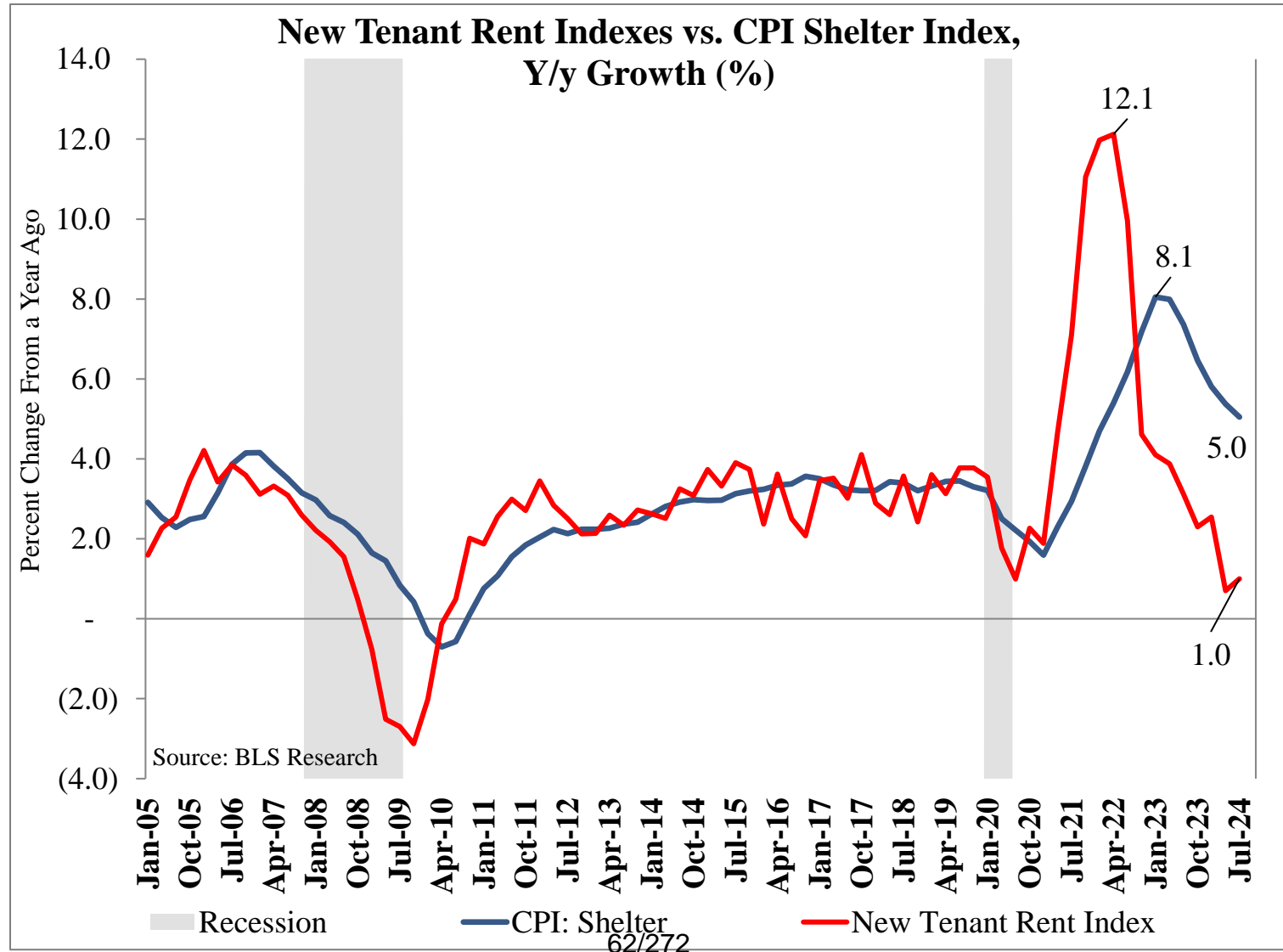
Inflation Surge Is Over; Auto Insurance & Shelter Inflation Remain Elevated



Auto Insurance Hyperinflation Driven By Pandemic Events

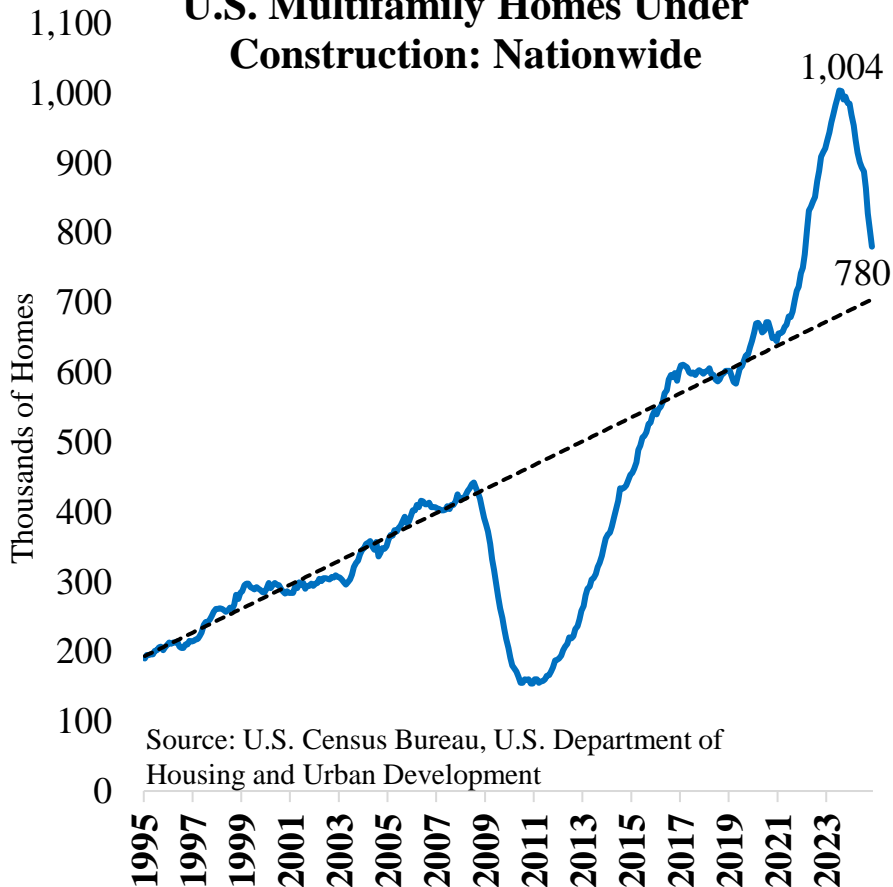


Shelter Inflation Remains Elevated Due To Calculation Methodologies

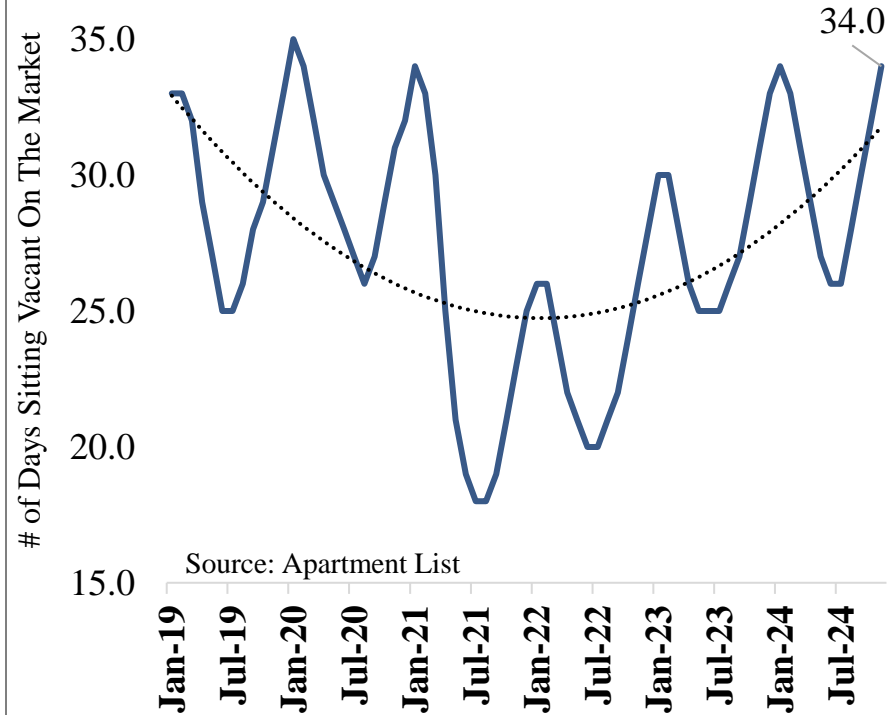


Significant Overbuilding Of Multi-Family Residential Units

U.S. Multifamily Homes Under Construction: Nationwide



Apartment List's National "Time on Market": Apartments Sitting Vacant Longer



180,000 new apartments hit the market in the 3rd quarter 2024, a 21% increase over the prior quarter, and the most since 1974. 2024 has delivered more new apartments than all of 2023, which was itself a 30-year high.

Any Questions?



Board Meeting IV.B

Alison Adams, PhD

Managing Principal /
Research Consultant

Portland



Ms. Adams joined Meketa in 2021 and has been in the financial services industry for 18 years. She serves as a research consultant where her responsibilities include global macroeconomic research and writing thought leadership materials. She is also a member of Meketa's Global Macroeconomic Investment, Investment Policy, and Strategic Asset Allocation/Risk Management Committees, and the Defined Contribution Practice Group.

Ms. Adams earned her Ph.D. from Harvard University Faculty of Arts and Sciences in History. Prior to joining the firm, she was an Associate Consultant at RVK, Inc. Previously, Ms. Adams was employed as an analyst at Fidelity Management & Research and as a case researcher at Harvard Business School.

Ohio Public Employees Retirement System

January 2025

Markets Outlook

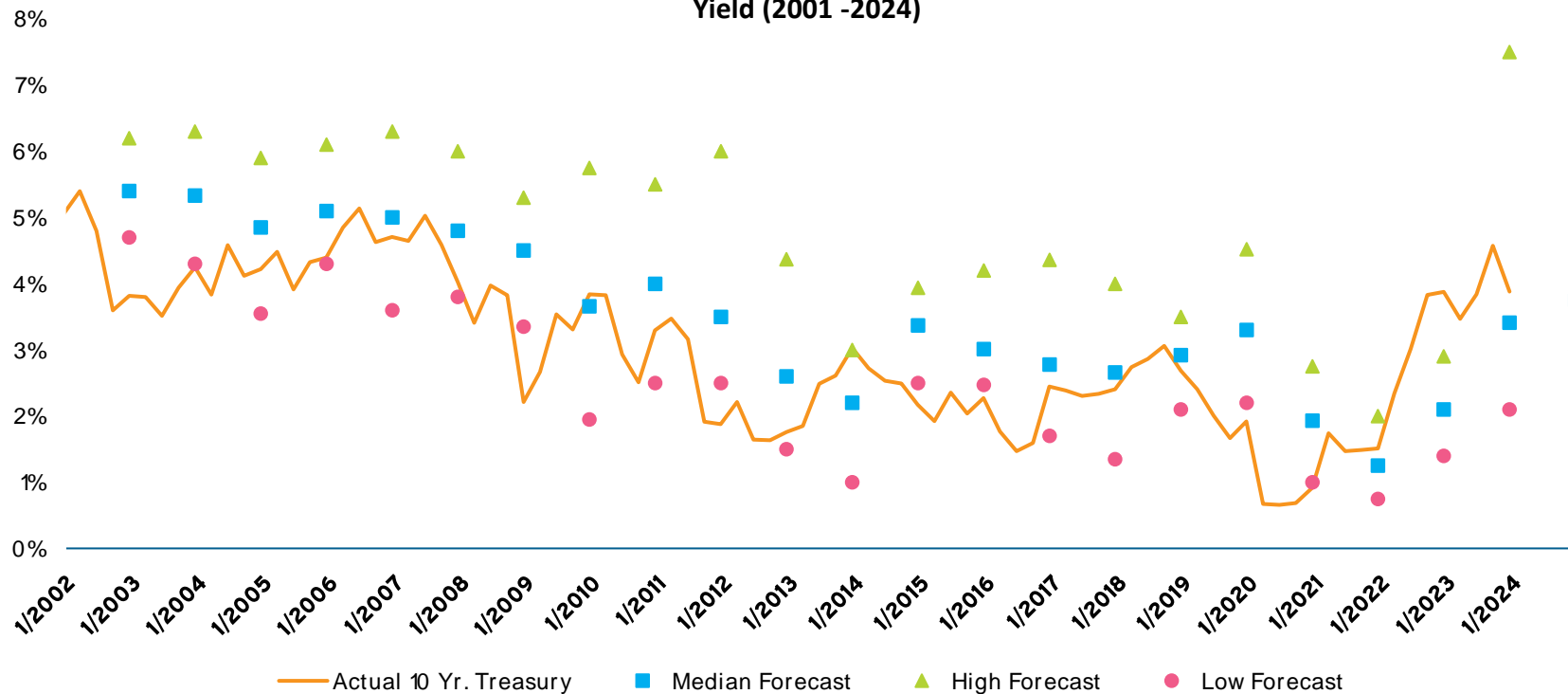
Overview

- The US may undergo significant pro-growth policies changes at the national level, but inflationary pressures may also arise as a result of some policies.
- China's economy continues to struggle with deep structural imbalances, insolvency risks, and weak domestic demand with repercussions for the global economy.
- Global supply-chains continue to evolve and de-risk reducing dependency on China with Mexico taking the role as the US's largest trade partner.
- The hype surrounding AI may have peaked, but the long-term impact on labor costs, productivity, and demographics could prove substantial.

Forecasting Is Very Difficult

- Even the economic experts have difficulty forecasting the ten-year bond yield 12-months out.
- Each year, the range of economic forecasts is considerable and even when taken together their average and median expectations are rarely accurate.

Figure 1: Survey of Economic Expert Forecasts & Actual 10-Year Treasury Yield (2001 -2024)



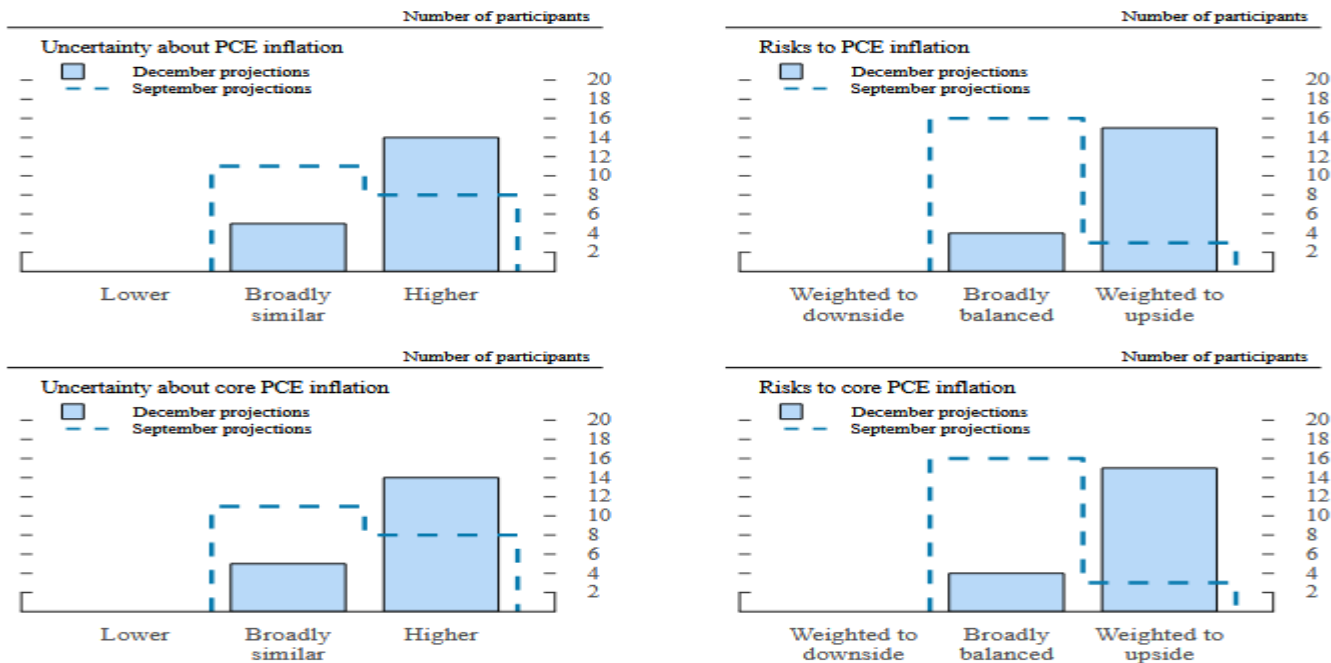
Source: Bloomberg Survey of Economic Experts as of December 2023.

Federal Reserve Outlook

- When we compare the Federal Reserve’s Yearly Outlook from 2021, 2022, and 2023 we can see that their best estimate forecasts have had mixed accuracy.
- Each year, the range of economic forecasts is considerable and even when taken together their average and median expectations are rarely accurate.

Summary of Economic Projections

FOMC participants’ assessments of uncertainty and risks around their economic projections



Source: Federal Reserve as of December 18, 2024.

United States

Enter President Elect - Donald Trump

- Winning the popular and electoral college, president-elect Donald Trump brings a significant change to national and international politics.
- Trump's America first could shift global capital flows and re-alignment of other countries priorities.
 - Unlike 2016, Trump enjoys considerable support from US businesses including tech companies.
- Some of Trump's policies may prove to be inflationary including:
 - Tariffs and trade wars
 - Cutting government revenue through lower taxes
 - Reducing immigration could push wages higher and inflationary pressures
- Other policies may be deflationary including:
 - Cutting government wasteful spending - DOGE
 - Deregulation making it easier to do business, build, and invest
 - Deregulating the energy sector

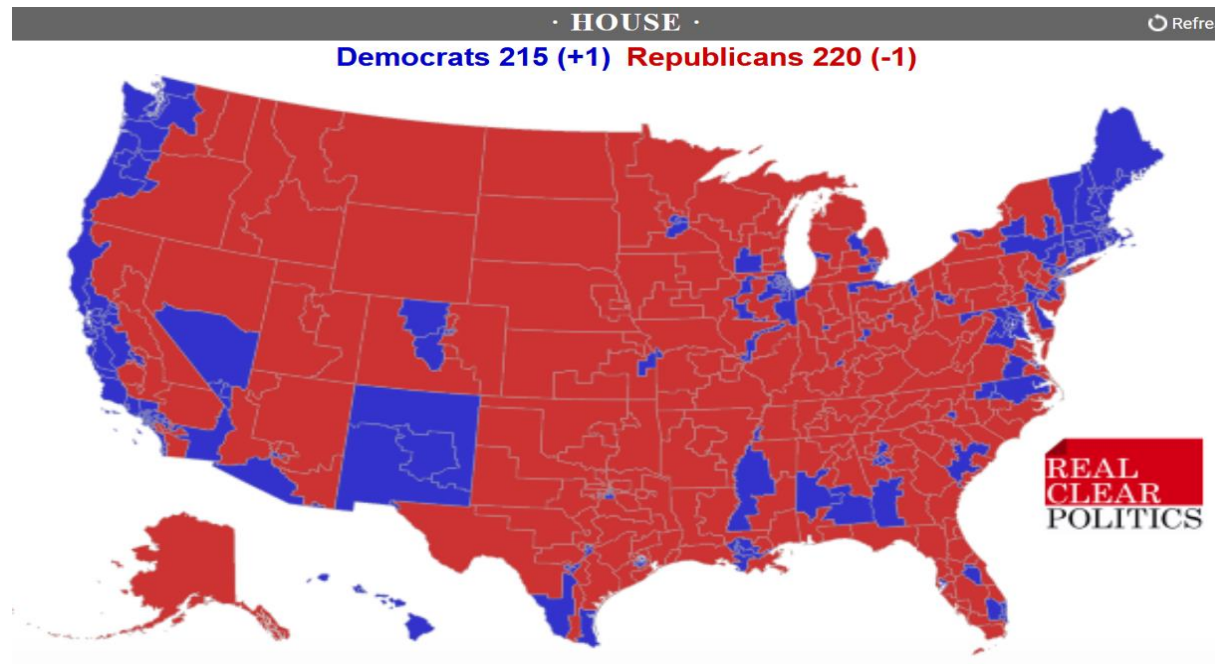


Bloomberg

Source: TS Lombard November 2024. Image from Bloomberg News.

Republican Senate & House

- The prospects for significant policy changes in the US over the next two years and possibly beyond is a meaningful sea-change for investors.
- Not only will policy change come from the executive branch, the Republican control of the House and Senate could also usher in changes in government spending and debt issuance.
- Bold campaign promises may or may not manifest in effective policy change.

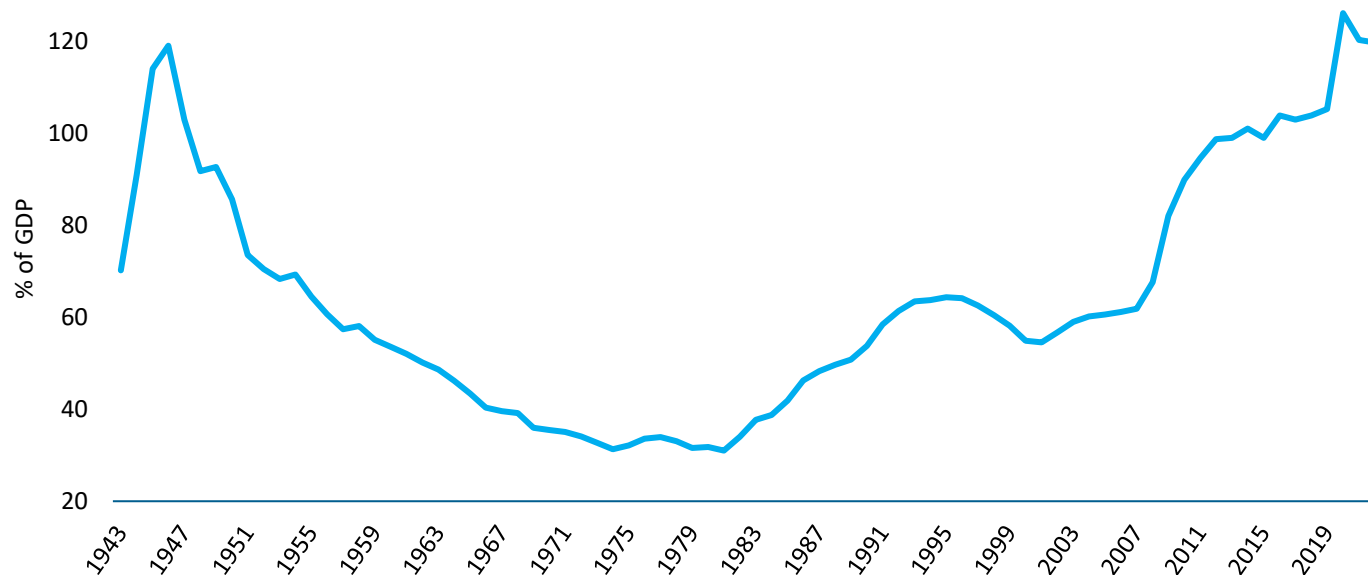


Source: Real Clear Politics as of December 17, 2024.

US Government Spending

- Between 2020 and 2022 the US government passed \$6 trillion in spending in the CARES Act (2020), the Infrastructure Act (2021), the CHIPS Act (2022) and the Inflation Reduction Act (2022).
- Although US economic growth has continued to surprise to the upside coming out of the pandemic, the US debt-to-GDP ratio reached over 120%, a level not seen since WWII.
- US government debt has been downgraded on debt ceiling challenges.

US Government Debt



Source: FRED as of October 2023. The Trump and Biden administrations signed stimulus spending bills that provided direct transfers to US citizens and small business; many programs relied on tax breaks and rebates rather than government expenditure.

→ Stimulus Plans and Spending

- COVID response (\$6 T)
- CARES Act
- Infrastructure Bill (\$1 T)
- CHIPS Act (\$52 B)
- Inflation Reduction Act (\$1 T)

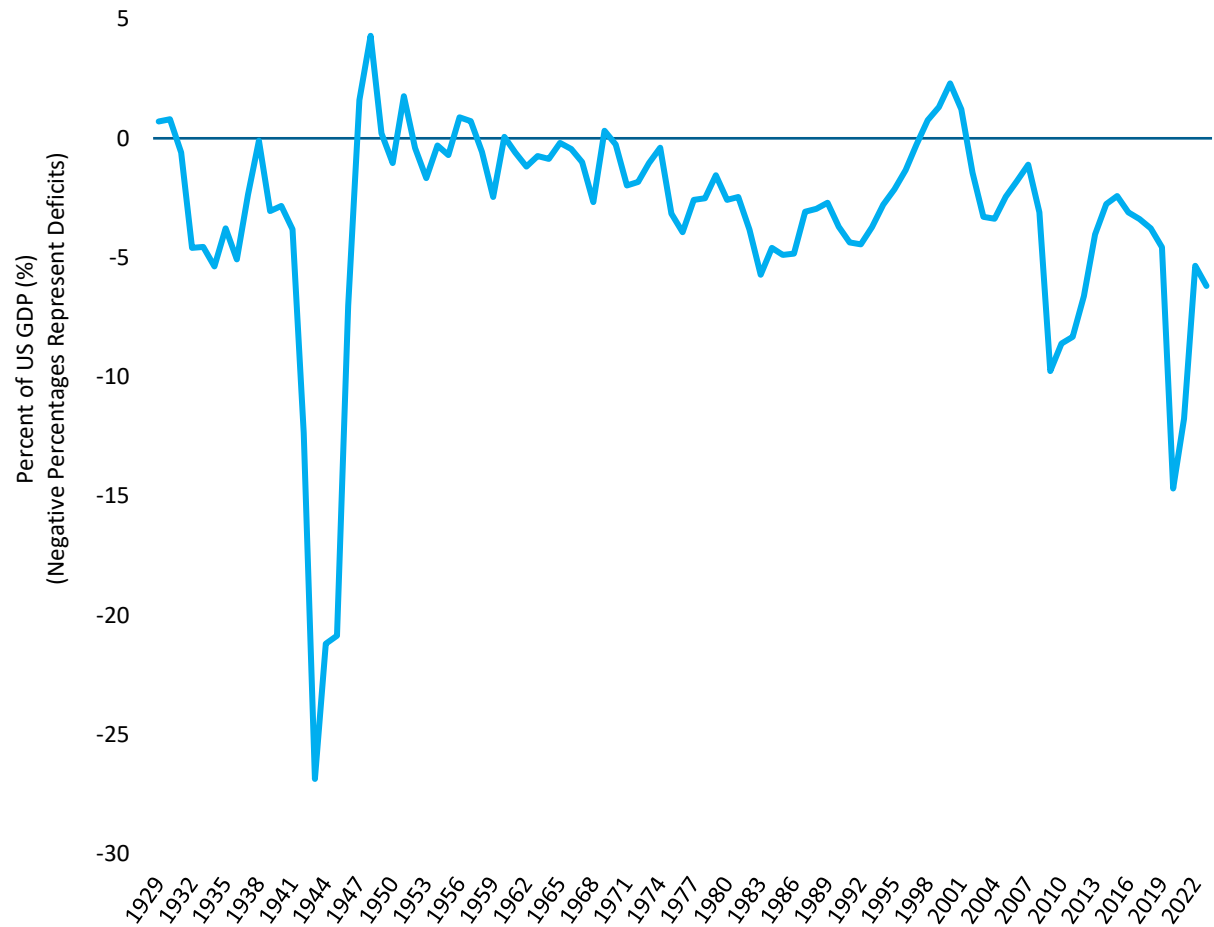
→ Federal Deficit Growth

- 2008: \$6 trillion
- 2020: \$19 trillion
- 2024: \$28 trillion

→ Debt-to-GDP Ratio

→ Surpassed World War II levels

Higher Debt Levels



Higher Interest Costs

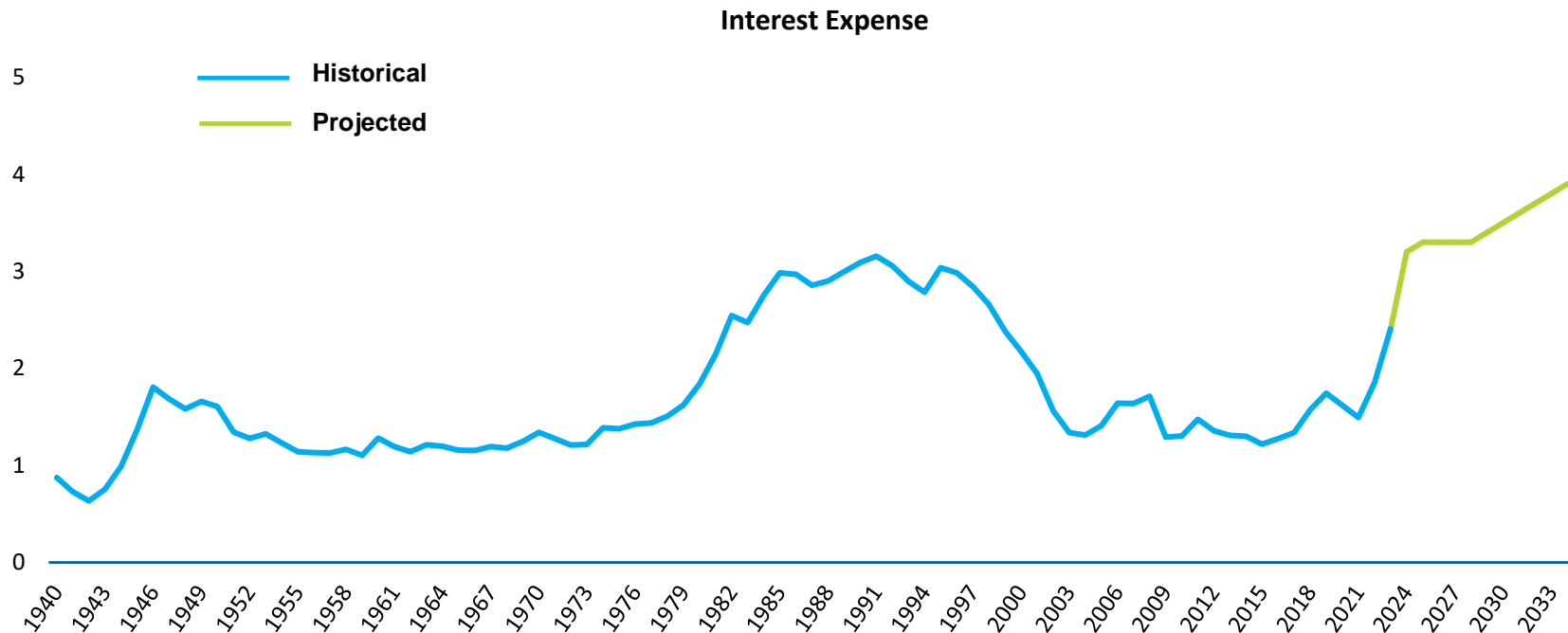
→ Higher interest costs

- Debt servicing costs increased from \$200 billion in 2022 to \$659 billion in 2023
- Interest expense expected to rise from 2.4% of GDP in 2023 to 3.2%

→ Interest expense on US debt exceeds the entire defense budget for fiscal year 2023

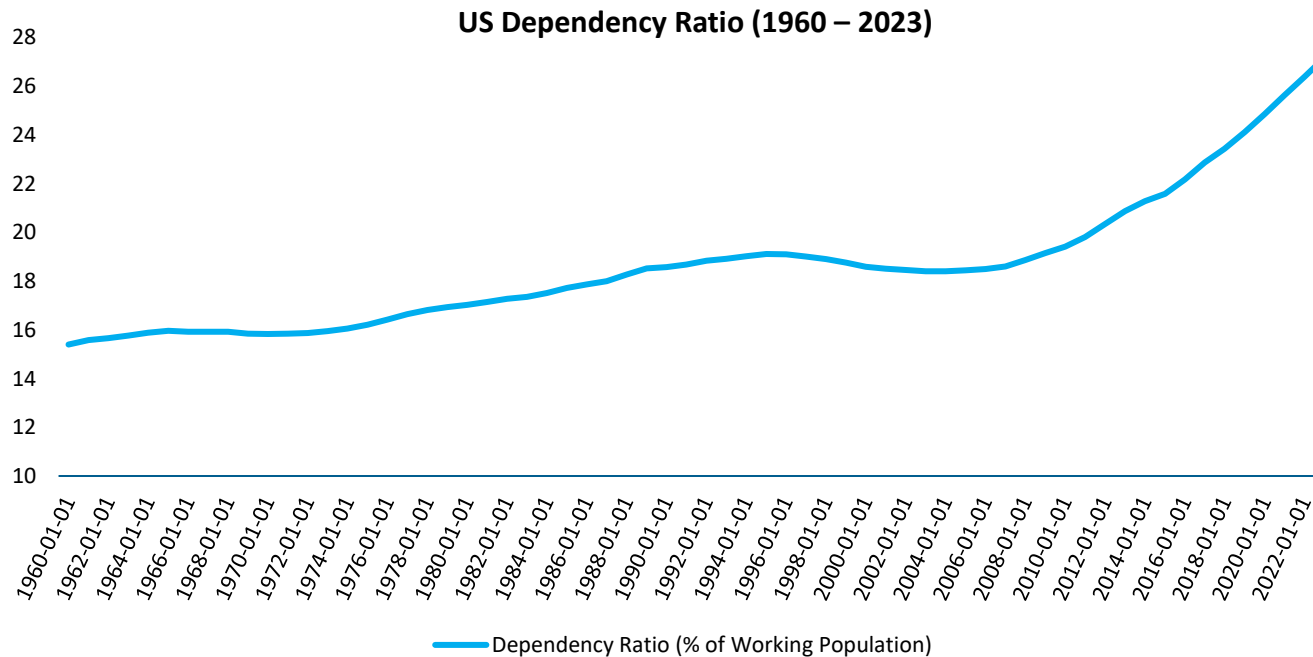
→ Impact on government resources

→ Rapidly rising cost of servicing US debt demands a larger share of government resources



“Peak 65” & Immigration

- By 2030, all of the baby-boomer generation will be 65 year old.
 - The number of young workers entering the work force may not be able to offset retirees
- Like Europe and Japan, the US faces the deflationary pressures of an aging society.
- While higher than Europe and Japan, the US’s fertility rate is below replacement levels (1.66).
- Immigration may help provide more young workers.

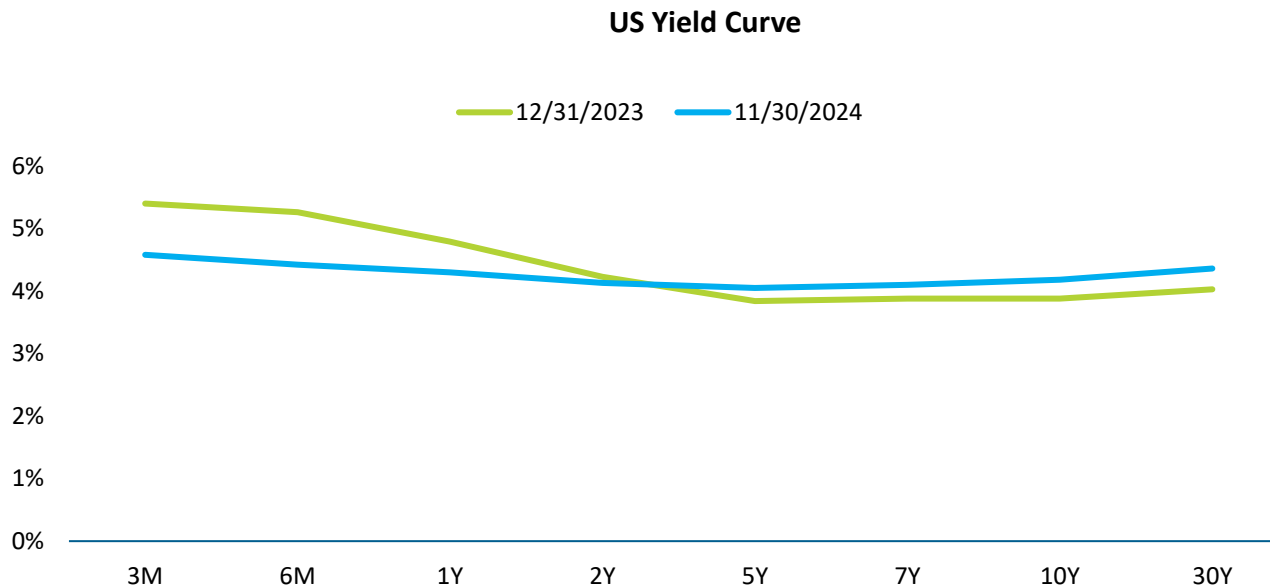


Source: US Census. FRED as of December 2023. Dependency ratio is the number of retired workers to active workers. A ratio of 33% means that there are three workers for every retired person.

US Public & Private Markets

2025 Hard or Soft-Landing Uncertainties

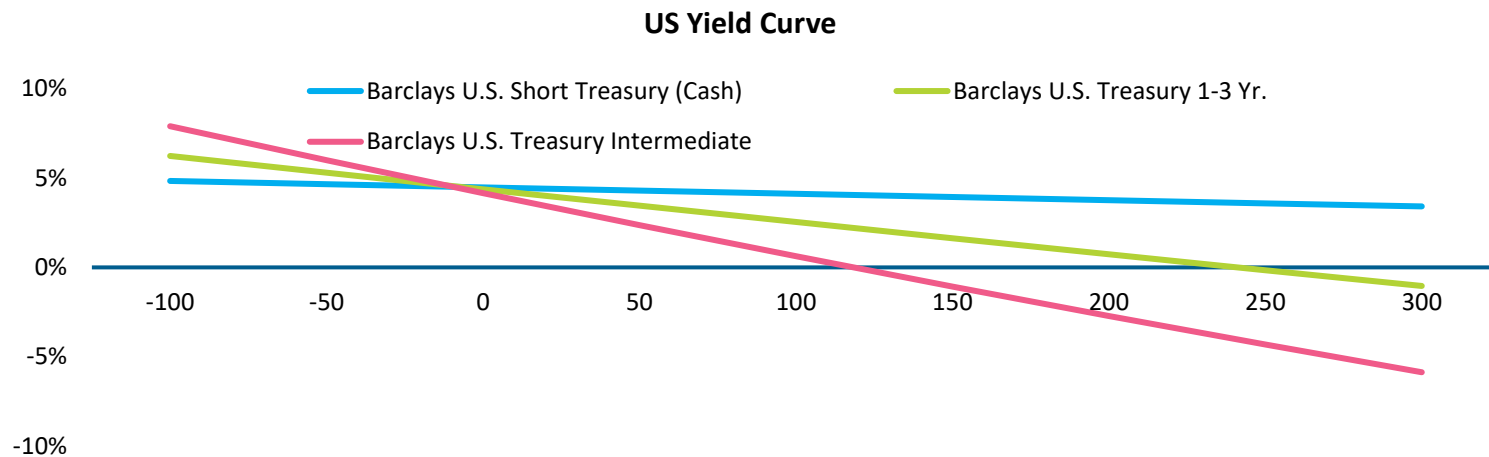
- At the end of 2023, markets expected a total of six rate cuts in 2024 starting in the Spring, we have only had four.
- Since the November election, markets have reduced the number of expected rate cuts for 2025.
- Bond yields can change very quickly given geo-political or macro economic changes but today the yield curve looks very close to where it was a year ago.
- With near-term yields close to long-term yields and policy uncertainties high markets are finding few reasons to extend duration.



Source: Bloomberg as of November 2024.

Rate Cuts Or Hikes?

→ Trump administration policy rollout and sequencing could determine the path of future rate cuts from the Fed in 2025 with implications for fixed income returns.

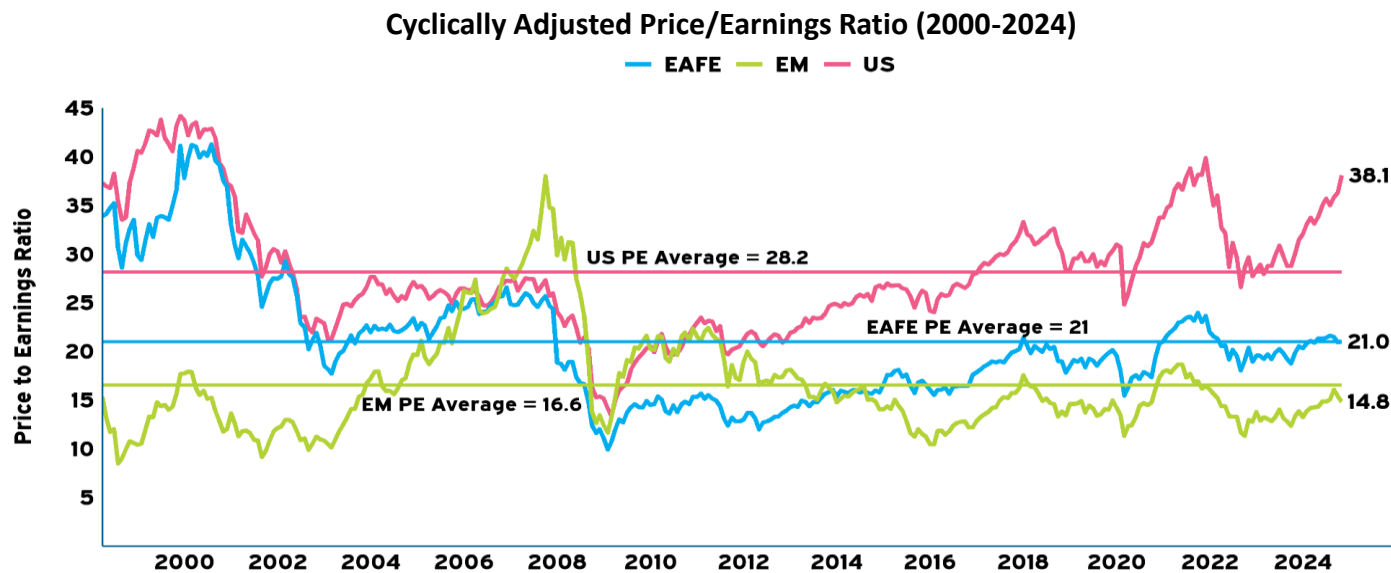


	Total Return for Given Changes in Interest Rates (bps)										Statistics	
	-100	-50	0	50	100	150	200	250	300	Duration	YTW	
Barclays US Short Treasury (Cash)	4.8%	4.7%	4.5%	4.3%	4.1%	3.9%	3.8%	3.6%	3.4%	0.36	4.48%	
Barclays US Treasury 1-3 Yr.	6.2%	5.3%	4.4%	3.4%	2.5%	1.6%	0.7%	-0.2%	-1.0%	1.85	4.37%	
Barclays US Treasury Intermediate	7.9%	6.0%	4.2%	2.4%	0.6%	-1.1%	-2.7%	-4.3%	-5.9%	3.64	4.16%	
Barclays US Treasury Long	21.1%	12.4%	4.5%	-2.7%	-9.1%	-14.8%	-19.7%	-23.8%	-27.2%	15.09	4.46%	

Source: Data represents the expected total return from a given change in interest rates (shown in basis points) over a 12-month period assuming a parallel shift in rates. Source: Bloomberg, and Meketa Investment Group.

US Stock Markets

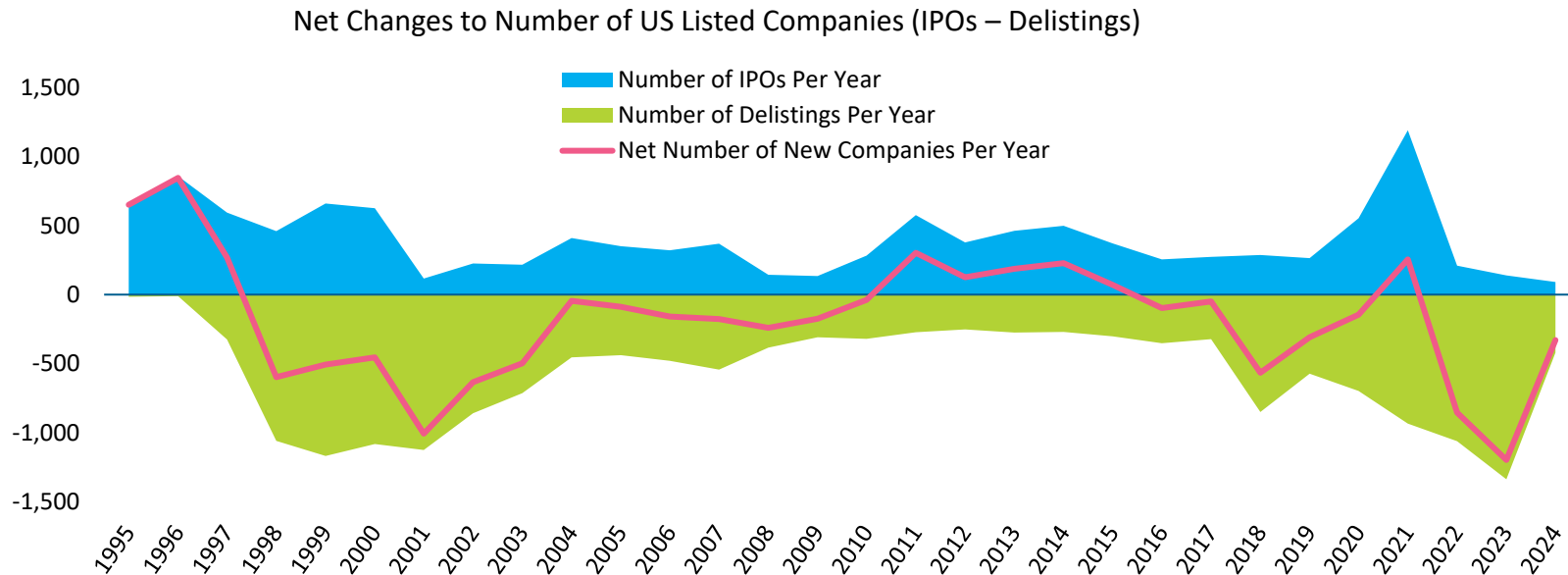
- The US stock market is the largest market in the world now accounting for 66% of the MSCI All Cap World Index; 2018 it was just 51%.
- US stocks are now pricing near historic highs commanding a significant premium over other regional indices.
- Nine of the top ten largest publicly traded companies in the world are US stocks that include the Magnificent 7: Tesla, Nvidia, Microsoft, Facebook, Alphabet, and Amazon.
- As the US stock market touches historic highs, concerns are building regarding the ability of US stocks to continue to deliver earnings growth and multiple expansion to justify their premium over peers.



Source: US Census. FRED as of December 2023. Dependency ratio is the number of retired workers to active workers. A ratio of 33% means that there are three workers for every retired person.

Delistings Rise as Initial Public Offerings (“IPOs”) Fall

- For the majority of the past thirty years, the number of net new companies has declined.
 - The number is impacted by both additions (i.e., IPOs) and subtractions (i.e., delistings).
- Delistings experienced two prolonged surges, one starting in 1997-98 and the other in 2018.
- IPOs declined from a peak in the mid 1990s, aside from a spike in 2021.
- Other developed markets (e.g., the UK) have seen similar trends of a decreasing number of public companies.
 - However, some emerging markets (e.g., China) have seen the opposite trend.



Source: London Stock Exchange as of June 2024 and Shanghai Stock Exchange as of August 16, 2024.

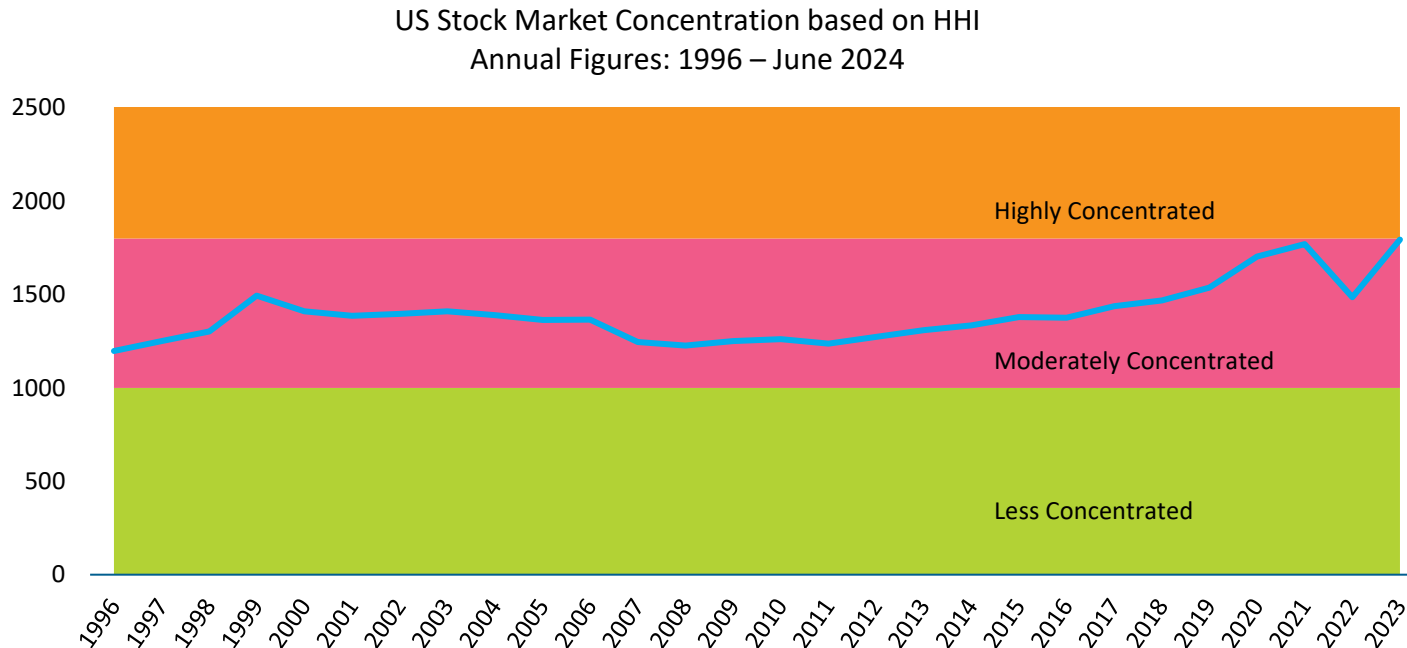
Source: Bloomberg data for delisting from NASDAQ, NYSE and NYSE American. Represents annual figures for 1996 through 2023 and partial year through June 2024. IPOs Data accounts only for “Primary Share Offerings,” excludes “Secondary Share Offerings” and “Best Efforts.” Delistings are based on delistings from NYSE and NASDAQ. “Other” reasons for delisting include reorganization, bankruptcy, liquidation, and not available.

US Stock Market Concentration

→ The change in the number of public US companies has potential ramifications for investors:

- An increased level of concentration in public markets.
- A broader opportunity set in private markets.

→ The US stock market recently reached a peak level of concentration (for the past thirty years).

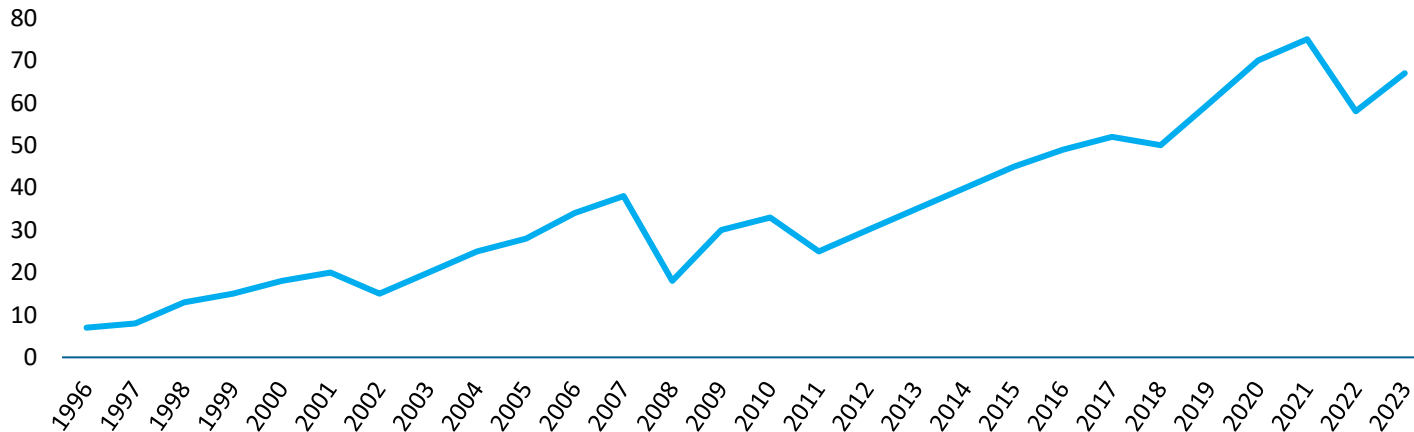


Source: Bloomberg and MSCI data. Represents annual figures from 1996 through 2023 and partial year as of June 2024. Based on the MSCI USA Index and GICS sector weights. Mechanics of the calculation make the result hold at the stock level as well. HHI refers to the Herfindahl-Hirschman Index, a widely used measure of market concentration. The metric calculates the sum of the squared market shares (or weights) for each member of the sample, and the higher the total, the more concentrated a market is. At the extreme, a market with only one company, or a monopoly, would be the most concentrated, with a HHI index of 10,000 (100²).

Intangible Assets

- The increasing importance of intangible corporate assets may also be a factor in a company’s decision to stay private or go public.
 - Intangibles include patents, software and databases, trademarks, customer lists, franchise agreements, organization capital, and firm-specific human capital.
- Establishing and enforcing exclusive property rights for intangible assets can be challenging.
 - Unlike physical capital, an intangible can be readily copied or imitated.
- Companies heavily investing in intangibles may prefer to stay private
 - This lowers the risk of proprietary information being divulged to competitors via regulatory disclosures.

Global Market Value of Intangible Assets (USD T)



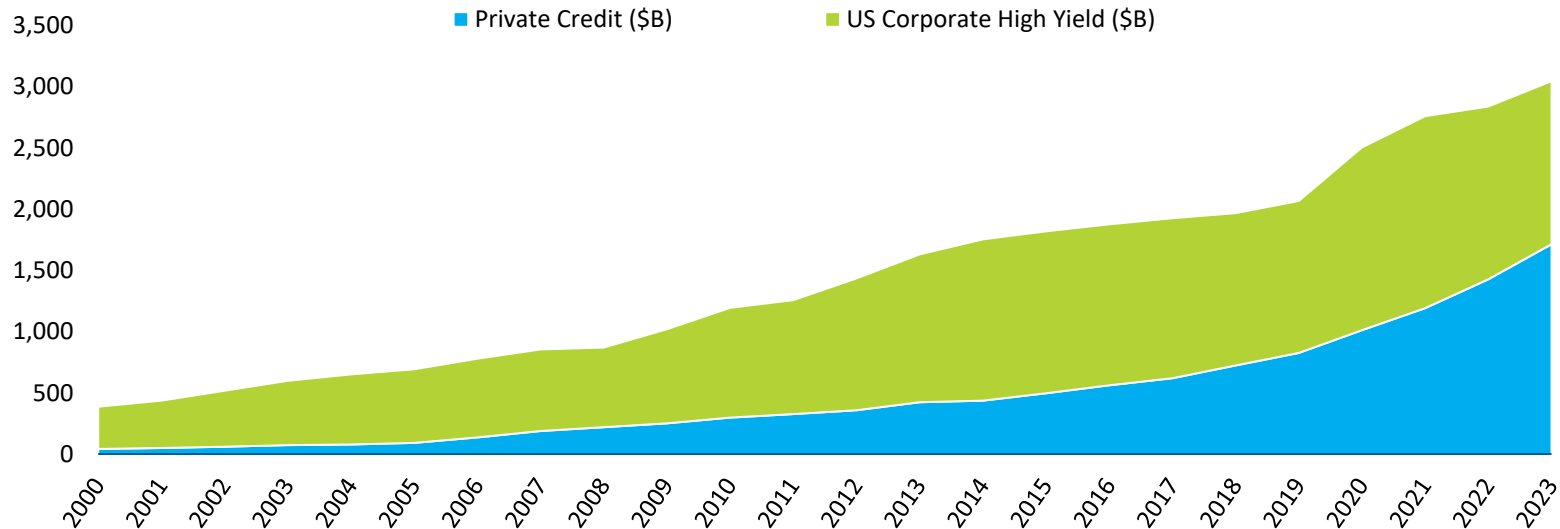
Source: Source: Journal of Economic Perspectives, N. Crouzet et. Al., "The Economics of Intangible Capital," Summer 2022.

Source: Brand Finance Global Intangible Finance Tracker (GIFT) as of December 2023. Journal of Economic Perspectives, N. Crouzet et. Al., "The Economics of Intangible Capital," Summer 2022.

Private Credit and High Yield

- The 2012 JOBS Act raised the number of investors that could privately provide capital to a company.
 - The limit increased from 500 individual investors to 2,000.
- Private companies are able to source capital from high yield markets and private credit lenders.
 - In 2023, the AUM in private credit exceeded the size of the high yield universe for the first time.
- The growing availability of private market options for raising capital have provided many companies that would have gone public a generation earlier with an alternative growth path.

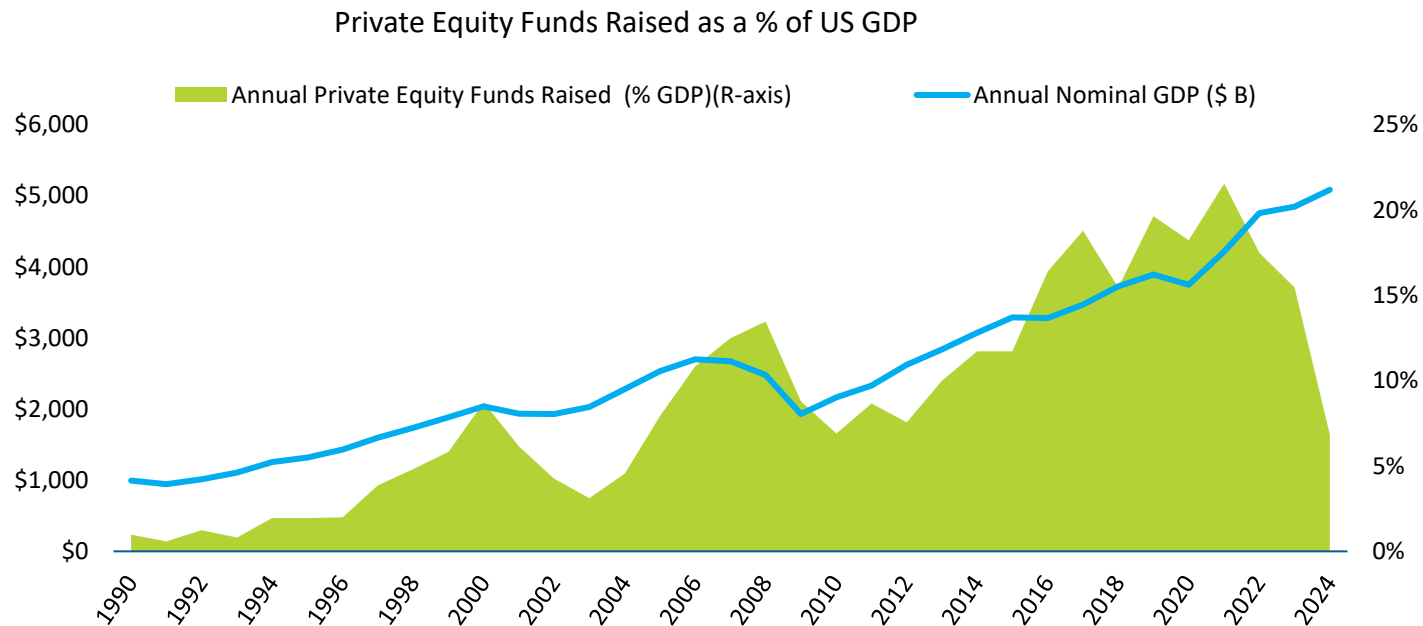
Growth in Private Credit and High Yield Assets Under Management



Source: Prequin private credit assets under management as of December 2023. Barclays Live high yield amount outstanding as of December 2023.

The Shift to Private Markets

- If investors want to access the growth of a broader swath of companies, they may want to consider investing more in private equity.
 - More than 85% of companies with annual revenues over \$100 million are private companies.
- Some recent analysis suggests that the return on investment for firms backed by venture capital and private equity are notably higher than those of the companies in the S&P 500.



Source: FRED nominal GDP as of June 30, 2024. Prequin annual private equity fund raising as of June 30, 2024. Private equity funds raised includes venture, buyouts and growth equity. Bain & Company, using data from S&P Capital IQ as of December 2022 and Statistics of US Businesses as of 2017.

Source: NBER, B. Jovanovic et al., "Private Equity and Growth" October 2020. The authors' analysis suggest that venture and buyout equity investment of approximately 5% to 7% may contribute to growth between 14% and 21% between 2001 and 2019. See also, NBER, N. Garreau et al., "Finance in a Time of Disruptive Growth," March 2024.

Artificial Intelligence

Prepare for Multiple Futures



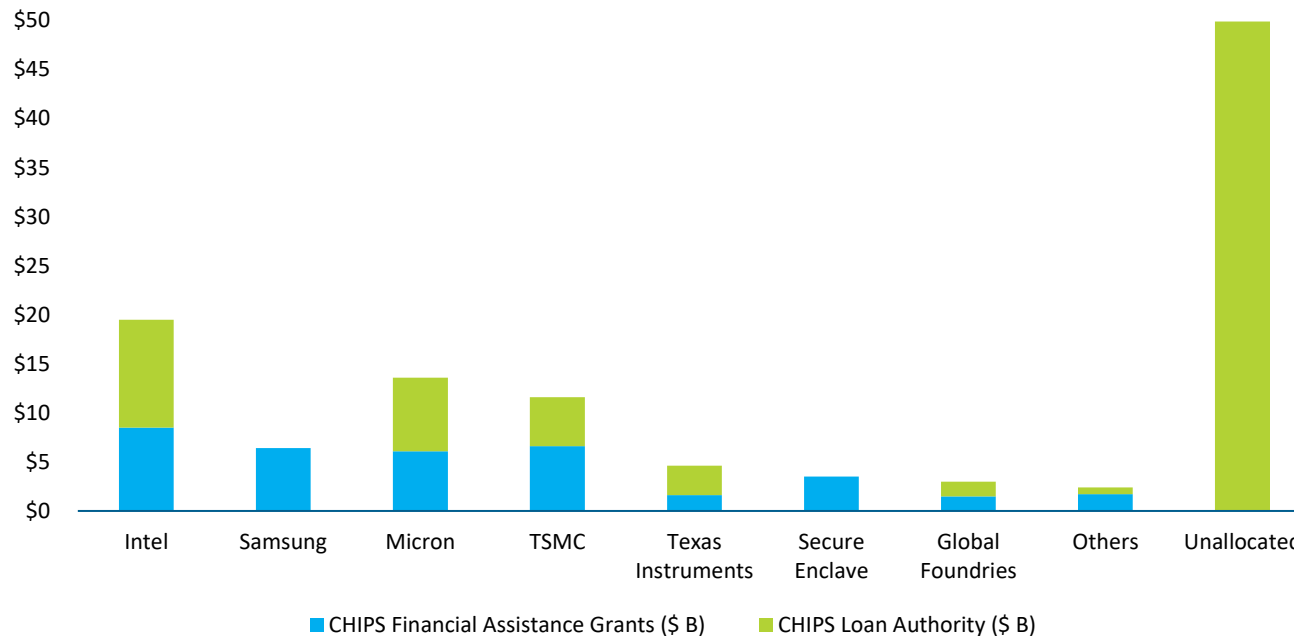
Note: this graphic was created using generative AI.

- Developments in AI since 2017 have been occurring at a rapid pace and with unexpected discoveries (i.e., “emergent capabilities”).
- Predicting what the actual developments will be and their corresponding impacts on economies/societies will be very challenging.
- Staying up-to-date on major developments and preparing for multiple futures is prudent.
- Research and predictions from industry insiders, economists, political scientists, etc., all indicate a high degree of uncertainty regarding impacts of AI.

CHIPS Act Two Years Old

- The CHIPS and Science Act is now two years old, and the scale of private and public investment since its passage is quite impressive when compared to the modest \$39 billion headline program.
- According to the Whitehouse press release on the two-year anniversary, nearly \$400 billion in private investments have been announced.

CHIPS & Science Act Grants & Loans to Private Companies

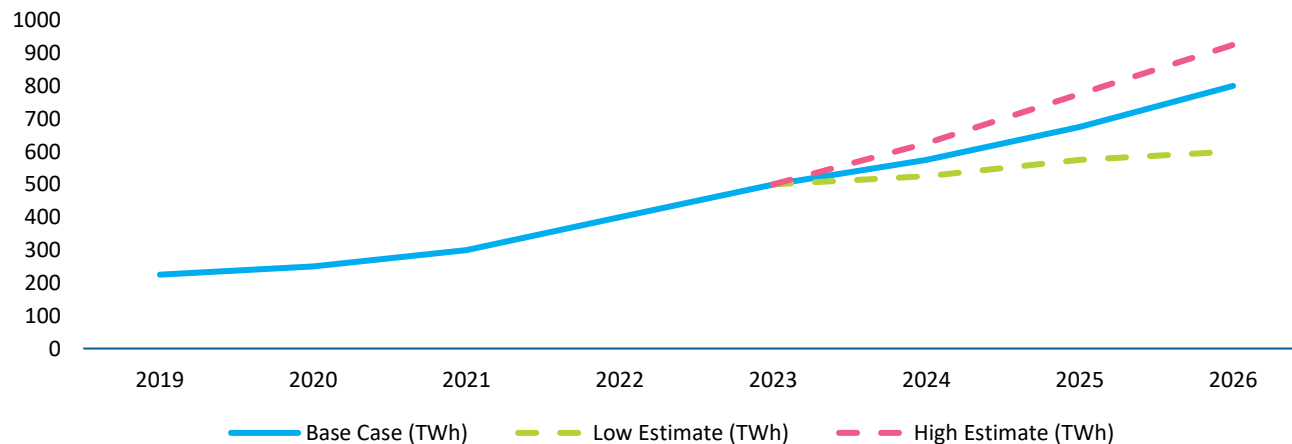


Source: CSIS, S. Shivakumar et al., "A World of Chips Acts: The Future of U.S. – EU Semiconductor Collaboration," August 2024.

Artificial Intelligence & Power Demand

- Google’s Head of Data Center Energy – Amanda Peterson Corio – said in order to power their data centers, “we need terawatts and terawatts more of traditional green energy, whether its wind or solar, and that’s across the globe.”
- And as data centers rush to upgrade and boost computing power by adding graphics processing units (GPUs), the newest AI GPU chips may well be faster than the central processing units (CPUs) and train and run AI models more quickly than CPUs but their relative efficiency to CPUs may be not mitigate future energy demands.
- In the US alone, the number of data centers grew by 26% in 2023 with a power capacity of 5,174 megawatts and there are another 3,77.8 megawatts of data center capacity under construction.
- Power demand is expected to increase by 40% in the US over the next decade.

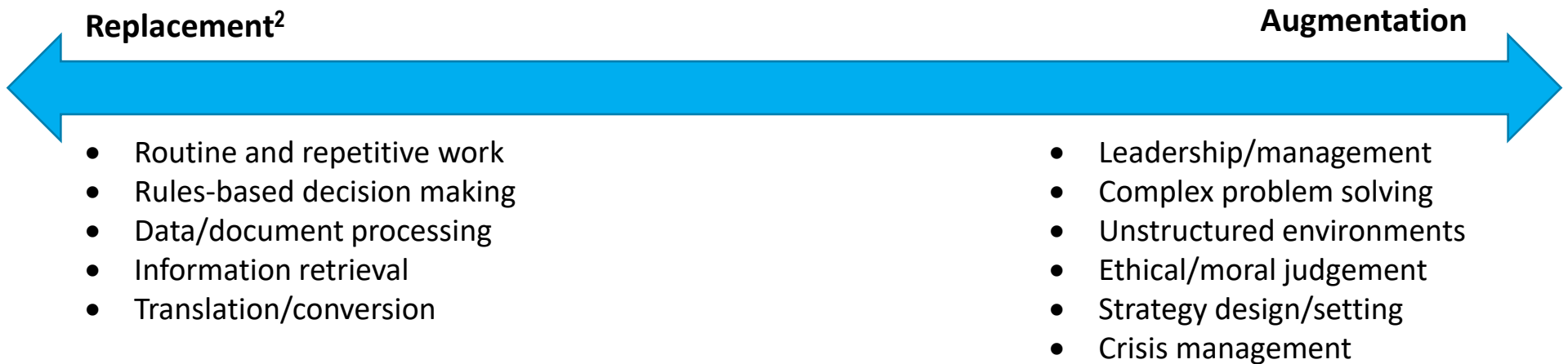
Global Electricity Demand from Data Centers, AI, and Crypto (TWh)



Source: International Energy Agency (IEA), “Electricity 2024: Analysis and Forecast to 2026,” January, 2024. “Notes: Includes traditional data centres [sic], dedicated AI data centres, and cryptocurrency consumption; excludes demand from data transmission networks.”

Replacement vs. Augmentation

- While job replacement is an understandable fear, it is better to think of it as a spectrum of replacement to augmentation.
- *“Our findings indicate that approximately 80% of the U.S. workforce could have at least 10% of their work tasks affected by the introduction of GPTs, while around 19% of workers may see at least 50% of their tasks impacted. The influence spans all wage levels, with higher-income jobs potentially facing greater exposure.”¹*



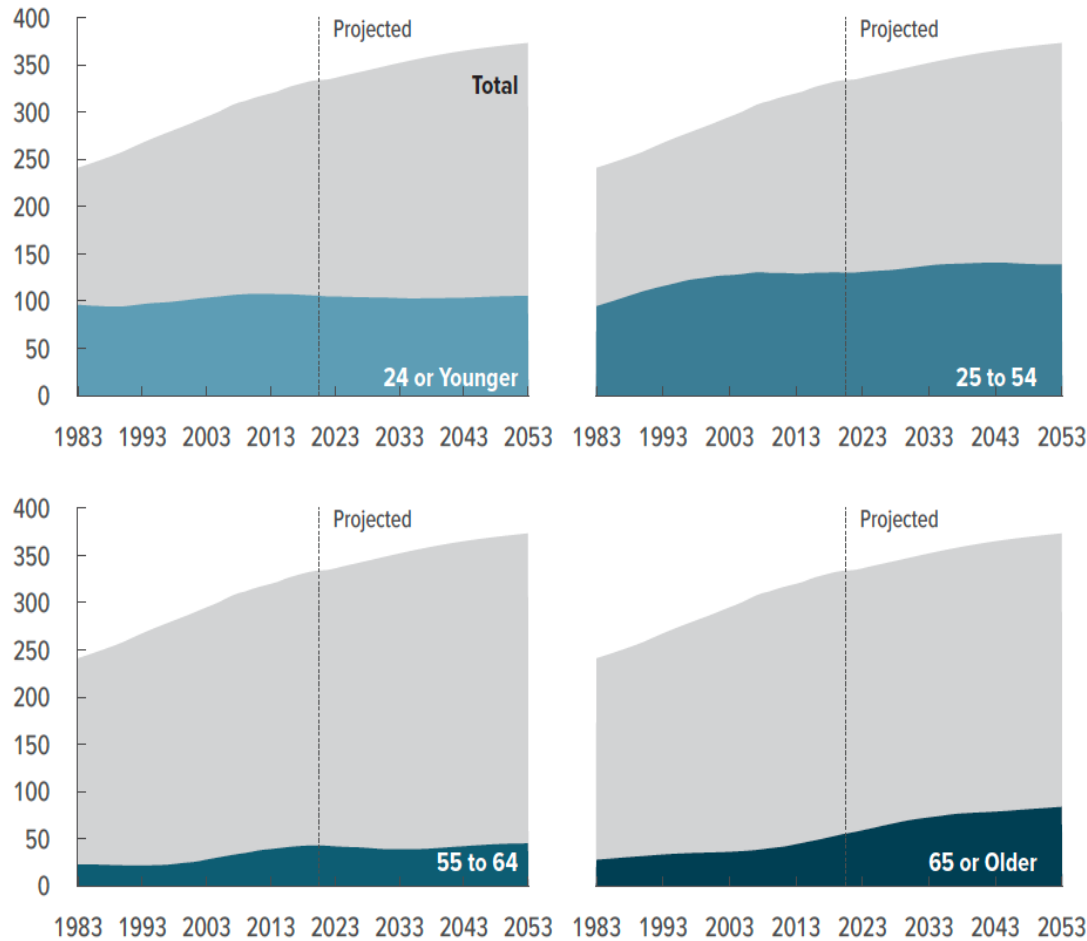
¹ Source: OpenAI (creator of ChatGPT), GPTs are GPTs: An early look at the labor market impact potential of large language models, Open AI, March 2023.

² Concepts regarding replacement and augmentation are adapted from presentations from Toffler Associates.

Silver Lining of AI Potential

Population, by Age Group

Millions of People



- Even excluding potential discoveries that may benefit society (e.g., healthcare, biotech, climate emissions, etc.), there is an underdiscussed benefit of AI: mitigating the demographic headwinds faced by many developed nations.
- For example, the aging population of the United States (highlighted in the graphics on the left) will require a reconfiguration of the nation's workforce.
- AI can help fill positions/tasks that societies may be unable to fill otherwise.

Source: Congressional Budget Office and US Census Bureau, as of January 2023

China

Enter President Xi

- Pragmatism appears to be fading in favor of nationalism and autarky, led by President Xi Jinping.
- Xi may have an additional goal that takes priority over the others:
 - Personal dominance & cementing his legacy
- Xi has consolidated power in a way that means he is going to be the final decision maker on major policy issues.
- The goals announced at the October 2022 Party Congress may be at odds with each other¹:
 - Reinvigorate Party ideological discipline and adherence to Marxist doctrine
 - Achieve first world economic wealth by 2035
 - Build “fortress China” that is self-sufficient in tech, military capacity, and geopolitical power



¹ Source: TS Lombard October 2022.

The Economic Rebound That Wasn't

Chinese growth has disappointed in 2023 and into 2024

- China exited their zero-COVID policy in late 2022
- Many investors and economists alike anticipated a surge in growth as the economy re-opened
- But the economic rebound did not materialize
- Growth projections are being ratcheted down
- Major causes include:
 - Debt overhang in the property sector – nearly ¼ of China's economy
 - Exports are lagging



Source: World Bank as of December 2023. World Bank data is from China's National Bureau of Statistics.

The Debt Bubble 2020 – 2024

Property market turns from tailwind to headwind

- The issue is systemic
- Both the private and public sectors are heavily indebted
- The worst problems are with property developers and local governments
- In 2021, it was Evergrande; in 2023, it is Country Garden
- Old model:
 - CCP sold land to developers, filling local government coffers in the process
 - This allowed CCP to spend freely while taking on more debt themselves
 - Local governments are responsible for ~85% of expenditures
 - Developers borrowed heavily and pre-sold properties to finance their acquisitions
 - No other good savings options, so ~70% of household wealth tied up in the property market
- Current status:
 - Housing prices falling
 - Some property owners now refusing to make payments on unfinished properties
 - This can turn into a vicious cycle where developers do not have the cash flow to complete projects

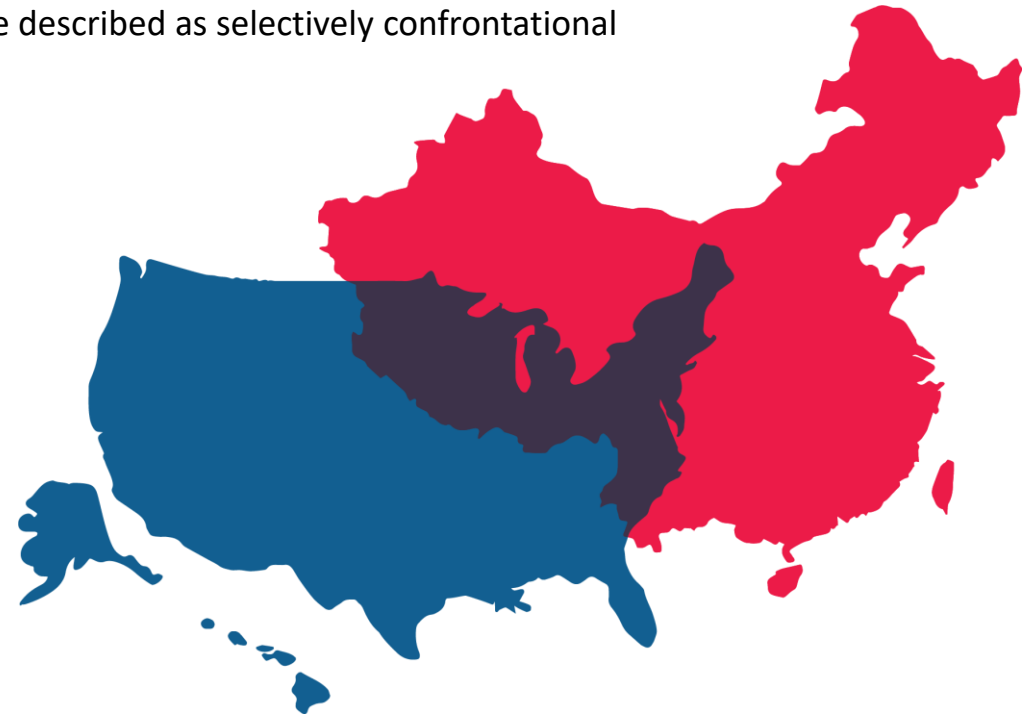
The US – China Relationship

It is not just the assertive nationalism and ideological enthusiasm of Xi's CCP that is a cause of concern for investors:

- The US now pursues an open policy of China containment
- If this trend continues, the US government could make investment in China difficult, painful, or even illegal

The “Thucydides Trap” refers to an apparent tendency towards war when an emerging power threatens to displace an existing great power as a regional or international hegemon¹

- The current relationship between China and the US can be described as selectively confrontational



¹ The term was coined by American political scientist Graham Allison in a 2012 article for the Financial Times.

Conclusion

- The Trump administration will have executive and congressional power to implement Trump's agenda over the next two years.
- Policy changes could have far reaching impacts for investors including inflationary pressures, labor shortages, and deficit spending.
- The US stock market continues to trade at a premium to global peers even as it approaches concentrated levels while private markets have grown considerably.
- The artificial intelligence investment boom here in the US and around the world will drive power demand higher; the US will continue to incentivize US investment in production of advanced semi-conductors, power generation, and machinery.
- China – the second largest economy in the world – continues to struggle with weak economic growth and foreign investment; but geopolitical tensions with the US remain high.

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS

Board Meeting IV.C



OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM
277 EAST TOWN STREET, COLUMBUS, OH 43215-4642
1-800-222-PERS (7377)
www.opers.org

MEMORANDUM

DATE: January 6, 2025

TO: OPERS Retirement Board Members

FROM: Anthony Tedesco, Government Relations Officer
Gordon Gatién, Director, External Relations

RE: **IV. Discussion Items:**
C. Legislative Update (State and Federal)

Purpose

The purpose of this memorandum is to provide the Board with a recap of state and federal legislative activities of the 135th Ohio General Assembly and the 117th U.S. Congress, and to provide insight about what to expect in the next two years.

As 2024 draws to a close and we take a moment to reflect on the notable developments and *interesting* accomplishments that have occurred since staff's last update to the Board in November, it is important to recognize both how far OPERS has come and how much more there is to do.

Background

This month, Jeannine Markoe Raymond, Director of Federal Relations for the National Association of State Retirement Administrators, and Leigh Snell, Federal Relations Director for the National Council on Teacher Retirement will discuss the ever-changing landscape and prospects for the upcoming year. Jeannine and Leigh are two of OPERS' biggest supporters in Washington and have been generous with their time, advice, and efforts on behalf of public retirement systems across the nation. They offer a 'boots on the ground' perspective about much of what challenges OPERS could face in the coming months.

Staff will provide a brief update regarding OPERS' legislative efforts in 2024. Following very active lame duck sessions in both the 135th General Assembly and 118th Congress that included passage of language clarifying OPERS' fiduciary duty and a repeal of the Windfall Elimination Provision (WEP) and

Government Pension Offset (GPO), as well as a rejection by the Ohio Retirement Study Council (ORSC) of a proposed employer contribution rate increase for another Ohio Retirement System, staff are working to address any outstanding questions and prepare for future policy discussions.

State

After two years of debate and consideration, the Ohio General Assembly approved a change (S.B. 6) to the fiduciary duties governing Ohio's public retirement system. In particular, the change clarifies that the Ohio Retirement Systems (Systems) must make investment decisions with the 'sole purpose' of maximizing returns, and expressly prohibits investment decisions made with the primary purpose of influencing any social or environmental policy or attempting to influence the governance of any corporation.' OPERS twice provided interested party testimony on the legislation and was clear on both occasions that it was already in compliance with the requirements of S.B. 6. Staff will continue to review the new language to determine what additional actions, if any, are necessary or advisable in the future.

As noted above, the ORSC considered and recommended rejection of a funding plan submitted by another Ohio Retirement System that was based primarily on increasing public employer contribution rates. Subsequently, though the Ohio House voted to pass the legislation, the Ohio Senate did not vote on the measure.

In their recommendation to the Council, ORSC staff noted that it has long been a tenet of ORSC policy that increases or decreases should not be an option to address funding challenges or to provide increased benefits. Additionally, the ORSC staff analysis suggests that to address funding shortfalls, board authority may be a more appropriate long-term solution. However, what was unsaid is perhaps just as important. The ORSC staff offered no guidance regarding the circumstances under which an increase in public employer contributions would be considered in a more favorable light.

To be fair, the ORSC is uniquely situated as legislative oversight body with no authority to ensure compliance with its policies or recommendations, and thus it would be extremely difficult – if not impossible – for them to identify an objective list of criteria that would allow positive consideration of a future funding increase, but the facts that (1) the cap on OPERS' employer contribution rates was last increased to 14 percent in 1976 and it took more than 30 years for OPERS to exercise the authority to reach that cap, and (2) OPERS has already implemented significant benefit reductions for current and future public employees suggest, at the very least, that the ORSC's policy regarding public employer contribution rate increases should be revisited and perhaps, revised.

Finally, the Ohio General Assembly passed Substitute House Bill 257, which allows members of Ohio's retirement boards to adopt a policy that would permit trustees to attend meetings via video conference. The bill brought consistency across all of Ohio's public retirement systems.

Though HB 257 was not exactly what OPERS requested, the final bill should be sufficient to address the concerns that prompted the System to request such authority. The bill was delivered to the Governor on December 30, 2024.

Federal

Beginning with the WEP and GPO, staff are pleased to report that, after almost 40 years of advocacy, Congress has finally decided to address these harmful offsets. On December 20th, the U.S. Senate voted overwhelmingly (76-20) to repeal the WEP and GPO. As of this writing, President Biden is expected to sign the Social Security Fairness Act on January 6th, 2025.

OPERS joins with its members and their families in celebrating this milestone achievement, but even as we turn the page on the WEP and GPO, we all must prepare ourselves for the coming debate over national Social Security reform.

As the Senate began debate on the Social Security Fairness Act (H.R. 82), several members introduced amendments aimed at addressing the high costs associated with the bill. One of the amendments would have encouraged a form of mandatory (or universal) Social Security coverage for Ohio's public employees. Mandatory coverage has long been viewed as an existential threat to public retirement systems in states with large populations of non-Social Security-covered public employees because of the high costs associated with that coverage and the redundancies that would result. After much advocacy activity by OPERS and others, the sponsor of the amendment ultimately decided not to seek a vote on his proposal and pulled the language from consideration, however, staff remain concerned that a seed was planted for further discussions on this topic.

State and Federal Legislative Update

*Jeannine Markoe Raymond, NASRA
Gordon Gatien*

*Leigh Snell, NCTR
Anthony Tedesco*

January 14, 2025

104/272



136th General Assembly

Status of Legislation

Federal

H.R. 82 Recap

Future Outlook

AGENDA

Status of Legislation



- HB 257 (passed in House; pending in Senate Government Oversight Committee)
- SB 6 – Passed in Senate – Pending in House Fin. Inst. Committee – 2 hearings
- Ohio Retirement Study Council / Employer Contribution Rates

H.R. 82 Recap



Future Outlook

- SS/HR 82
- Taxes
- Investments
- Federal Intervention



Questions



In honor of Senator J. Kirk Schuring.

WHEREAS, the Board of Trustees and staff of the Ohio Public Employees Retirement System extend our sincere condolences to the family and friends of Senator J. Kirk Schuring following his passing; and

WHEREAS, Kirk Schuring was dedicated to and passionate about public service for more than 32 years; and

WHEREAS, Kirk Schuring was a true statesman, a man of conviction, and a model for other legislators to emulate; and

WHEREAS, Kirk Schuring was well respected across Ohio and beyond for his commitment, engagement, attention to detail, and respect for process; and

WHEREAS, Kirk Schuring was a source of institutional knowledge regarding Ohio's public retirement systems and an ardent supporter of retirement security for Ohio's public servants in both the Ohio House of Representatives and Ohio Senate; and

WHEREAS, Kirk Schuring was a voice of reason, a proponent of consensus building, and THE source for practical legislative initiatives related to Ohio's public retirement systems as a long-time member of and the Chairman of the Ohio Retirement Study Council; and

WHEREAS, Kirk Schuring consistently championed legislative changes that supported Ohio's public retirement systems and positively impacted the lives of countless Ohioans; and

WHEREAS, Ohio and its public retirement systems are stronger due to the efforts and contributions of Kirk Schuring; and

WHEREAS, Kirk Schuring was a friend of not only the Ohio Public Employees Retirement System, but to many individuals within it; and

WHEREAS, Kirk Schuring was always generous with his time, his insights, and his advice; therefore, be it

RESOLVED, That the Board of Trustees and staff of the Ohio Public Employees Retirement System express our sincerest gratitude for Kirk Schuring's leadership, partnership, and friendship, and honor his legacy of accomplishments in the furtherance of Ohioans' retirement security; and be it further

RESOLVED, That a copy of this resolution be transmitted to the family of Senator J. Kirk Schuring.

Board Vacancy Schedule



OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM
277 EAST TOWN STREET, COLUMBUS, OH 43215-4642
1-800-222-PERS (7377)
www.opers.org

MEMORANDUM

DATE: January 15, 2025
TO: OPERS Retirement Board Members
FROM: Eric Harrell, General Counsel
Jenny Starr, Director-Finance
RE: **Action Item**
Board Vacancy Schedule

Action requested: _____ moved, _____ seconded to: approve the schedule and manner by which the Board will select a replacement for the Non-teaching College/University employee representative seat which became vacant in January 2025.

Background – Pursuant to Ohio Revised Code Section 145.06, when a vacancy occurs in the term of any employee member of the Board, the remaining members of the Board shall elect a successor employee member from the employee group lacking representation because of the vacancy. The Non-teaching College and University employee representative resigned from the Board in January 2025.

The Board adopted rules to govern the administration of Board vacancies pursuant to authority granted in the Ohio Revised Code Section 145.058. Pursuant to Ohio Admin. Code 145-1-02(E)(1), when a vacancy occurs in the term of an employee member, the remaining members determine the schedule and manner in which they will select a successor member.

Ohio Admin. Code Section 145-1-02(E)(1)(a) provides that the Board shall notify the membership group affected, stating the procedure for candidates to submit their names to the Board, and the procedures for selection by the Board of the candidate to fill the vacancy. Candidates shall qualify under the same eligibility requirements as the predecessor in office.

The Board selects a successor member from those names submitted to it. A successor member is selected by majority vote in which successive voting occurs until one candidate receives a majority. In the event of a tie vote, the tie vote will be decided by coin toss.

The suggested schedule will allow for selection by the Board at the March 2025 Board meeting.

After notices are issued and resumes are submitted, each Board member can nominate one candidate at the February 2025 meeting. Those nominated will be interviewed at the March 2025 meeting and the Board can then make its selection at that time. The Board must select either by voice vote or roll call vote. The new Board member's term will run through December 2026.

A schedule of the process is included as Attachment A.

Next steps:

Once the Board takes action to approve the schedule and manner by which the vacancy will be filled, OPERS staff will send a notice to all Non-teaching College/University employees, employers and interested parties. The notice will include information about the process for submitting candidate information and a Board of Trustees job description.

ATTACHMENT A



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**Non-teaching College/University Employee Representative
Board Vacancy Selection Time Schedule**

Non-teaching College/University Employees: approximately 55,750

Items and Dates:

January 17, 2025	Send notices of vacancy process to Non-teaching College/University employees, employers and interested groups
February 14, 2025 (4:00 p.m. EST)	Last day to receive resumes at OPERS' offices
February 19, 2025	Board reviews candidate pool and nominates finalists
March 18-19, 2025	Candidate interview and Board selection of successor

Board Meeting V.A

December 31, 2024 Preliminary Investment Returns

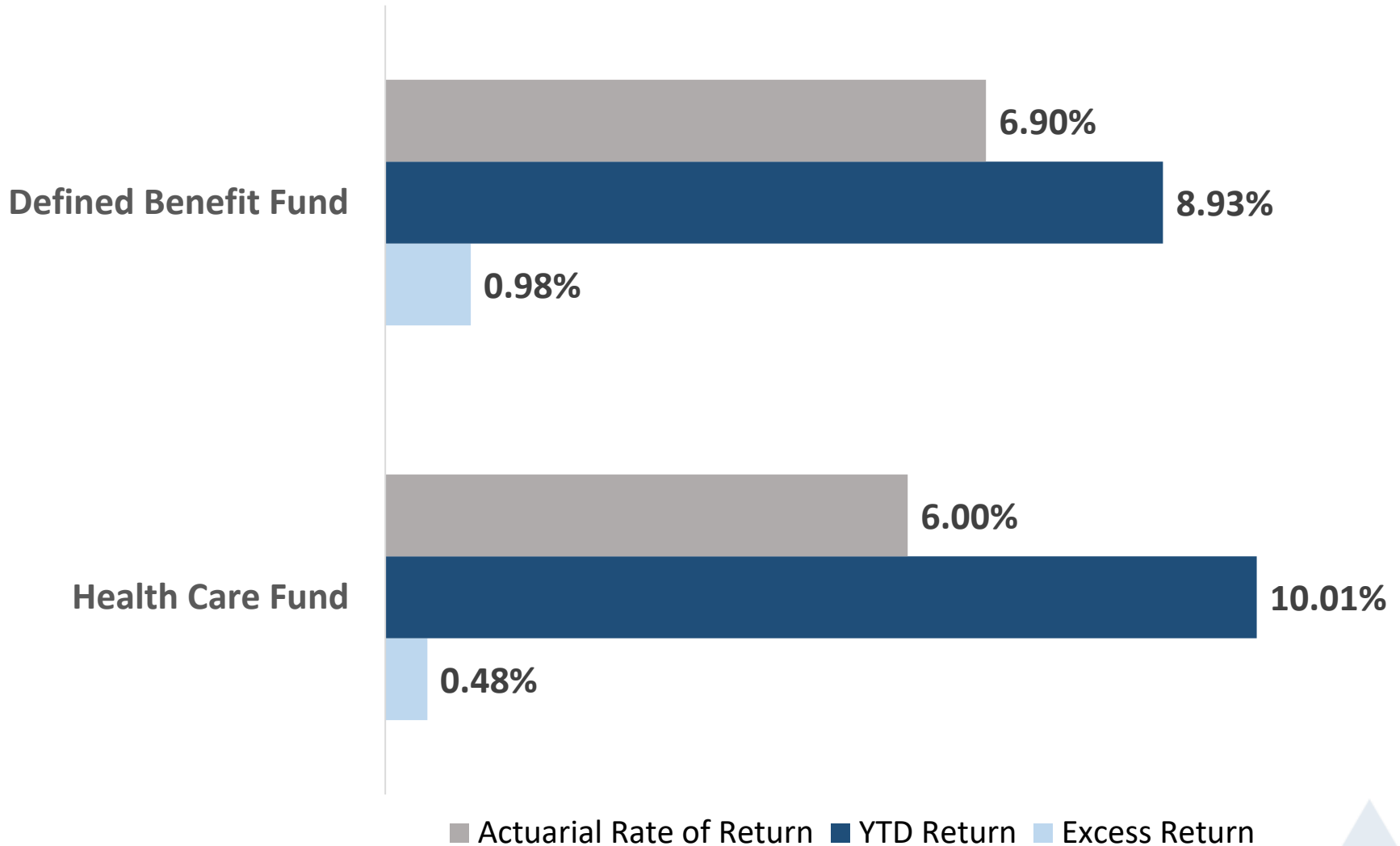
**Paul T. Greff
Chief Investment Officer**

January 15, 2025

117/272



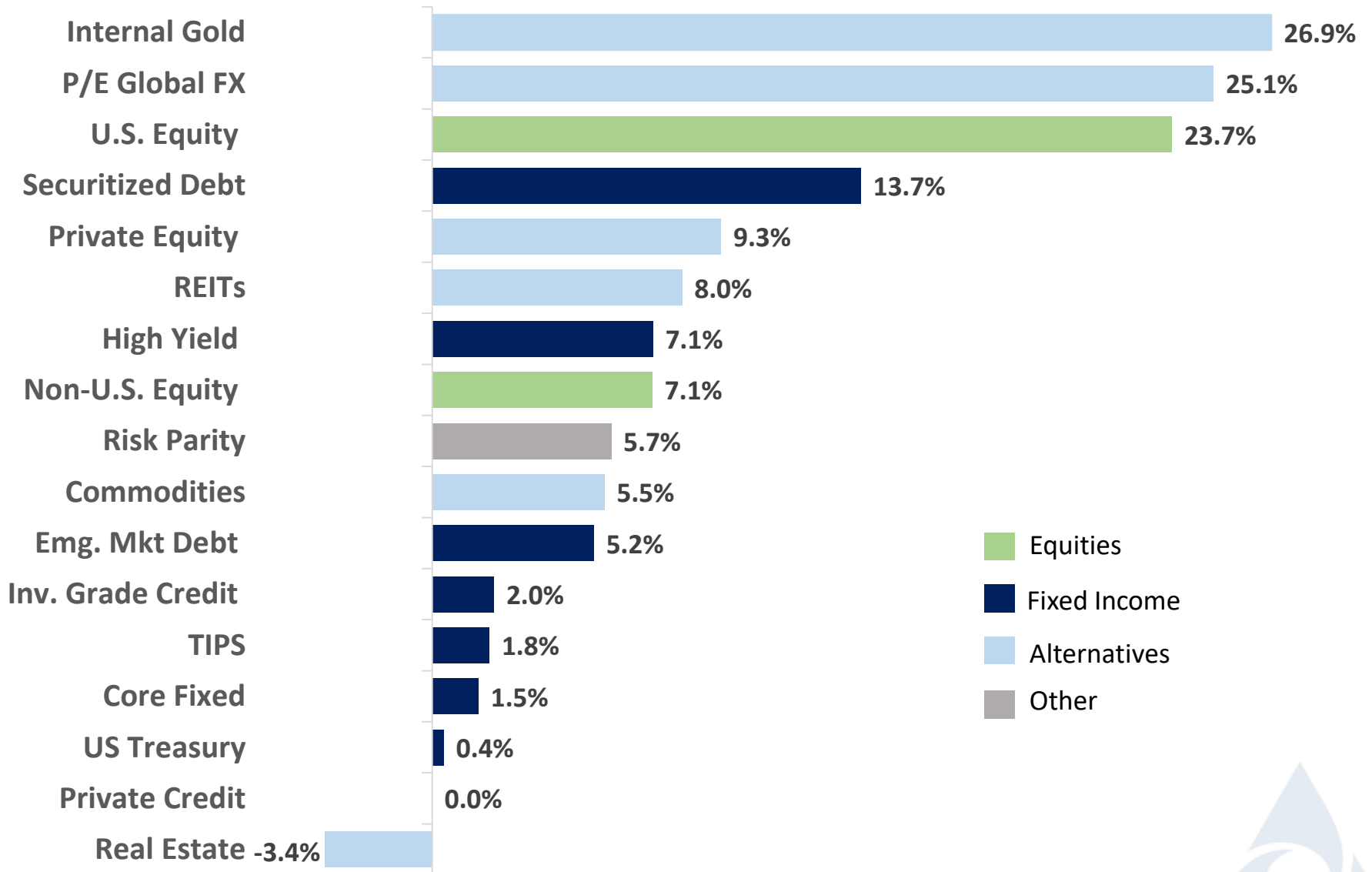
Plan Returns as of 12/31/2024



All return data sourced from BNY Mellon

Returns are Net of Fees

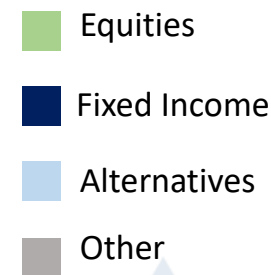
Total Plan: Asset Class Returns



Returns are Net of Fees

Defined Benefit: Contribution to Return of 8.93%

<u>% of Plan</u>	<u>Asset Class</u>	<u>2024 Total Return</u>	<u>*Contribution to 8.93%</u>
22.0%	U.S. Equity	23.7%	5.2%
14.8%	Private Equity	9.3%	1.4%
19.2%	Non-U.S. Equity	7.1%	1.4%
4.0%	High Yield	7.1%	0.3%
1.0%	Internal Gold	26.9%	0.3%
1.7%	Securitized Debt	13.7%	0.2%
0.9%	P/E Global FX	25.1%	0.2%
9.0%	Core Fixed	1.5%	0.1%
2.1%	Commodities	5.5%	0.1%
1.9%	Risk Parity	5.7%	0.1%
0.8%	REITs	8.0%	0.1%
3.2%	TIPS	1.8%	0.1%
2.8%	Inv. Grade Credit	2.0%	0.1%
1.1%	Emg. Mkt Debt	5.2%	0.1%
2.7%	US Treasury	0.4%	0.0%
0.2%	Private Credit	0.0%	0.0%
11.6%	Real Estate	-3.4%	-0.4%



Returns are Net of Fees

The estimated contribution to return for each asset class is the product of the weighting by NAV and the return.

*Weighted average contribution to the total Fund return may not add up to the reported number due to use of year end weights and rounding

Defined Benefit: Contribution to Alpha of 98 BPS

<u>% of Plan</u>	<u>Asset Class</u>	<u>2024 Excess Return (bps)</u>	<u>*Contribution to 98 bps</u>	
11.6%	Real Estate	374	44	
19.2%	Non-U.S. Equity	166	32	Equities
0.9%	P/E Global FX	1351	12	
14.8%	Private Equity	34	5	
1.1%	Emg. Mkt Debt	356	4	Fixed Income
9.0%	Core Fixed	23	2	Fixed Income
1.9%	Risk Parity	66	1	Other
2.1%	Commodities	14	0	Alternatives
1.0%	Internal Gold	29	0	Alternatives
0.2%	Private Credit	0	0	Alternatives
0.8%	REITs	-1	0	Alternatives
3.2%	TIPS	-1	0	Fixed Income
2.8%	Inv. Grade Credit	-14	0	Fixed Income
2.7%	US Treasury	-21	-1	Fixed Income
1.7%	Securitized Debt	-94	-2	Fixed Income
22.0%	U.S. Equity	-9	-2	Equities
4.0%	High Yield	-111	-4	Fixed Income

Returns are Net of Fees

The estimated contribution to return for each asset class is the product of the weighting by NAV and the return.

*Weighted average contribution to the total Fund return may not add up to the reported number due to use of year end weights and rounding

Healthcare: Contribution to Return of 10.01%


<u>% of Plan</u>	<u>Asset Class</u>	<u>2024 Total Return</u>	<u>*Contribution to 10.01%</u>	
26.4%	U.S. Equity	23.7%	6.3%	Equities
24.2%	Non-U.S. Equity	7.1%	1.7%	
3.1%	Securitized Debt	13.7%	0.4%	Fixed Income
4.8%	REITs	8.0%	0.4%	
5.0%	High Yield	7.1%	0.4%	Alternatives
1.0%	Internal Gold	26.9%	0.3%	
15.4%	Core Fixed	1.5%	0.2%	Other
0.8%	P/E Global FX	25.1%	0.2%	
3.1%	Commodities	5.5%	0.2%	Other
2.9%	Risk Parity	5.7%	0.2%	
6.7%	TIPS	1.8%	0.1%	Fixed Income
3.0%	Inv. Grade Credit	2.0%	0.1%	
1.0%	Emg. Mkt Debt	5.2%	0.1%	Fixed Income
1.9%	US Treasury	0.4%	0.0%	

Returns are Net of Fees

The estimated contribution to return for each asset class is the product of the weighting by NAV and the return.

*Weighted average contribution to the total Fund return may not add up to the reported number due to use of year end weights and rounding.

Healthcare: Contribution to Alpha of 48 BPS

<u>% of Plan</u>	<u>Asset Class</u>	<u>2024 Excess Return (bps)</u>	<u>*Contribution to 48 bps</u>	
24.2%	Non-U.S. Equity	166	40	
0.9%	P/E Global FX	1351	11	
1.0%	Emg. Mkt Debt	356	4	
15.4%	Core Fixed	23	4	
2.9%	Risk Parity	66	2	
3.1%	Commodities	14	0	
1.0%	Internal Gold	29	0	
4.8%	REITs	-1	0	
6.7%	TIPS	-1	0	
1.9%	US Treasury	-21	0	
3.0%	Inv. Grade Credit	-14	0	
26.4%	U.S. Equity	-9	-2	
3.1%	Securitized Debt	-94	-3	
5.0%	High Yield	-111	-6	

Returns are Net of Fees

The estimated contribution to return for each asset class is the product of the weighting by NAV and the return.

*Weighted average contribution to the total Fund return may not add up to the reported number due to use of year end weights and rounding.

Current Economic and Financial Situation

- US GDP running at 2.5% - 3.0% (strong)
- Headline CPI at 2.7%; Core CPI at 3.3%; Personal Consumption Expenditures 2.8% (all higher than Fed's target of 2.0%)
- Unemployment at 4.1% (below the average of ~6.0% since 1988)
- Fed fund rate at 4.25% - 4.50% and *currently in easing mode*; market pricing in 4.0% one year forward

New Administration Policies and Impacts

■ Deregulation

- Pro growth, potentially inflationary
- Largest benefactors could be banking, energy, manufacturing and technology

■ Tariffs

- Inflationary
- Viewed as mostly negotiating tactic

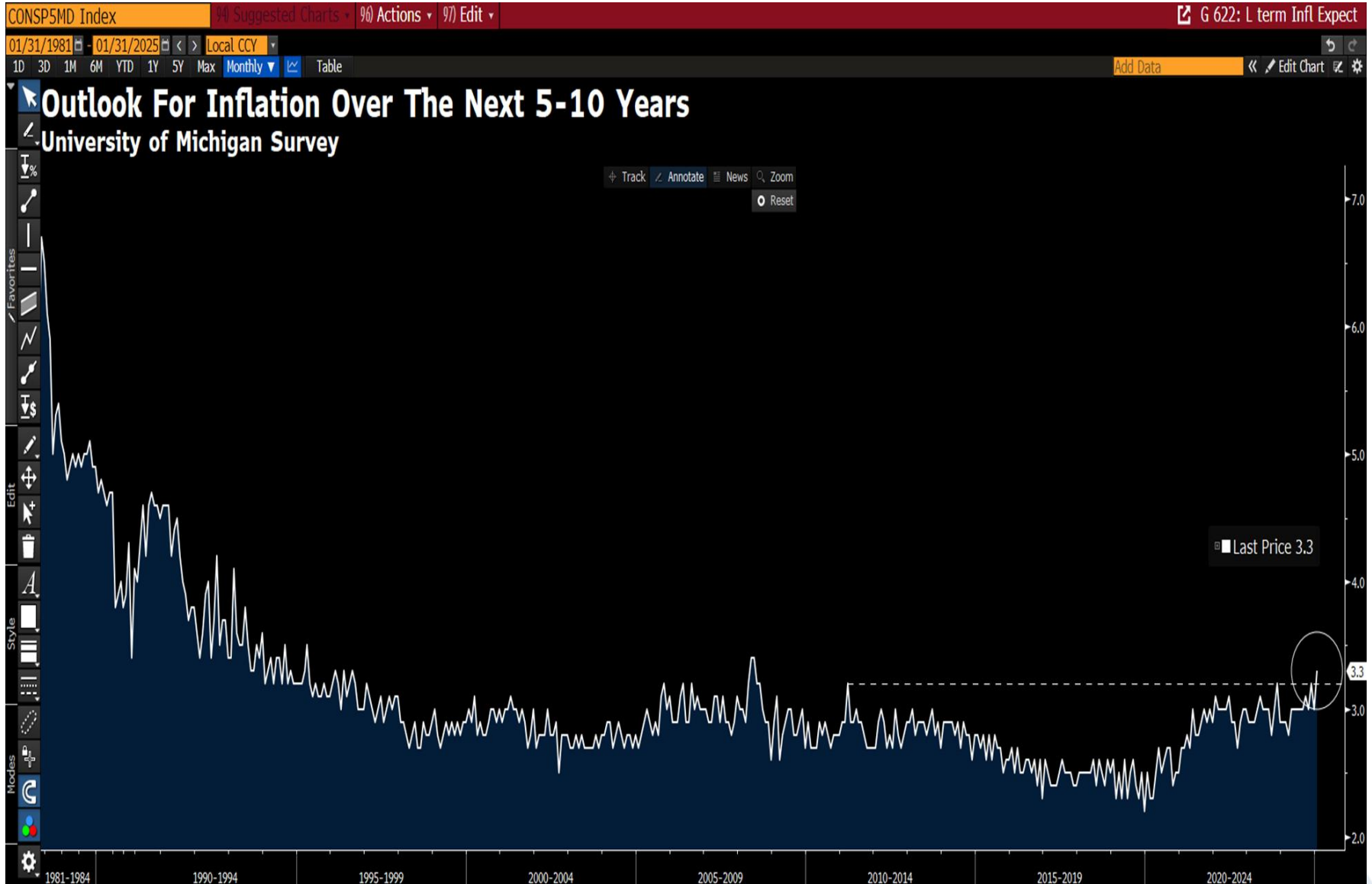
■ Immigration

- Slower growth, higher wages for lowest earners

■ Taxes

- Extend 2017 corporate tax cuts; others on the table
- Pro growth, potentially inflationary

Inflation Outlook



2018 – 2023 Restructuring Summary

■ Cultural

- Shifted to an open, collaborative environment

■ Organizational

- Reorganized existing investment teams to maximize talent

■ Asset Allocation

- Eliminated complex, low transparency and high fee allocations
- Maximized internal management
- Reduced fees from 0.54% to 0.34%

■ Systems Infrastructure

- Replaced multiple portfolio management and risk systems with one total plan system



2024 and Beyond...

- Onboard the new investment advisor - Meketa
 - Introduce the Functional Allocation Framework (FAF) and the concept of a Risk Mitigation Strategies (RMS) allocation
- Conduct an asset liability study for the Defined Benefit and Health Care plans incorporating the FAF and RMS
- Research and implement the components of the RMS allocation:
 - Long Treasuries
 - Trend Following
 - Alternative Risk Premia
- Goal: Improve OPERS plan returns on a risk adjusted basis through more efficient methods of implementation and by introducing new active strategies where appropriate



Board Meeting V.B



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MEMORANDUM

DATE: January 6, 2025
TO: OPERS Board of Trustees
FROM: Paul T. Greff, Chief Investment Officer
RE: **V. Discussion Items:**
B. 2025 Investments Market Outlook

Purpose

OPERS Retirement Board (“Board”) Investment Advisor, Meketa, will be presenting their Investments Market Outlook for the year 2025.

Background

Annually, in January, the Investment Advisor typically reviews the capital market landscape and highlights the emerging themes with the Board. Meketa was hired in May 2024, and has been sharing their capital market views and return expectations with the Board as part of the asset-liability study discussions. This presentation will be their first formal review of the market outlook for the year 2025.

Next Steps

OPERS Staff will incorporate the market outlook and capital market expectations shared by Meketa into the Annual Investment Plan (“AIP”). Staff will also prepare the 2025 AIP and seek Board approval at the scheduled March 2025 meeting.

Meketa Investment Group

January 2025

What We Are Watching in 2025

Introduction

→ The upcoming change in administration with the introduction of Trump will bring about changes in economic factors.

- Trump Administration Policies
- Federal Reserve Dynamics
- US Fiscal challenges
- China-US relations
- US Equities

→ Understanding these factors is crucial for market predictions and investment strategies

Trump Administration Policies and Impact on Inflation and Growth

- Numerous promises were made while on the campaign trail, however the current focus is on which of these promises ultimately get implemented into policy.
- Expansion of fossil fuel production
 - Potential to lower energy costs and strengthen corporate margins
- Tax cuts
 - Expected to stimulate short-term growth but may increase deficit spending and have inflationary components
- Deregulation
 - Opportunity to boost corporate profits but may have long-term regulatory risks
- Restrictive immigration policies
 - Potential disruption in labor force and wage inflation
- US First - trade policies
 - Tariffs imposed on imports from countries such as China and Mexico could potentially disrupt supply chains, elevate consumer pricing, and adversely affect consumer spending
- Potential for inflation to reignite
 - Could reverse the trend of falling rates and bond yields

Federal Reserve Policy Dynamics

→ Rate cuts

- Despite high rates the labor market and economy remained resilient in 2023 and 2024
- Initially expected 10 rate cuts in 2025, now only expecting 2

→ Fed's dual mandate

- Balancing price stability and maximum employment

→ Fiscal measures

- Potential increase in economic volatility

→ Yield curve trends

- On the rise post-election as markets measure inflationary impacts of Trump policies

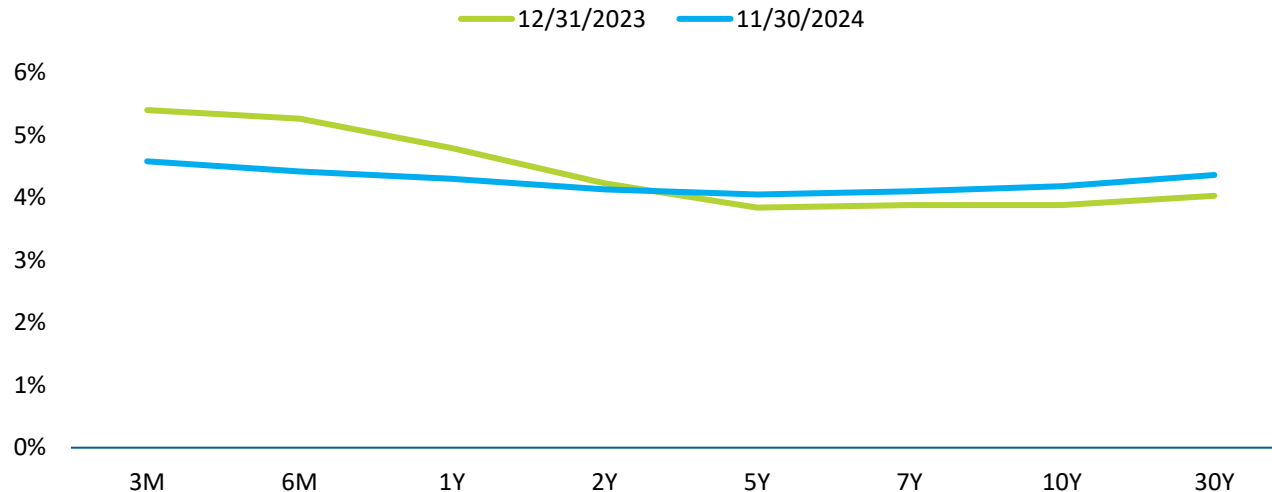
→ Challenges

- Balancing inflation and growth in a volatile environment

Yield Curve and Credit Spreads

- Monitoring yield curve dynamics is important for understanding economic trends
- Fed's current monetary policy includes
 - Slower pace of rate cuts
 - Balanced approach to inflation and price stability
- Terminal rate projections: Higher than initial projections, increasing borrowing costs
- A steepening yield curve: Indicates optimism about economic growth, but also raises concerns about rising inflation; potentially influencing the Federal Reserve's monetary policy
- A flattening or inverting yield curve: Reflects skepticism about growth and concerns about a potential recession

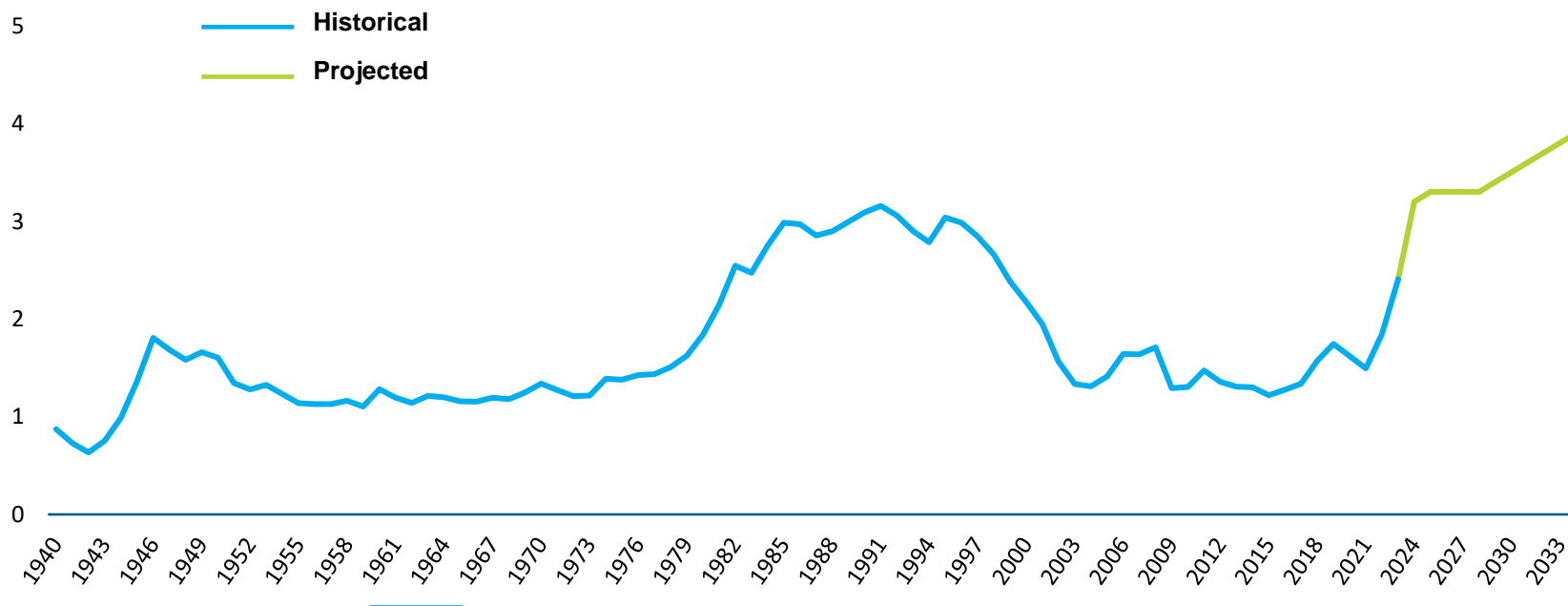
US Yield Curve



US Fiscal Challenges

- Approximately 25% of outstanding debt, amounting to roughly \$9 trillion, is set to mature in 2025
 - Refinancing needs: Substantial efforts required
- The national debt has surged from approximately \$20 trillion in 2017 to around \$36 trillion in 2024
- Interest expense has more than doubled, rising from \$458 billion in 2017 to over \$1 trillion in 2024
- Increased borrowing costs and economic implications have heightened budgetary tensions

Interest Expense



China – Stimulus vs Tensions with the US

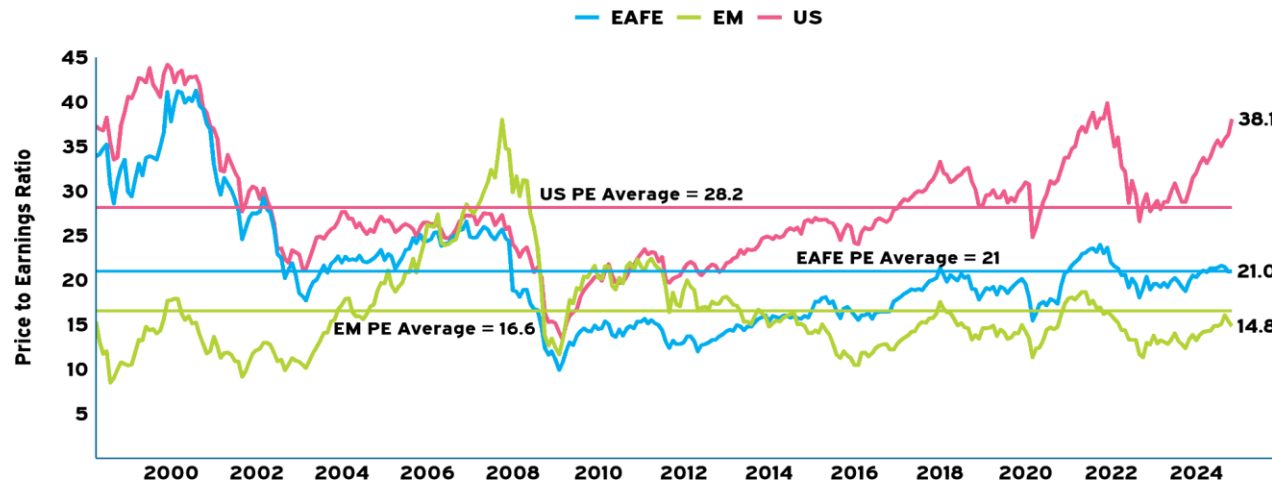
- The ongoing economic challenges include a real estate crisis and weak consumer demand.
- Trade Tensions: Decline in Foreign Direct Investment (FDI) by 29.1% YoY.
- A potential 20% tariff could reduce China's growth by 70 basis points.
- Yuan Depreciation: Mitigates the impact of tariffs, it also risks capital outflows and increases debt servicing costs.
- Monitoring currency policies is crucial for maintaining global financial stability.



US Equities

- Concentration risk: AI-focused technology stocks are driving major indices.
 - There are diversification concerns due to the impact of large-cap stocks on portfolio performance
 - However, the breadth of the market has increased since the election of President Trump
- Elevated valuations: Price-to-earnings ratios above historic averages.
- Corporate tax cuts incentivize stock buybacks, which artificially boost earnings per share (EPS).
- The market is vulnerable to macroeconomic shocks and earnings disappointments.
- Potential opportunities exist for small-cap stocks in a new monetary environment.

Equity Cyclically Adjusted P/E Ratios



US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E Source: Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of November 2024. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

Conclusion

- Trump's Administrative plan for expansion of fossil fuel production, tax cuts, and deregulation may boost corporate margins and short-term growth but risk higher deficit spending, regulatory challenges, and inflation, while restrictive immigration and protectionist trade policies could disrupt supply chains, reduce labor force, elevate consumer prices, and reignite inflation.
- Despite recent rate cuts, the US labor market and economy have remained resilient, while the Fed balances its dual mandate of price stability and maximum employment amidst fiscal measures that may increase economic volatility. Rising yield curve trends reflect market concerns over inflationary impacts of Trump policies, and challenges in balancing inflation and growth within a volatile environment.
- Approximately \$9 trillion, or 25% of outstanding debt, is maturing in the US in 2025, necessitating substantial refinancing efforts. The national debt has increased from \$20 trillion in 2017 to \$36 trillion in 2024. Interest expenses have more than doubled, from \$458 billion in 2017 to over \$1 trillion in 2024, leading to heightened budgetary tensions and significant economic implications.
- China's ongoing real estate crisis and weak consumer demand pose ongoing economic challenges. Trade tensions between the US and China have reduced Foreign Direct Investment by 29.1% YoY, while potential additional US tariffs in combination with yuan depreciation may impact US growth and financial stability.
- The US market faces risks from AI-focused stocks driving indices and elevated P/E ratios. Corporate tax cuts boost EPS artificially, while macroeconomic shocks and diversification concerns persist. Opportunities exist for small caps in a new monetary environment.

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Board Meeting V.C



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MEMORANDUM

DATE: January 6, 2025

TO: OPERS Retirement Board Members

FROM: Craig Hallermann, Actuary
Lai Woo, Senior Financial Analyst

RE: **V. Discussion Items:**
C. 2024 Preliminary Pension Funding Update

Purpose – To provide the Board with a preliminary estimate of the pension funded ratio and the health care solvency period based on the preliminary 2024 investment returns.

Background – In May and September 2025, Gabriel, Roeder, Smith and Company (GRS) will present the results of the 2024 actuarial valuations for the pension and health care plans. These reports will measure the actual asset and liability results for 2024 as of 12/31/24. While the actual results are not available until May/September, staff is providing the Board with an estimated impact on each plan as of 12/31/24 based on the preliminary investment returns. It is important to note that these are preliminary and not final investment returns and, secondarily, that this reflects only one of the many assumptions that impact the final actuarial results.

Using the preliminary investment returns of 8.6% for the pension fund and 10.0% for the health care fund (compared to the assumed rates of 6.9% and 6.0%, respectively), the estimated funded ratio will decline from 84% to 83% and the amortization period is expected to increase from 15 years to 16 years. The 2024 excess investment gain helps offset a portion of the 2023 unrealized loss carryforward of \$5.5 billion. A net unrealized funding asset loss carryforward of \$2.5B as of 12/31/24 remains for the pension plan and will be recognized over the next three years.

The excess investment gain will increase the health care plan's expected solvency period. The health care solvency is expected to increase from 25 years to 27 years.

The attached presentation presents these estimated results assuming all other actuarial assumptions are met and provides an estimated funded ratio and amortization period for the pension plan and solvency period for the health care plan.

Next Steps -- GRS will present the pension actuarial valuation results in May and the health care actuarial valuation results in September.

Pension Funding Update - 2024 Preliminary Investment Results

Craig Hallermann, Actuary

Lai Woo, Senior Financial Analyst



Agenda

1 Overview of 12/31/23 and Historical Results

2 Preliminary 2024 Investment Returns

3 Estimated Funding

4 Summary / Questions

Overview of 12/31/23 Results

- Actual 12/31/23 results
 - Funded ratio: 83.8%
 - UAAL (funding basis): \$20.3B
 - Unrecognized funding asset loss: \$5.5B
 - Amortization years: 15
 - Healthcare solvency years: 25
- Funded ratio remained around 84% for the third consecutive year on a funding (smoothed) asset basis
- Unrecognized funding asset loss of \$9.7B improved to an unrecognized loss of \$5.5B
- Amortization years declined from 16 to 15 years

Historical Pension and Healthcare Results

Dollar in billions

Year	AAL	Funding Value of Assets	UAAL	Funded Ratio	Amortization Years	Market Value of Assets	Unrecognized Asset Gain (Loss)	HC Solvency Years
2023	125.5	105.1	20.3	83.8%	15	99.6	(5.5)	25
2022	122.5	102.9	19.6	84.0%	16	93.2	(9.7)	21
2021	118.5	99.7	18.8	84.1%	16	110.2	10.5	29
2020	113.4	94.0	19.4	82.9%	18	98.9	4.9	25
2019	111.4	88.6	22.8	79.5%	23	91.8	3.2	23/13 ¹
2018	108.7	84.3	24.4	77.5%	27	81.4	(2.9)	11
2017	102.7	83.3	19.4	81.1%	18	87.1	3.8	13

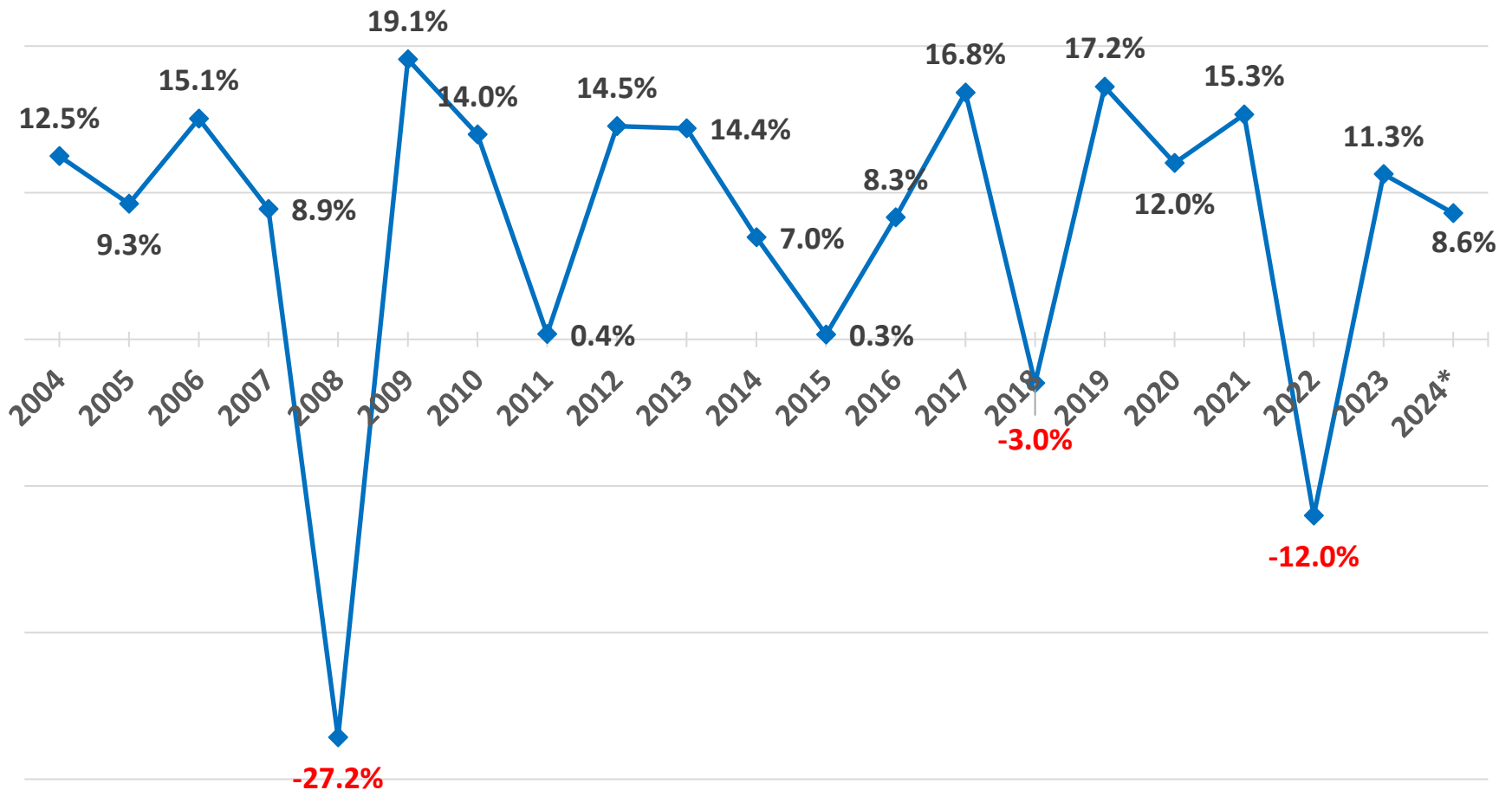
¹ post-HCPP 3.1 / pre-HCPP 3.1

Preliminary 12/31/24 Investment Return

Defined Benefit	8.6%
Health Care	10.0%

Note: Real Estate and Private Equity returns lag by a quarter, so we have yet to receive the 12/31/24 preliminary returns for these two asset categories nor have any assets been reconciled.

Historical Investment Returns



* preliminary

12/31/24 Estimated Funding Impact

	Defined Benefit (\$billions)		
	12/31/24 Estimate		2023 Actual
	8.6%	6.9%	
Assumed 2024 DB return:	8.6%	6.9%	2023 Actual
AAL	\$128.6	\$128.6	\$125.5
Funding Asset Value	\$107.0	\$106.5	\$105.1
UAAL	\$21.6	\$22.1	\$20.3
Unrecognized funding asset gain(loss)	(\$2.5)	(\$3.7)	(\$5.5)
Funded ratio	83.1%	82.8%	83.8%
Amortization years	16	17	15
Health Care solvency years	27 ¹	25 ²	25

¹ Assumed 2024 HC fund return of 10.0%

² Assumed 2024 HC fund return of 6.0%

Summary of Unrecognized Investment Gains/(Losses)

(\$ Billions)	Total	2024	2025	2026	2027
Unrecognized Prior (Loss) as of 12/31/24	(\$5.537)	(\$2.080)	(\$4.239)	\$0.782	\$0.000
2024 Investment Gain	\$1.300	\$0.325	\$0.325	\$0.325	\$0.325
Net (Loss) Recognized in 2024	(\$1.755)	(\$1.755)			
Net Unrecognized (Loss) Carryforward	(\$2.482)		(\$3.914)	\$1.107	\$0.325

Summary

- While 2024 final investment returns are not finalized, the preliminary investment return of 8.6% exceeded the actuarial assumption [6.9%].
- The impact of the 2024 gain offsets a portion of the unrecognized loss carryforward of \$5.5B reducing the future unrecognized loss carryforward to \$2.5B.
- The preliminary results reflect a small decrease in funded ratio from 84% to 83% and an increase in amortization period from 15 years to 16 years.
- Health Care solvency is projected to increase by 2 years to 27 years.
- Actual results will depend on all the final results from the valuation and final investment returns.

Questions?



Board Meeting V.D



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MEMORANDUM

DATE: January 6, 2025

TO: OPERS Retirement Board Members

FROM: Karen Carraher, Executive Director
Craig Hallermann, Actuary

RE: **V. Discussion Items:**
D. Health Care Primer for 2025 Health Care Asset Liability Study

Purpose – The Board discussed the health care asset liability study during the November 2024 Board meeting. Based on the discussion and the fact that most of the current Board members were not Board members during the Health Care Preservation Plans 3.0 and 3.1 (HCPP 3.0 and 3.1), staff felt it would assist the Board to understand some of the issues that drove the decisions comprising HCPP 3.0 and 3.1. The attached presentation is a brief primer on HCPP 3.0 and 3.1 and the health care funding strategy.

Next Steps -- The Board will discuss the asset liability study for the health care fund.

Health Care Fund Primer

January 15, 2025



Health Care Fund

Purpose:

- Provide the Board with appropriate background on prior health care funding decisions prior to the finalization of the health care fund asset liability study
- Provide additional context on the nature of the past decisions and the differences between pension funding decisions and health care funding decisions

Health Care Program

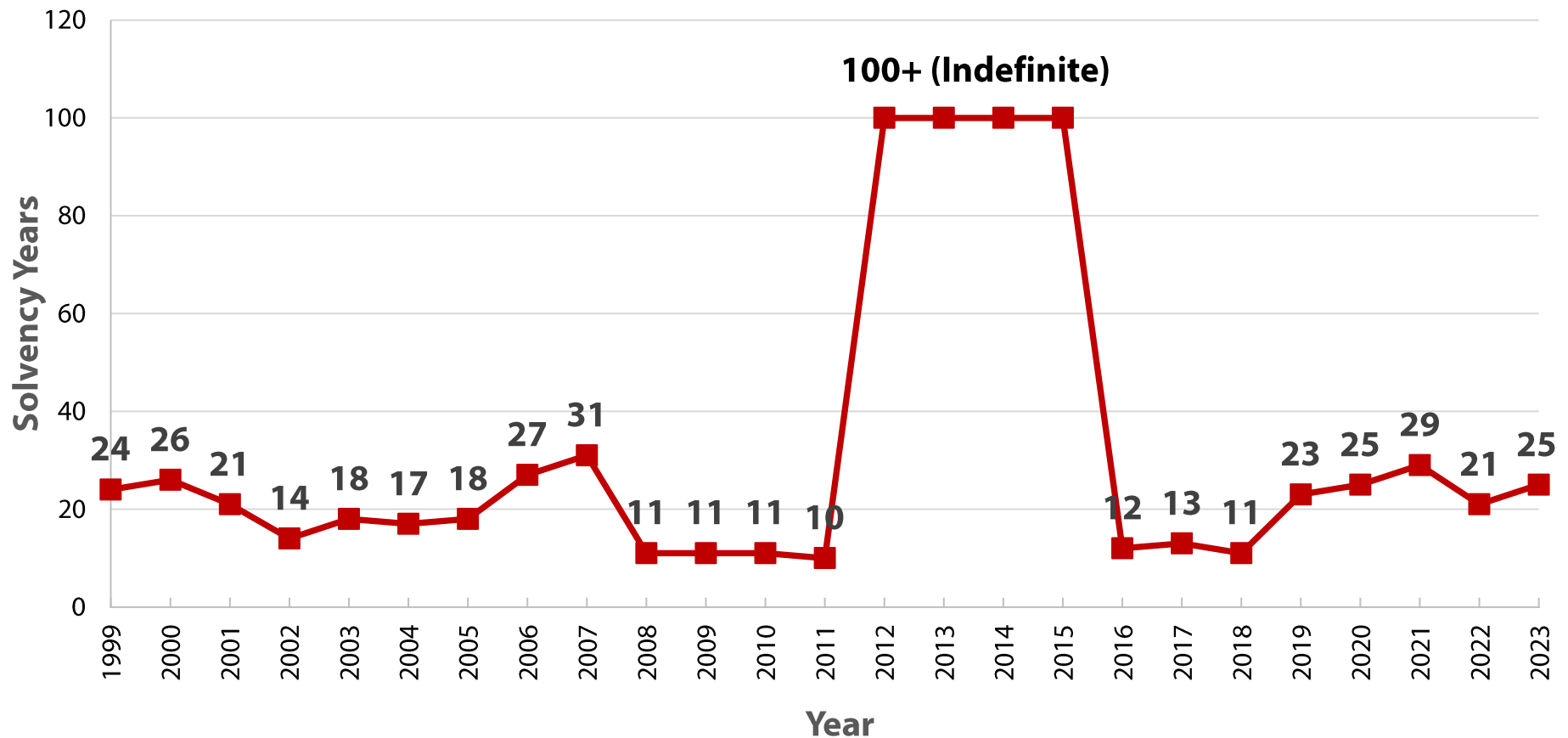
- OPERS is not required to provide health care coverage by law, the program is discretionary, but we recognize the important role this plays as part of a secure retirement.
- The health care fund is \$13.4B as of 12/31/24, with about \$600M in annual expenses.
- The health care program has ~135,000 participants, of which 80% are Medicare.

Health Care Program

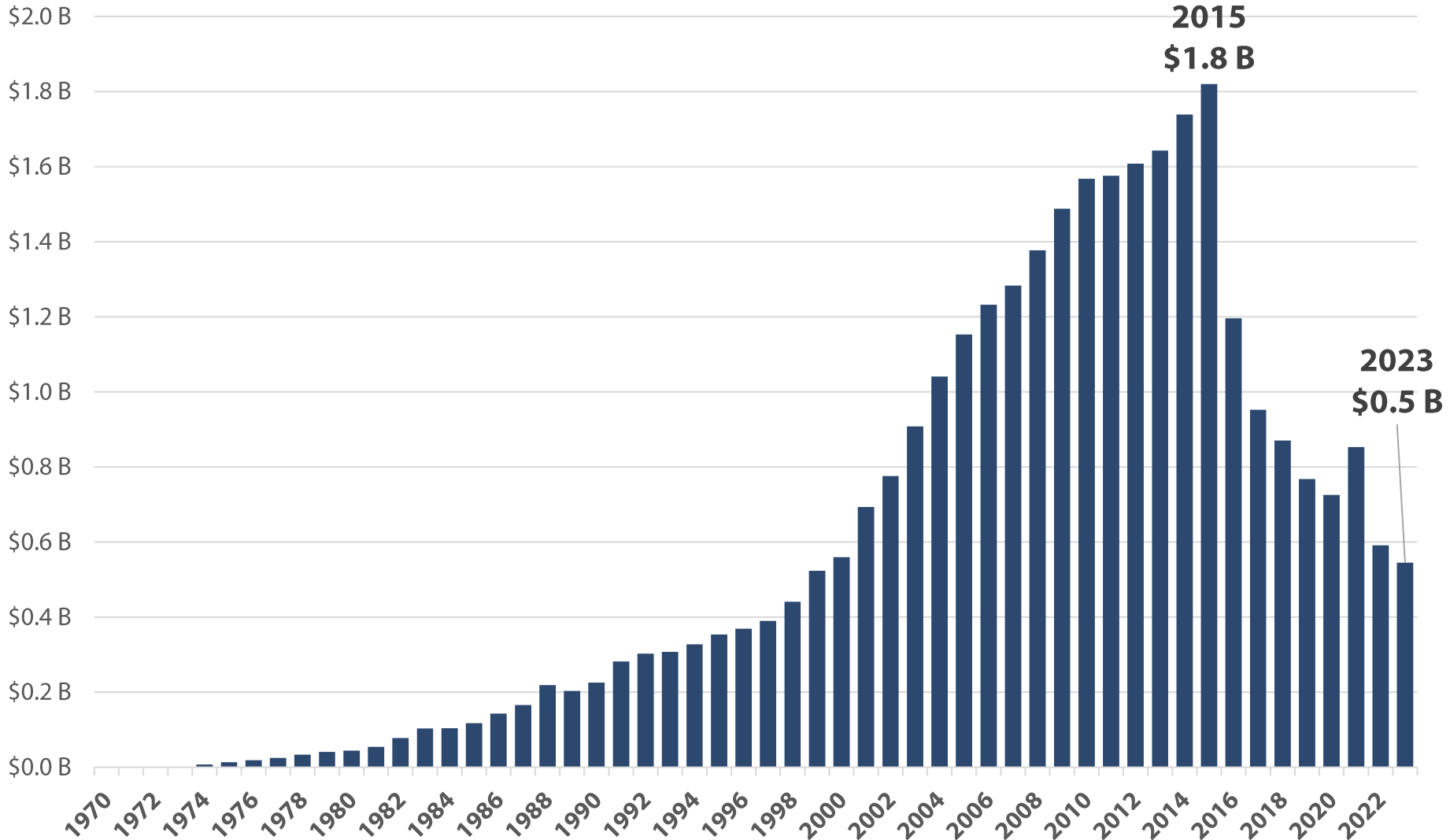
- Since OPERS began providing health care in 1974, the costs of health care increased substantially more than anticipated.
- Over the years, OPERS initiated many changes focused on reducing the health care costs.
- Health Care Preservation Plan 3.0 or HCPP 3.0 (and the subsequent additional changes in HCPP 3.1) fundamentally changed the program from an insurance provided model to a flat base allowance model.
- HCPP 3.0 involved more than 2 years of special Board meetings and many stakeholder meetings to develop the final product.

HC Fund Solvency History

Estimated Years of Solvency (As of December 31)



Health Care Payments



Health Care Goal of HCPP 3.0

Self-funding rate

(What future funding rate, as a percentage of payroll, is needed to maintain today's program indefinitely?)

9.3%

Assumptions and other inputs used to determine this self-funding rate are shown in the Appendix.

Note: The ARC is 14.55%

Available funding (assuming passage of APD)

(What future funding rate, as a percentage of payroll, is anticipated to be available to fund health care?)

4.0%

The current contribution schedule includes a decrease in health care contributions to zero by 2014. The Board intends to maintain the health care contribution rate at 4.0% of payroll for all future years, subject to legislative approval of the Board's recommended pension changes.

Note: OPERS has been unable to fund health care since 2018




HCPP 3.0 Goal:

The Board's current objective is to consider changes to OPERS health care that will more closely balance the future funding needed (self-funding rate) with the health care funding actually anticipated to be available in the future (4.0% of payroll, assuming passage of APD proposed pension legislation).

Health Care Program

- The keys to the success of the program included:
 - Funding the program based on conservative assumptions of interest earnings
 - Use the differential between actual earnings and funding assumptions to fund a stabilization program which could be used when health care contributions could not be made or investment earnings were less than the conservative assumptions
 - Establish a link between the amount of health care payment an eligible member would receive and their age at retirement and years of service
 - Assist in developing reasonable member payment expectations

Health Care Funding Framework

 <p>Investments <i>(6.0% target return)</i></p>	<p>OPERS health care investment funding goal has been a target of 6.0% investment return (based on current asset allocation policies and actuarial assumptions)</p>
 <p>- Health Care <i>(4.0% expected return)</i></p>	<p>OPERS Health Care plan design structure based on a lesser investment return (4.0%)</p>
 <p>= Health Care Stabilization Fund <i>(2.0% expected return)</i></p>	<p>Investment return in excess of 4.0% is placed in a reserve fund to build a buffer against future volatility. Funds used to stabilize health care subsidies in years of poor returns. When sufficiently large, can also be used to enhance the health care program.</p>

- **Funding Framework puts the HC Fund on path to funding sustainability**

- 4% Expected Return
- 2% Contribution (OPERS has been unable to make this contribution since 2018)
- Flexibility in contribution based on plan dynamics

- **Assets should be invested in line with long-term target**

- Target 6.0% Expected Return
- Maximize efficiency of investable assets

Impact of HCPP 3.0 and 3.1 Changes

The Health Care Program changes had the following positive impacts:

- ✓ Savings of \$18.2B in future health care liabilities
- ✓ An annual spend reduction of \$1.1B
- ✓ A significant increase in plan solvency and funded ratio.

	Before	After HCPP 3.0 and 3.1	Impact
Annual Health Care Spend	\$1.5 Billion	\$556 Million	Reduction of \$1.0 Billion
Self-Funding Rate	16%	2%	Reduction of 14%
Funded Ratio	39%	115%	Increase of 106%
Solvency Period	13 Years	29 Years	Increase of 16 years

Health Care Plan

Investment Policy

- Maximize return based on risk
- Minimize risk
- Maximum likelihood assumptions

Funding Policy

- Balances investment return, contributions and base allowance levels
- Plan sustainability and solvency are a priority
- Conservative assumptions

Health Care Funding Policy

Why assume conservative 4.0% investment return to determine Solvency Period?

- The greatest risk to funding health care is the funding status of the pension plan
- Health care contributions from the employer contributions cannot be made unless the pension plan is well funded
- The health care fund cannot sustain poor investment returns for as long as the pension plan can
- The health care funding level drives the amount of health care payments members can receive
- The Health Care Stabilization Fund (if available) reduces the impact of poor investment returns and/or no health care funding

Health Care Funding Policy (cont.)

Why assume conservative 4.0% investment return to determine Solvency Period?

- Excess returns above 4% can fund base allowance increases if needed to keep up with health care inflation
- Provides funding flexibility given there is no dedicated funding source
- Higher likelihood of outcomes meeting or exceeding the reported Solvency Period

Questions/Considerations

- How will any proposed asset allocation do in poor investment markets?
- Does the proposed asset allocation maintain our liquidity needs?
- What should have more consideration...returns in down markets or transition costs?
- Are we still willing to leave potential investment return on the table to protect the health care portfolio base?
- If we take more risk and the health care portfolio shrinks, are we willing to make further health care program changes?

Questions?



Board Meeting V.E



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MEMORANDUM

DATE: January 15, 2025

TO: OPERS Retirement Board Members

FROM: Paul Greff, Chief Investment Officer

RE: **V. Discussion Items:**
E. Asset Liability Study – Health Care Benefit Fund

Action requested: _____ moved, _____
seconded, a motion to approve the recommended target asset allocation mix presented
by Meketa and Staff's preference.

Purpose

This memo outlines the two asset allocation mixes recommended by our Board investment consultant, Meketa, for the Health Care (HC) Fund. It includes the pros and cons of each mix, as well as the preferred option of Meketa and Investment staff (Staff).

Background

The OPERS Retirement Board (Board) is responsible for annually establishing and reviewing the asset allocation targets and ranges for the HC Fund assets. Additionally, every three to five years, or when significant changes occur—such as plan design modifications or substantial shifts in underlying assumptions—the Board conducts a comprehensive strategic asset allocation review. This review process includes an asset-liability study that examines future health care benefits, funding requirements, the appropriateness of the actuarial interest rate assumption, and the prospective funded status of future benefits.

Asset Liability Study

The Board selected Meketa as its new investment consultant, replacing NEPC effective May 1, 2024. Meketa has introduced a functional framework design to OPERS and defined the role of each asset class in the HC Fund into that framework as shown in the chart below: At the November meeting, the Board selected the final asset mix for the Defined Benefit (DB) Fund. Following the conclusion of the DB Fund discussions, Meketa initiated a discussion on the HC Fund asset allocation.

The table below illustrates the final two asset mixes proposed by Meketa and Staff to the Board with their associated risk and return metrics.

Proposed Asset Allocation Mixes – Options A & B

	Current Policy	Option A	Option B
US Equity *	31%	28%	22%
Equity ex-US	26%	26%	22%
Core Fixed Income	18%	12%	18%
Public Credit	12%	14%	18%
Inflation Assets	10%	7%	6%
Risk Parity (10% vol)	3%	4%	4%
Risk Mitigating	0%	9%	10%
Total	100%	100%	100%
Expected Return (20 Years)	7.6%	7.6%	7.2%
Standard Deviation (1st)	10.8%	10.5%	8.9%
Sharpe Ratio	0.47	0.48	0.53
Expectation - Funded Status (2033)	-4.1%	-4.7%	-7.2%
Risk - Funded Status (2025)	-16.4%	-15.7%	-13.8%

* Includes REITs

Comparison of Options A & B

Both Option A and Option B offer either a higher or similar long-term return with lower risk compared to the current policy allocation. However, there are notable differences between these two options. For instance, Option A allocates more to Public Equity, whereas Option B dedicates more capital to Fixed Income. Below is a chart summarizing other important key metrics for Options A and Option B.

	Option A	Option B
Expected Transition Turnover	Lower	Higher
Transition Costs	Lower	Higher
Total Fees	Lower	Higher
Source for Funding Risk Mitigation Strategies (RMS)	Fixed Income	Public Equity

Recommendation

Compared to the current HC Fund policy mix, both Option A and Option B reduce the program's volatility and improve its efficiency, as measured by the Sharpe ratio. Option A leans more towards growth assets, while Option B focuses more on income generation and risk mitigation. Meketa and Staff believe both A and B are preferable alternatives to the current asset allocation. However, both Staff and Meketa recommend Option A as the new long-term asset allocation.

MEMORANDUM

TO: OPERS Retirement Board
FROM: Meketa Investment Group (Meketa)
DATE: January 15, 2025
RE: Asset Liability Study – HC Trust Plan (Portfolio Selection)

For the last several board meetings, Meketa has been working on an asset liability study for the OPERS HC Trust Portfolio. This study has evaluated a multitude of factors through various presentations. As a result of these discussions, the board has narrowed the potential portfolios down to two (options A and B).

When selecting a portfolio there are a multitude of factors for the Board to consider. Picking a portfolio that balances return and downside risk is possible, but it will require changes to the current policy portfolio. Some of these changes are a departure from the path OPERS is currently on (the addition of RMS). In addition, viewing these options under a functional framework allows for a simplified discussion of the portfolio's allocations.

Meketa and OPERS staff believe both options A and B are preferable alternatives to the current long-term asset allocation policy. However, Meketa and OPERS staff prefer Option A as the new long-term asset allocation targets.

Following the selection of a portfolio, Meketa will work with staff to develop an implementation plan to move the portfolio into its new target allocations.

Ohio Public Employees Retirement System

January 2025

Retiree Health Benefits:
Asset-Liability Study Part II



Month

Asset-Liability Study Agenda Items

November 2024

- Baseline Model Output
- Optimization Process
- Board Feedback

January 2025

- React to Board Feedback
- Portfolio Selection



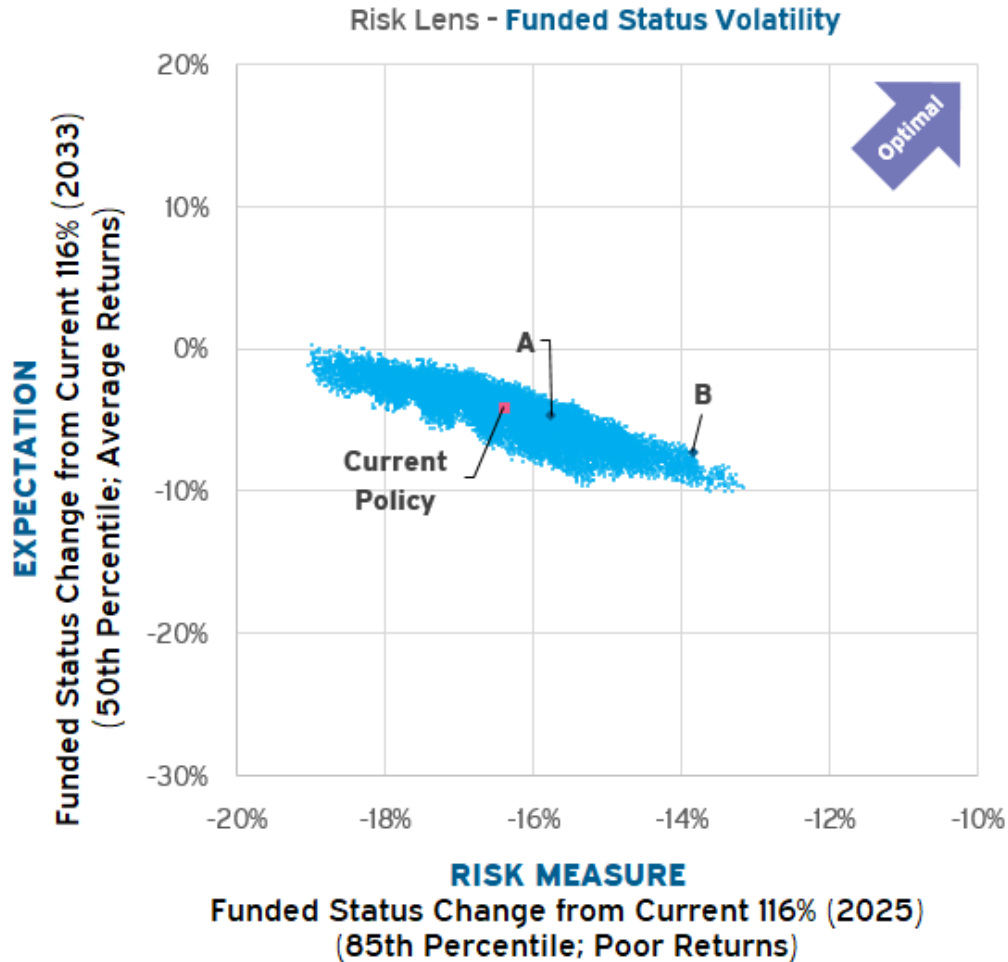
Project Goal:

To review and possibly modify OPERS's health care trust strategic asset allocation targets, reflecting the Board's unique definition, tolerance for, and beliefs about investment risk.

Retiree Health Benefits - Asset Liability Study



- During the November meeting, Meketa presented the Board with a baseline expectation for the funded status of the health plan.
- Two sample allocations were discussed – one with additional return and risk mitigation qualities and the other focused solely on funded status volatility reduction.
- Feedback received from the Board centered around seeing allocations that further reduced funded status volatility given the health assets are not forecasted to receive contributions for the foreseeable future.



Notes

- Alternative asset allocations (Option A to B) are identified as having “efficient” funded status outcomes given the constraints (shown in the Appendix).
- Option A is expected to reduce volatility slightly while keeping similar long-term growth vs Current Policy.
- Option B is expected to reduce growth and further reduce volatility vs Current Policy.



Ohio Public Employees Retirement System

Current Policy and Go-Forward Policy Options – Functional Framework

			Current Policy	Option A	Option B
Broad Growth	Traditional Growth	U.S. Equity, Int'l Equity, REITS	57%	54%	44%
	Stabilized Growth	Risk Parity, Public Credit,	15%	18%	22%
Diversifying Strategies	Principal Protection	Core Fixed Income	18%	12%	18%
	Inflation	TIPS, Commodities	10%	7%	6%
	Risk Mitigating Strategies	Treasuries, Trend, ARP	0%	9%	10%
Total			100%	100%	100%
Expected Return (20 Years)			7.6%	7.6%	7.2%
Standard Deviation (1st)			10.8%	10.5%	8.9%
Sharpe Ratio			0.47	0.48	0.53
Expectation - Funded Status (2033)			-4.1%	-4.7%	-7.2%
Risk - Funded Status (2025)			-16.4%	-15.7%	-13.8%

Comparison to Current Policy:

Option A: Slight decrease in funded status growth and volatility. Increase in RMS, funded through Principal Protection and Inflation. Slight shift from Traditional to Stabilized Growth.

Option B: Larger decrease in growth and volatility. Increase in RMS and Stabilized Growth, funded through Inflation and Traditional Growth.



Ohio Public Employees Retirement System

Current Policy and Go-Forward Policy Options – Individual Asset Classes

	Current Policy	Option A	Option B
US Equity *	31%	28%	22%
Equity ex-US	26%	26%	22%
Core Fixed Income	18%	12%	18%
Public Credit	12%	14%	18%
Inflation Assets	10%	7%	6%
Risk Parity (10% vol)	3%	4%	4%
Risk Mitigating	0%	9%	10%
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Risk - Funded Status (2025)	-16.4%	-15.7%	-13.8%

* Includes REITS



Ohio Public Employees Retirement System

Current Policy and Go-Forward Policy Options – Individual Asset Classes

	Current Policy	Option A	Option B
US Equity*	31.00%	28.00%	22.00%
Equity ex-US	26.00%	26.00%	22.00%
Core Fixed Income	16.00%	10.00%	16.00%
Treasuries	2.00%	2.00%	2.00%
Public Credit	12.00%	14.00%	18.00%
High Yield	5.00%	6.00%	7.50%
EMD	1.00%	1.00%	1.50%
Securitized Debt	3.00%	4.00%	4.50%
IG Corporates	3.00%	3.00%	4.50%
Inflation Assets	10.00%	7.00%	6.00%
TIPS	7.00%	4.00%	3.00%
Commodities	3.00%	2.00%	2.00%
Gold	0.00%	1.00%	1.00%
Risk Parity (10% vol)	3.00%	4.00%	4.00%
Risk Mitigating	0.00%	9.00%	10.00%
Long Treasuries	0.00%	3.00%	3.34%
Trend Following	0.00%	3.00%	3.33%
Alternative Risk Premia	0.00%	3.00%	3.33%
Total	100%	100%	100%

* Includes REITS



Negative Scenario*	2024 Policy	Option A	Option B
Post-COVID Rate Hikes(Jan 2022-Oct 2023)	-14.11%	-12.61%	-12.33%
COVID-19 Market Shock (Feb 2020-Mar 2020)	<u>-22.50%</u>	<u>-21.49%</u>	<u>-18.58%</u>
Taper Tantrum (May - Aug 2013)	-3.08%	-2.67%	-2.73%
Global Financial Crisis (Oct 2007 - Mar 2009)	<u>-29.63%</u>	<u>-26.99%</u>	<u>-21.77%</u>
Popping of the TMT Bubble (Apr 2000 - Sep 2002)	-10.73%	-12.26%	-7.42%
LTCM (Jul - Aug 1998)	-8.91%	-9.04%	-7.72%
Asian Financial Crisis (Aug 97 - Jan 98)	0.73%	0.10%	0.54%
Rate spike (1994 Calendar Year)	0.77%	0.81%	0.26%
Early 1990s Recession (Jun - Oct 1990)	-5.80%	-5.77%	-4.47%
Crash of 1987 (Sep - Nov 1987)	-12.35%	-11.93%	-9.73%
Strong dollar (Jan 1981 - Sep 1982)	3.11%	3.27%	6.52%
Volcker Recession (Jan - Mar 1980)	-6.32%	-4.93%	-5.08%
Stagflation (Jan 1973 - Sep 1974)	-16.47%	-14.16%	-10.43%

→ Option A and B both outperformed the current Policy in each of the negative scenarios above

→ Meaningful outperformance of A and B in the GFC and COVID shock

* Policy benchmark Only. Does not include active management and assumes rebalancing to target



Positive Scenario*	2024 Policy	Option A	Option B
Covid Recovery (Apr 2020-Dec 2021)	48.99%	46.48%	39.79%
Global Financial Crisis Recovery (Mar 2009 - Nov 2009)	43.32%	41.29%	36.70%
Best of Great Moderation (Apr 2003 - Feb 2004)	31.83%	31.95%	28.19%
Peak of the TMT Bubble (Oct 1998 - Mar 2000)	30.28%	30.12%	26.19%
Plummeting Dollar (Jan 1986 - Aug 1987)	62.89%	65.40%	58.46%
Volcker Recovery (Aug 1982 - Apr 1983)	37.25%	37.23%	35.35%
Bretton Wood Recovery (Oct 1974 - Jun 1975)	29.04%	28.93%	25.91%

→ Option A and B both slightly underperformed the Current Policy in market rebounds

* Policy benchmark Only. Does not include active management and assumes rebalancing to target



Negative Stress	2024 Policy	Option A	Option B
10-year Treasury Bond rates rise 100 bps	2.23%	2.48%	1.72%
10-year Treasury Bond rates rise 200 bps	-4.09%	-3.39%	-3.80%
10-year Treasury Bond rates rise 300 bps	-3.64%	-2.99%	-3.94%
Baa Spreads widen by 50 bps, High Yield by 200 bps	0.13%	0.35%	0.77%
Baa Spreads widen by 300 bps, High Yield by 1000 bps	-21.87%	-20.48%	-17.79%
Trade Weighted Dollar gains 10%	-4.53%	-4.57%	-3.95%
Trade Weighted Dollar gains 20%	-2.05%	-1.54%	-0.87%
U.S. Equities decline 10%	-5.24%	-5.00%	-4.11%
U.S. Equities decline 25%	-16.45%	-15.44%	-13.19%
U.S. Equities decline 40%	-27.74%	-25.56%	-21.87%

→ Option A and B both outperformed the Current Policy in U.S. equity market declines

* Policy benchmark Only. Does not include active management and assumes rebalancing to target



Positive Stress	2024 Policy	Option A	Option B
10-year Treasury Bond rates drop 100 bps	2.57%	2.5%	2.73%
10-year Treasury Bond rates drop 200 bps	11.69%	11.35%	10.87%
10-year Treasury Bond rates drop 300 bps	16.50%	16.02%	15.48%
Baa Spreads narrow by 30bps, High Yield by 100 bps	6.05%	5.87%	5.22%
Baa Spreads narrow by 100bps, High Yield by 300 bps	14.28%	13.84%	12.81%
Trade Weighted Dollar drops 10%	7.71%	7.91%	7.38%
Trade Weighted Dollar drops 20%	20.32%	20.53%	18.77%
U.S. Equities rise 10%	6.23%	6.13%	5.50%
U.S. Equities rise 30%	17.90%	17.51%	15.40%

→ In positive stress markets both Option A and B perform well in various scenarios.

* Policy benchmark Only. Does not include active management and assumes rebalancing to target



Conclusions and Recommendations

- There are a multitude of factors for the Board to consider.
- Constructing a portfolio that balances return, and downside risk is possible, but it will require changes to the current policy portfolio.
 - Some of these changes are a departure from the path OPERS is currently on (the addition of RMS).
 - All of the portfolio options are structurally more efficient than the current policy.

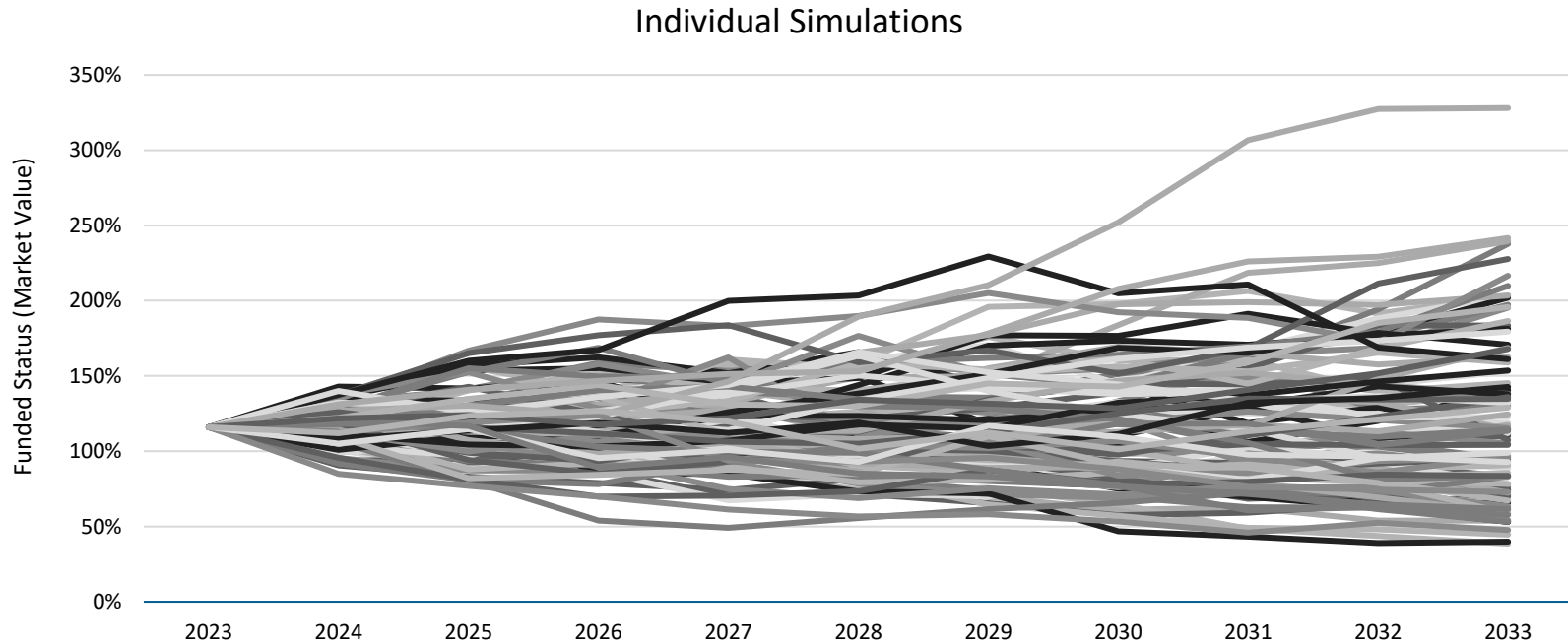
Recommendations: Meketa and OPERS staff believe both options A and B are preferable alternatives to the current long-term asset allocation policy. However, Meketa and OPERS staff prefer Option A as the new long-term asset allocation targets.

- Following the selection of a portfolio, Meketa will work with staff to develop an implementation plan to move the portfolio into its new target allocations.

Appendix



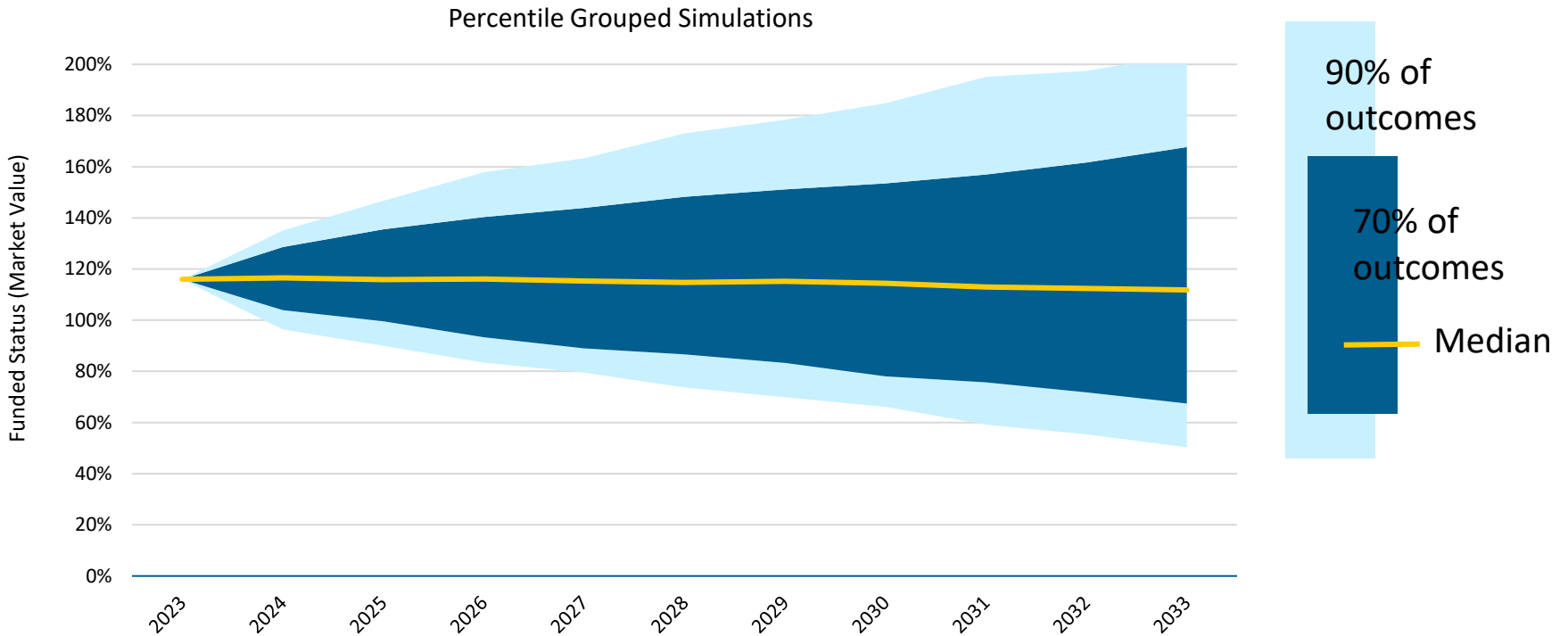
- Capital Market Assumptions: Meketa 2024 Capital Market Expectations – 10 & 20-year assumptions.
- Assets: Market value of assets of \$12.5B as of December 31, 2023.
- Asset Rebalancing: annual
- Funding policy: No employer contributions assumed.
- Plan Provisions and Additional Assumptions: Additional details regarding provisions and assumptions are documented in the December 31, 2023 actuarial valuation report issued by GRS.



→ The funded status is simulated in a variety of market environments.

→ Analysis reflects the current:

- Asset allocation
- Projected benefit payments
- Funding policy (statutory)
- Plan provisions
- Actuarial assumptions
- Meketa 2024 Capital Market Assumptions

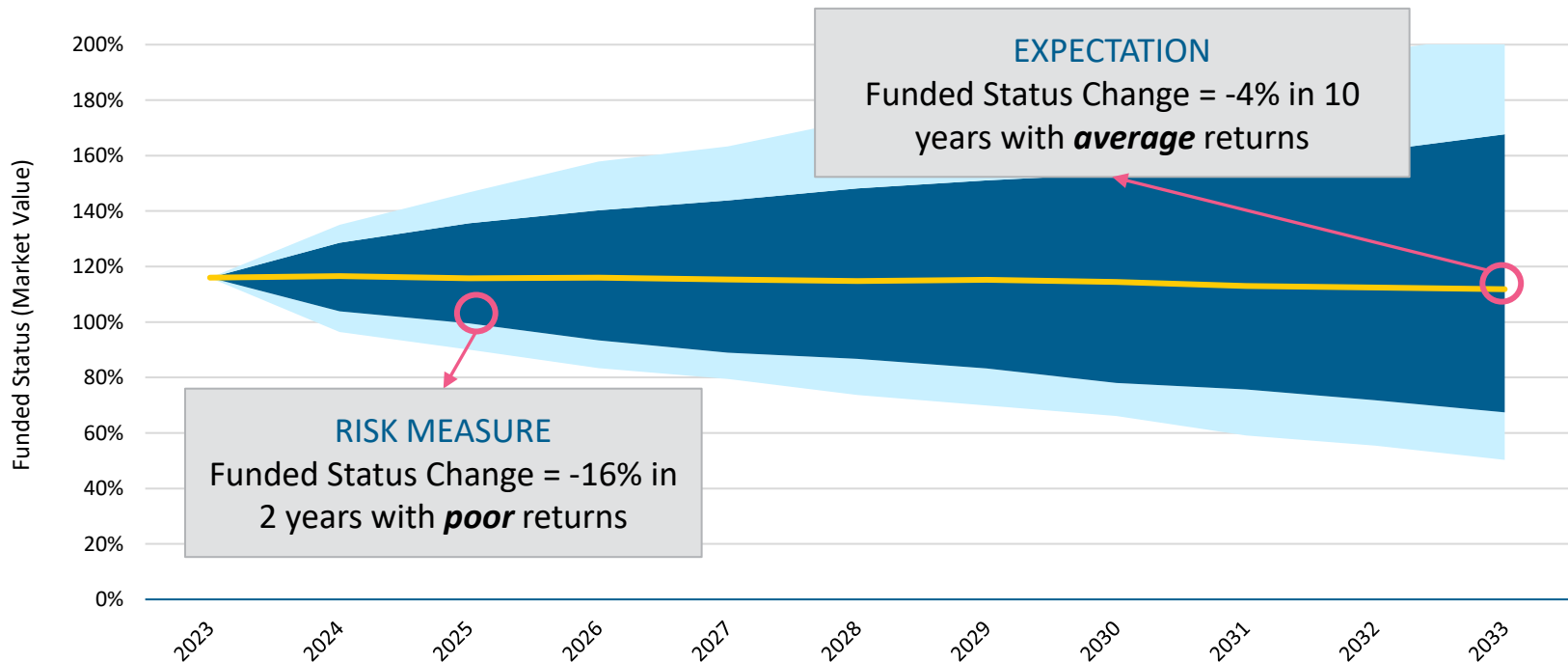


- Simulations are summarized into percentiles, providing a quantitative analysis of enterprise risk, given the current asset allocation.
- As an example, the median (50th Percentile) Funded Status in 2033 is 112% -> there is a 50% probability the Funded Status will be greater than 112% and 50% probability it will be less than 112%.



→ Key observations are determined during objective setting discussion and analyzed in a “Expectation/Risk Measure” framework.

- **Expectation** – Outcome where all the underlying assumptions prove to be accurate over the long-term (Example: 50th percentile over a 10-year time horizon).
- **Risk Measure** – Outcome with a lower probability (Ex: 85th percentile) and detrimental impact, especially when that outcome occurs in the short-term (Ex: 2-year time horizon).





How does Meketa optimize the asset allocation?

1 – Plot the Baseline

Plot the primary expectation and risk measure for the asset allocation in the Investment Policy Statement

2 – Create Constraints

Asset classes are constrained to a minimum and maximum allocation to prevent impractical allocation recommendations

3 – Compare Alternatives

Alternative asset allocations will be optimized according to the Board's preferred risk measures.

4 – Produce Samples

Meketa will provide samples of asset allocations that reflect the feedback received from the Board with regards to growth expectations and tolerance for volatility.

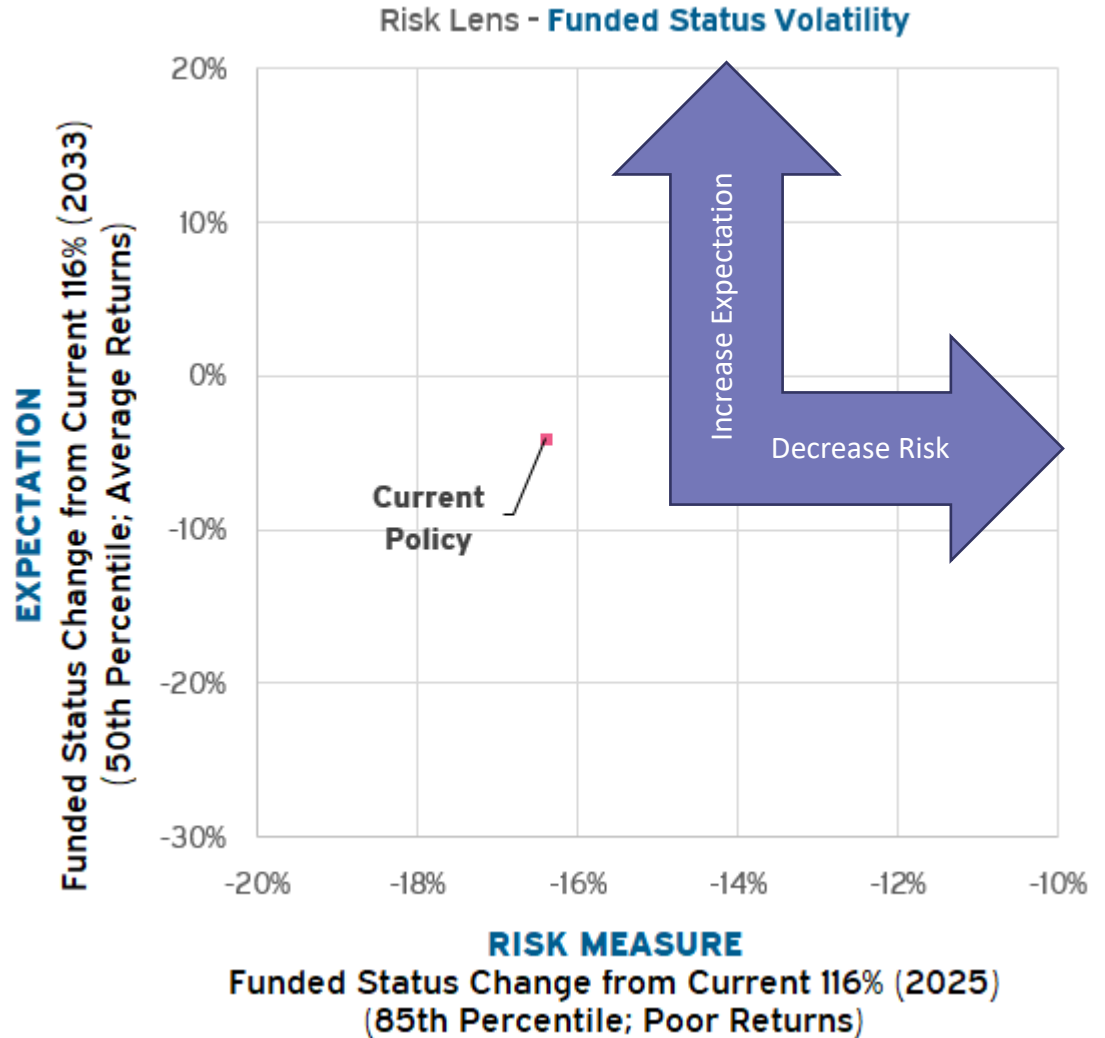
5 – Analyze Additional Risks

Repeat the process for additional risk measures that are important to the Board's decision making



Notes

- The goal of Optimization is to align the projected health of the retiree medical benefits plan to match the objectives and risk tolerance of the Board.
- Funded Status as of 12/31/2023 = 116%





- The constraints below were developed to provide a spectrum of expectation and risk measure outcomes.
- The health plan doesn't currently have illiquid assets and, therefore, no allocations to illiquids were modeled.

High Level	Mid Level Class	Strategic Class	Current Policy	Min Constraint	Max Constraint
Broad Growth	Aggressive Growth	Private Equity	0%	0%	0%
		Non-Core Private Real Estate	0%	0%	0%
	Traditional Growth	US Equity	26%	20%	30%
		Non-US Equity	26%	20%	30%
		REITS	5%	0%	8%
	Stabilized Growth	Core Real Estate	0%	0%	0%
		Risk Parity (10% vol)	3%	0%	6%
Private Credit		0%	0%	0%	
Public Credit		12%	6%	18%	
Diversifying Strategies	Principal Protection	Core Fixed Income	18%	10%	22%
	Inflation	TIPS, Commodities	10%	0%	12%
	Risk Mitigating Strategies	Trend Following, Alternative Risk Premia, Long Treasuries	0%	0%	10%



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MEMORANDUM

DATE: January 15, 2025 - **REVISED**
TO: OPERS Retirement Board Members
FROM: Paul Greff, Chief Investment Officer
RE: **Asset Liability Study – Health Care Benefit Fund**

Action requested: _____ moved, _____
seconded, a motion to approve the recommended target asset allocation mix presented
by Meketa and Staff's preference.

Purpose

This memo outlines the asset allocation mixes recommended by our Board investment consultant, Meketa, and OPERS Staff (Staff) for the Health Care (HC) Fund.

Background

The OPERS Retirement Board (Board) is responsible for annually establishing and reviewing the asset allocation targets and ranges for the HC Fund assets. Additionally, every three to five years, or when significant changes occur—such as plan design modifications or substantial shifts in underlying assumptions—the Board conducts a comprehensive strategic asset allocation review. This review process includes an asset-liability study that examines future health care benefits, funding requirements, the appropriateness of the actuarial interest rate assumption, and the prospective funded status of future benefits.

Asset Liability Study

The Board selected Meketa as its new investment consultant, replacing NEPC effective May 1, 2024. Meketa has introduced a functional framework design to OPERS and defined the role of each asset class in the HC Fund into that framework as shown in the chart below: At the November meeting, the Board selected the final asset mix for the Defined Benefit (DB) Fund. Following the conclusion of the DB Fund discussions, Meketa initiated a discussion on the HC Fund asset allocation.

The table below illustrates the final three asset mixes proposed by Meketa and Staff to the Board with their associated risk and return metrics.

Proposed Asset Allocation Mixes

	Current Policy	Option A	Option B	Option C - New
US Equity *	31%	28%	22%	24%
Equity ex-US	26%	26%	22%	23%
Core Fixed Income	18%	12%	18%	15%
Public Credit	12%	14%	18%	16%
Inflation Assets	10%	7%	6%	7%
Risk Parity (10% vol)	3%	4%	4%	3%
Risk Mitigating	0%	9%	10%	10%
Total	100%	100%	100%	100%
Expected Return (20 Years)	7.6%	7.6%	7.2%	7.30%
Standard Deviation (1st)	10.8%	10.5%	8.9%	10.0%
Sharpe Ratio	0.47	0.48	0.53	0.48
Expectation - Funded Status (2033)	-4.1%	-4.7%	-7.2%	-6.9%
Risk - Funded Status (2025)	-16.4%	-15.7%	-13.8%	-14.1%

* Includes REITs

Comparison of Options

All three Options (A, B and C) offer either a higher or similar long-term risk adjusted return compared to the current policy allocation. However, there are notable differences between the three options. For instance, Option A allocates more to Public Equity, whereas Options B and C dedicate more capital to Fixed Income and RMS. Below is a chart summarizing other important key metrics for three proposed asset mixes.

	Option A	Option B	Option C - New
Expected Transition Turnover	Low	High	Medium
Transition Costs	Low	High	Medium
Total Fees	Low	High	Medium
Source for Funding Risk Mitigation Strategies (RMS)	Fixed Income	Public Equity	Combination of Public Equity & Fixed Income

Recommendation

Compared to the current HC Fund policy mix, all three Options (A, B and C) reduce the program's volatility and improve its efficiency, as measured by the Sharpe ratio. Option A leans more towards growth assets, while Options B and C focus more on income generation and risk mitigation. Meketa and Staff believe all options are preferable alternatives to the current HC asset allocation.

MEMORANDUM

TO: OPERS Board of Retirement
FROM: Meketa Investment Group (Meketa)
DATE: January 15, 2025
RE: Asset Liability Study – HC Trust Plan (Portfolio Selection)

For the last several board meetings, Meketa has been working on an asset liability study for the OPERS HC Trust Portfolio. This study has evaluated a multitude of factors through various presentations. As a result of these discussions, the board has narrowed the potential portfolios down to three (options A, B and C).

When selecting a portfolio there are a multitude of factors for the Board to consider. Picking a portfolio that balances return and downside risk is possible, but it will require changes to the current policy portfolio. Some of these changes are a departure from the path OPERS is currently on (the addition of RMS). In addition, viewing these options under a functional framework allows for a simplified discussion of the portfolio's allocations.

Meketa and OPERS staff believe all options A, B, and C are preferable alternatives to the current long-term asset allocation policy. Meketa and OPERS staff would prefer one of these new options as the new long-term asset allocation targets.

Following the selection of a portfolio, Meketa will work with staff to develop an implementation plan to move the portfolio into its new target allocations.



Ohio Public Employees Retirement System

Current Policy and Go-Forward Policy Options – Individual Asset Classes

	Current Policy	Option A	Option B	Option C - New
US Equity *	31%	28%	22%	24%
Equity ex-US	26%	26%	22%	23%
Core Fixed Income	18%	12%	18%	15%
Public Credit	12%	14%	18%	16%
Inflation Assets	10%	7%	6%	7%
Risk Parity (10% vol)	3%	4%	4%	3%
Risk Mitigating	0%	9%	10%	10%
Total	100%	100%	100%	100%
Expected Return (20 Years)	7.6%	7.6%	7.2%	7.30%
Standard Deviation (1st)	10.8%	10.5%	8.9%	10.0%
Sharpe Ratio	0.47	0.48	0.53	0.48
Expectation - Funded Status (2033)	-4.1%	-4.7%	-7.2%	-6.9%
Risk - Funded Status (2025)	-16.4%	-15.7%	-13.8%	-14.1%

* Includes REITS



Ohio Public Employees Retirement System

Current Policy and Go-Forward Policy Options – Individual Asset Classes

	Current Policy	Option A	Option B	Option C - New
US Equity*	31.00%	28.00%	22.00%	24.00%
Equity ex-US	26.00%	26.00%	22.00%	23.00%
Core Fixed Income	16.00%	10.00%	16.00%	15.00%
Treasuries	2.00%	2.00%	2.00%	2.00%
Public Credit	12.00%	14.00%	18.00%	16.00%
High Yield	5.00%	6.00%	7.50%	7.00%
EMD	1.00%	1.00%	1.50%	1.50%
Securitized Debt	3.00%	4.00%	4.50%	4.00%
IG Corporates	3.00%	3.00%	4.50%	3.50%
Inflation Assets	10.00%	7.00%	6.00%	7.00%
TIPS	7.00%	4.00%	3.00%	4.00%
Commodities	3.00%	2.00%	2.00%	2.00%
Gold	0.00%	1.00%	1.00%	1.00%
Risk Parity (10% vol)	3.00%	4.00%	4.00%	3.00%
Risk Mitigating	0.00%	9.00%	10.00%	10.00%
Long Treasuries	0.00%	3.00%	3.34%	3.34%
Trend Following	0.00	3.00%	3.33%	3.33%
Alternative Risk Premia	0.00%	3.00%	3.33%	3.33%
Total	100%	100%	100%	100%

* Includes REITS



Ohio Public Employees Retirement System

Current and optional Portfolios – Negative Scenario Analysis

Negative Scenario *	2024 Policy	Option A	Option B	Option C - New
Post-COVID Rate Hikes (Jan 2022-Oct 2023)	-14.11%	-12.61%	-12.33%	-12.48%
COVID-19 Market Shock (Feb 2020-Mar 2020)	<u>-22.50%</u>	<u>-21.49%</u>	<u>-18.58%</u>	<u>-19.21%</u>
Taper Tantrum (May - Aug 2013)	-3.08%	-2.67%	-2.73%	-2.75%
Global Financial Crisis (Oct 2007 - Mar 2009)	<u>-29.63%</u>	<u>-26.99%</u>	<u>-21.77%</u>	<u>-22.96%</u>
Popping of the TMT Bubble (Apr 2000 - Sep 2002)	-10.73%	-12.26%	-7.42%	-8.28%
LTCM (Jul - Aug 1998)	-8.91%	-9.04%	-7.72%	-8.06%
Asian Financial Crisis (Aug 97 - Jan 98)	0.73%	0.10%	0.54%	0.44%
Rate spike (1994 Calendar Year)	0.77%	0.81%	0.26%	0.33%
Early 1990s Recession (Jun - Oct 1990)	-5.80%	-5.77%	-4.47%	-4.84%
Crash of 1987 (Sep - Nov 1987)	-12.35%	-11.93%	-9.73%	-10.32%
Strong dollar (Jan 1981 - Sep 1982)	3.11%	3.27%	6.52%	5.38%
Volcker Recession (Jan - Mar 1980)	-6.32%	-4.93%	-5.08%	-4.91%
Stagflation (Jan 1973 - Sep 1974)	-16.47%	-14.16%	-10.43%	-11.29%

→ Options A,B, and C outperformed the current Policy in each of the negative scenarios above

→ Meaningful outperformance of the new policies in the GFC and COVID shock

* Policy benchmark Only. Does not include active management and assumes rebalancing to target



Ohio Public Employees Retirement System

Current and optional Portfolios – Positive Scenario Analysis

Positive Scenario*	2024 Policy	Option A	Option B	Option C - New
Covid Recovery (Apr 2020-Dec 2021)	48.99%	46.48%	39.79%	42.36%
Global Financial Crisis Recovery (Mar 2009 - Nov 2009)	43.32%	41.29%	36.70%	38.00%
Best of Great Moderation (Apr 2003 - Feb 2004)	31.83%	31.95%	28.19%	29.20%
Peak of the TMT Bubble (Oct 1998 - Mar 2000)	30.28%	30.12%	26.19%	27.09%
Plummeting Dollar (Jan 1986 - Aug 1987)	62.89%	65.40%	58.46%	60.01%
Volcker Recovery (Aug 1982 - Apr 1983)	37.25%	37.23%	35.35%	35.44%
Bretton Wood Recovery (Oct 1974 - Jun 1975)	29.04%	28.93%	25.91%	26.54%

→ All three of the new options slightly underperformed the Current Policy in market rebounds

* Policy benchmark Only. Does not include active management and assumes rebalancing to target



Ohio Public Employees Retirement System

Current and optional Portfolios – Negative Stress Test

	2024	Option A	Option B	Option C - New
Negative Stress	Policy	Option A	Option B	Option C - New
10-year Treasury Bond rates rise 100 bps	2.23%	2.48%	1.72%	1.89%
10-year Treasury Bond rates rise 200 bps	-4.09%	-3.39%	-3.80%	-3.70%
10-year Treasury Bond rates rise 300 bps	-3.64%	-2.99%	-3.94%	-3.67%
Baa Spreads widen by 50 bps, High Yield by 200 bps	0.13%	0.35%	0.77%	0.67%
Baa Spreads widen by 300 bps, High Yield by 1000 bps	-21.87%	-20.48%	-17.79%	-18.39%
Trade Weighted Dollar gains 10%	-4.53%	-4.57%	-3.95%	-4.08%
Trade Weighted Dollar gains 20%	-2.05%	-1.54%	-0.87%	-0.94%
U.S. Equities decline 10%	-5.24%	-5.00%	-4.11%	-4.33%
U.S. Equities decline 25%	-16.45%	-15.44%	-13.19%	-13.73%
U.S. Equities decline 40%	-27.74%	-25.56%	-21.87%	-22.77%

→ Option A, B and C outperformed the Current Policy in U.S. equity market declines

* Policy benchmark Only. Does not include active management and assumes rebalancing to target



Ohio Public Employees Retirement System

Current and optional Portfolios – Positive Stress Test

Positive Stress	2024 Policy	Option A	Option B	Option C - New
10-year Treasury Bond rates drop 100 bps	2.57%	2.50%	2.73%	2.68%
10-year Treasury Bond rates drop 200 bps	11.69%	11.35%	10.87%	11.02%
10-year Treasury Bond rates drop 300 bps	16.50%	16.02%	15.48%	15.66%
Baa Spreads narrow by 30bps, High Yield by 100 bps	6.05%	5.87%	5.22%	5.37%
Baa Spreads narrow by 100bps, High Yield by 300 bps	14.28%	13.84%	12.81%	13.01%
Trade Weighted Dollar drops 10%	7.71%	7.91%	7.38%	7.46%
Trade Weighted Dollar drops 20%	20.32%	20.53%	18.77%	19.24%
U.S. Equities rise 10%	6.23%	6.13%	5.50%	5.66%
U.S. Equities rise 30%	17.90%	17.51%	15.40%	15.93%

→ In positive stress markets all of the new policies perform well in various scenarios.

* Policy benchmark Only. Does not include active management and assumes rebalancing to target



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Board Meeting V.F



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MEMORANDUM

DATE: January 6, 2025

TO: OPERS Retirement Board Members

FROM: Karen Carraher, Executive Director
Eric Harrell, General Counsel

RE: **V. Discussion Items:**
F. Summary Report of Compliance for 2024

In the most recent Fiduciary Audit of OPERS, conducted on behalf of the Ohio Retirement Study Council by Aon Hewitt Investment Consultants, the auditors made the following recommendation:

1.A.3. Establish a single cumulative annual report to the OPERS Board that certifies OPERS was in compliance with key legal and administrative rules for the fiscal year.

In response to that recommendation, we have annually compiled a summary report of compliance with legal, administrative and policy requirements that were required during the prior year, beginning with calendar year 2020. Attached is the report for 2024. As in the past, we have presented first the requirements that generally occur on an annual basis, followed by those that are less frequently required or only on an ad hoc basis. We are pleased to report that each requirement was addressed during the calendar year.

We would be happy to provide the Board with additional information regarding any of these requirements and the system's compliance with those requirements should you have questions.

Requirement	Source of the requirement	Due date	Completion in 2024
Certify State Rates	R.C. 145.69	November 1, even-numbered years	Certified at the September 2024 Meeting
Certify Local Rates	R.C. 145.12	Prior to July 15	Certified at the May 2024 Meeting
Budget Approval by the Board	R.C. 145.092	Adopted only after submission to ORSC plus 60 days	Approved 2025 budget at the October 2024 Meeting; adoption to be effective in December 2024.
Budget Submission to ORSC	R.C. 145.092	At least 60 days prior to adoption	October 18, 2024
Submit Annual Audit Report to ORSC	R.C. 145.095	Annually, generally requested around March 1.	The 2023 report was submitted February 6, 2024
Approve Annual Internal Audit Plan	OAC 145-1-01	Review audit plans	6-month plans approved at the May and November 2024 Meetings
Internal Audit Committee Meetings	OAC 145-1-01	Twice annually	Committee meetings were held in May and November 2024
Financial Audit/Annual Financial Report	Various	Annually	Financial audit report to the Board at the May 2024 Meeting
Approve Employer Rate Allocation – pension/UAAL/Health Care	Internal policy	Annually	Approved at the November 2024 Meeting
5-year rule review	R.C. 106.03	Each rule every 5 years – annual rotation of a set of rules	Approved at the September 2024 Meeting
Pension and HC valuation 145.22	R.C. 145.22	Submit annually upon availability, not later than September 1	Submitted to ORSC on August 30, 2024
Pension 50-year projection	Internal Policy	Annually	Presented at the May 2024 Meeting
Health Care 50-year projection	Internal Policy	Annually	Presented at the September 2024 Meeting

Requirement	Source of the requirement	Due date	Completion in 2024
Investment Incentive Plan approval	OAC 145-1-05	Annually	Personnel and Salary Review Committee approved the 2024 plan at the January 2024 Committee Meeting; Board approved at the March 2024 Meeting
Annual investment plan/ asset allocation	R.C. 145.11	Publish no less than annually	Approved at the January 2024 Meeting; published on OPERS.org
Approve Investment Policies	R.C. 145.11	Approve changes in meetings; Publish no less than annually	Policies are published on OPERS.org; Updates approved at the March 2024 Meeting
Approve consent agenda (minutes/disability report)	R.C. 121.22 and 145.35	Approve promptly	Consent agenda was approved at each meeting during 2024
Elect Chair/Vice Chair and appoint committee members	R.C. 145.09; OAC 145-1-01	First meeting of the year	Election at the January 2024 Meeting
Appoint Committee Members	OAC 145-1-01	No later than next meeting after chair is elected	February 2024 Meeting materials contained appointments
Board Member travel pre-approval	OAC 145-1-03	Prior to travel	N/A for 2024
Approval of Board Member Expenses	OAC 145-1-03	As needed	Expenses approved by the Chair/Vice Chair each month throughout 2024
Executive Director Performance Review	R.C. 145.09; Governance Manual	Annually	Discussion at the February 2024 Meeting; Review was conducted at the July 2024 Meeting
Board Consultant Performance Review	Internal Policy	Annually	Evaluations provided in May 2024; Discussion at the July 2024 Meeting

Requirement	Source of the requirement	Due date	Completion in 2024
Board Governance Manual Reviewed	Governance Manual	Periodically	N/A for 2024; Last updated in 2022
Board/Committee Self-Evaluation	Governance Manual	Annually	Conducted self-evaluation discussion with governance consultant at the February 2024 Meeting
Corporate Governance/Proxy Policy Review	R.C. 145.11; Proxy policy	Annually	Presented at the October 2024 Meeting
ERM Update received	Internal Policy	Twice annually	Presentation at the November 2024 Meeting; Quarterly reports posted to the portal
Investment Compliance Updates	Internal Policy	Quarterly	Quarterly reports posted to the portal
Report to ORSC – Disability	R.C. 145.351	Annually by March 1	February 14, 2024
Report to ORSC – Iran/Sudan	Policy	Annually in November / December	November 21, 2024
Board Education	R.C. 145.041	Annual	January – Economic Outlook February – Fiduciary training and scenario discussion March – Cash/Securities Lending May – Investment Grade Credit September – External Public Markets October – Private Credit Asset Class Review

Requirement	Source of the requirement	Due date	Completion in 2024
Less Frequent/ad hoc requirements			
Board Election	R.C. 145.05	First Monday in October	N/A -- Will be held in 2025 and 2026
Board Vacancy Election	R.C. 145.06 OAC 145-1-02	Upon vacancy	N/A
Oath of Office	R.C. 145.07	Upon assuming office	N/A
New Trustee Orientation	R.C. 145.041	Within 90 days of service	N/A
Joint Trustee Training	R.C. 171.50	Generally held every three years	Last held November 2022. Will be held next in 2025.
Travel policy approved by Ohio Ethics Commission and submitted to ORSC	R.C. 145.092	For OEC approval and 60 days ORSC review prior to adoption.	N/A
Ethics policy approved by Ohio Ethics Commission and submitted to ORSC	R.C. 145.093	For OEC approval and 60 days ORSC review prior to adoption.	N/A
Hire Investment Consultant	Internal Policy	As needed; 3-5 years	Board selected Meketa Investment Group at the March 2024 Meeting. Meketa's contract began May 1, 2024 and runs through April 30, 2027 with two, one-year renewals available
Hire Consulting Actuary	Internal Policy	As needed	N/A. GRS's contract was approved for renewal in 2023 and runs through 2030
HRA – set allowance limits	Internal Policy	Varies	Board approved new rates in March 2024 to be flat dollar amounts that will be periodically reviewed.

Requirement	Source of the requirement	Due date	Completion in 2024
5 Year Experience Study	R.C. 145.22	At least every 5 years	N/A. Most recent was conducted during 2021
ARP Mitigating Rate Study	R.C. 145.222	Every 5 years (completed and submitted to Higher Education by December 31)	N/A. Most recent was conducted during 2021
Member Directed/Combined Plan Mitigating and Administrative Rates	R.C. 145.87 and Internal Policy	As needed	N/A. Last approved at the February 2022 Meeting
Membership Determination Appeals to Board	OAC 145-1-11	As needed	N/A
Notice to Division of Securities of new CIO	R.C. 145.092	Within 10 days of designation	N/A
Asset Liability Studies	Internal Policy	Every 3-5 years or as needed	Presentations from July through November 2024. DB approved at the November 2024 Meeting. HC will be presented and approved in 2025.

Board Meeting V.H

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM
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MEMORANDUM

DATE: January 10, 2025
TO: OPERS Retirement Board Members
FROM: Karen Carraher, Executive Director
RE: **V. Discussion Items:**
H. Executive Director Report

Below is my Executive Director report.

Finance

- **The 2025 Mileage Reimbursement Rate.** The OPERS Travel & Expense Policy provides for the reimbursement of mileage expenses incurred on OPERS business at the mileage rate established by the IRS effective in January of each year.

On December 19, 2024, the IRS issued a news release indicating that the standard mileage rate for business use of an automobile would increase from \$0.67 per mile to \$0.70 per mile. This \$0.03 increase is effective for travel after January 1, 2025. The mileage reimbursement rate for moving / relocation expenses will remain the same at \$0.21 per mile.

The IRS mileage rate increase reflects the adoption of the travel reimbursement rate pursuant to the OPERS Travel & Expense Policy and will also be used when calculating the cost of alternative travel and alternative airport reimbursements.

- Finance, Legal and Procurement staff finalized the Request for Proposal (RFP) process for **Board election services** for the next election two-year cycle starting in 2025. The new vendor is Election America, Inc., doing business as YesElections, with its principal offices located in Mineola, NY. As a reminder, in 2025, the Miscellaneous and County Employee seats and one Retiree seat are up for election. In 2026, the Non-teaching College/University, Municipal and State Employee seats and one Retiree seat are up for election. We expect to sign the agreement with this new vendor in early January.
- Financial Services and Procurement staff finalized the RFP process for **travel booking services**. The new travel vendor is Corporate Travel Management (CTM)

and implementation will begin in January 2025. The transition is expected to be complete by the end of February 2025. Users will be trained on the new system and should benefit from enhanced customer service and mobile application features.

- The Investment Accounting and Investment Operations teams executed a **site visit of our domestic Custodian, Fifth Third Bank**. The teams toured Fifth Third's operating center, met client service personnel dedicated to the OPERS accounts and observed critical business processes conducted throughout a typical business day. In addition, OPERS demonstrated its critical business processes to Fifth Third personnel so both sides could identify best practices and potential efficiencies. Several opportunities to simplify and streamline current processes emerged throughout the day. Two members from the Internal Audit department joined the visit to observe processes relevant to their current collateral audit.
- The Investment Accounting team worked with an outside consultant to **finalize workflows relevant for new types of bi-lateral repo agreements** entered into by the Investments Division cash management team. Since these agreements do not include a tri-party custodian, it is important for OPERS to monitor collateral levels on a daily basis. In the next and final step of this larger project, the consultant will help the Investment Compliance team develop compliance rules in our current system to test collateral and alert when minimum levels are breached.

Investments

- Unaudited **2024 returns** for Defined Benefit and Healthcare funds came in at 8.62% and 10.03%, respectively. The successful overall performance was driven by strong returns from U.S. Equity at 23.69% and Securitized Debt at 13.76%. All asset classes had a positive return, except for Real Estate at -3.33%. Excluding Defined Contribution assets, the estimated AUM of the total fund is \$117 billion.
- The **Internal Global Equity team rebalanced six U.S. Equity Portfolios** with a market value of \$25.8 billion in mid-December in conjunction with the quarterly Russell Index and Dow Jones REIT Index reconstitution. The rebalance activity resulted in over 3,170 trades, with an approximate total traded market value of \$329.1 million.

Information Technology

IT Operations

- With the mainframe retirement and new solution, **batch completion times** have significantly improved, allowing second shift staff to contribute more effectively to projects and enhancing automation. Production batch completion times on the mainframe averaged between 10:30 PM and 1:00 AM, whereas on the new solution, they now average between 7:30 PM and 8:00 PM, providing greater consistency. The daily number of executed tasks has slightly decreased from 4,400 on the mainframe to 4,300 on the new solution, as fewer tasks are needed to maintain the mainframe, allowing for more functional tasks. This change benefits IT operations by

enabling second shift employees to start earlier and finish earlier, increasing productivity as the batch process requires less attention. Additionally, second shift employees can leverage their deeper technical skills, and overtime is reduced as more tasks can be completed during the week instead of the weekend.

Investments IT

- The **eFront READY project**, led by OPERS IT in partnership with Investments, aimed to enhance OPERS Alternative Investments infrastructure by upgrading and transitioning to cloud-based operations, standardizing reporting, and improving data quality from data and software partner, Blackrock. The project, which spanned from March 2023 to August 2024, involved significant collaboration across IT and Alternative Investment groups and the project was completed just under budget (5% less). Key deliverables included core private equity, real estate, and private credit portfolio setup, CRM and deal flow integration, and improved reporting capabilities. The benefits realized from this project include faster report generation, better data quality, reduced customization, additional business function and enhanced disaster recovery and business continuity capabilities.

Government Relations

Congress

- Decades of advocacy resulted in the repeal of two federal laws for which Ohio's public employees have been harmed. The **Windfall Elimination Provision and Government Pension Offset** were eliminated with the passage of the Social Security Fairness Act (H.R. 82). President Biden is expected to sign the legislation soon. The action will restore monthly Social Security benefits to OPERS retirees who have had their benefits reduced because of their OPERS pensions. Additionally, the bill's effects are retroactive to December 2023.
- On January 6, 2025, President Biden signed into law the Social Security Fairness Act (H.R. 82), which repealed the **Windfall Elimination Provision and Government Pension Offset**. The action will restore monthly Social Security benefits retroactive to December 2023 to OPERS retirees who have had their benefits reduced because of their OPERS pensions. Many questions still remain, as the Social Security Administration indicated it is "evaluating how to implement the Act. Staff will update information as it becomes available.

Ohio's 135th General Assembly

- The following bills were enacted into law late in the 135th General Assembly:

Senate Bill 6, which prohibits Ohio's public retirement systems from adopting "a policy, or take any action to promote a policy, under which the board makes investment decisions with the primary purpose of influencing any social or environmental policy or attempting to influence the governance of any corporation"

was signed into law by the Governor on December 19, 2024 and will become effective on March 18, 2025.

Working with the other public retirement systems, staff were successful in thwarting an effort to amend the bill to include specific industries, which would have introduced uncertainty with regard to Ohio's public pension systems' investments.

The Ohio Senate concurred in House amendments and passed **Substitute House Bill 257**, which allows members of Ohio's retirement boards to adopt a policy that would permit trustees to attend meetings via video conference under limited circumstances. The bill brought consistency across all of Ohio's public retirement systems (State Teachers of Ohio received similar authority in a prior state budget bill).

The trustees may adopt a policy that must include the following:

- The number of regular in-person meetings (a meeting in which no virtual attendance is allowed) must be at least $\frac{3}{4}$ of the board's annual meetings;
- A majority of the board members attending the meeting must be present in person;
- All votes taken must be by roll call vote; and
- A board member must notify the chairperson of the intent to attend a meeting virtually no less than 48 hours before the meeting, except in the case of an emergency as defined in the policy.
- Any meeting that is virtually attended by a trustee must allow the public to "hear and observe the discussions and deliberations" of the meeting.

Attending a meeting virtually affords the trustee the same rights as those who attend meetings in person.

Though HB 257 was not exactly what OPERS requested, the final bill should be sufficient to address the concerns that prompted the System to request such authority. The bill was delivered to the Governor on December 30, 2024.

- On January 8, 2025, Governor Mike DeWine signed into law **Substitute House Bill 257**, which allows members of Ohio's retirement boards to adopt a policy that would permit trustees to attend meetings via video conference under limited circumstances. The bill brought consistency across all of Ohio's public retirement systems (State Teachers of Ohio received similar authority in a prior state budget bill).

If you have any questions, please let me know.

Board Meeting VI.A



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MEMORANDUM

DATE: January 6, 2025
TO: OPERS Retirement Board Members
FROM: Jenny Starr, Director - Finance
RE: **VI. For Your Information:**
A. 2025 Mileage Reimbursement Rate

The OPERS Travel & Expense Policy provides for the reimbursement of mileage expenses incurred on OPERS business at the mileage rate established by the IRS effective in January of each year.

On December 19, 2024, the IRS issued a news release indicating that the standard mileage rate for business use of an automobile would increase from \$0.67 per mile to \$0.70 per mile. This \$0.03 increase is effective for travel after January 1, 2025. The mileage reimbursement rate for moving / relocation expenses will remain the same at \$0.21 per mile.

The IRS mileage rate increase reflects the adoption of the travel reimbursement rate pursuant to the OPERS Travel & Expense Policy and will also be used when calculating the cost of alternative travel and alternative airport reimbursements.

Board Meeting VI.B



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MEMORANDUM

DATE: January 10, 2025

TO: OPERS Audit Committee

FROM: Caroline Stinziano, Director – Internal Audit

RE: **VI. For Your Information:**
B. 2024 Annual Audit Committee Report to ORSC

Purpose

The purpose of this memorandum is to provide the Audit Committee with the final 2023 Annual Audit Committee Report to be submitted to ORSC.

Background

Pursuant to R.C. 145.095, the Audit Committee of the Public Employees Retirement Board is required to provide an annual audit committee report to the Ohio Retirement Study Council (ORSC).

Report Updates

In December 2024, the ORSC approved changes to the report template which included adding a new section “Prior Years Completed Audits with Updates to Recommendations and Management Response.” This section of the report includes a status of audit recommendations from audits issued in prior years that were not able to be remediated in the year they were initially reported. The updates in this new section were taken from previously issued ORSC reports and reflect audit recommendations that were remediated in 2024 related to prior audits and audit recommendations that are still outstanding related to prior audits. Of the 16 recommendations reported in this section, 15 were remediated in 2024 and one audit recommendation remains open with a target implementation date of December 2025.

The following report documents the activities of the OPERS Internal Audit Department for 2024 including:

- Current Year Completed Audits with Recommendations
- Prior Year Completed Audits with Updates to Recommendations
- Completed Audits with No Recommendations
- Active Audits
- Other Audit Related Activity

Review Results/Summary

Excluding the report updates discussed in the previous section, the following report was reviewed with the OPERS Audit Committee during its meeting on November 19, 2024, and approved by the OPERS Retirement Board on November 20, 2024. This report will be submitted to the ORSC following the January Board meeting and prior to the due date of March 31st.



Ohio Public Employees Retirement System

January 15, 2025

Ms. Bethany Rhodes
Executive Director
Ohio Retirement Study Council
30 East Broad Street, 2nd Floor
Columbus, OH 43215

Dear Director Rhodes:

Pursuant to R.C. 145.095, please find enclosed the 2024 Annual Audit Committee Report of the OPERS Retirement Board. This report was reviewed with the OPERS Audit Committee during its meeting on November 19, 2024 and approved by the OPERS Retirement Board on November 20, 2024. The report documents the activities of the OPERS Internal Audit Department for 2024 including:

- Current Year Completed Audits with Recommendations
- Prior Year Completed Audits with Updates to Recommendations
- Current Year Completed Audits with No Recommendations
- Active Audits
- Other Audit Related Activity

Also, the OPERS Audit Committee held two (2) meetings during 2024. Following is a summary of the meetings and actions taken:

Meeting Date	Meeting Summary & Action Taken
May 14, 2024	<ul style="list-style-type: none">• Action: The Audit Committee reviewed, discussed, and approved the 2024 Six Month Internal Audit Plan (July-December).• An executive summary of internal audit initiatives and activities occurring since November 2023 along with the status of outstanding audit recommendations was presented.• Staff from Plante Moran, OPERS' external auditor, discussed the results of the 2023 financial statement audit.• Staff from OPERS presented highlights from the Annual Financial Report for 2023.

Meeting Date	Meeting Summary & Action Taken
November 19, 2024	<ul style="list-style-type: none"> • Action: The Audit Committee reviewed and approved the 2024 Annual Audit Committee Report to be provided to the ORSC. • An executive summary of internal audit initiatives and activities occurring since May 2024 along with the status of outstanding audit recommendations was presented. • Action: The Audit Committee reviewed, discussed, and approved the 2025 Six Month Internal Audit Plan (January-June). • Action: The Committee discussed and reviewed recent updates to the Institute of Internal Auditor (IIA) Global Standards that are followed by the OPERS Internal Audit function. As a result of these updates, changes were approved to the Audit Committee and Internal Audit charters to align with the updates and reorganization of the standards. The basis for these changes was a model template provided by the IIA which will serve to further enhance the Internal Audit function's compliance with the global standards • Staff from Plante Moran, OPERS' external auditor, discussed the audit plan for the 2024 financial statement audit.

Please let us know if you need additional information.

Sincerely,



Caroline Stinziano
 OPERS Director – Internal Audit
cstinziano@opers.org
 (614) 228-3303

Karen Carraher
 OPERS Executive Director
kcarraher@opers.org
 (614) 222-0011

Board Meeting VI.D

INVESTMENTS MARKET UPDATE

Net Asset Value & Performance

	NAV (\$ B) 11/30/2024	PERFORMANCE					NAV (\$ B) 01/10/2025
		MTD Dec	YTD Dec	YTD December Benchmark	Jan 1 to 10 Estimated	Benchmark Jan 1 to 10 Estimated	
DB Fund	\$105.03	-1.20%	8.93%	7.45%	-0.52%	-0.54%	\$103.0
HC115 Fund	\$13.71	-2.10%	10.01%	9.53%	-0.77%	-0.83%	\$13.2

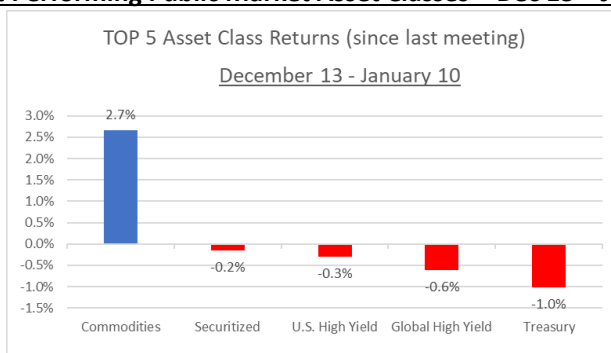
Market Events Summary

- The U.S. total unemployment rate fell to 4.1% in December, below the prior month's print and consensus estimates of 4.2%. December's total nonfarm payroll surged 256,000, above the consensus estimates of 165,000.
- The services sector continued its growth for the sixth straight month, with the ISM Services Index climbing to 54.1 in December, a 2-point increase from November's 52.1. The index tracking prices paid for materials and services surged over 6 points to 64.4, marking its highest level since early 2023.
- In their December meeting, Federal Reserve officials highlighted concerns about inflation and the economic uncertainty stemming from the policies of President-elect Donald Trump, according to minutes released January 8. While not directly naming Trump, the discussion referenced potential impacts of changes to immigration and trade policies at least four times. Officials expressed caution, suggesting a slower approach to interest rate adjustments amid this uncertainty. Trump's post-election rhetoric has included proposals for steep tariffs on major trading partners like China, Mexico, and Canada, alongside plans for deregulation and large-scale deportations, which could have significant economic implications.

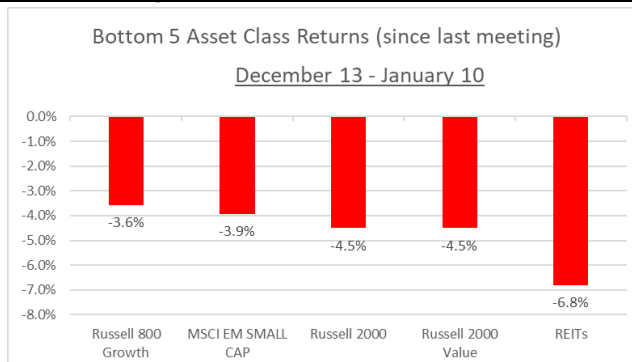
Portfolio Changes

- A U.S. Equity slice of \$685 million was sourced from U.S. Equity internal index portfolios in late December. The slice was liquidated in the U.S. Equity Transition account (2005) and the cash proceeds of \$300 million were transferred to the U.S. Equity Liquidity Reserves portfolio (2007). The remaining amount was transferred to Fund Level cash. In early January, as part of rebalancing, an additional funding of \$525 million sourced from Fund level cash was provided to Core Fixed to cover the underweight of the sub-asset class.

Best Performing Public Market Asset Classes – Dec 13 – Jan 10



Worst Performing Public Market Asset Classes – Dec 13 – Jan 10



Personnel and Salary Committee

PERSONNEL AND SALARY COMMITTEE MEETING AGENDA
January 15, 2025
Immediately Following the Board Meeting

I. Action Item:

- A. [Appendix C of the 2025 Investment Division Incentive Compensation Plan](#) –
15 minutes
Ciji Wilhelm, Director – Human Resources