



MARKET UPDATE & LIQUIDITY DISCUSSION

EMPLOYEES' RETIREMENT SYSTEM
OF RHODE ISLAND

APRIL 2025

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NEPC MARKET OUTLOOK



Recession risks are high should the effective tariff rate on imported goods remain above 20%, but we expect rates to be negotiated lower



Brace for volatility as tariff policy uncertainty and additional announcements are likely to continue buffeting equity markets



Periods of heightened market fear offer elevated long-term returns and we encourage rebalancing back into the S&P 500



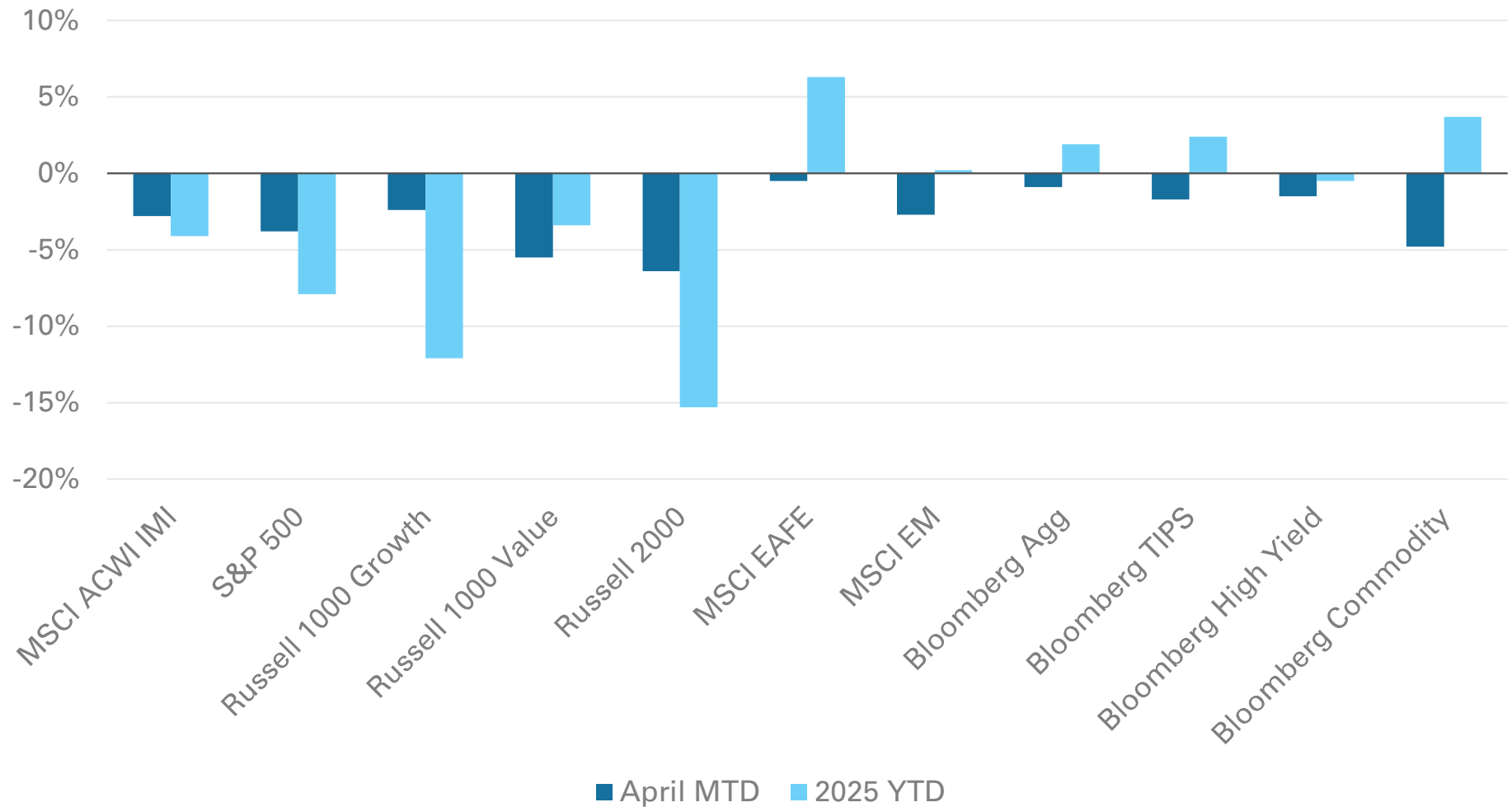
We recommend investors to ensure they have appropriate safe-haven fixed-income exposure and sufficient liquidity for cash flow needs



We urge investors to stay the course and not pull away from markets when panic takes hold; look for opportunities should the rout deepen

TARIFF AND RECESSION FEARS HIT MARKETS

MTD AND YTD TOTAL RETURNS

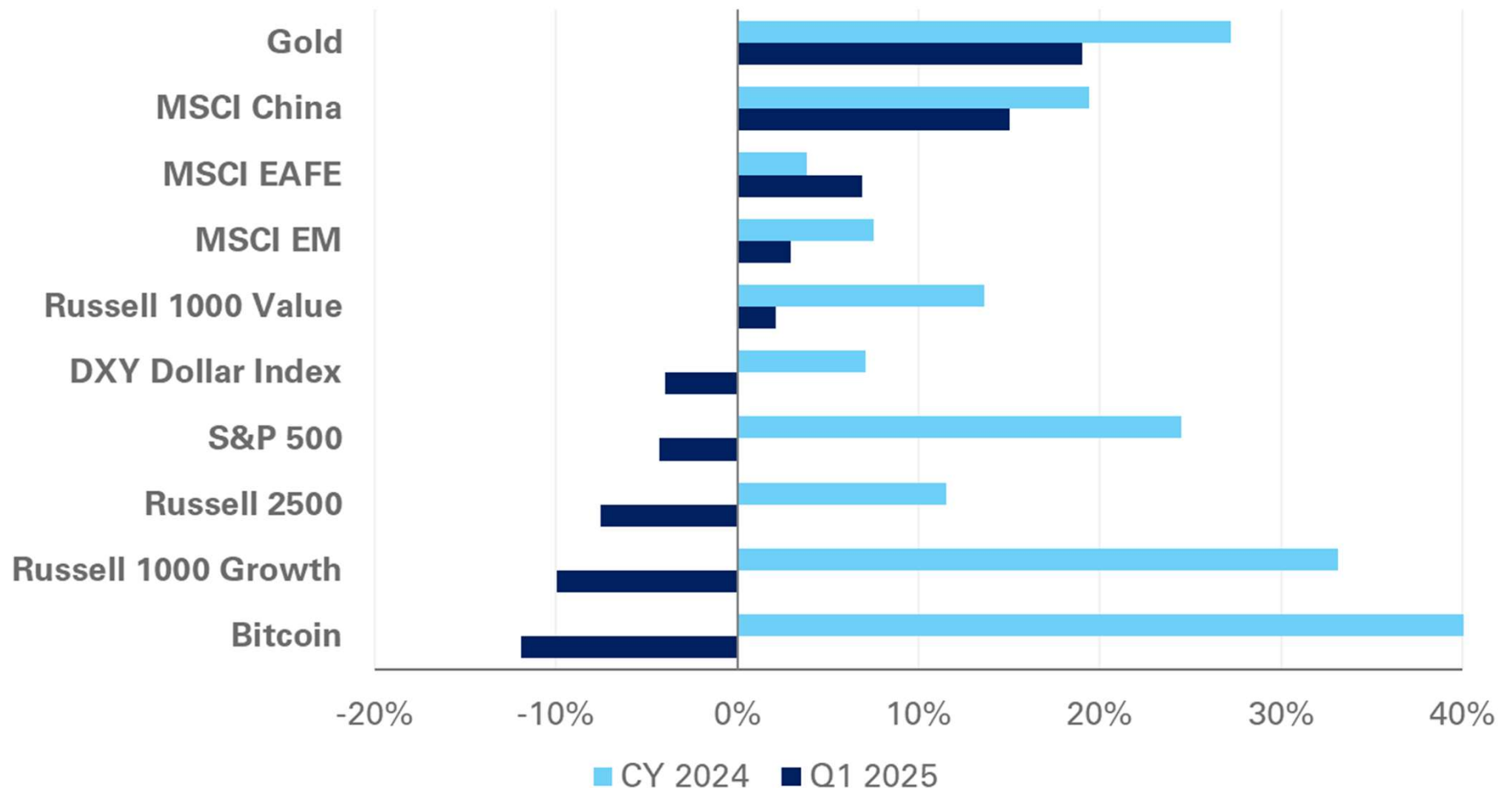


Note: Chart reflects data through April 15, 2025

Sources: S&P, Russell, MSCI, JPM, Bloomberg, FactSet

2024 RETURN DYNAMICS HAVE REVERSED

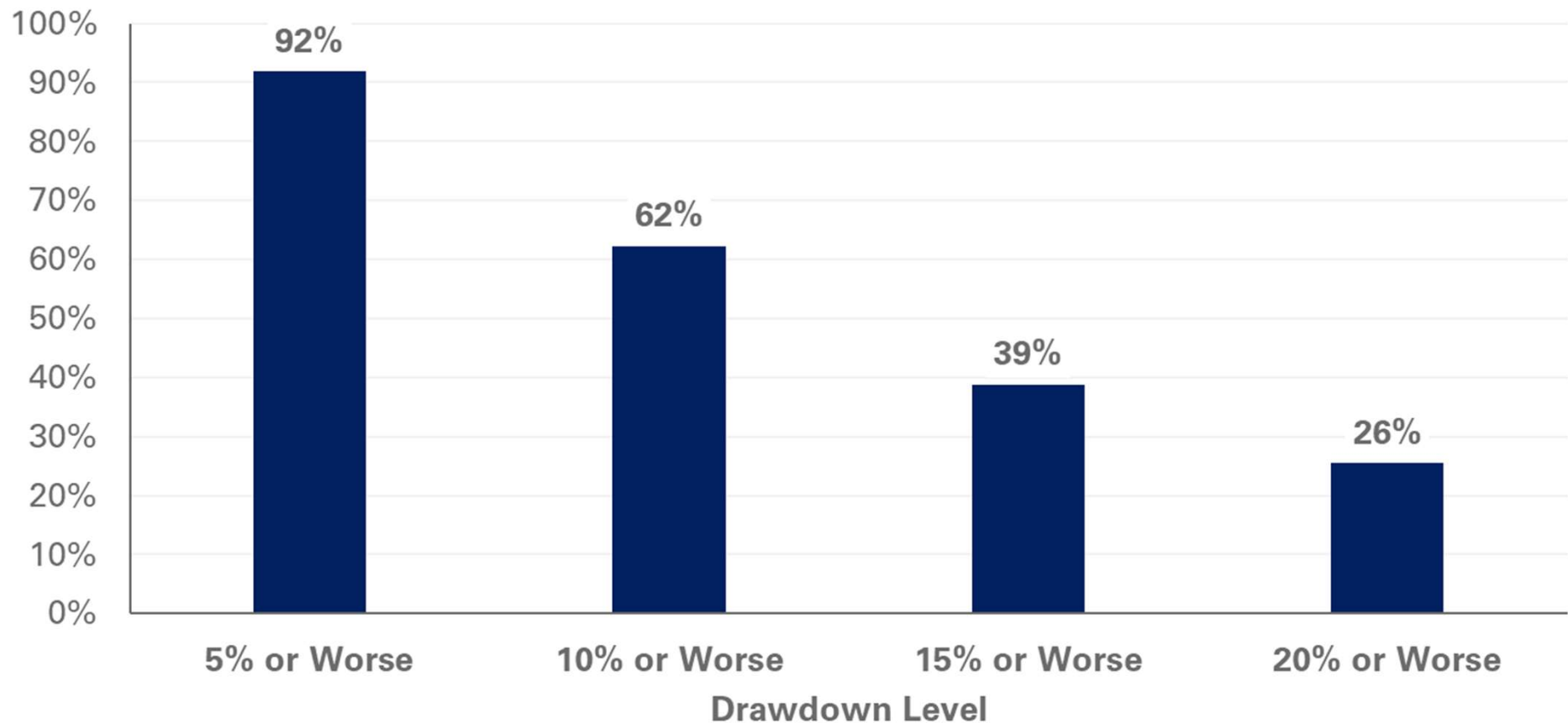
CALENDAR YEAR 2024 VERSUS Q1 2025



Note: Chart truncated at 40%; Bitcoin 2024 return was 123%.
Sources: S&P, MSCI, Russell, FactSet

MARKET CORRECTIONS ARE NOT UNUSUAL

% OF YEARS WITH A X% DRAWDOWN IN THE S&P 500



Note: Data 1928 – Present
Sources: S&P, FactSet, NEPC

PRESIDENT TRUMP'S TARIFF ACTIONS

AS ORIGINALLY ANNOUNCED ON APRIL 2ND

- **10% baseline tariff rate on imported goods effective April 5, 2025**
- **Effective April 9th, higher 'reciprocal' tariffs imposed on up to 60 nations**
 - Reciprocal tariffs most intensely impact countries from Asia and nations that have a trade surplus with the U.S.
 - Canada and Mexico were exempt pending USMCA-compliance review
- **Total value of imported goods coming into the U.S. is \$3.4 Trillion**
 - 'Reciprocal' tariffs will be stacked on top of existing tariffs with China's baseline tariff rate increasing to 54%

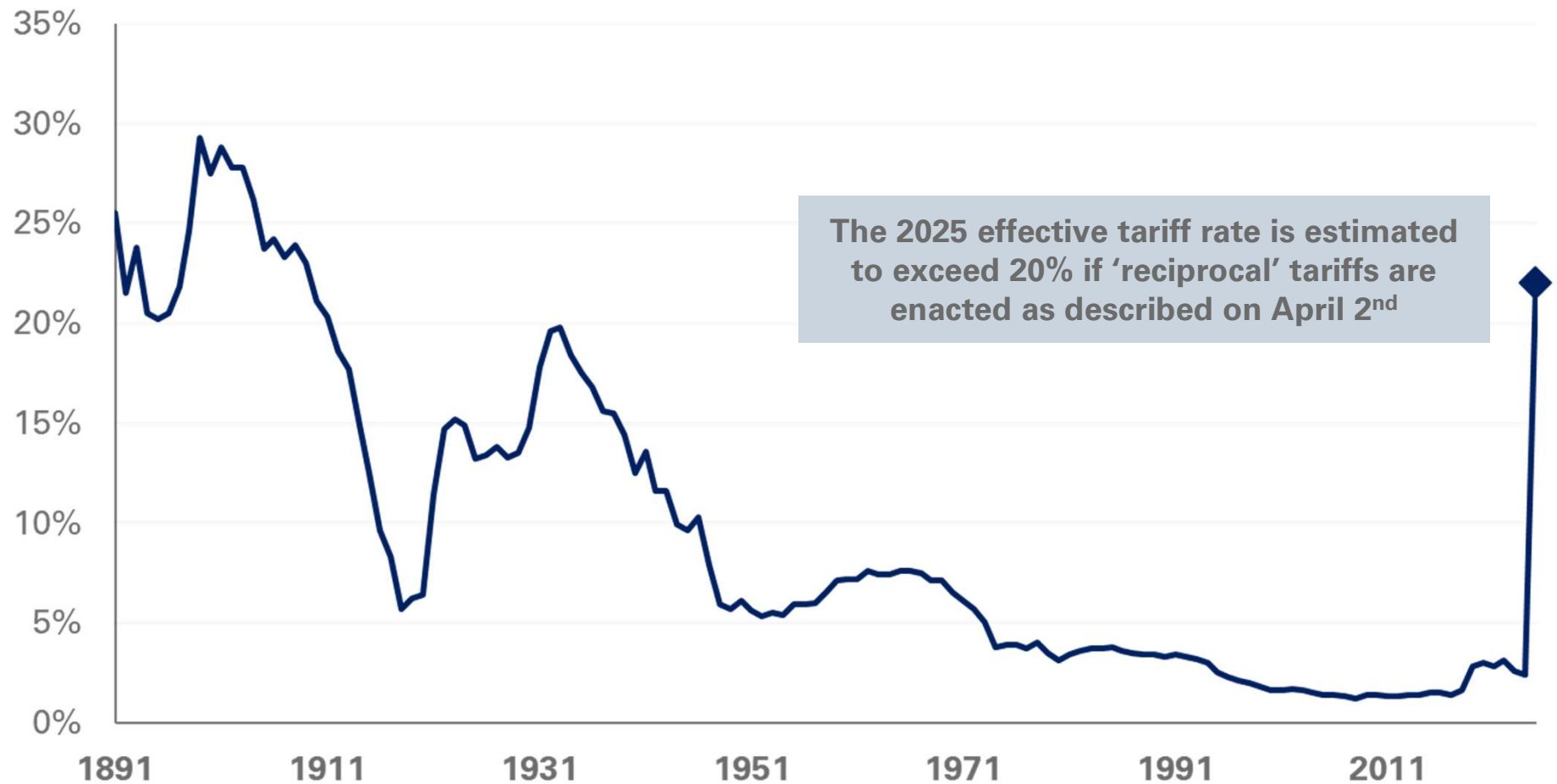
	U.S. Trade Deficit (\$Bil)	U.S. 'Reciprocal' Tariff Rates
China	\$295	34%
European Union	\$236	20%
Mexico	\$172	-
Vietnam	\$123	46%
Taiwan	\$74	32%
Japan	\$69	24%
South Korea	\$66	25%
Canada	\$64	-

Note: Value of total goods imports as of 2024 U.S. fiscal year

Sources: The White House, Annex I: Tariff Rates, U.S. Census Bureau

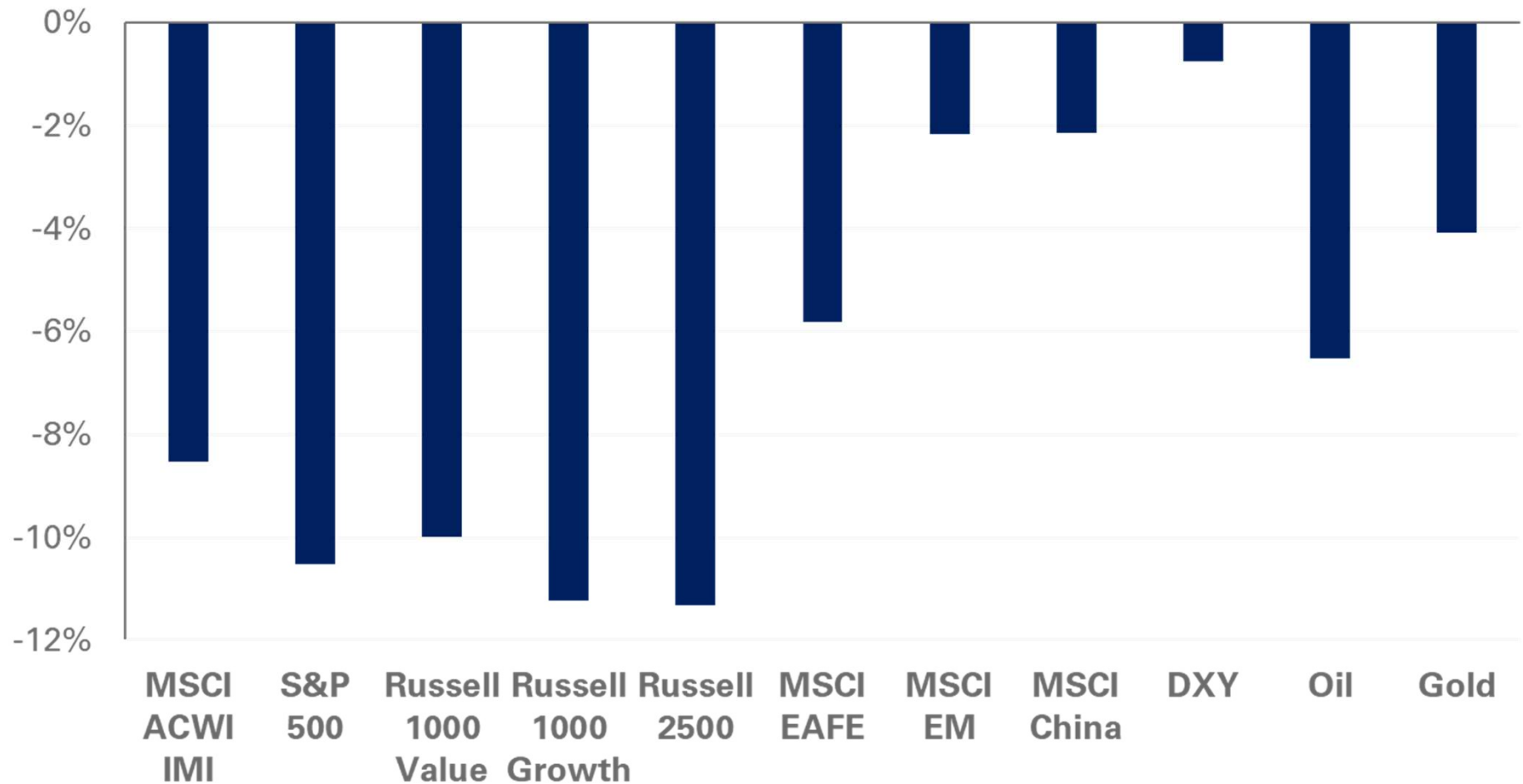
NEW U.S. TARIFF RATES ARE EXTRAORDINARY

U.S. AVERAGE EFFECTIVE TARIFF RATE



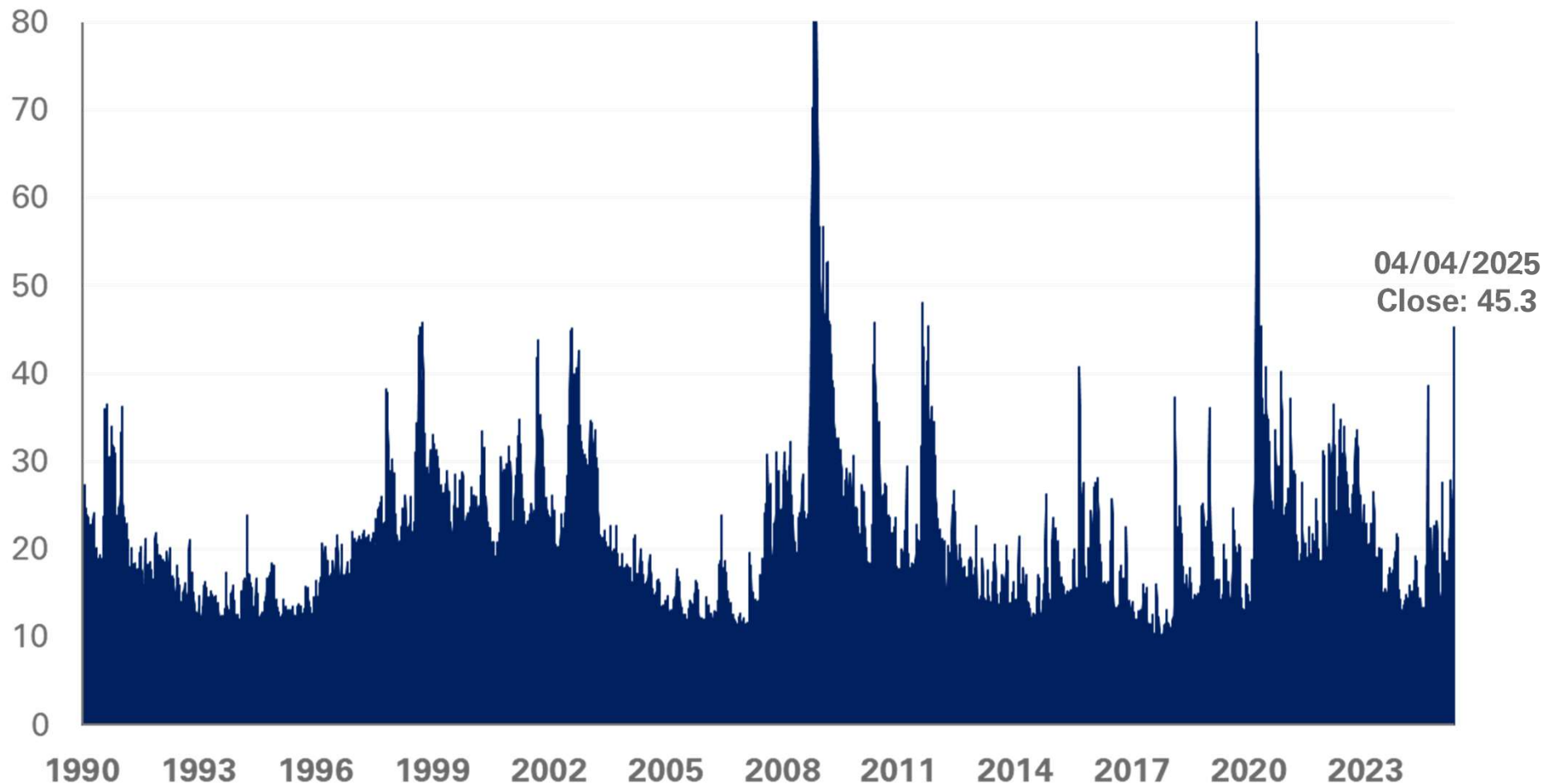
SELLING PRESSURE WASHED THROUGH MARKETS

TWO DAY PRICE RETURNS (APRIL 2 – APRIL 4, 2025)



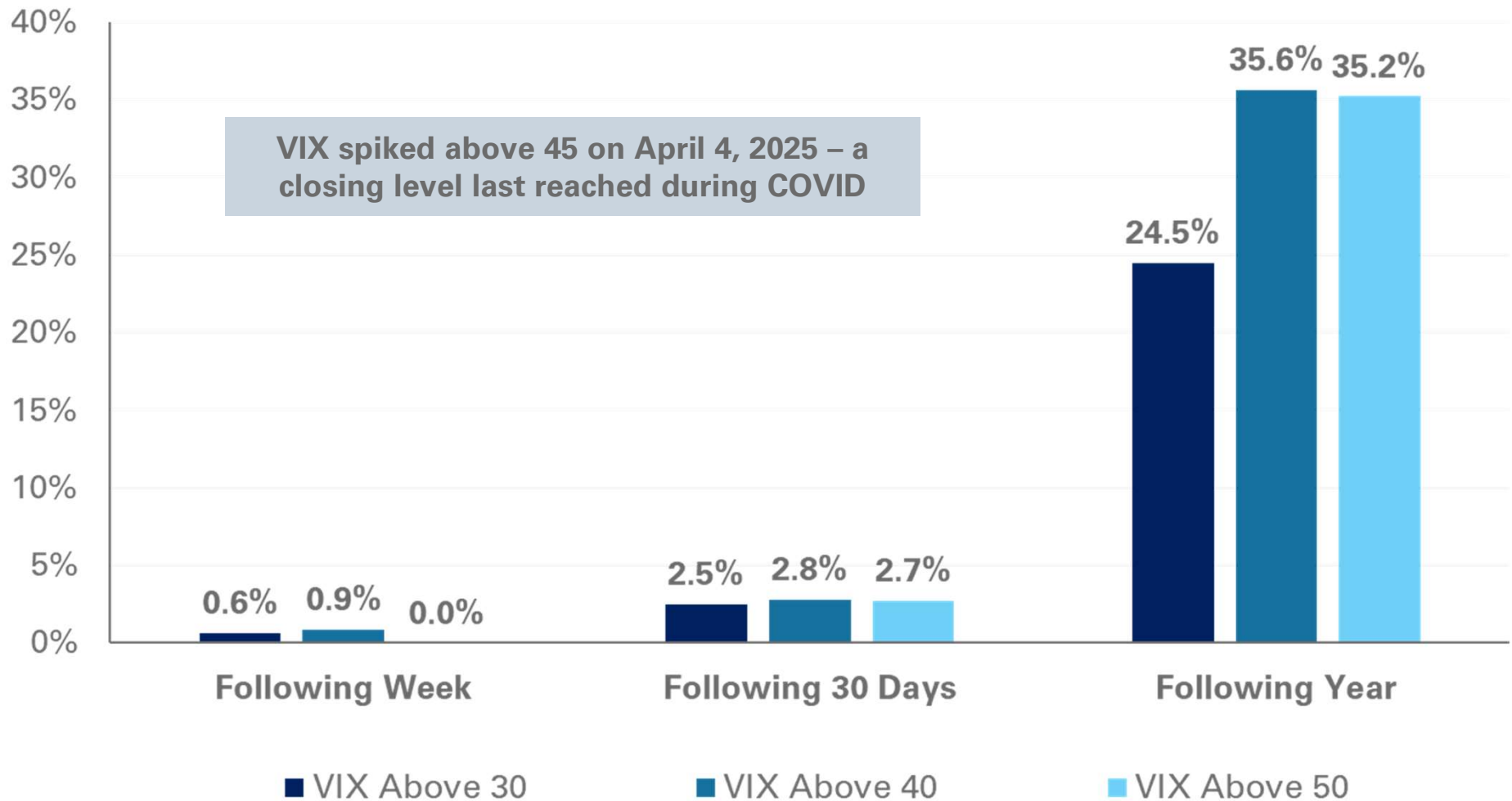
A VOLATILITY SPIKE OF THIS SCALE IS RARE

CBOE VOLATILITY INDEX (VIX)



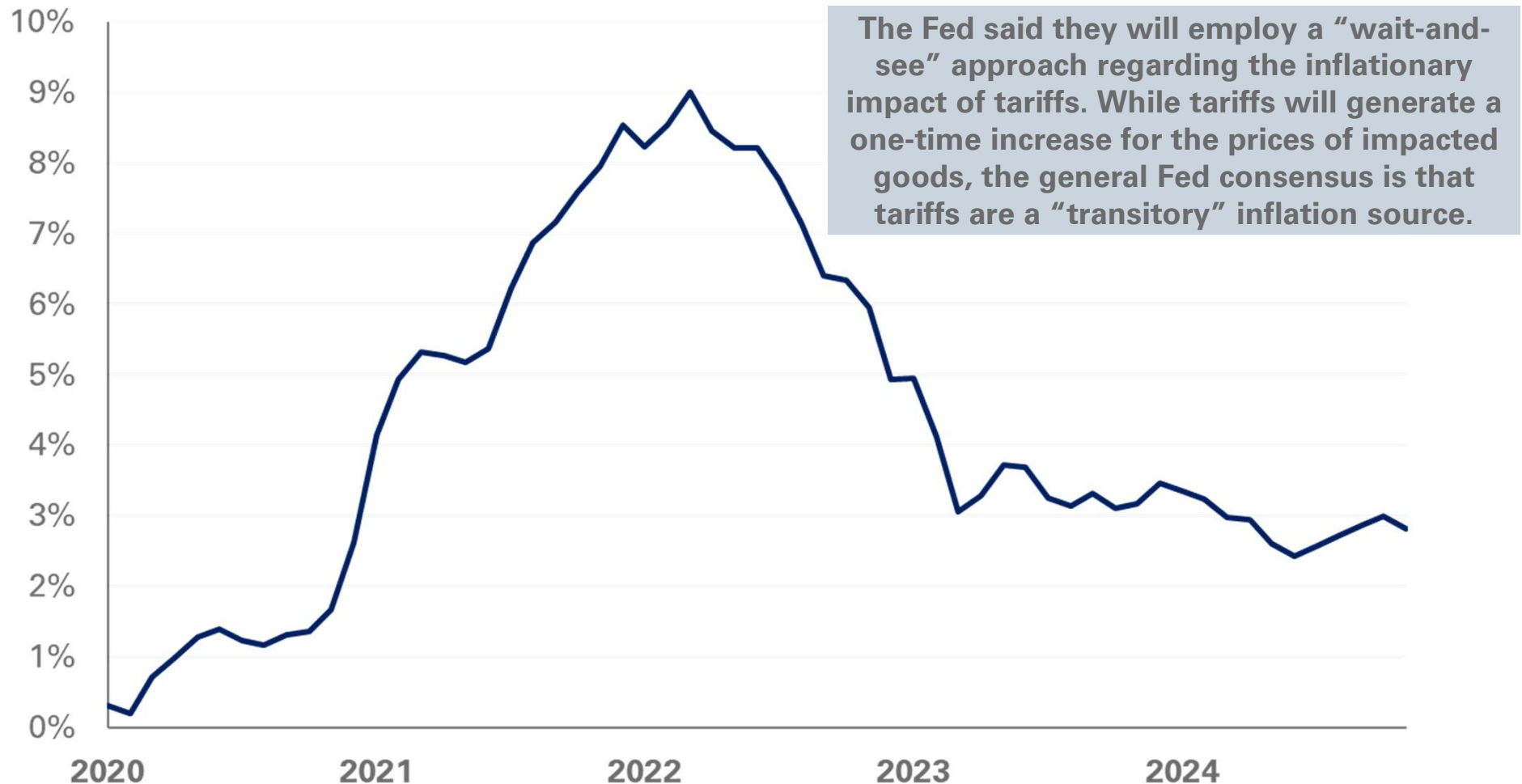
EQUITY REBALANCING PAYS OFF OVER TIME

AVERAGE S&P 500 RETURNS FOLLOWING SPIKES IN VIX



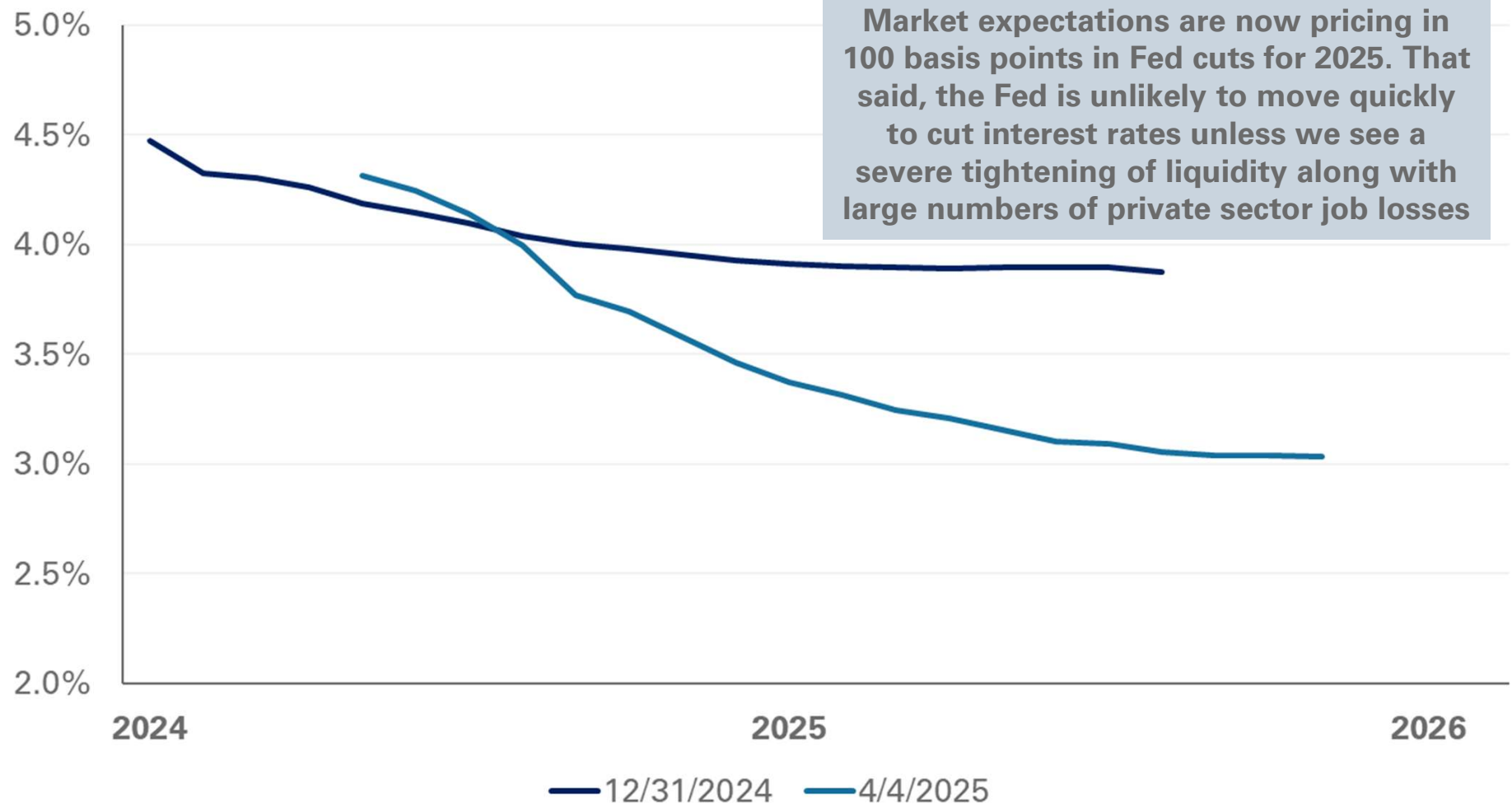
INFLATION RATES HAD BEEN NORMALIZING

ANNUAL CHANGE IN U.S. CONSUMER PRICE INDEX (CPI)



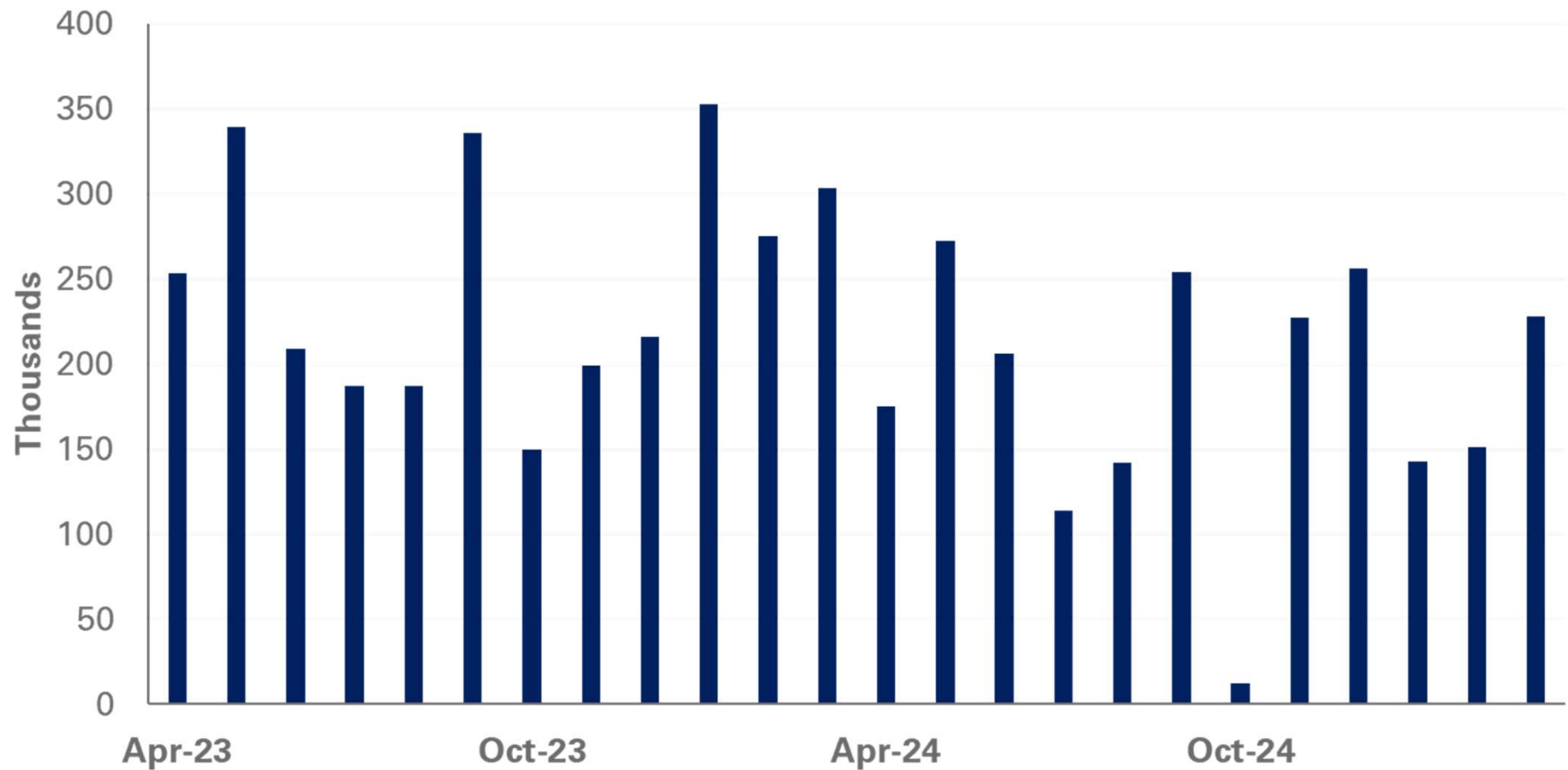
MARKETS ARE HOPING FOR MORE FED RATE CUTS

FED FUNDS FUTURES EXPECTATIONS



FEDERAL CUTS HAVE YET TO IMPACT JOBS DATA

U.S. NONFARM PAYROLLS: MONTHLY JOBS ADDED



Sources: U.S. Bureau of Labor Statistics, FactSet

PORTFOLIO LIQUIDITY



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LIQUIDITY GUARDRAILS

STATE OF RHODE ISLAND PENSION PLAN

- The liquidity guardrails below are updated as of April 2025
- The projections below are based on several inputs including NEPC's latest return/risk forecasts, forecasted pacing plans from Cliffwater/Mekta, and the latest benefit payments and contributions provided by State of Rhode Island.
- In the base case, each guardrail remains in the "acceptable" range

Annual Commitment Rate	Current*	Acceptable	Monitor Closely	Watch for Liquidity
Annual Commitment / Private Markets NAV	14%	20-40%	40-50%	>50%
Uncalled Committed Capital	Current*	Acceptable	Monitor Closely	Watch for Liquidity
Uncalled Capital + Benefit Payments / Monthly Liquidity	32%	<40%	40-60%	>60%
Uncalled Capital / Total Pool NAV	10%	<15%	15-20%	>20%

*As of April 17, 2025

Source: NEPC. Liquidity guardrails may need to be adjusted to reflect a client's liquidity profile, private markets exposure, and maturity of program.

LIQUIDITY GUARDRAILS

UNCALLED CAPITAL AND BENEFIT PAYMENTS

- **There are many ways to think about the liquidity profile of the portfolio**
- **NEPC reviewed the expected number of years of benefit payments available in an adverse scenario**
- **The table below looks at an extreme scenario where all uncalled capital is called immediately (with no corresponding distributions)**
- **We then look at the number of years of GROSS and NET benefit payments available in liquid assets**

Years Available of Gross Benefit Payments	Liquid Assets / GROSS Benefit Payments	5.1 years
Years Available of Net Benefit Payments	Liquid Assets / Benefit Payments NET of contributions	19.0 years

*As of April 17, 2025

Source: NEPC, State of Rhode Island. Net benefit payments includes expected contributions.

LIQUIDITY GUARDRAILS

STRESS SCENARIO FORECASTS

- Using the output from NEPC's scenario analysis, we have forecasted out the liquidity guardrails for the next four years under different economic scenarios

Annual Commitment / Private Markets NAV	2025	2026	2027	2028
Base Case	14%	16%	17%	18%
Depression	20%	21%	21%	21%
Expansion	13%	14%	19%	21%
Recession	18%	19%	20%	20%
Stagflation	14%	16%	18%	20%

Uncalled Capital + Benefit Payments / Monthly Liquidity	2025	2026	2027	2028
Base Case	27%	28%	29%	30%
Depression	47%	56%	57%	60%
Expansion	23%	22%	25%	25%
Recession	41%	45%	48%	45%
Stagflation	30%	36%	35%	37%

Uncalled Capital / Total Pool NAV	2025	2026	2027	2028
Base Case	9%	10%	10%	11%
Depression	16%	21%	22%	24%
Expansion	7%	7%	9%	9%
Recession	14%	17%	18%	17%
Stagflation	11%	13%	13%	14%

PORTFOLIO REBALANCING



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CURRENT PORTFOLIO POSITIONING

		Current Target	Actual – 4/17/25	Diff. vs Target
Growth	Global Equity	40.0%	35.7%	-4.3%
	Private Equity	12.5%	17.8%	5.3%
	Non-Core Real Estate	2.5%	2.5%	0.0%
	Private Growth	15.0%	20.3%	5.3%
	TOTAL GROWTH	55.0%	56.0%	1.0%

Income	Equity Options	2.0%	1.7%	-0.3%
	Liquid Credit	5.0%	4.0%	-1.0%
	CLO Mezz/Equity	2.0%	2.1%	0.1%
	Private Credit	3.0%	3.2%	0.2%
	TOTAL INCOME	12.0%	11.0%	-1.0%

Stability	Long Treasuries	5.0%	4.4%	-0.6%
	Systematic Trend	5.0%	4.4%	-0.6%
	CPC	10.0%	8.8%	-1.2%
	Core Real Estate	4.0%	3.4%	-0.6%
	Private Real Assets (ex-RE)	4.0%	4.5%	0.5%
	Inflation Protection	8.0%	7.8%	-0.2%
	Inv. Grade Fixed (ex-Treas.)	6.5%	5.8%	-0.7%
	Absolute Return	6.5%	6.8%	0.3%
	Strategic Cash	2.0%	1.7%	-0.3%
	Volatility Protection	15.0%	14.4%	-0.6%
	TOTAL STABILITY	33.0%	31.0%	-2.0%

	Operating Cash	0.0%	2.0%	2.0%
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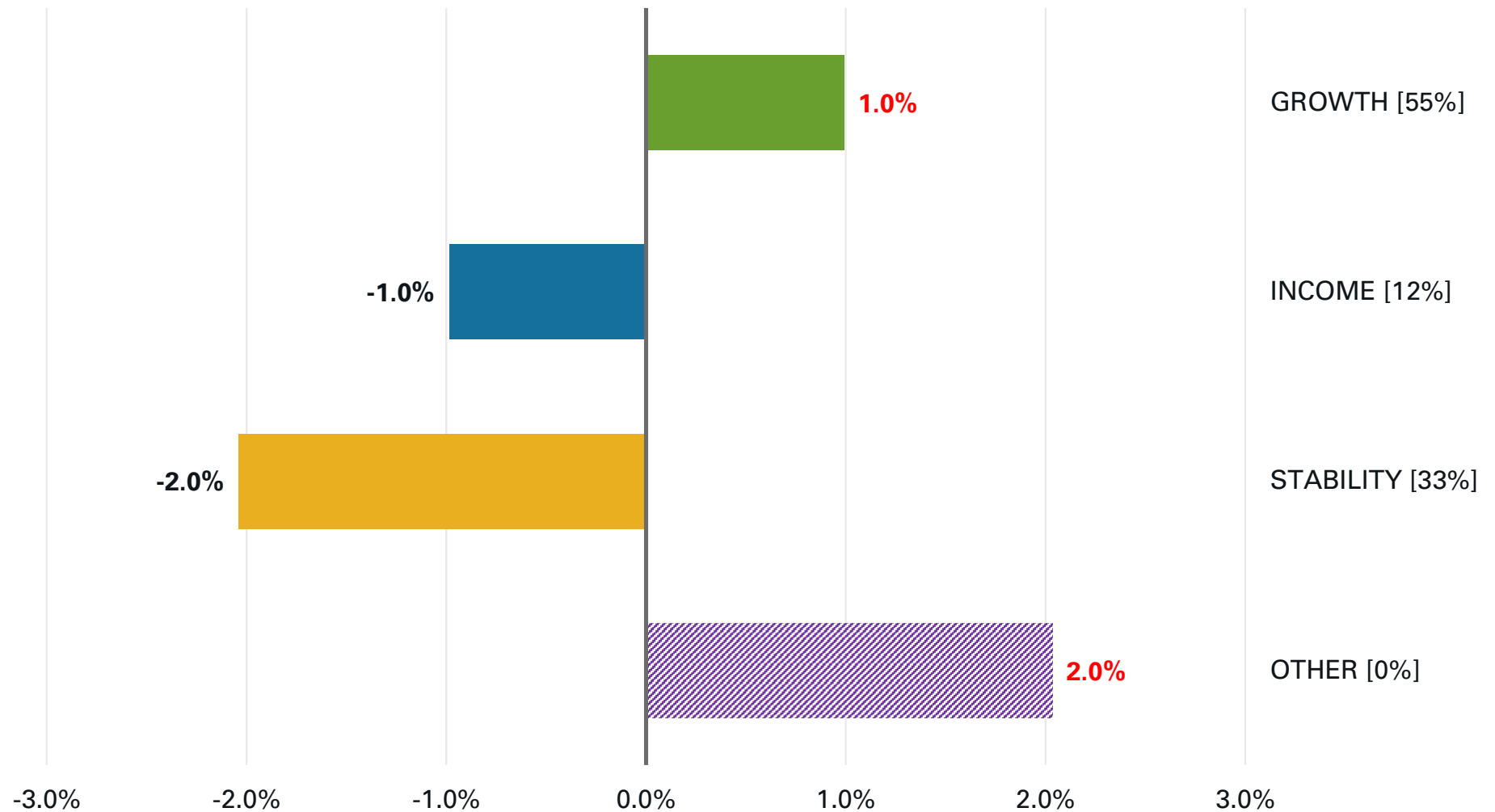


Based on estimates as of April 17, 2025

PORTFOLIO OVER/UNDERWEIGHTS

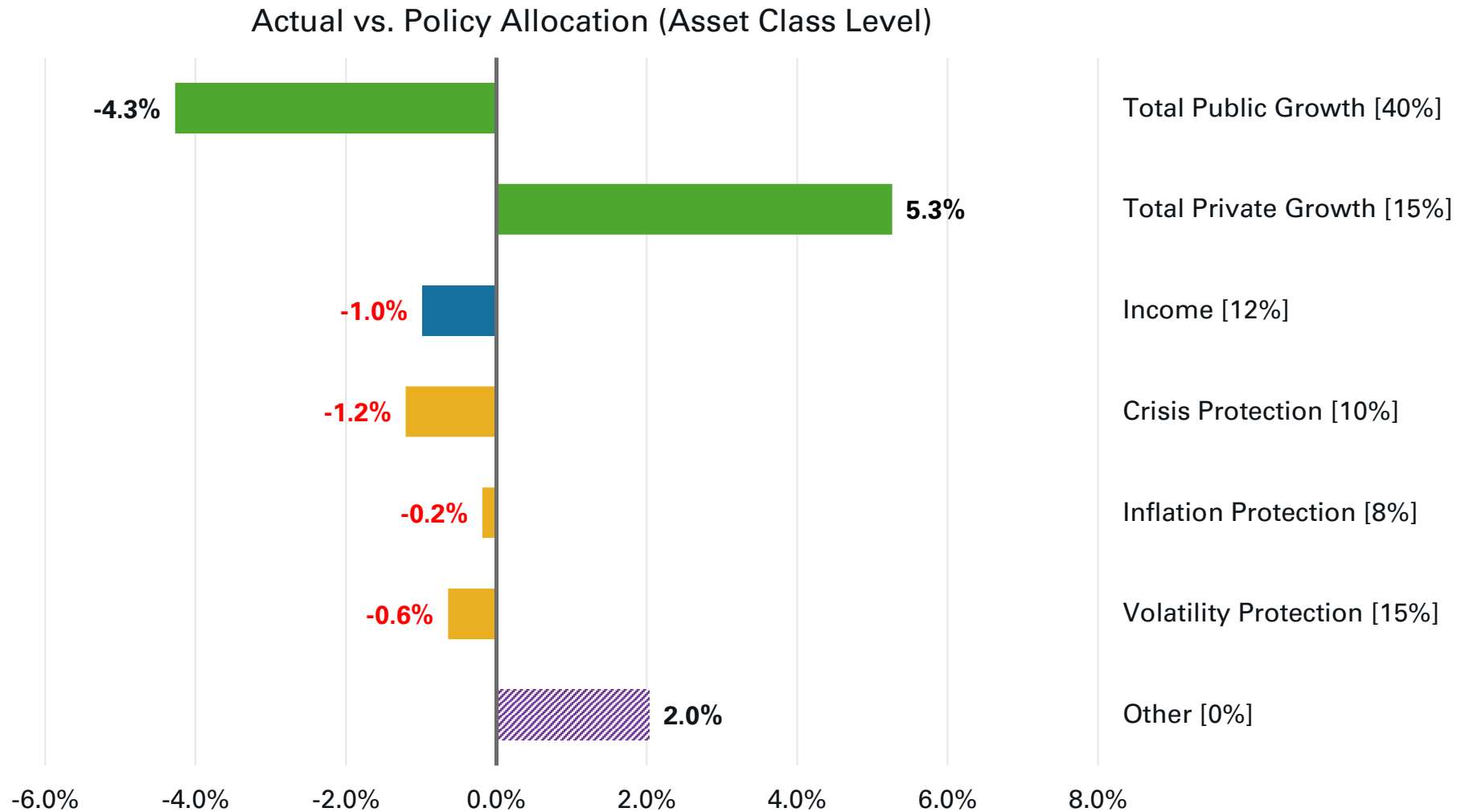
BUCKET LEVEL

Actual vs. Policy Allocation (Bucket Level)

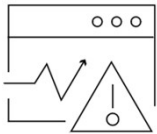


PORTFOLIO OVER/UNDERWEIGHTS

ASSET CLASS LEVEL



WHY USE AN OVERLAY?



RISK REDUCTION

Unintended exposures add risk, disciplined rebalancing can reduce this risk by approximately 75%¹



COST REDUCTION

Costs to trade futures is approximately 25%² of the cost to trade physical securities



RETURN ENHANCEMENT

Cash reduces long-term performance, overlays allow for market risk premium or beta to be matched with derivatives



SIMPLIFICATION

Overlays make running multi-manager portfolios easier and more efficient

¹Source: Russell Investments; Average annual tracking error calculated over Russell Investments' U.S. Overlay client universe from 1 Jan 2010 – 31 December 2023 is 73%

²Source: Russell Investments as of December 2022; S&P 500 physical trade cost is 5 bps; Costs of futures trading is 0.6 bps. MSCI World trading cost comparison of 10 bps vs 2 bps

OVERLAY PROXIES

Rhode Island - Rhode Island

Asset Summary

Balance Date: 4/9/2025



<u>Asset Class</u>	<u>Physical Exposure</u>		<u>Synthetic Exposure</u>		<u>Net Position</u>		<u>Overlay Target</u>		<u>Policy Target</u>	
Total Market Value	11,357.4	100.0%	0.0	0.0%	11,357.4	100.0%	11,357.4	100.0%	11,357.4	100.00%
Cash	145.3	1.3%	-141.5	-1.2%	3.8	0.0%	3.6	0.0%	0.0	0.00%
Cash	145.3	1.3%	-141.5	-1.2%	3.8	0.0%	3.6	0.0%	0.0	0.00%
Equity	6,287.1	55.4%	-102.5	-0.9%	6,184.6	54.5%	6,222.7	54.8%	6,246.6	55.00%
Global Equity	4,012.0	35.3%	-102.5	-0.9%	3,909.5	34.4%	3,947.6	34.8%	4,543.0	40.00%
Opportunistic Credit	106.6	0.9%	0.0	0.0%	106.6	0.9%	106.6	0.9%	0.0	0.00%
Private Equity	1,886.4	16.6%	0.0	0.0%	1,886.4	16.6%	1,886.4	16.6%	1,419.7	12.50%
Real Estate (Non-Core)	282.1	2.5%	0.0	0.0%	282.1	2.5%	282.1	2.5%	283.9	2.50%
Fixed	3,571.3	31.4%	244.0	2.1%	3,815.3	33.6%	3,777.4	33.3%	3,747.9	33.00%
Absolute Return - Fixed	773.0	6.8%	0.0	0.0%	773.0	6.8%	773.0	6.8%	738.2	6.50%
Fixed Income	656.9	5.8%	244.0	2.1%	900.9	7.9%	863.0	7.6%	738.2	6.50%
Long Duration	496.2	4.4%	0.0	0.0%	496.2	4.4%	496.2	4.4%	567.9	5.00%
Private Real Assets Ex-RE	504.9	4.4%	0.0	0.0%	504.9	4.4%	504.9	4.4%	454.3	4.00%
Real Estate (Core)	380.6	3.4%	0.0	0.0%	380.6	3.4%	380.6	3.4%	454.3	4.00%
Systematic Trend-Following	565.3	5.0%	0.0	0.0%	565.3	5.0%	565.3	5.0%	567.9	5.00%
Tactical Cash	194.5	1.7%	0.0	0.0%	194.5	1.7%	194.5	1.7%	227.1	2.00%
Other	1,353.6	11.9%	0.0	0.0%	1,353.6	11.9%	1,353.6	11.9%	1,362.9	12.00%
CLO	295.5	2.6%	0.0	0.0%	295.5	2.6%	295.5	2.6%	227.1	2.00%
Equity Options	205.4	1.8%	0.0	0.0%	205.4	1.8%	205.4	1.8%	227.1	2.00%
Liquid Credit	483.9	4.3%	0.0	0.0%	483.9	4.3%	483.9	4.3%	567.9	5.00%
Other Related	1.1	0.0%	0.0	0.0%	1.1	0.0%	1.1	0.0%	0.0	0.00%
Private Credit	367.8	3.2%	0.0	0.0%	367.8	3.2%	367.8	3.2%	340.7	3.00%

- > **Growth:** Private Equity overweight offset by Public Equity underweight
- > **Stability:** Real Estate underweight offset by Public Fixed overweight
- > **Income:** small underweight, pro rata allocated to Growth (slightly offsets overweight, still short Global Equity futures) and Stability (adds to underweight, resulting in long Treasury futures position)



Source: Russell. Data is historical and is not an indication of future performance.

POTENTIAL PRIVATE EQUITY APPROACHES

- Current: Private Equity deviations from target are proxied with equity index futures (public equity)
- Alternatives
 1. Apply an agreed upon haircut (20% shown in table below) to PE market value, given lagged valuations
 - 2a. Proxy PE deviations from target with a pro-rata mix of equity index and Treasury futures, using the same treatment applied to Income illiquid assets (~55% equity / 45% fixed)
 - 2b. Proxy PE deviations from target with Treasury futures (public fixed income) like Stability illiquids
 3. Temporarily move to long only, such that the Overlay would only bring underweights (specifically Stability) closer to target
 4. Employ leverage to get to target (shown below), or x% of the way to target.

Scenario	Public Equity Overlay Target	Distance from SAA Target	Synthetic Equity Notional (assumes no physical rebal) \$mm	Fixed Income Overlay Target	Synthetic Treasury Notional (assumes no physical rebal) \$mm	Gross Notional as % of Plan NAV
Current - at month end snapback	35.0%	-5.0%	-37	7.4%	179	1.9%
1. PE Haircut	37.5%	-2.5%	104	6.3%	37	1.2%
2a. PE to Other	36.8%	-3.2%	167	5.6%	-25	1.7%
2b. PE to Fixed	39.1%	-0.9%	429	3.3%	-287	6.3%
3. Long Only	35.0%	-5.0%	0	7.4%	142	1.2%
4. Employ Leverage	39.9%	-0.1%	522	7.3%	174	6.1%

Based on estimates as of April 9, 2025



Source: Russell.

PRIVATE EQUITY HAIRCUT SENSITIVITIES

<i>as of 4/17/2025</i>	PE Haircut	Public Equity Physical Exposure (incl. PE Haircut)	Overlay Target Public Equity Exposure	Public Equity + Overlay % (Tot. Plan incl. PE Haircut)	Public Equity + Overlay % (Tot. Plan excl. PE Haircut)
BASELINE	0%	35.7%	-0.41%	35.3%	35.3%
	10%	36.4%	+0.22%	36.6%	36.0%
	20%	37.0%	+0.88%	37.9%	36.6%
	30%	37.7%	+1.56%	39.2%	37.2%
	40%	38.3%	+2.27%	40.6%	37.9%
	50%	39.0%	+3.00%	42.0%	38.5%
	60%	39.8%	+3.75%	43.5%	39.1%
	70%	40.5%	+4.54%	45.1%	39.8%
	80%	41.3%	+5.36%	46.7%	40.4%
	90%	42.1%	+6.21%	48.3%	41.0%
	100%	43.0%	+7.09%	50.1%	41.6%

Based on estimates as of April 17, 2025



Source: Treasury Investment Staff,



APPENDIX

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