PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: December 31, 2023

Investment Performance Review for

Illinois Police Officer's Pension Investment Fund

Table of Contents

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Executive Summary

- Total assets grew from $9.2 billion to just over $10.0 billion through the end of the 4th quarter, responding to a strong market environment across most asset classes.
- The market reacted favorably to a continued steady decline in inflation, as the Fed softened its language regarding the prospect of future interest rate moves. This, combined with strong fundamentals, such as continued economic growth, labor market stability, and consumer resilience led to an increase in risk assets. The S&P 500 returned 11.7% in the 4th quarter, and the Bloomberg U.S. Aggregate Bond Index returned 6.8%.
- The IPOPIF Investment Portfolio returned 8.8% for the quarter and was slightly below the Policy Index return of 9.0%, largely resulting from a modest underweight to equity relative to policy (56.4% vs. 58.0% at quarter-end) in a strong equity environment. The same is true for underperformance relative to the Broad-Based Policy Index, which returned 10.3% for the quarter with a 70% global equity allocation.
- Since its inception in April 2022, the IPOPIF Portfolio has returned 2.3% through the end of the 4th quarter, in line with the Policy Index and meaningfully ahead of the Broad-Based Policy Index of 1.4%.
- The IPOPIF Portfolio ranked in the 6th percentile relative to a representative universe of Public Pensions with assets greater than $1 billion for the quarter. Like similarly strong rankings in previous quarters, the favorable ranking in the 4th quarter continues to be largely attributable to a relatively high public markets equity allocation relative to peers[3].
- As a primarily passively-invested investment strategy, the IPOPIF Portfolio experienced minimal variation to its Policy Index in the 4th quarter. We would expect some tracking error to be introduced as the Fund takes on more active management. Individual investment strategies also performed in line with their strategy-specific benchmarks during the quarter.
- The IPOPIF investment team actively monitors current asset allocations vs. policy targets and conducts rebalancing trades as appropriate. As of 12/31/23, all asset classes were within policy target.

Notes
[1]Total Fund assets includes Member Fund and Transition accounts that were not invested in the IPOPIF Investment Portfolio during Transition Period.
[2]The Broad-Based Policy Index represents a passively invested 70/30 global stock/bond portfolio.
[3]IPOPIF has implemented a short-term asset allocation which is primarily passively invested in public markets. IPOPIF is currently moving toward its long-term asset allocation, which includes active management and private market assets.

Investment Landscape

4th quarter summary

THE ECONOMIC CLIMATE

— Real GDP increased at a 2.9% pace from a year ago in Q3 (4.9% quarter-over-quarter annualized rate). The economy has remained relatively strong while inflation now appears likely to fall closer to the Fed's 2% target in 2024. These expectations contributed to a dovish pivot from the Fed, a sharp drop in interest rates, and a notable market rally as the possibility of a soft landing has risen.

— Unemployment fell slightly from 3.8% to 3.7%, though the labor participation rate dropped sharply towards the end of the year. The labor market remains surprisingly resilient after roughly a full year of higher interest rates.

PORTFOLIO IMPACTS

— Consumer sentiment has been incredibly poor, and one of the greatest concerns for Americans is inflation. Although inflation has fallen considerably, prices of goods and services remain high, placing strain on budgets. Because inflation measures the rate of change of prices, rather than the level of prices, lower inflation has failed to ease the financial pressure that many households face.

— The Cboe VIX implied volatility index moved even lower during Q4, from 17.5 to 12.5. At the same time, bond market volatility was very high, as indicated by the "MOVE" Index. Uncertainty around inflation, the Federal Reserve's possible interest rate path and the extent of rate cuts, potential recession, and fears around the U.S. fiscal situation are likely contributing to market shakiness.

THE INVESTMENT CLIMATE

— An abrupt change in Federal Reserve communication regarding interest rate cuts during the quarter coincided with sharply lower bond yields, higher equity valuations, and further tightening of credit spreads.

— U.S. headline inflation fell during the quarter, from 3.7% to 3.3% year-over-year. Core CPI (ex-food & energy) declined from 4.1% to 3.9%. Low inflation numbers in October and November (0.0% and 0.1% month-over-month) were counterbalanced by a surprisingly high inflation number in December (0.3% month-over-month).

ASSET ALLOCATION ISSUES

— U.S. equities (S&P 500 +11.7%) led international developed equities (MSCI EAFE +10.4%) and emerging market equities (MSCI EM +7.9%) during the quarter. Domestic equities also led non-U.S. equities over the full year while emerging markets lagged. Wide sector performance differences contributed to U.S. leadership given a much heavier tech focus of the domestic market.

— Style factor performance was mixed during Q4. Small cap outperformed large cap by +2.0%. Value underperformed Growth by -3.2%. Over the full year, small caps underperformed large caps by -9.6% while value stocks underperformed growth by a whopping -31.2%. Besides an extreme period of value underperformance during 2020, calendar year 2023 was the worst 1-year rolling period in more than two decades.

Risk assets rallied in Q4 following a dovish pivot from the Federal Reserve and recent economic data suggesting a greater chance of a soft landing

What drove the market in Q4?

"A Soft Landing is in View as Inflation Drops"

HEADLINE CPI MONTH-OVER-MONTH CHANGES					
July	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
0.2%	0.6%	0.4%	0.0%	0.1%	0.3%

Article Source: WSJ, November 14th, 2023

"U.S. Labor Market Resilience Keeps Economy Afloat as Year Ends"

U-3 UNEMPLOYMENT RATE					
July	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
3.5%	3.8%	3.8%	3.8%	3.7%	3.7%

Article Source: Reuters, December 21st, 2023

"U.S. Consumer Spending, Inflation Slow in Sign of Cooling Economy"

U.S. NOMINAL RETAIL SALES (YEAR-OVER-YEAR)					
July	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
2.8%	2.8%	4.0%	2.2%	4.0%	5.6%

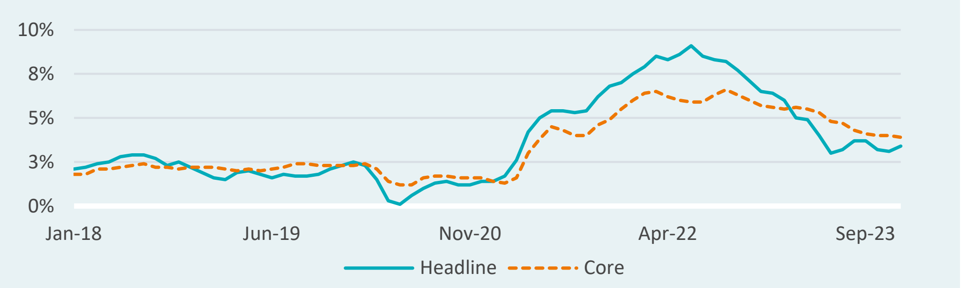
Article Source: Bloomberg, November 30th, 2023

"Fed Holds Rates Steady, Indicating Three Cuts Coming in 2024"

FOMC PROJECTED END OF 2023 FED FUNDS RATE					
Sep 22 SEP	**Dec 22 SEP**	**Mar 23 SEP**	**June 23 SEP**	**Sept 23 SEP**	**Dec 23 SEP**
4.60%	5.10%	5.10%	5.60%	5.60%	5.40%

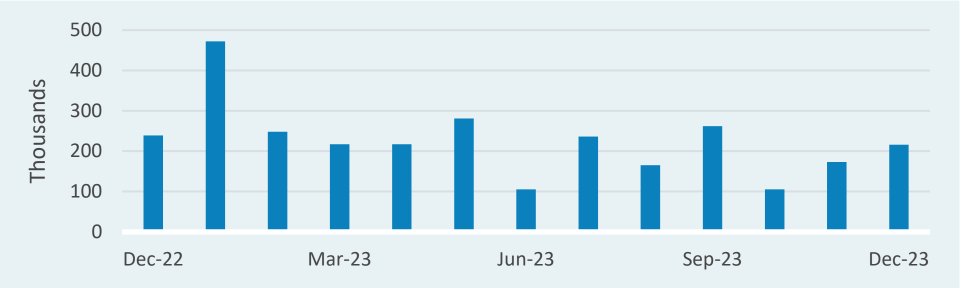
Article Source: CNBC, December 13th, 2023

HEADLINE & CORE CPI (YEAR-OVER-YEAR)



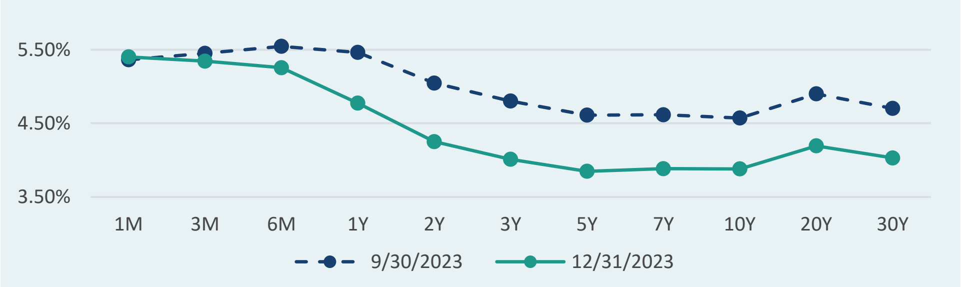
Source: BLS, as of 12/31/23

CHANGE IN NONFARM PAYROLLS



Source: BLS, as of 12/31/23

TREASURY YIELD MOVEMENTS (FOURTH QUARTER)



Source: Bloomberg, as of 12/31/23

U.S. economics summary

— Real GDP increased at a 2.9% pace year-over-year in Q3 (4.9% quarter-over-quarter annualized rate). The economy has remained relatively strong while inflation appears more likely to fall closer to the Fed's target in 2024. These expectations contributed to a dovish pivot from the Federal Reserve in December, a sharp drop in interest rates, and a notable market rally as the possibility of a soft landing has risen.

— U.S. headline inflation fell during the quarter, from 3.7% to 3.3% year-over-year. Core CPI (ex-food & energy) declined further from 4.1% to 3.9%. Low inflation numbers in October and November (0.0% and 0.1% month-over-month) were counterbalanced by a surprisingly high inflation number in December (0.3% month-over-month).

— Consumer spending has been stable, with real personal consumption expenditures up +2.7% year-over-year in November, the strongest growth figure since early 2022. However, strong spending appears to be at the expense of a low household savings rate (4.1% in November) and may be partly driven by necessity (higher prices of goods & services) rather than by a positive financial or economic outlook.

— The job market has shown mixed signals, increasing in total size during 2023 but arguably with some weakness around the edges. Unemployment rose during the year but fell slightly in Q4 from 3.8% to 3.7%. This historic mismatch between jobs available and workers available has been slowly closing.

— Consumer sentiment improved slightly but remains incredibly poor. Inflation is a central concern for Americans. Although inflation has fallen considerably, prices of goods and services remain high, placing strain on budgets. Because inflation measures the rate of change of prices, rather than the level of prices, lower inflation has failed to ease the financial pressure that many households face.

	Most Recent	**12 Months Prior**
Real GDP *(YoY)*	2.9% *9/30/23*	1.7% *9/30/22*
Inflation *(CPI YoY, Core)*	3.9% *12/31/23*	6.4% *12/31/22*
Expected Inflation *(5yr-5yr forward)*	2.2% *12/31/23*	2.3% *12/31/22*
Fed Funds Target Range	5.25–5.50% *12/31/23*	4.25–4.50% *12/31/22*
10-Year Rate	3.88% *12/31/23*	3.88% *12/31/22*
U-3 Unemployment	3.7% *12/31/23*	3.5% *12/31/22*
U-6 Unemployment	7.1% *12/31/23*	6.5% *12/31/22*

GDP growth

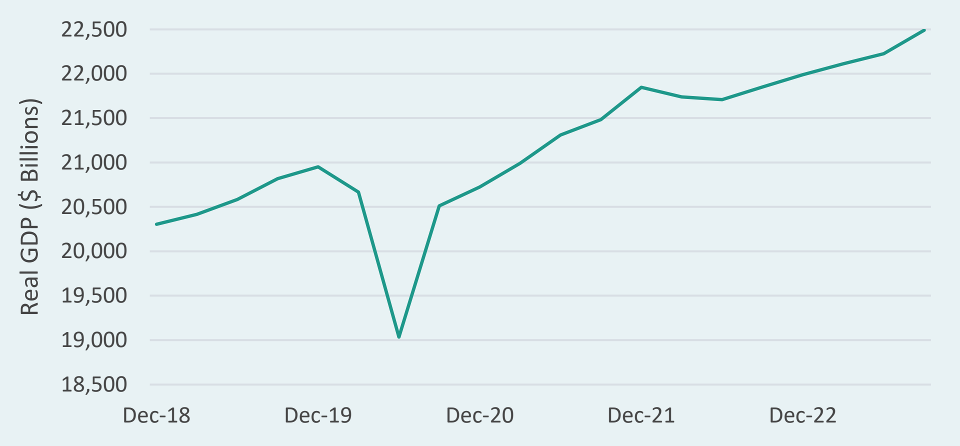
Real GDP increased at a 2.9% pace from a year ago in the third quarter (4.9% quarter-over-quarter annualized rate). The large uptick was driven by consumption, which continues to show resiliency. While many investors have expected high inflation and weaker wage growth to impact spending, a combination of pandemic related excess savings and a strong decade of household wealth expansion is likely providing a cushion against an economic slowdown. Outside of consumption, all major categories, besides net exports, positively contributed to GDP growth.

The economy has remained relatively strong while inflation now appears likely to fall closer to the Fed target in 2024. These expectations contributed to a sharp drop in interest rates towards the end of 2023, and a notable market rally, as the possibility of a soft landing has risen.

A string of positive economic news occurred throughout the fourth quarter. The economic outlook has improved along with this new information, though we continue to believe economic bumpiness is on the horizon—perhaps in mid-2024. However, U.S. markets appear to be fully pricing in the soft-landing narrative, which likely limits the upside if that were to come to fruition.

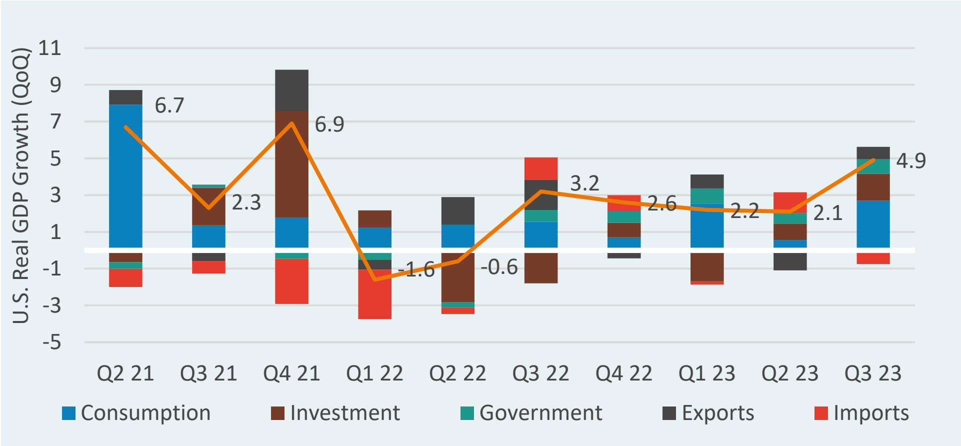
The U.S. economy continues to show resilience despite aggressive monetary tightening & low consumer confidence

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 9/30/23

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 9/30/23

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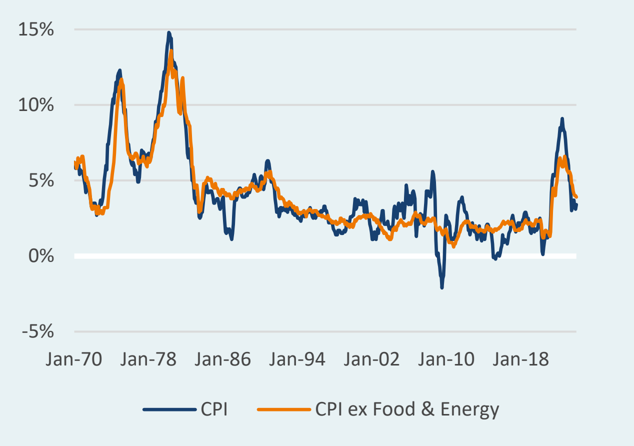
Inflation

U.S. headline inflation fell during the quarter, from 3.7% to 3.3% year-over-year in December. Core CPI (ex-food & energy) declined further from 4.1% to 3.9%. It is not yet clear how long it will take for inflation to return to the Federal Reserve's 2% target, or how bumpy that ride might be. Low inflation numbers in October and November (0.0% and 0.1% month-over-month) were counterbalanced by a surprisingly high inflation release in December (0.3% month-over-month).

Most of the largest initial drivers of U.S. inflation, such as food, energy, and used autos, are now moderating in price and helping to bring inflation down towards the Fed's 2% target. Additionally, the largest component of the inflation "basket" of goods and services is shelter prices (the cost of rents or renter's equivalent). The calculation of shelter for official government data purposes tends to reflect market rent movements with a lag. Market-based rent indexes reflect much lower rent inflation. For example, the series published by Zillow indicates 3.3% year-over-year inflation as of December. This suggests that as government shelter data catches up with true market rent prices, the greatest support to current inflation levels (shelter costs) will drop materially, potentially bringing inflation officially back to around a 2% level.

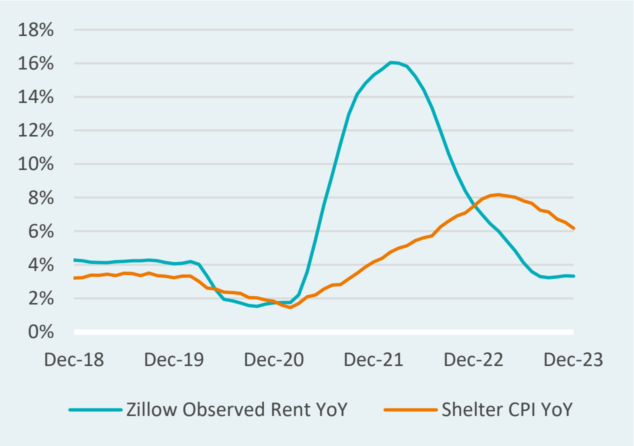
Inflation & other economic data released in Q4 suggests a path for inflation to fall towards 2% in 2024

U.S. CPI (YOY)



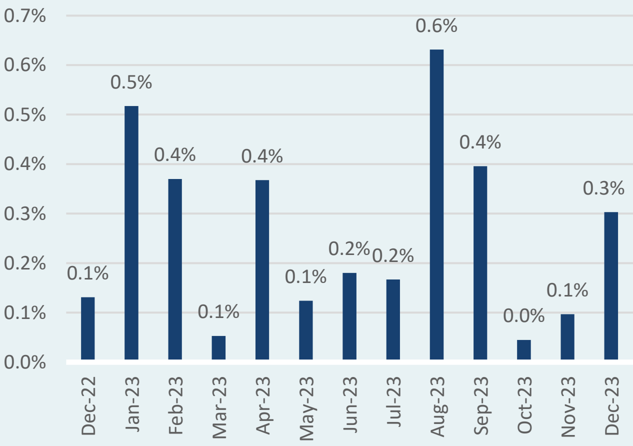
Source: BLS, as of 12/31/23

ZILLOW OBSERVED RENT VS. SHELTER CPI (YOY)



Source: Zillow Observed Rent Index, as of 12/31/23

MONTHLY PRICE MOVEMENT (CPI)



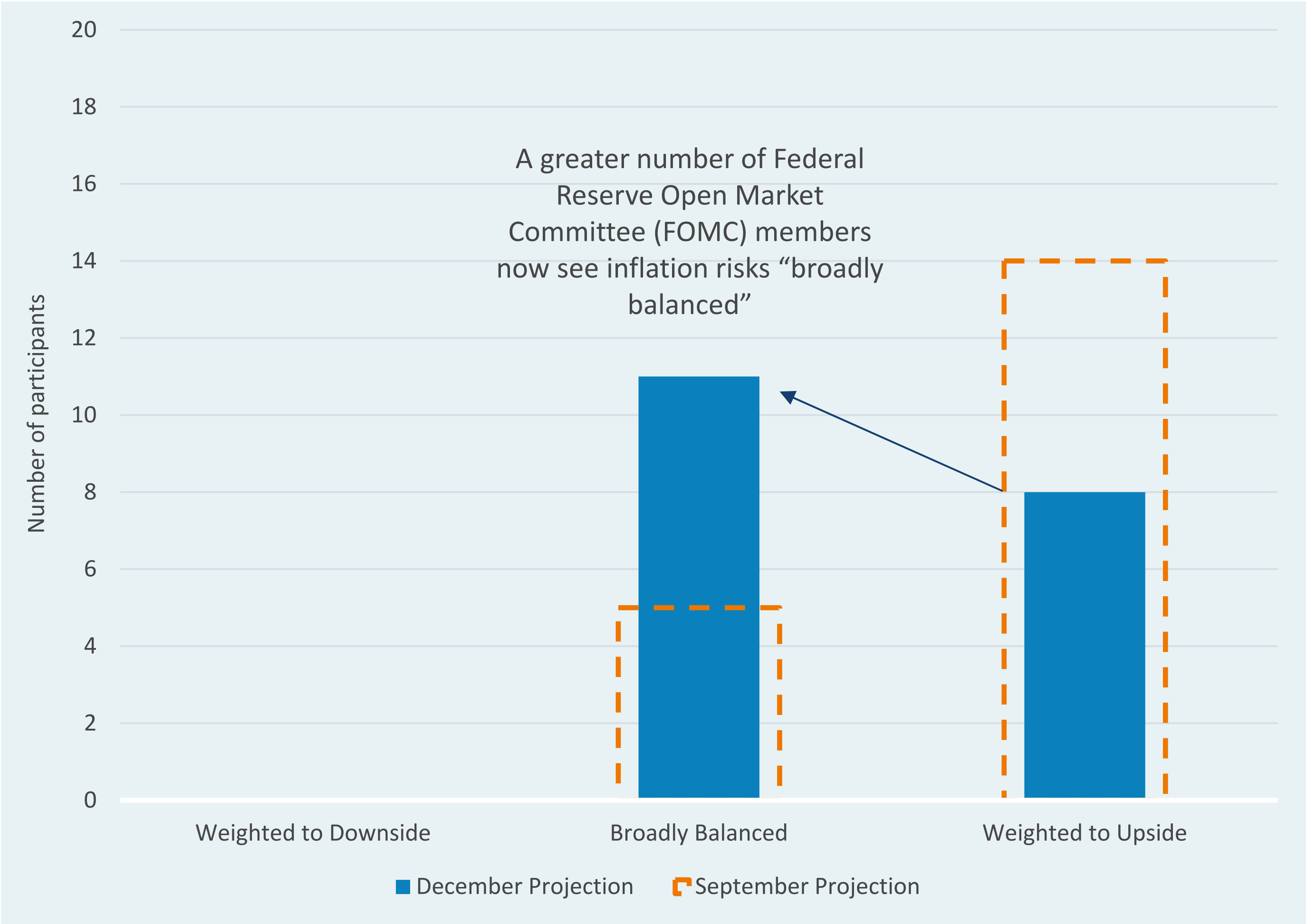
Source: BLS, as of 12/31/23

Shifting signaling from the Federal Reserve

December 2023 risks to core inflation: FOMC participants

On December 13th, the Fed's tone shifted. Powell spoke to a much rosier inflation picture and described a greater focus on both sides of its dual mandate—price stability and full employment.

Although optimistic, Powell's comments emphasized a cautious view of the restrictive policy's impact, ***"Our actions have moved our policy rate well into restrictive territory, meaning that tight policy is putting downward pressure on economic activity and inflation, and the full effects of our tightening likely have not yet been felt… Given how far we have come, along with the uncertainties and risks that we face, the Committee is proceeding carefully."***



Source: Federal Reserve December 2023 Summary of Economic Projections

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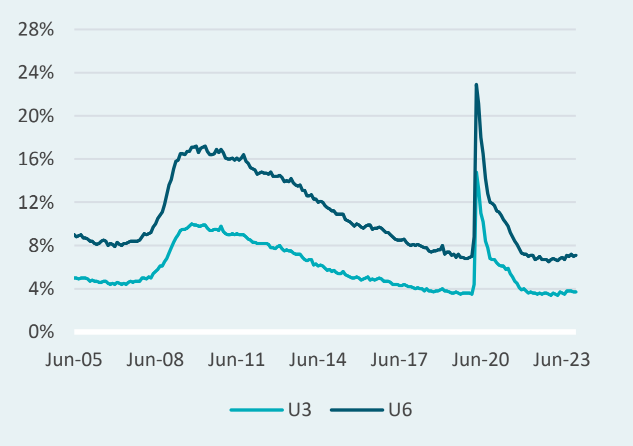
Labor market

Unemployment fell slightly in Q4 from 3.8% to 3.7%, though the labor participation rate dropped sharply towards the end of the year from 62.8% to 62.5%. According to most available metrics, the labor market remains surprisingly resilient. While throughout history higher interest rates, and yield curve inversion in particular, have typically been followed by recession, the economy has been strong in the face of higher interest rates for roughly a full year. These dynamics have fueled hope that the economy may achieve a soft landing.

Some mixed signals have appeared in recent months. The labor participation rate has fallen for both younger and older workers, potentially a sign of stalling of strong post-pandemic job growth. Rebalancing within the labor market continued, as the mismatch between the number of *workers available* and the number of *available jobs* closes. This gap was 5.5 million at the beginning of the year and fell to 2.5 million in November. This rebalancing appears to be due to positive factors (a growing workforce) rather than negative factors (fewer jobs available), as more Americans are seeking employment and finding jobs that had previously gone unfilled.

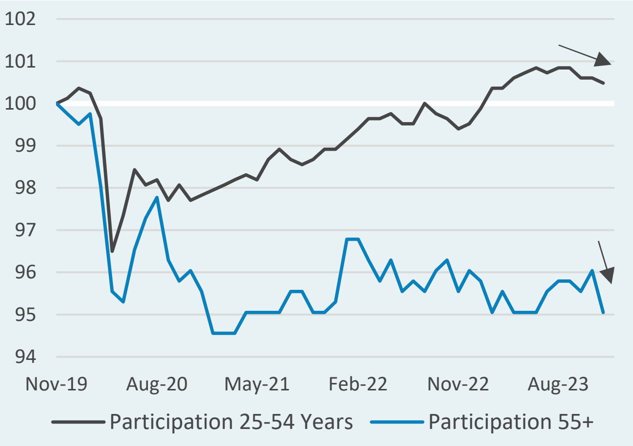
The gap between *available jobs* and *available workers* was cut in half during 2023, as the labor market moves into balance

U.S. UNEMPLOYMENT



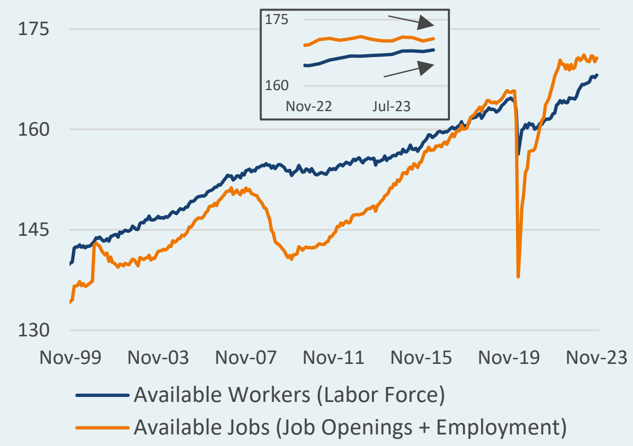
Source: FRED, as of 12/31/23

LABOR FORCE PARTICIPATION RATE BY AGE



Source: FRED, as of 12/31/23

WORKERS AVAILABLE VS. AVAILABLE JOBS



Source: BLS, Verus, as of 11/30/23

The consumer

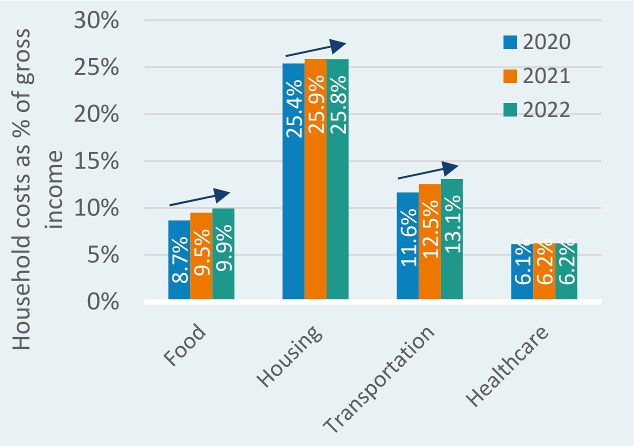
We believe there are two important sides to the U.S. consumer picture. First, spending has been stable, as real (inflation-adjusted) personal consumption expenditures continued at a moderate pace, at 2.7% year-over-year in November—the strongest growth figure since early 2022. But second, strong spending appears to be coming at the expense of household savings (very low at 4.1% in November) and may be partly driven by necessity (higher prices of goods and services) rather than driven by a positive financial or economic outlook. This latter point is supported by incredibly poor consumer sentiment.

As discussed in last quarter's report, wealth for the majority of Americans has greatly expanded over the past decade, fueled by higher home prices, a bull market for stocks, and broad economic strength. However, this stands in stark contrast to reports of widespread financial difficulties of Americans. For example, a Lending Club survey conducted in November 2023 indicated that 62% of consumers are living paycheck to paycheck. In this unique environment, it is difficult to gauge the extent to which greater wealth, though often illiquid, might help extend strong spending into future quarters, or whether spending is set to slow as households reset their spending to lower levels to try and return to more conservative budgets with an appropriate savings rate.

REAL PERSONAL SPENDING

Source: FRED, as of 11/30/23

HIGHER COSTS EATING INTO BUDGETS



Source: BLS, Verus, as of 9/8/23 – household costs as % of gross income

PERSONAL SAVINGS RATE

Source: FRED, as of 11/30/23

Housing

Home prices increased 3.0% in the third quarter, with ongoing support from very low housing inventory levels. It is possible that low inventories, high costs of new construction, a lack of forced sales (home sales due to financial stress), and an unwillingness of current homeowners to sell and sacrifice their existing low mortgage rate, could act as an ongoing support to high home prices despite extreme unaffordability.

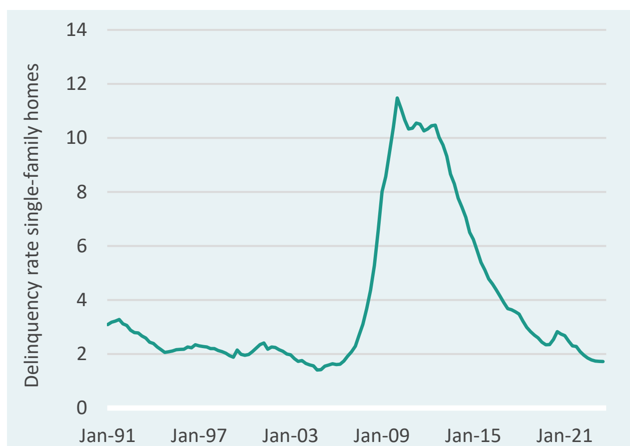
On a brighter note, housing affordability on the margin may be moving in a better direction. Despite mild gains in home prices, the 30-year average fixed mortgage rate has fallen from a 23-year high of 7.3% to 6.6% at the end of December. A moderation in mortgage rates, with expectations for a handful of Federal Reserve rate cuts in 2023, could help affordability and provide a support to home demand in the near-term.

Mortgage delinquency levels of single-family homeowners continue to be muted, at 1.7% as of Q3. Surprisingly, mortgage delinquency rates have consistently declined since the pandemic. This may be a reflection of significant home equity built up for the average homeowner, the ability of homeowners to draw on that equity to help make financial ends meet, and a hesitance to default on a loan if the loan is not underwater.

30-YEAR MORTGAGE RATE (%)

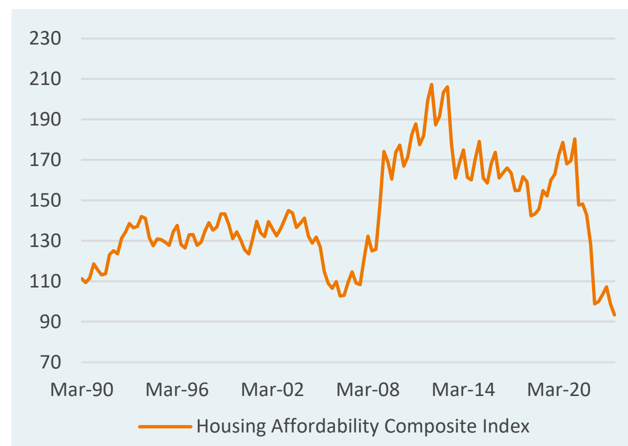
Source: FRED, as of 12/31/23

SINGLE-FAMILY HOME DELINQUENCY RATE (%)



Source: FRED, as of 9/30/23

HOUSING AFFORDABILITY



Source: FRED, as of 9/30/23 – Housing affordability is calculated as the cost of a median priced single-family home at the current mortgage rate, as a percentage of the median family income

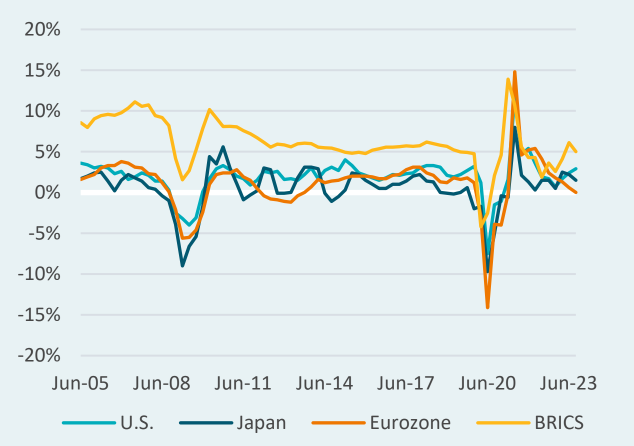
International economics

The ongoing threat of inflation, and central banks' tightrope act of working to battle that inflation without tipping economies into recession, was expected to be a key risk of 2024. However, in the fourth quarter inflation has fallen more quickly than expected, while economic growth has generally been more resilient. The global growth picture seems to have improved, all else equal, although growth is still expected to slow materially in the coming quarters.

Although broad macroeconomic conditions improved, additional risks surfaced throughout the quarter, as conflicts within the Middle East escalated. Tensions remain high and concerns around global supply chains and energy markets have been at the forefront—though impacts across commodity markets have been muted so far.

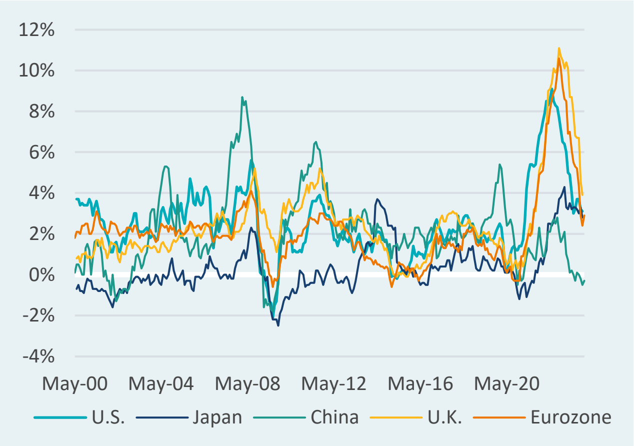
The outlook remains uncertain. Geopolitical tension is still high, especially as the U.S. and China compete for dominance in the technology sector. Developed economies in the Eurozone and Japan are projected by the World Bank to grow less than 1% in 2024, far below historical long-term averages. On the flip side, emerging and developing economies still boast strong growth targets. India is a highlight, as growth expectations for both 2024 and 2025 sit above six-percent.

REAL GDP GROWTH (YEAR-OVER-YEAR)



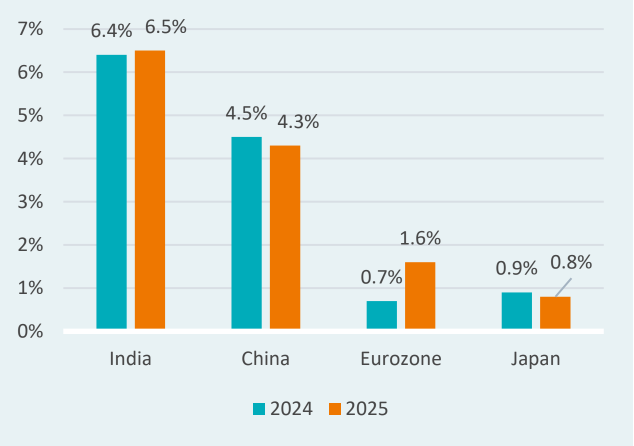
Source: Bloomberg, as of 9/30/23

INFLATION (CPI YEAR-OVER-YEAR)



Source: Bloomberg, as of 12/31/23 – or most recent release

WORLD BANK REAL GDP FORECASTS



Source: World Bank Global Economic Prospects, as of 1/9/24

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Fixed income environment

— The 10-year U.S. Treasury yield reversed its gains from the prior quarter, falling from 4.58% to 3.88% in Q4, as the market reassessed inflation conditions and the Federal Reserve's likely path. Further signs that inflation is moderating toward target, along with surprisingly upbeat economic news, likely contributed to the Federal Reserve's "dovish pivot" as it has been referred to. The 10-year yield ended 2023 unchanged.

— During Q4, credit markets delivered strong results, led by lower-quality bonds such as high yield and bank loans. High yield gained +7.2% (Bbg U.S. Corporate High Yield), while bank loans rose +2.8% (S&P/LSTA Leveraged Loan). Longer duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) rose 14.0% during the quarter as both falling interest rates and narrower credit spreads acted as a tailwind.

— The U.S. yield curve has remained inverted for 1.5 years, which is among the most extended periods in modern history. This is indicated by the 10-year minus 2-year Treasury yield—ending the year at -35bps, up from -44bps in Q3. Unique attributes of the current economic environment suggest that this curve inversion may not coincide with a near-term recession.

— US interest rates remained steady during the quarter as inflation continued to moderate towards the Federal Reserve Bank's 2.0% target. Importantly, expectations for future rate cuts increased following the statement made by Chairman Powell that future rate hikes may not be required.

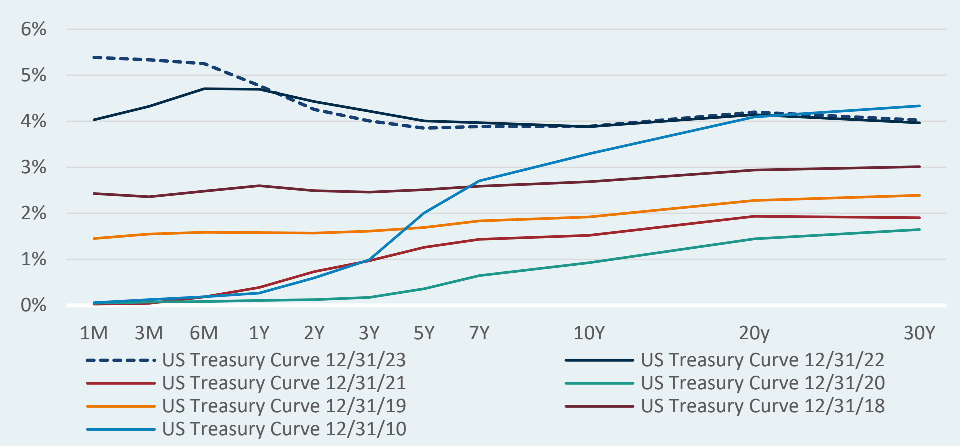
— With inflation and economic growth continuing to moderate during the quarter, market expectations for future rate cuts by the Federal Reserve increased. As a result, interest rates across the US Treasury curve declined meaningfully, with shorter-term rates declining more than longer-term rates.

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	6.8%	5.5%
Core Plus Fixed Income (Bloomberg U.S. Universal)	6.8%	6.2%
U.S. Treasuries (Bloomberg U.S. Treasury)	5.7%	4.1%
U.S. Treasuries: Long (Bloomberg U.S. Treasury 20+)	13.4%	2.7%
U.S. High Yield (Bloomberg U.S. Corporate HY)	7.2%	13.4%
Bank Loans (S&P/LSTA Leveraged Loan)	2.8%	13.3%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	8.1%	12.7%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	9.2%	11.1%
Mortgage-Backed Securities (Bloomberg MBS)	7.5%	5.0%

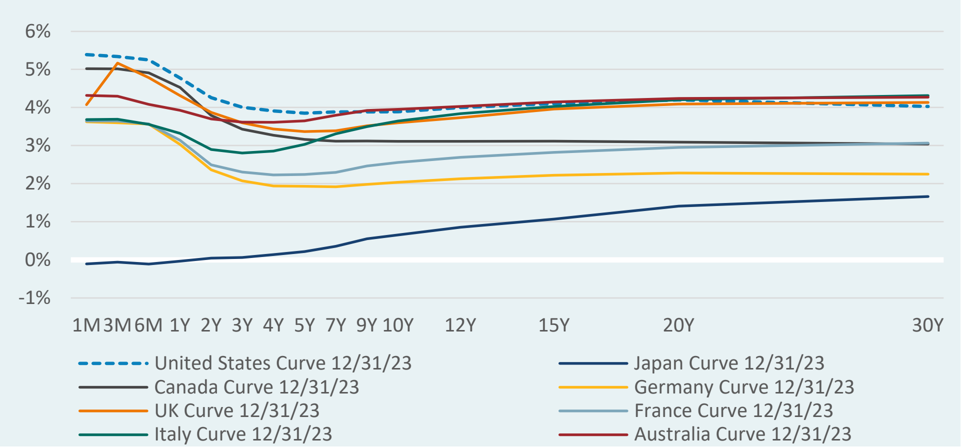
Source: Bloomberg, as of 12/31/23

Yield environment

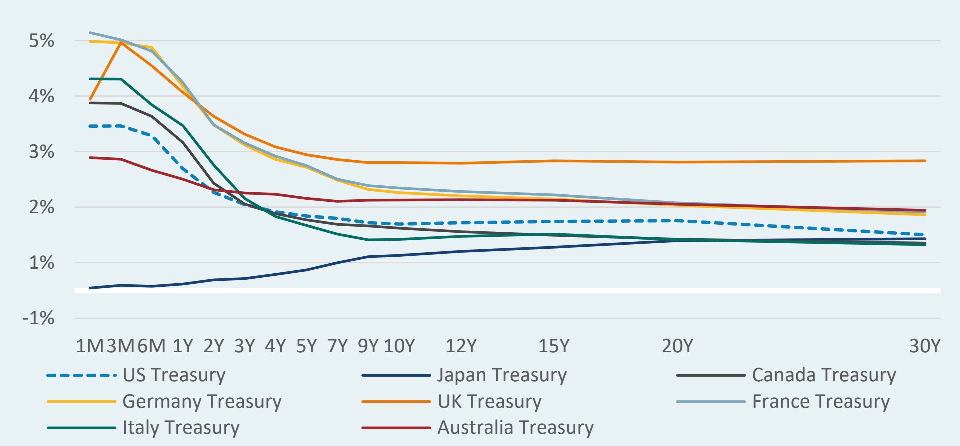
U.S. YIELD CURVE



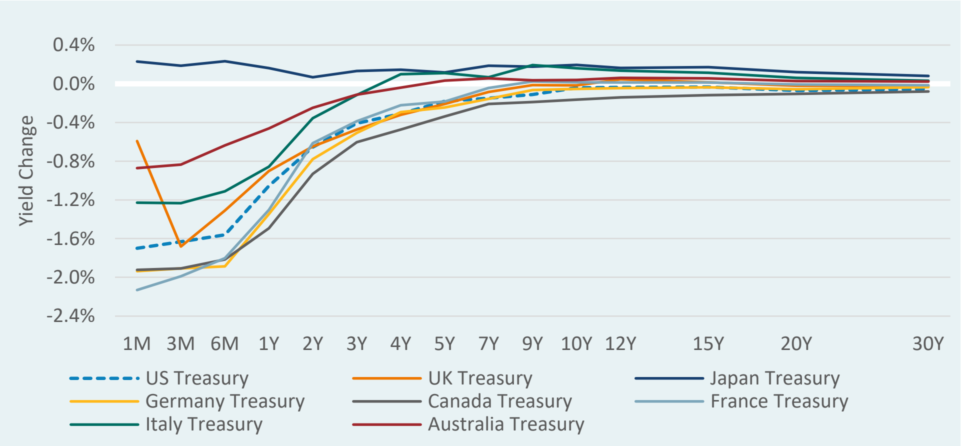
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 12/31/23

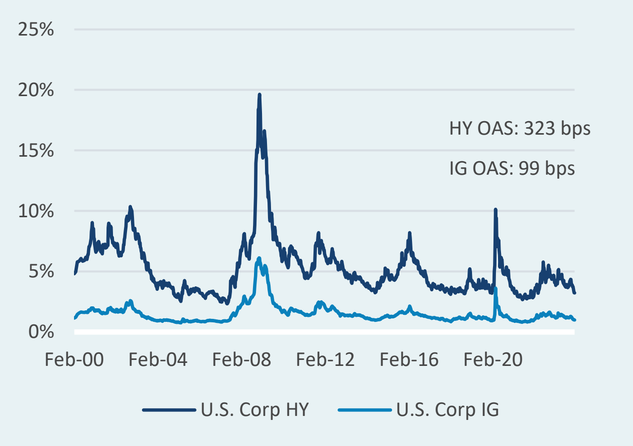
Credit environment

During the fourth quarter, credit markets delivered strong positive results, led by lower-quality credits such as high yield bonds and bank loans. High yield bonds delivered strong results gaining 7.2% (Bbg U.S. Corporate High Yield), while bank loans rose 2.8% (CS Leveraged Loans). Longer duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) rose 14.0% during the quarter as both falling interest rates and narrower credit spreads acted as a tailwind.

Higher-quality BB-rated bonds outperformed lower quality credits during the period returning 7.3% compared to 6.8% and 6.6% for B-rated and CCC-rated bonds, respectively. While absolute returns were positive, bank loans delivered a less-than-impressive 2.8%, primarily due to the combination of falling interest rates and expectations that the Federal Reserve Bank would begin cutting rates in the future.

Credit spreads narrowed during the quarter despite concerns related to an economic slowdown, weakening corporate fundamentals, and rising geopolitical tensions. Lower-quality, high yield bond spreads fell by 0.6% to roughly 3.2%, while investment grade spreads decreased by roughly 0.2% to 1.0%. Broadly, spreads remain below their long-term historical averages, which suggests that investors remain confident about the ability of those companies to service their debt. That said, slower U.S. economic growth could lead to wider credit spreads as investors seek safety in higher quality assets.

SPREADS



Source: Barclays, Bloomberg, as of 12/31/23

HIGH YIELD BONDS MONTHLY INCOME RETURN

Source: Bloomberg, as of 12/31/23

CREDIT SPREAD (OAS)

Market	12/31/23	12/31/22
Long U.S. Corp	1.2%	1.6%
U.S. Inv Grade Corp	1.0%	1.3%
U.S. High Yield	3.2%	4.7%
U.S. Bank Loans*	5.0%	5.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 12/31/23
**Discount margin (4-year life)*

Equity environment

— Domestic equities delivered a strong rally to finish Q4, driven by a combination of better-than-expected Q3 earnings and signals of easing from the Federal Reserve. The S&P 500 Index gained +26.3% during 2023.

— U.S. equities (S&P 500 +11.7%) led international developed equities (MSCI EAFE +10.4%) and emerging market equities (MSCI EM +7.9%) during the quarter. Domestic equities also led non-U.S. equities over the full year, while emerging markets were laggards. Wide sector performance differences contributed to U.S. leadership, given the much heavier tech focus of the domestic market.

— The U.S. dollar fell sharply, as investors reassessed Federal Reserve policy and interest rates retraced lower. This move created a tailwind for investors with unhedged exposure to foreign currencies. On a trade-weighted basis, the value of the U.S. dollar fell -4.3%. However, over the full calendar year investors with unhedged currency exposure saw moderate losses, due to wide fluctuations of the dollar.

— Style factor investing delivered mixed performance for investors in Q4. Over the full year, style investing suffered substantially. Small cap underperformed by -9.6% while value stocks underperformed growth by a whopping -31.2%. Besides an extreme period during 2020, calendar year 2023 was the worst 1-year rolling period in more than two decades.

— The Cboe VIX implied volatility index moved even lower during the fourth quarter, from 17.5 to 12.5 in December. Priced volatility is incredibly low—at a level that has historically tended to coincide with very strong economic and market conditions.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	11.7%		26.3%	
U.S. Small Cap (Russell 2000)	14.0%		16.9%	
U.S. Equity (Russell 3000)	12.1%		26.0%	
U.S. Large Value (Russell 1000 Value)	9.5%		11.5%	
US Large Growth (Russell 1000 Growth)	14.2%		42.7%	
Global Equity (MSCI ACWI)	11.0%	9.7%	22.2%	22.7%
International Large (MSCI EAFE)	10.4%	6.0%	18.2%	19.9%
Eurozone (EURO STOXX 50)	13.3%	9.3%	26.5%	25.6%
U.K. (FTSE 100)	6.9%	2.5%	14.3%	8.8%
Japan (TOPIX)	8.2%	3.6%	19.3%	35.7%
Emerging Markets (MSCI Emerging Markets)	7.9%	5.7%	9.8%	10.1%

Source: Russell Investments, MSCI, STOXX, FTSE, JPX, as of 12/31/23

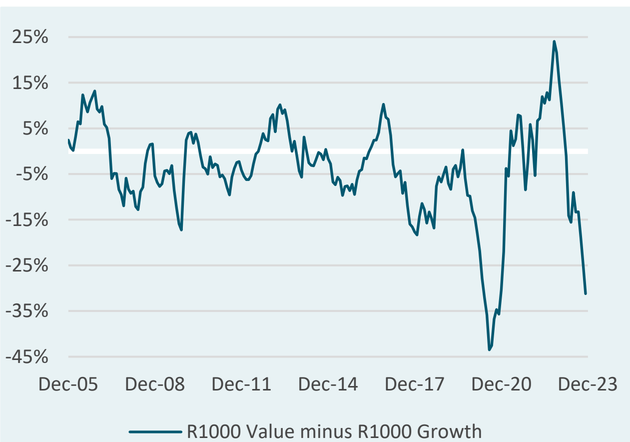
Domestic equity size & style

Style factor investing delivered mixed performance for investors in the fourth quarter. Small cap outperformed large cap by +2.0% during Q4 (Russell 2000 vs. Russell 1000). Value underperformed Growth by -3.2% (Russell 1000 Value vs. Russell 1000 Growth). Over the full year, style investing suffered substantially. Small cap underperformed by -9.6% while value stocks underperformed growth by a whopping -31.2%. Besides an extreme period during 2020, calendar year 2023 was the worst 1-year rolling period in more than two decades.

The wide variability of style investing continues to be fueled by extreme sector volatility. For example, the information technology sector, which tends to be more concentrated in growth stocks, performed +57.8% in 2023. Meanwhile, utilities and energy sectors, which tend to be more concentrated in value stocks, performed -7.1% and -1.3%, respectively. Mega cap growth stocks have propelled the U.S. market higher in 2023—a reversal from significant losses in 2022. Many market-leading stocks are concentrated in technology and telecom sectors, which have outperformed the overall index (+57.8% and +55.8%, respectively).

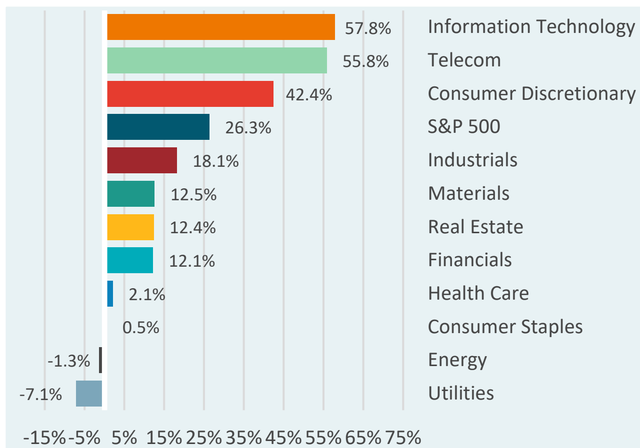
We believe sector variability and the way this has contributed to style factor volatility is further evidence that style investing should be a long-term decision. Short-term factor timing decisions should typically be pursued only in the rare occasion of obvious market mispricing and a foreseen catalyst for price correction.

VALUE VS. GROWTH 1-YR ROLLING



Source: FTSE, as of 12/31/23

VALUE VS GROWTH (YOY)



Source: Morningstar, as of 12/31/23

1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	11.5%	26.5%	42.7%
Mid Cap	12.7%	17.2%	25.9%
Small Cap	14.6%	16.9%	18.7%

Source: FTSE, as of 12/31/23

International developed equity

International developed equities also benefited from shifting expectations around Federal Reserve policy in the fourth quarter, with the MSCI EAFE Index delivering a +10.4% gain in unhedged currency terms. Fading dollar strength provided a large boost, as expectations for potential easing from the Federal Reserve contrasted against shifting policy from the ECB and BOE.

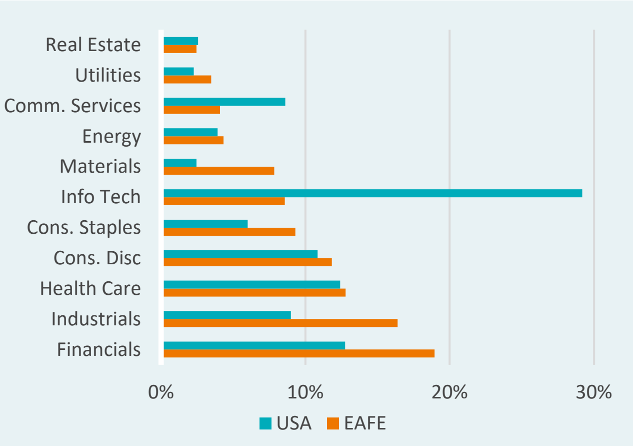
In terms of relative performance, international developed shares trailed the U.S., but outperformed emerging market equities. Sector weightings played the largest role, as gains from mega-cap technology names drove domestic performance, contrasting against the heavier financials and industrial sector composition of the MSCI EAFE index.

Despite macroeconomic challenges, international developed equities saw strong performance in 2023, up +18.2% in unhedged dollar terms. Japanese shares continued to benefit from zero-interest rate policy and shifting investment away from China and into Japan. European shares were lifted by better-than-expected global growth and the ability for companies to pass off higher prices – resulting in strong earnings.

INTERNATIONAL DEVELOPED EQUITY

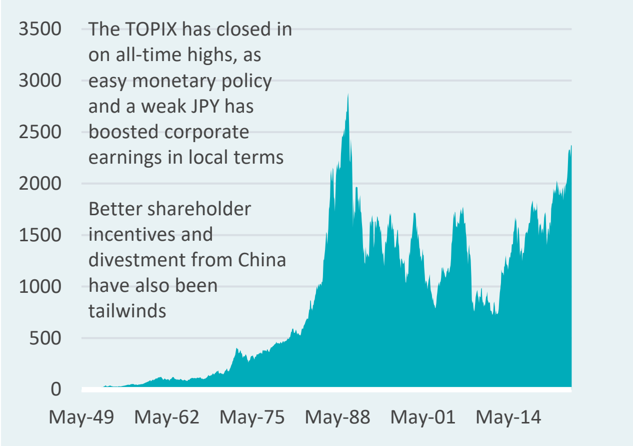
Source: MSCI, as of 12/31/23

MSCI EAFE VS. USA SECTOR WEIGHTING



Source: MSCI, as of 12/31/23

JAPAN TOPIX PRICE INDEX



Source: Tokyo Stock Exchange, as of 12/31/23

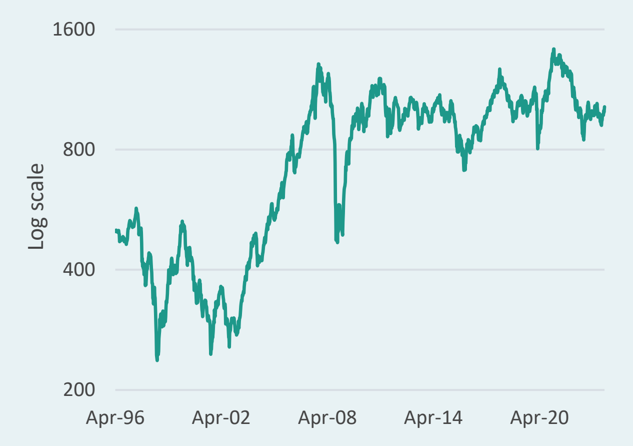
Emerging market equity

Emerging markets saw a positive end to 2023, rising +7.9% in the fourth quarter – helping to notch a +9.8% gain for the index over the 2023 calendar year. While rebounding from losses seen last year (-20.1% decline in 2022), emerging market equities underperformed both domestic and international developed equities for the second straight year.

Most countries within the index saw positive returns in the last quarter of the year, fueled by the broader rally in risk assets as U.S. monetary policy expectations eased. China was the outlier, declining -4.2%.

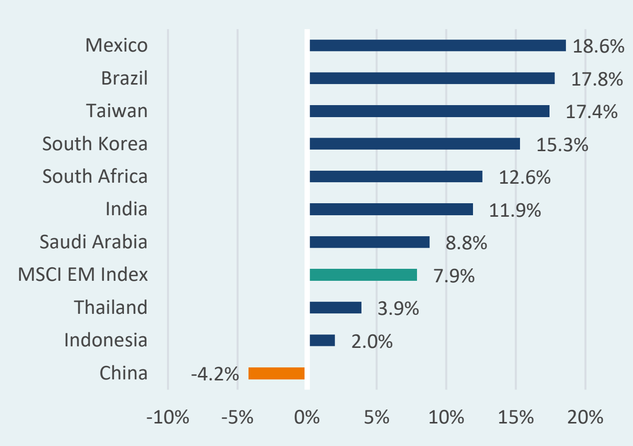
Chinese shares remain the elephant in the room within emerging markets. The MSCI EM ex China Index outperformed the flagship index by more than 10% in 2023, which highlights the large drag that China has caused, given its nearly 30% country weight in the index. The country continues to face a variety of challenges including incredibly dire demographic trends, geopolitical tension with the U.S., slowing growth, financial distress amongst the property sector and local government financing vehicles, a heavy national debt burden, and deflation. Combined with further consolidation of power within the CCP, the cheap pricing of Chinese equities may be justified.

EMERGING MARKET EQUITY



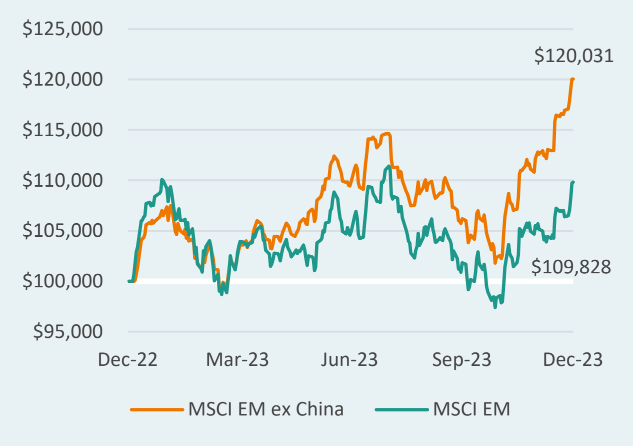
Source: MSCI, as of 12/31/23

Q4 2023 MSCI EM COUNTRY RETURNS (USD)



Source: Bloomberg, MSCI, as of 12/31/23

MSCI EM VS. EM EX CHINA (GROWTH $100K)



Source: Bloomberg, MSCI, as of 12/31/23

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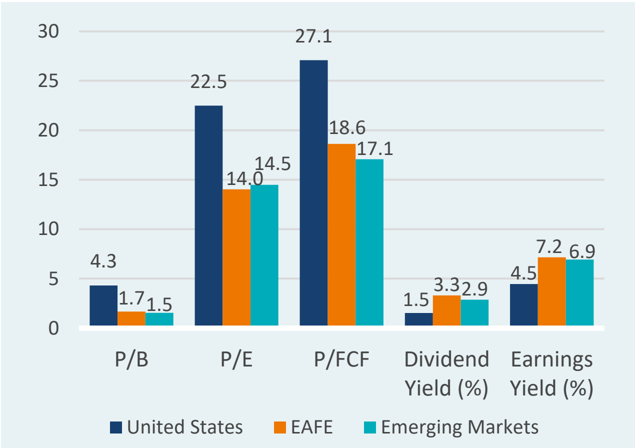
Equity valuations

U.S. equity valuation drifted further above those of non-U.S. equities during the quarter. The domestic market is priced at a historic 71% premium over emerging market equities, up from a 59% premium in the third quarter. A portion of the U.S. pricing premium is due to a larger U.S. technology sector, which tends to demand higher valuations, though the valuation gap remains wide even after adjusting for sector composition.

The lower valuations of international developed equities may be at least partly justified due to weaker growth potential and unique challenges in those markets, though rising valuations create a high bar for future profit growth. In order for U.S. equities to justify high valuations over the longer-term, business will need to generate supernormal earnings growth, and/or stock multiples will need to move upward even further.

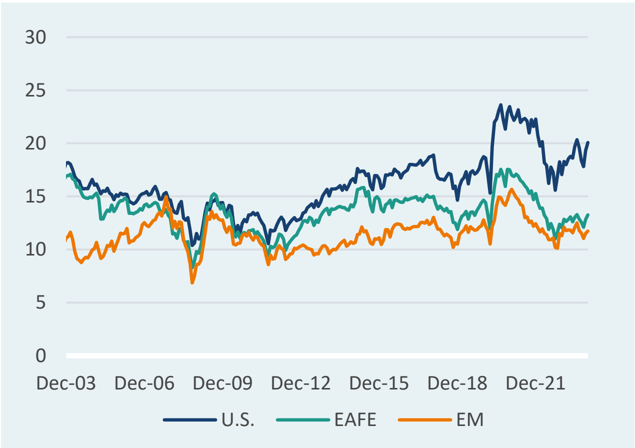
U.S. equity market valuations seem to have defied rising interest rates. Theoretically (and historically) speaking, equities should be fairly sensitive to sharply higher interest rates—the present value of stocks is less when rates are high due to the discounting effect, higher interest rates damage profits as financing is more expensive, and the overall economy tends to slow as borrowing costs rise which bodes poorly for profits. At least for now, the U.S. market remains richly valued and median bank forecasts are for a healthy 2024 S&P 500 return.

MSCI VALUATION METRICS (3-MONTH AVG)



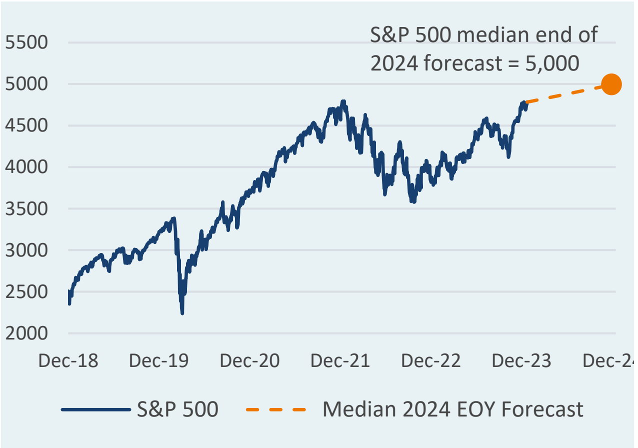
Source: Bloomberg, as of 12/31/23

FORWARD PRICE/EARNINGS RATIO



Source: MSCI, Bloomberg, as of 12/31/23

2024 S&P 500 MEDIAN FORECAST



Source: Bloomberg, as of 1/10/24. Banks included in forecast include J.P. Morgan, Goldman Sachs, Bank of America, Citibank, Morgan Stanley, Deutsche Bank, and UBS.

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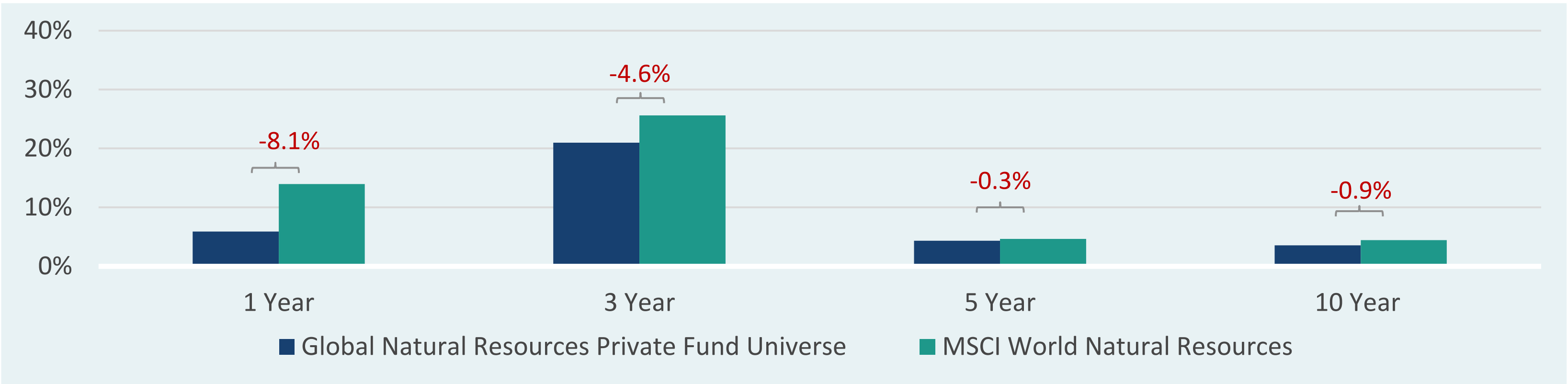
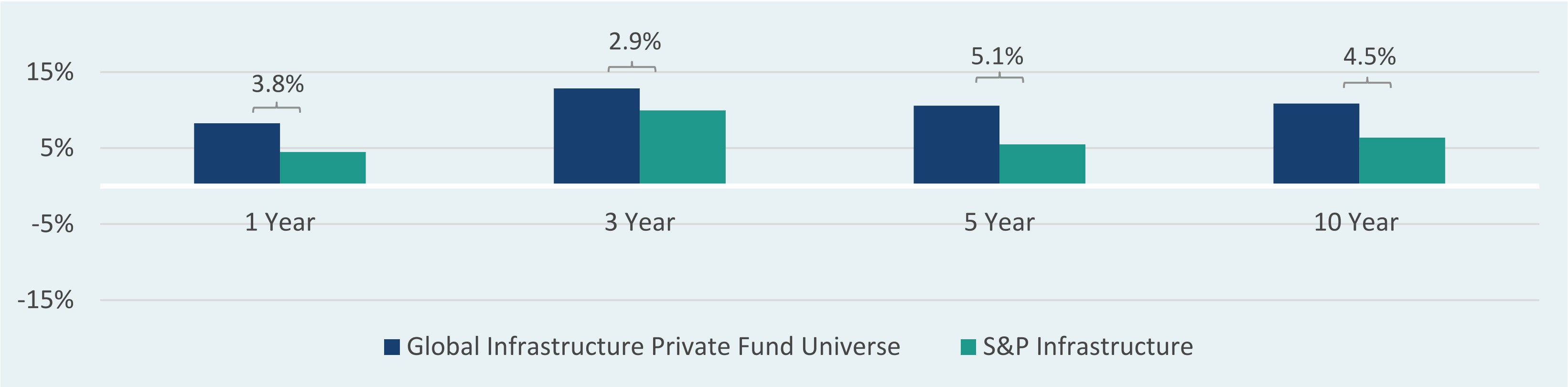
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



N.R. funds underperformed the MSCI World Natural Resources benchmark across all periods.

GLOBAL INFRASTRUCTURE FUNDS

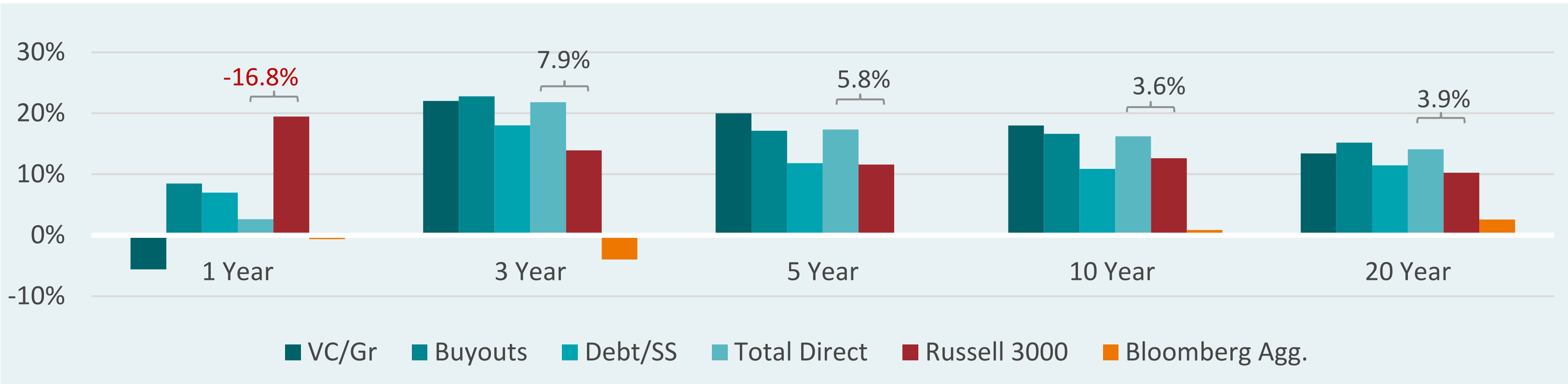


Infra. funds outperformed the S&P Infra. across all periods.

Sources: Refinitiv PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of June 30, 2023. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

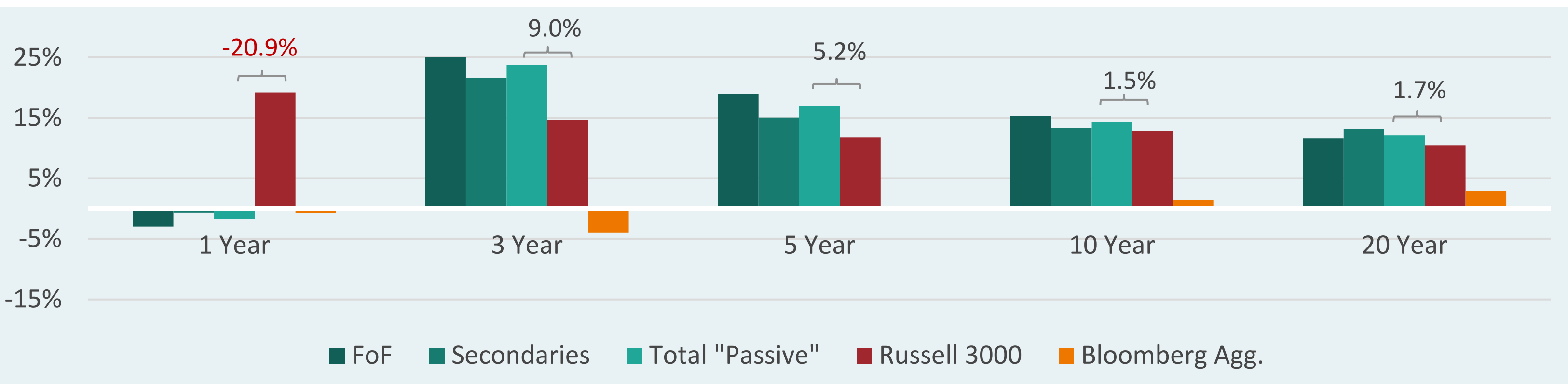
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed comparable public equites across all time periods, aside from the 1-year.

"PASSIVE" STRATEGIES



"Passive" strategies outperformed comparable public equities across all time periods, aside from the 1-year.

Sources: Refinitiv PME: U.S. Private Equity Funds sub asset classes as of June 30, 2023. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

Verus

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	4.5	11.7	26.3	26.3	10.0	15.7	12.0
S&P 500 Equal Weighted	6.9	11.9	13.9	13.9	9.3	13.8	10.4
DJ Industrial Average	4.9	13.1	16.2	16.2	9.4	12.5	11.1
Russell Top 200	4.1	11.7	29.9	29.9	10.0	16.5	12.7
Russell 1000	4.9	12.0	26.5	26.5	9.0	15.5	11.8
Russell 2000	12.2	14.0	16.9	16.9	2.2	10.0	7.2
Russell 3000	5.3	12.1	26.0	26.0	8.5	15.2	11.5
Russell Mid Cap	7.7	12.8	17.2	17.2	5.9	12.7	9.4
Style Index							
Russell 1000 Growth	4.4	14.2	42.7	42.7	8.9	19.5	14.9
Russell 1000 Value	5.5	9.5	11.5	11.5	8.9	10.9	8.4
Russell 2000 Growth	12.0	12.7	18.7	18.7	(3.5)	9.2	7.2
Russell 2000 Value	12.4	15.3	14.6	14.6	7.9	10.0	6.8

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	4.8	11.0	22.2	22.2	5.7	11.7	7.9
MSCI ACWI ex US	5.0	9.8	15.6	15.6	1.5	7.1	3.8
MSCI EAFE	5.3	10.4	18.2	18.2	4.0	8.2	4.3
MSCI EM	3.9	7.9	9.8	9.8	(5.1)	3.7	2.7
MSCI EAFE Small Cap	7.3	11.1	13.2	13.2	(0.7)	6.6	4.8
Style Index							
MSCI EAFE Growth	5.7	12.7	17.6	17.6	0.3	8.8	5.1
MSCI EAFE Value	4.9	8.2	19.0	19.0	7.6	7.1	3.2
Regional Index							
MSCI UK	4.5	6.9	14.1	14.1	8.8	6.9	2.5
MSCI Japan	4.4	8.2	20.3	20.3	0.7	6.9	5.0
MSCI Euro	4.4	12.9	25.2	25.2	6.0	9.3	4.1
MSCI EM Asia	3.3	6.7	7.8	7.8	(6.9)	4.3	4.1
MSCI EM Latin American	8.3	17.6	32.7	32.7	9.9	6.1	2.1

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
Bloomberg US TIPS	2.7	4.7	3.9	3.9	(1.0)	3.2	2.4
Bloomberg US Treasury Bills	0.5	1.4	5.1	5.1	2.1	1.9	1.3
Bloomberg US Agg Bond	3.8	6.8	5.5	5.5	(3.3)	1.1	1.8
Bloomberg US Universal	3.8	6.8	6.2	6.2	(3.0)	1.4	2.1
Duration							
Bloomberg US Treasury 1-3 Yr	1.2	2.6	4.3	4.3	(0.1)	1.3	1.0
Bloomberg US Treasury Long	8.6	12.7	3.1	3.1	(11.4)	(1.2)	2.3
Bloomberg US Treasury	3.4	5.7	4.1	4.1	(3.8)	0.5	1.3
Issuer							
Bloomberg US MBS	4.3	7.5	5.0	5.0	(2.9)	0.3	1.4
Bloomberg US Corp. High Yield	3.7	7.2	13.4	13.4	2.0	5.4	4.6
Bloomberg US Agency Interm	1.6	3.2	4.9	4.9	(1.1)	1.1	1.2
Bloomberg US Credit	4.2	8.2	8.2	8.2	(3.2)	2.4	2.8

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(2.7)	(4.6)	(7.9)	(7.9)	10.8	7.2	(1.1)
Wilshire US REIT	10.2	16.3	16.1	16.1	7.5	7.6	7.7
CS Leveraged Loans	1.6	2.9	13.0	13.0	5.6	5.6	4.4
S&P Global Infrastructure	4.2	10.9	6.8	6.8	6.0	7.4	5.7
Alerian MLP	(3.4)	3.0	23.8	23.8	31.8	10.9	1.6
Regional Index							
JPM EMBI Global Div	4.7	9.2	11.1	11.1	(3.6)	1.7	3.2
JPM GBI-EM Global Div	3.2	8.1	12.7	12.7	(3.2)	1.1	0.1
Hedge Funds							
HFRI Composite	2.6	3.6	7.5	7.5	4.3	7.0	4.5
HFRI FOF Composite	2.3	3.4	6.3	6.3	2.3	5.1	3.3
Currency (Spot)							
Euro	1.2	4.3	3.5	3.5	(3.4)	(0.7)	(2.2)
Pound Sterling	0.7	4.4	6.0	6.0	(2.3)	0.0	(2.6)
Yen	4.9	5.9	(6.4)	(6.4)	(9.9)	(4.9)	(2.9)

Source: Morningstar, HFRI, as of 12/31/23

Definitions

Bloomberg US Weekly Consumer Comfort Index *- tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. (www.langerresearch.com)*

University of Michigan Consumer Sentiment Index *- A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. (www.Bloomberg.com)*

NFIB Small Business Outlook *- Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (http://www.nfib-sbet.org/about/)*

NAHB Housing Market Index – *the housing market index is a weighted average of separate diffusion induces for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula "(Good-Poor + 100)/2" to the present and future sales series and "(High/Very High-Low/Very Low + 100)/2" to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.*

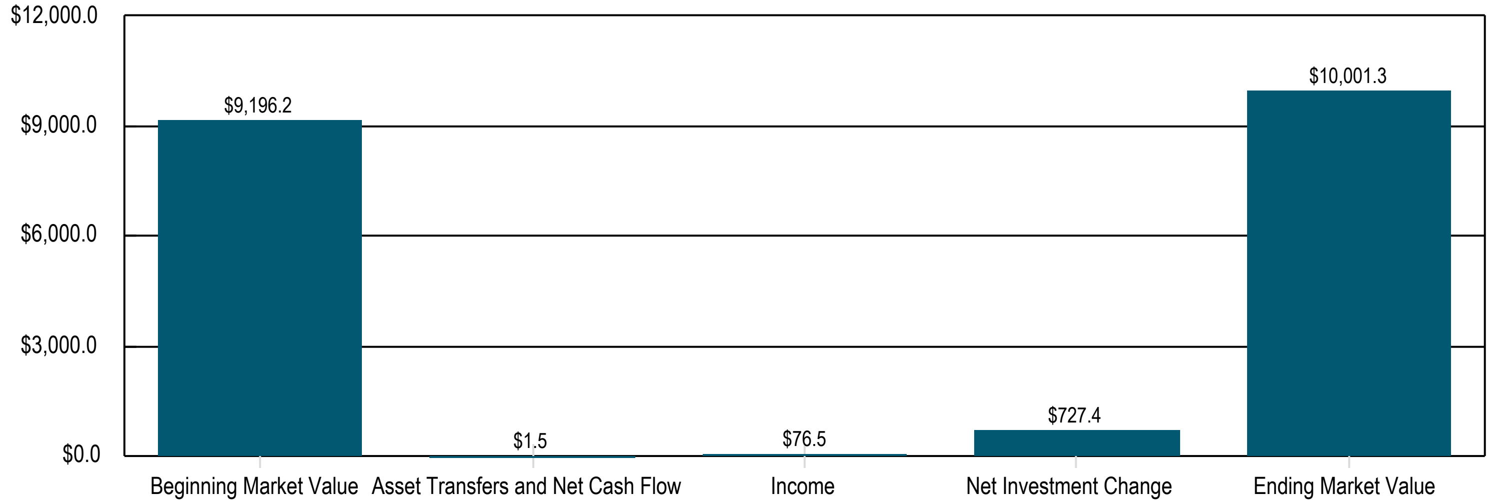
Notices & disclosures

Investment Performance

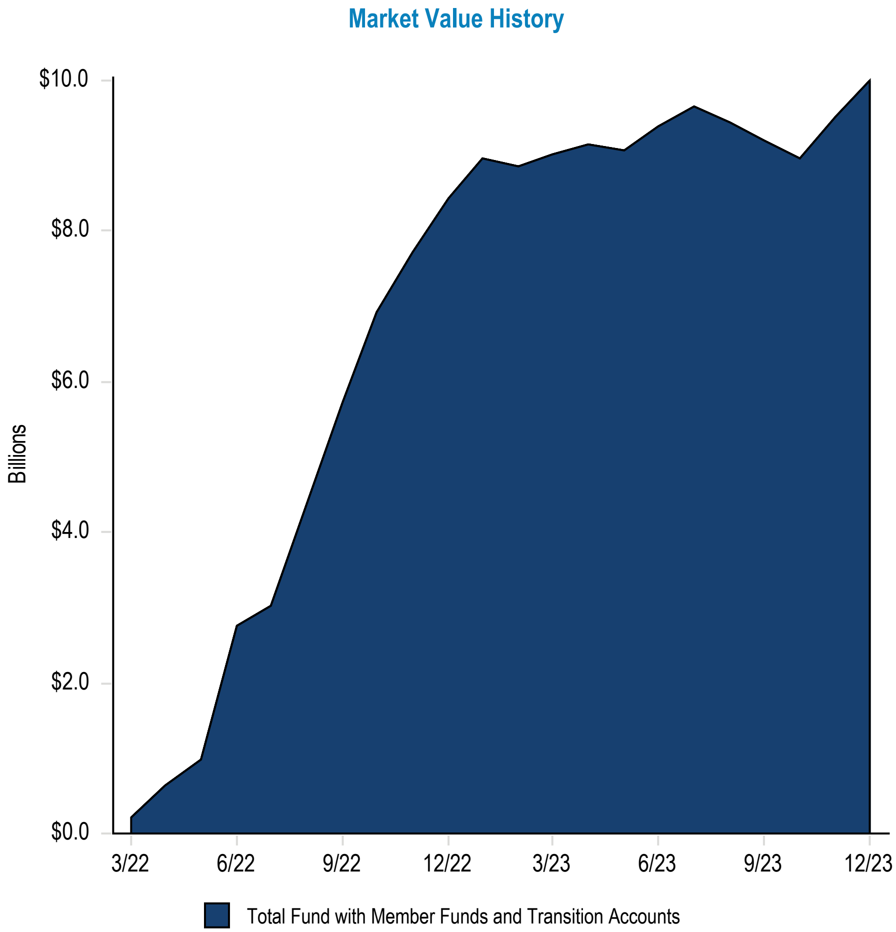
Portfolio Reconciliation

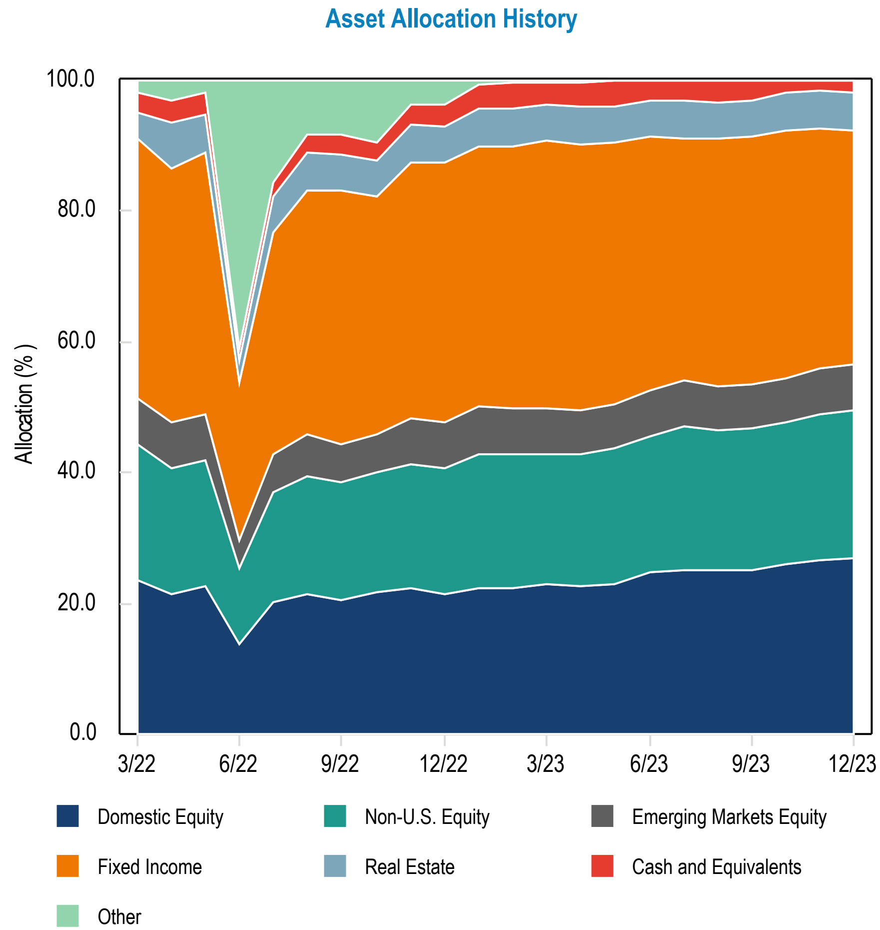
	Quarter-To-Date	Fiscal Year-To-Date
Beginning Market Value	$9,196,231,760	$9,387,424,024
Asset Transfers and Net Cash Flow	$1,473,705	$39,467,745
Income	$76,535,688	$152,749,430
Net Investment Change	$727,419,528	$422,300,434
Ending Market Value	**$10,001,345,755**	**$10,001,345,755**

Change in Market Value
Last Three Months

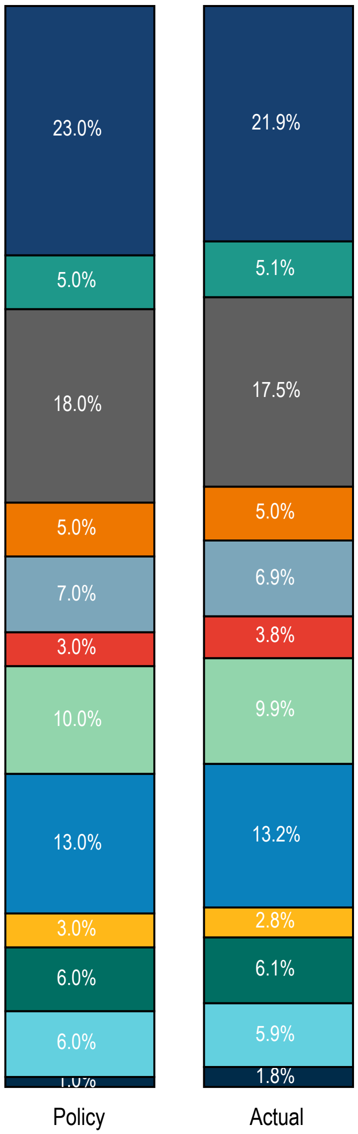


The portfolio reconciliation includes the Member Funds and Transition Account. Income excludes Member Funds and Transition Account. Income is calculated using the actual dividend and income received from separate accounts and estimated income and dividends for commingled funds. The income and dividends for RhumbLine Russell 1000 Index, RhumbLine Russell 2000 Index, SSgA US TIPS Index and Cash are sourced from State Street custodial reports. The income and dividends for the SSGA commingled funds are an estimate based on the current yield for bond funds and the dividend yield for equity funds. SSGA can use dividend and income to cover fund expenses, so the actual income that flows to the IPOPIF may be different than reported. Income for the Principal RE fund is based on a monthly income spreadsheet received from Principal via email.





**Market value and asset class history includes Transition Accounts and Member Funds as represented by the Other category in the asset allocation history chart. The large allocation to the Other Category for 6/22 reflects assets in transition associated with the 6/24/22 Transfer Date.*



	Current Balance ($)	Current Allocation (%)	Policy Allocation (%)	Excess Allocation (%)	Excess Allocation ($)	Policy Range (%)	Within IPS Range?
Domestic Equity Large Cap	2,185,860,986	21.9	23.0	-1.1	-114,448,537	21.0 - 25.0	Yes
Domestic Equity Small Cap	513,495,227	5.1	5.0	0.1	13,427,939	4.0 - 6.0	Yes
International Equity Large Cap	1,755,146,583	17.5	18.0	-0.5	-45,095,653	16.0 - 20.0	Yes
International Equity Small Cap	498,873,912	5.0	5.0	0.0	-1,193,376	4.0 - 6.0	Yes
Emerging Markets Equity	692,811,070	6.9	7.0	-0.1	-7,283,133	6.0 - 8.0	Yes
Domestic Fixed Income Core	382,924,869	3.8	3.0	0.8	82,884,496	2.0 - 4.0	Yes
Domestic Fixed Income High Yield	990,838,603	9.9	10.0	-0.1	-9,295,972	9.0 - 11.0	Yes
Domestic Fixed Income Short Term	1,324,183,169	13.2	13.0	0.2	24,008,221	11.0 - 15.0	Yes
Domestic Fixed Income Real Return	279,889,804	2.8	3.0	-0.2	-20,150,569	2.0 - 4.0	Yes
Emerging Markets Fixed Income	610,563,951	6.1	6.0	0.1	10,483,206	5.0 - 7.0	Yes
Real Estate	590,356,792	5.9	6.0	-0.1	-9,723,953	5.0 - 7.0	Yes
Cash and Equivalents	176,400,789	1.8	1.0	0.8	76,387,331	0.0 - 2.0	Yes
Total	**10,001,345,755**	**100.0**	**100.0**	**0.0**			

Asset Allocation reflects short-term policy targets and excludes the Transition Account and Member Funds.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	Inception	Inception Date
Total Fund with Member and Transition Accounts	**10,001,345,755**	**100.0**	**8.8**	**13.7**	**6.2**	**13.7**	**2.3**	**03/01/22**
Policy Index			*9.0*	*14.4*	*6.4*	*14.4*	*2.3*	
Policy Index- Broad Based			*10.3*	*16.8*	*6.5*	*16.8*	*1.4*	
IPOPIF Investment Portfolio	**10,001,345,755**	**100.0**	**8.8**	**13.7**	**6.2**	**13.7**	**2.0**	**04/01/22**
Policy Index			*9.0*	*14.4*	*6.4*	*14.4*	*2.2*	
Policy Index- Broad Based			*10.3*	*16.8*	*6.5*	*16.8*	*1.2*	
Growth	**5,646,187,777**	**56.5**	**11.0**	**19.4**	**7.0**	**19.4**	**2.3**	**04/01/22**
Growth Benchmark			*11.1*	*19.5*	*7.1*	*19.5*	*2.1*	
Income	**1,601,402,555**	**16.0**	**8.0**	**12.8**	**7.4**	**12.8**	**1.5**	**04/01/22**
Income Benchmark			*7.9*	*12.6*	*7.3*	*12.6*	*2.8*	
Inflation Protection	**870,246,596**	**8.7**	**7.9**	**5.4**	**3.6**	**5.4**	**-2.4**	**04/01/22**
Inflation Protection Benchmark			*8.1*	*7.5*	*5.2*	*7.5*	*-2.9*	
Risk Mitigation	**1,883,407,684**	**18.8**	**3.4**	**5.1**	**3.3**	**5.1**	**1.2**	**04/01/22**
Risk Mitigation Benchmark			*3.3*	*5.0*	*3.4*	*5.0*	*1.2*	
IPOPIF Pool Fixed Income Transition	**101,143**	**0.0**						
Member Accounts	-	0.0						

The composition of blended benchmarks are located on the Data Sources and Methodology page.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	Inception	Inception Date
Total Fund with Member and Transition Accounts	**10,001,345,755**	**100.0**	**8.8**	**13.7**	**6.2**	**13.7**	**2.3**	**03/01/22**
Policy Index			*9.0*	*14.4*	*6.4*	*14.4*	*2.3*	
Policy Index- Broad Based			*10.3*	*16.8*	*6.5*	*16.8*	*1.4*	
All Public Plans > $1B-Total Fund Rank			*6*	*14*	*4*	*14*	*49*	
IPOPIF Investment Portfolio	**10,001,345,755**	**100.0**	**8.8**	**13.7**	**6.2**	**13.7**	**2.0**	**04/01/22**
Policy Index			*9.0*	*14.4*	*6.4*	*14.4*	*2.2*	
Policy Index- Broad Based			*10.3*	*16.8*	*6.5*	*16.8*	*1.2*	
All Public Plans > $1B-Total Fund Rank			*6*	*14*	*4*	*14*	*33*	
Growth	**5,646,187,777**	**56.5**	**11.0**	**19.4**	**7.0**	**19.4**	**2.3**	**04/01/22**
Growth Benchmark			*11.1*	*19.5*	*7.1*	*19.5*	*2.1*	
RhumbLine Russell 1000 Index	2,185,860,986	21.9	11.9	26.5	8.4	26.5	9.2	03/15/22
Russell 1000 Index			*12.0*	*26.5*	*8.4*	*26.5*	*9.3*	
eV US Large Cap Core Equity Rank			*36*	*24*	*38*	*24*		
RhumbLine Russell 2000 Index	513,495,227	5.1	13.9	16.8	8.1	16.8	3.6	03/15/22
Russell 2000 Index			*14.0*	*16.9*	*8.2*	*16.9*	*4.0*	
eV US Small Cap Core Equity Rank			*23*	*52*	*40*	*52*		
SSgA Non-US Developed Index	1,755,146,583	17.5	10.5	18.3	6.0	18.3	7.3	03/10/22
MSCI World ex U.S. (Net)			*10.5*	*17.9*	*6.0*	*17.9*	*6.9*	
eV EAFE Core Equity Rank			*42*	*34*	*45*	*34*		
SSgA Non-US Developed SC Index	498,873,912	5.0	10.6	12.9	6.9	12.9	1.4	03/10/22
MSCI World ex U.S. Small Cap Index (Net)			*10.6*	*12.6*	*6.8*	*12.6*	*1.1*	
eV EAFE Small Cap Core Rank			*55*	*64*	*39*	*64*		
SSgA Emerging Markets Equity Index	692,811,070	6.9	7.8	9.6	4.3	9.6	-1.5	03/10/22
MSCI Emerging Markets (Net)			*7.9*	*9.8*	*4.7*	*9.8*	*- 0.6*	
eV Emg Mkts Equity Rank			*53*	*64*	*53*	*64*		
Income	**1,601,402,555**	**16.0**	**8.0**	**12.8**	**7.4**	**12.8**	**1.5**	**04/01/22**
Income Benchmark			*7.9*	*12.6*	*7.3*	*12.6*	*2.8*	
SSgA High Yield Corporate Credit	990,838,603	9.9	7.2	13.8	7.7	13.8	3.1	03/18/22
Spliced SSgA U.S. High Yield Index			*7.1*	*13.5*	*7.6*	*13.5*	*3.1*	
eV US High Yield Fixed Inc Rank			*13*	*12*	*18*	*12*		
SSgA EMD Hard Index Fund	610,563,951	6.1	9.2	11.2	6.8	11.2	1.3	03/14/22
Spliced SSgA EMD Hard Index			*9.2*	*11.1*	*6.7*	*11.1*	*1.5*	
Emerging Markets Bond Rank			*47*	*52*	*41*	*52*	*42*	

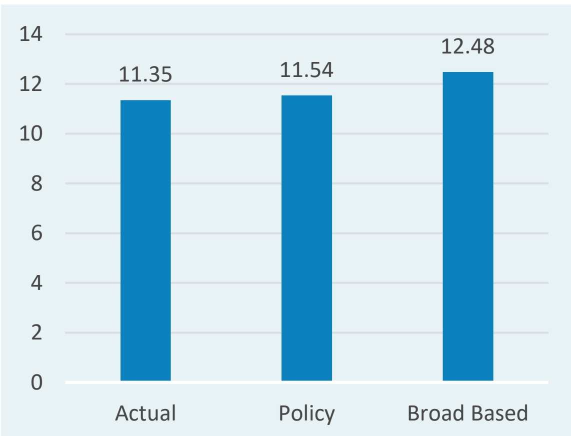
The composition of blended benchmarks are located on the Data Sources and Methodology page. Principal USPA does not show a Since 4/1/2022 return because the fund was incepted on 4/6/2022.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	Inception	Inception Date
Inflation Protection	**870,246,596**	**8.7**	**7.9**	**5.4**	**3.6**	**5.4**	**-2.4**	**04/01/22**
Inflation Protection Benchmark			*8.1*	*7.5*	*5.2*	*7.5*	*-2.9*	
SSgA US TIPS Index	279,889,804	2.8	2.6	4.6	3.1	4.6	0.2	03/17/22
Blmbg. U.S. TIPS 0-5 Year			*2.6*	*4.6*	*3.0*	*4.6*	*0.4*	
eV US TIPS / Inflation Fixed Inc Rank			*94*	*22*	*12*	*22*		
SSgA REITs Index	427,884,594	4.3	16.4	13.9	7.7	13.9	-4.5	03/16/22
Dow Jones U.S. Select REIT			*16.3*	*14.0*	*7.7*	*14.0*	*-4.4*	
eV US REIT Rank			*55*	*33*	*45*	*33*		
Principal USPA	162,472,199	1.6	-2.3	-10.7	-6.1	-10.7	-7.9	04/06/22
NCREIF ODCE			*-5.0*	*-12.7*	*-7.0*	*-12.7*	*-7.8*	
Risk Mitigation	**1,883,407,684**	**18.8**	**3.4**	**5.1**	**3.3**	**5.1**	**1.2**	**04/01/22**
Risk Mitigation Benchmark			*3.3*	*5.0*	*3.4*	*5.0*	*1.2*	
SSgA Core Fixed Income Index	382,924,869	3.8	6.7	5.6	3.3	5.6	-1.7	03/17/22
Blmbg. U.S. Aggregate Index			*6.8*	*5.5*	*3.4*	*5.5*	*- 1.6*	
eV US Core Fixed Inc Rank			*61*	*66*	*72*	*66*		
SSgA Short-Term Gov't/Credit Index	1,324,082,026	13.2	2.7	4.6	3.4	4.6	1.6	03/17/22
Blmbg. 1-3 Year Gov/Credit Index			*2.7*	*4.6*	*3.4*	*4.6*	*1.6*	
eV US Short Duration Fixed Inc Rank			*75*	*82*	*71*	*82*		
Cash	176,400,789	1.8	1.3	5.0	2.6	5.0	3.3	03/22/22
90 Day U.S. Treasury Bill			*1.4*	*5.0*	*2.7*	*5.0*	*3.6*	
IPOPIF Pool Fixed Income Transition	**101,143**	**0.0**						
Member Accounts	-	0.0						

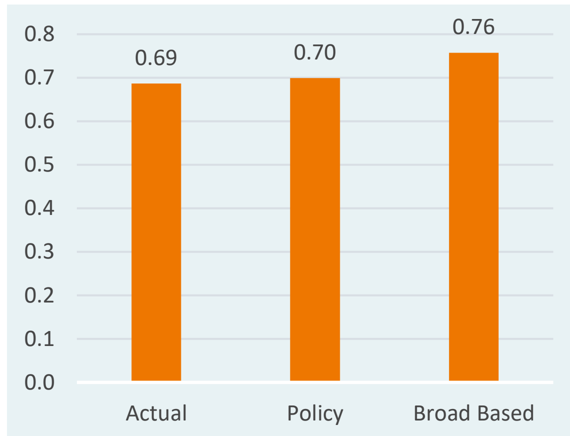
The composition of blended benchmarks are located on the Data Sources and Methodology page. Principal USPA does not show a Since 4/1/2022 return because the fund was incepted on 4/6/2022.

Portfolio Characteristics

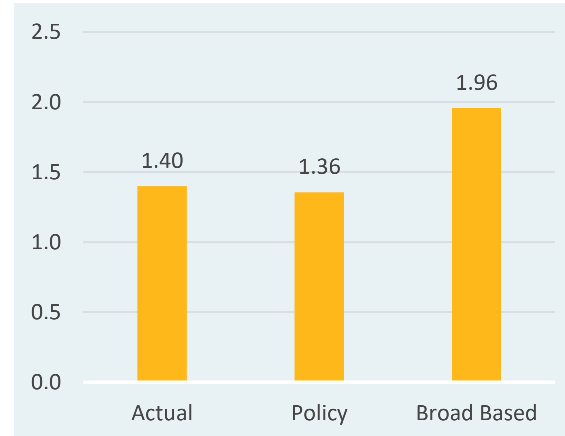
TOTAL PLAN RISK (EXPECTED VOLATILITY)



EQUITY BETA (ACWI IMI)

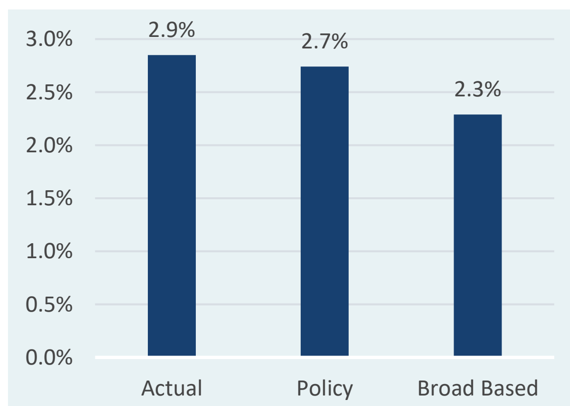


EFFECTIVE DURATION

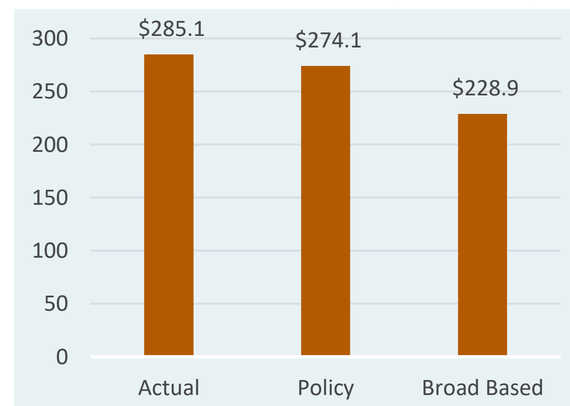


CREDIT SPREAD DURATION

ESTIMATED PORTFOLIO INCOME YIELD*



ESTIMATED PORTFOLIO INCOME ($ MILLIONS)*



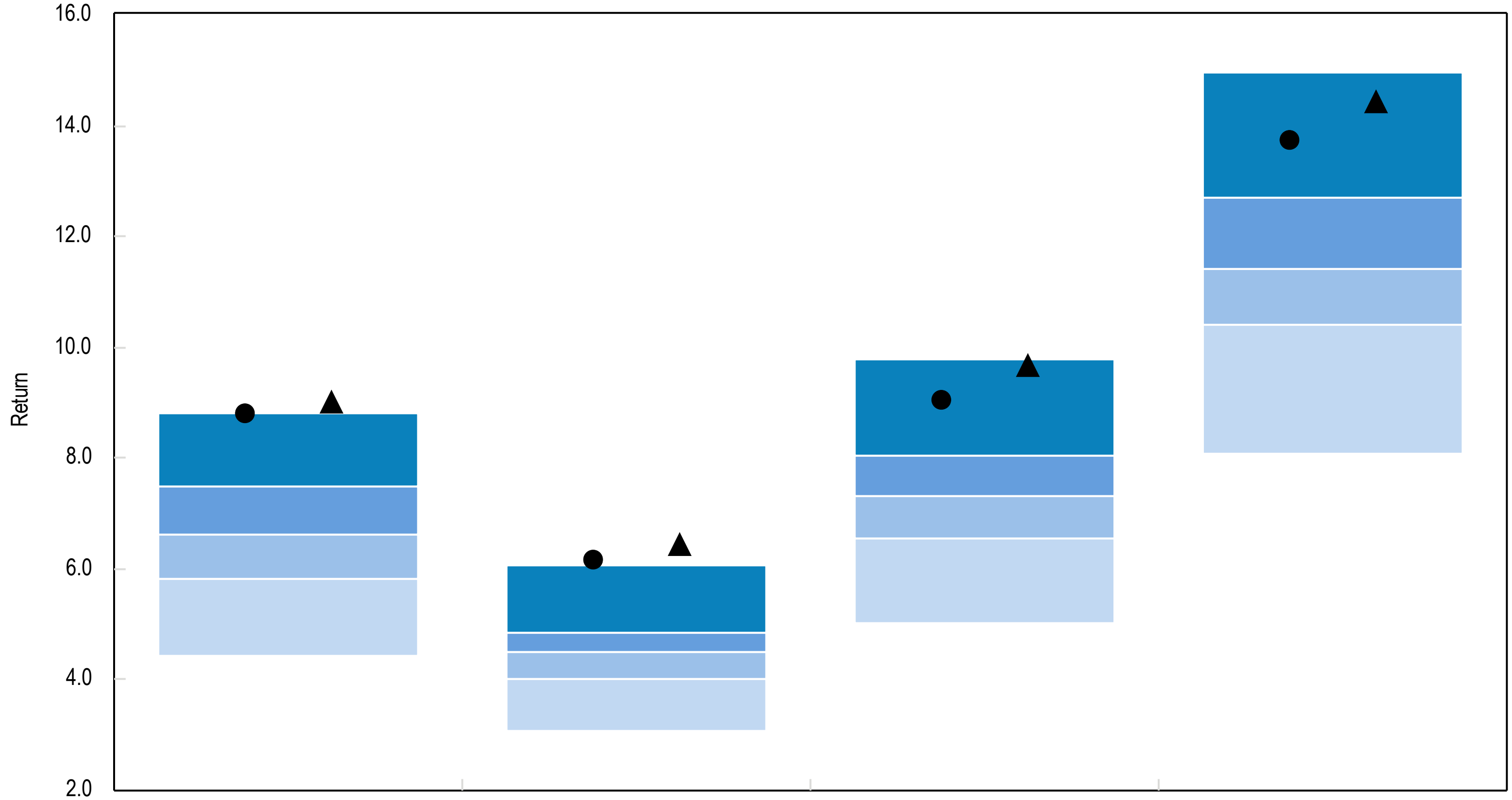
*Income Yield and Income are estimated based on dividend yields and coupon rates applied to benchmark weights and does not include factors such as dividend re-investment rates.
Source: Barra One using index holdings as representative proxies

Name	Asset Class	Vehicle Type	Market Value	% of Portfolio	Estimated Fee Value	Expense Fee (%)
RhumbLine Russell 1000 Index	Domestic Equity	Separate Account	$2,185,860,986	21.8557	$109,293	0.005
RhumbLine Russell 2000 Index	Domestic Equity	Separate Account	$513,495,227	5.1343	$25,675	0.005
SSgA Non-US Developed Index	Non-U.S. Equity	Commingled Fund	$1,755,146,583	17.5491	$280,823	0.016
SSgA Non-US Developed SC Index	Non-U.S. Equity	Commingled Fund	$498,873,912	4.9881	$79,820	0.016
SSgA Emerging Markets Equity Index	Emerging Markets Equity	Commingled Fund	$692,811,070	6.9272	$110,850	0.016
SSgA High Yield Corporate Credit	Fixed Income	Commingled Fund	$990,838,603	9.9071	$158,534	0.016
SSgA EMD Hard Index Fund	Fixed Income	Commingled Fund	$610,563,951	6.1048	$97,690	0.016
SSgA US TIPS Index	Fixed Income	Separate Account	$279,889,804	2.7985	$44,782	0.016
Principal USPA	Real Estate	Commingled Fund	$162,472,199	1.6245	$1,299,778	0.800
SSgA REITs Index	Real Estate	Commingled Fund	$427,884,594	4.2783	$68,462	0.016
SSgA Core Fixed Income Index	Fixed Income	Commingled Fund	$382,924,869	3.8287	$61,268	0.016
SSgA Short-Term Gov't/Credit Index	Fixed Income	Commingled Fund	$1,324,082,026	13.2390	$211,853	0.016
Cash	Cash and Equivalents	Commingled Fund	$176,400,789	1.7638		
IPOPIF Investment Portfolio			**$10,001,345,755**	**100.0000**	**$2,548,828**	**0.025**

SSGA charges a flat 0.0155% fee through 2Q 2023 and an aggregate asset-based fee thereafter.

Name	Beginning Market Value	Contributions	Distributions	Net Cash Flows	Income	Fees	Net Investment Change	Ending Market Value
RhumbLine Russell 1000 Index	$1,884,842,515	$69,023,459	-	$69,023,459	$8,356,514	-$23,459	$223,661,957	$2,185,860,986
RhumbLine Russell 2000 Index	$427,987,216	$22,005,382	-	$22,005,382	$1,985,185	-$5,382	$61,522,826	$513,495,227
SSgA Non-US Developed Index	$1,555,687,019	$32,034,984	-	$32,034,984	$12,789,175	-$34,984	$154,670,388	$1,755,146,583
SSgA Non-US Developed SC Index	$434,758,925	$16,009,962	-	$16,009,962	$3,408,837	-$9,962	$44,706,150	$498,873,912
SSgA Emerging Markets Equity Index	$620,688,961	$22,057,044	-	$22,057,044	$4,619,447	-$57,044	$45,502,662	$692,811,070
SSgA High Yield Corporate Credit	$923,848,187	$82,178	-	$82,178	$15,806,813	-$82,178	$51,183,604	$990,838,603
SSgA EMD Hard Index Fund	$540,696,293	$18,048,831	-	$18,048,831	$8,533,242	-$48,831	$43,334,416	$610,563,951
SSgA US TIPS Index	$272,872,066	$5,858	-	$5,858	$400,180	-$5,858	$6,617,558	$279,889,804
Principal USPA	$166,252,433	-	-	-	$1,777,618	-	-$5,557,852	$162,472,199
SSgA REITs Index	$350,899,762	$17,007,860	-	$17,007,860	$3,909,277	-$7,860	$56,075,555	$427,884,594
SSgA Core Fixed Income Index	$399,348,805	$9,577	-$40,000,000	-$39,990,423	$3,270,704	-$9,577	$20,305,360	$382,924,869
SSgA Short-Term Gov't/Credit Index	$1,336,350,068	$29,792	-$47,000,000	-$46,970,208	$9,336,258	-$29,792	$25,395,700	$1,324,082,026
Cash	$281,901,983	$113,200,021	-$221,041,242	-$107,841,221	$2,339,905	-	$122	$176,400,789
IPOPIF Pool Fixed Income Transition	$97,527	-	-	-	$794	-	$2,822	$101,143
Member Accounts	-	-	-	-	$1,740	-	-$1,740	-
Total Fund with Member Funds and Transition Accounts	**$9,196,231,760**	**$309,514,947**	**-$308,041,242**	**$1,473,705**	**$76,535,688**	**-$314,926**	**$727,419,528**	**$10,001,345,755**

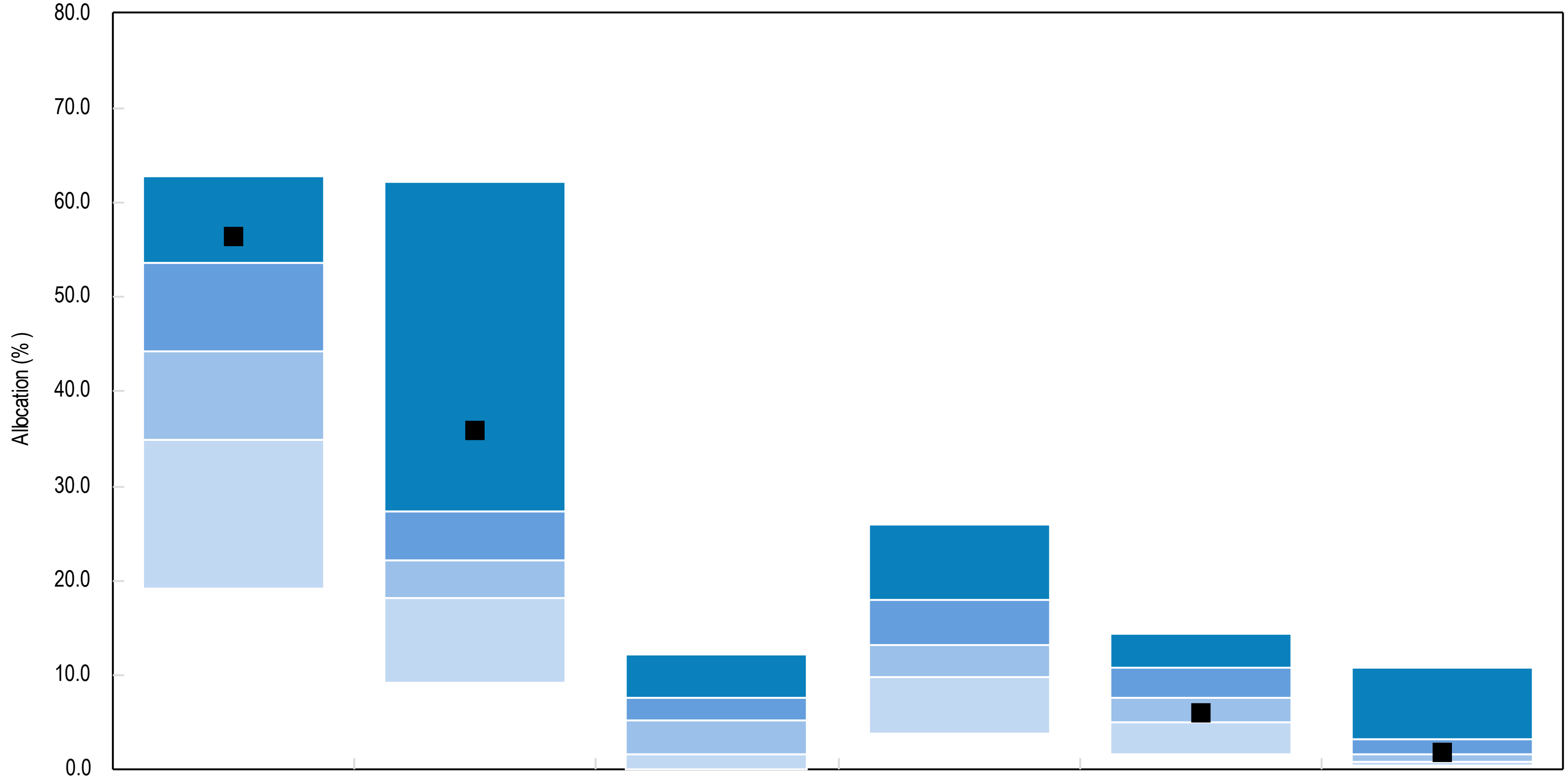
IPOPIF Investment Portfolio vs. All Public Plans > $1B-Total Fund



	Quarter	2 Quarters	3 Quarters	1 Year
● IPOPIF Investment Portfolio	8.8 (6)	6.2 (4)	9.1 (10)	13.7 (14)
▲ Policy Index	9.0 (4)	6.4 (1)	9.7 (7)	14.4 (6)
5th Percentile	8.8	6.1	9.8	14.9
1st Quartile	7.5	4.9	8.0	12.7
Median	6.6	4.5	7.3	11.4
3rd Quartile	5.8	4.0	6.6	10.4
95th Percentile	4.4	3.1	5.0	8.1
Population	97	94	91	88

Parentheses contain percentile rankings. Performance shown for IPOPIF Investment Fund which excludes the Transition Account and Member Funds.

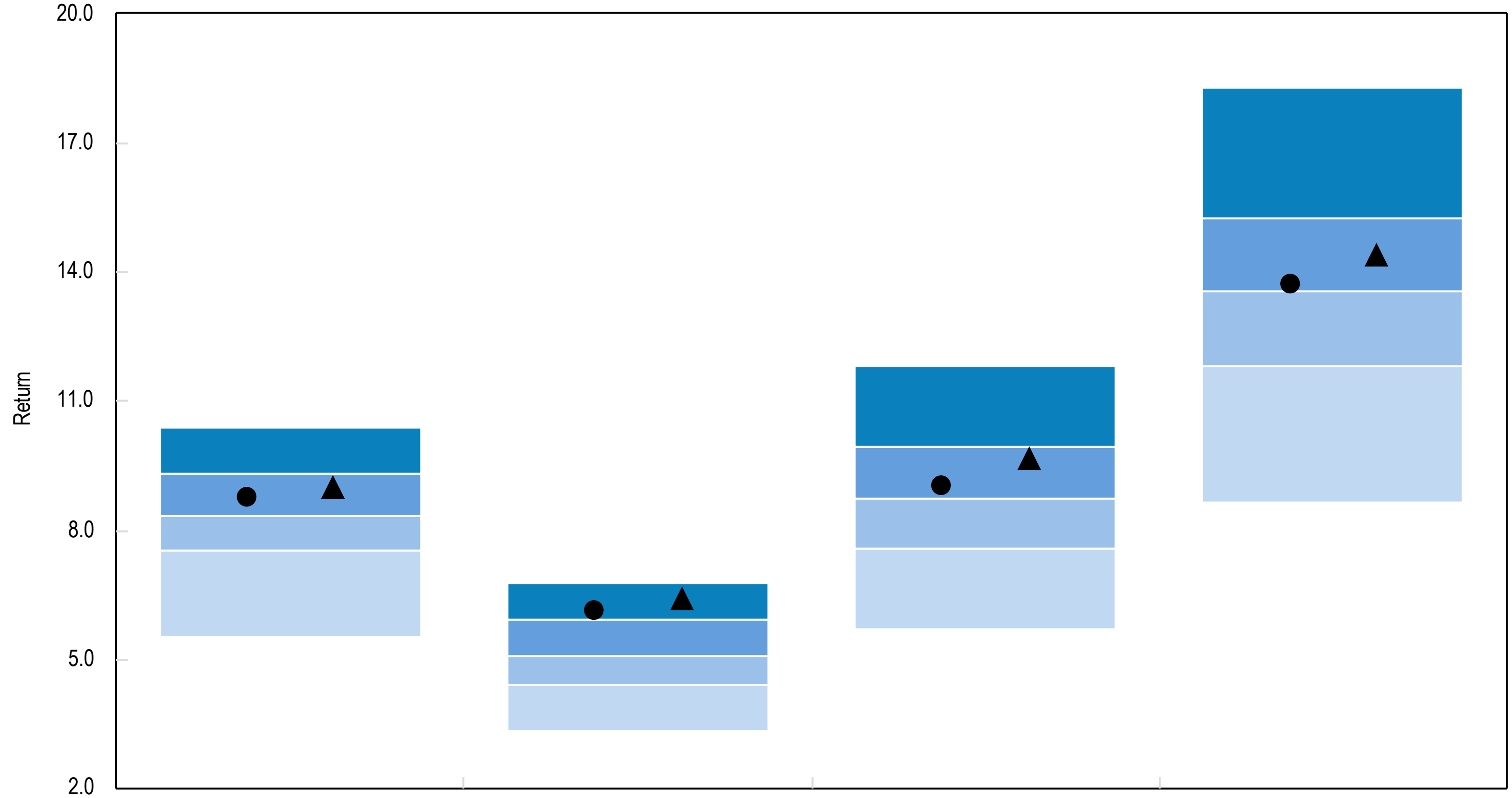
Total Plan Allocation vs. All Public Plans > $1B-Total Fund
As of December 31, 2023



	Total Equity	Total Fixed Income	Hedge Funds	Private Equity	Total Real Estate	Cash & Equivalents
■ IPOPIF Investment Portfolio	56.5 (19)	35.9 (10)	-	-	5.9 (69)	1.8 (49)
5th Percentile	62.9	62.3	12.2	25.9	14.4	10.8
1st Quartile	53.6	27.4	7.6	17.9	10.8	3.1
Median	44.3	22.1	5.2	13.2	7.6	1.7
3rd Quartile	34.9	18.1	1.5	9.8	5.0	0.9
95th Percentile	19.2	9.3	0.0	3.9	1.5	0.3
Population	141	148	43	71	112	116

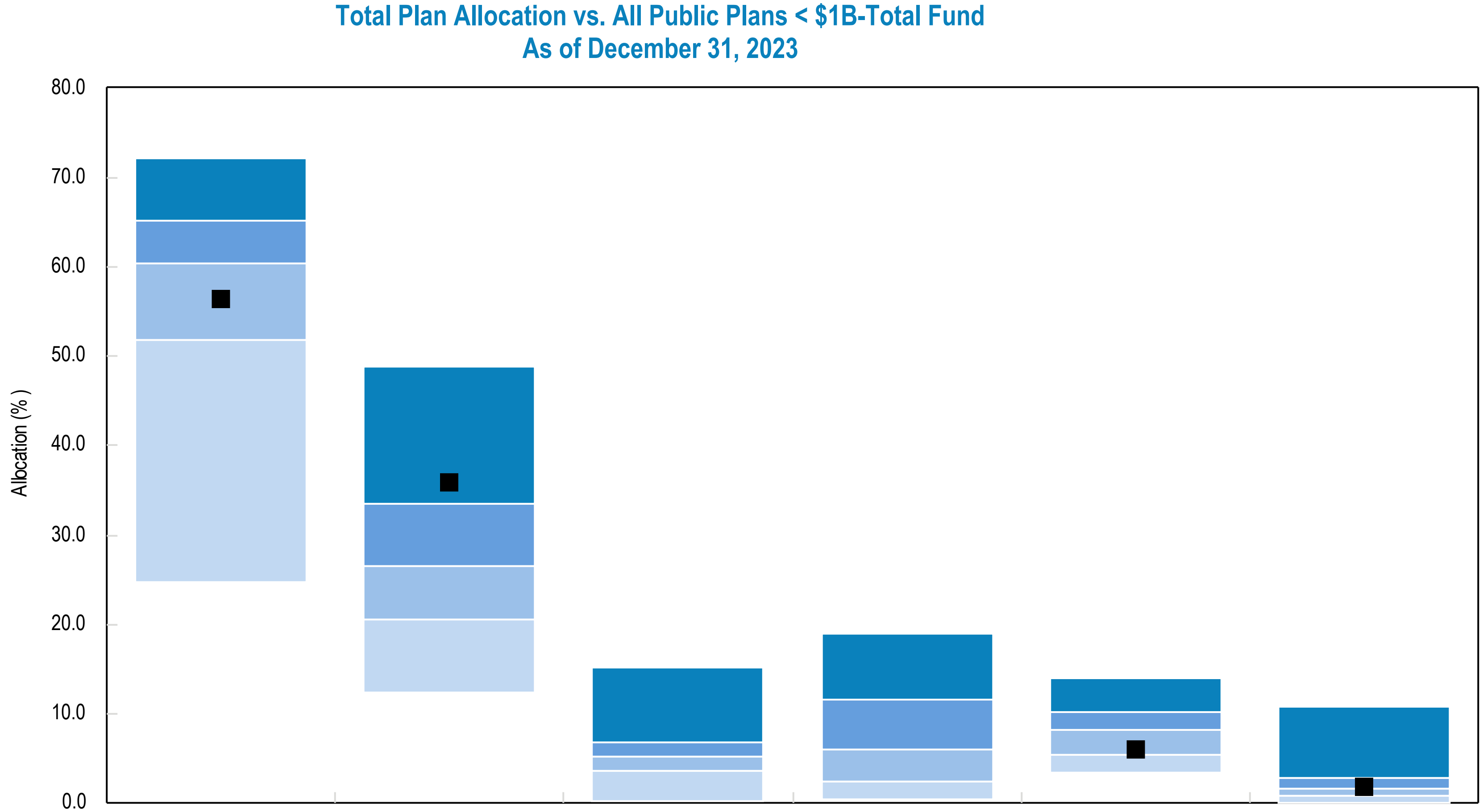
Parentheses contain percentile rankings. Excludes Transition Account and Member Funds. Real Assets contains Core Real Estate and REITs.

IPOPIF Investment Portfolio vs. All Public Plans < $1B-Total Fund



	Quarter	2 Quarters	3 Quarters	1 Year
● IPOPIF Investment Portfolio	8.8 (40)	6.2 (19)	9.1 (43)	13.7 (48)
▲ Policy Index	9.0 (35)	6.4 (12)	9.7 (30)	14.4 (37)
5th Percentile	10.4	6.8	11.8	18.3
1st Quartile	9.3	5.9	10.0	15.3
Median	8.3	5.1	8.7	13.5
3rd Quartile	7.6	4.4	7.6	11.8
95th Percentile	5.5	3.4	5.7	8.7
Population	535	520	514	507

Parentheses contain percentile rankings.Performance shown for IPOPIF Investment Fund which excludes the Transition Account and Member Funds.



	Total Equity	Total Fixed Income	Hedge Funds	Private Equity	Total Real Estate	Cash & Equivalents
■ IPOPIF Investment Portfolio	56.5 (64)	35.9 (20)	-	-	5.9 (70)	1.8 (48)
5th Percentile	72.2	48.9	15.1	19.0	14.0	10.8
1st Quartile	65.2	33.4	6.7	11.6	10.2	2.8
Median	60.5	26.4	5.1	5.9	8.1	1.6
3rd Quartile	51.8	20.5	3.7	2.4	5.4	0.7
95th Percentile	24.8	12.4	0.2	0.5	3.4	0.1
Population	548	572	71	141	347	486

Parentheses contain percentile rankings. Excludes Transition Account and Member Funds. Real Assets contains Core Real Estate and REITs.

Performance Return Calculations

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

Manager Line Up

Manager	Inception Date	Data Source
RhumbLine Russell 1000 Index Fund	3/15/2022	State Street
RhumbLine Russell 2000 Index Fund	3/15/2022	State Street
SSgA Non-US Developed Index Fund	3/10/2022	State Street
SSgA Non-US Developed SC Index Fund	3/10/2022	State Street
SSgA Emerging Markets Equity Index Fund	3/10/2022	State Street
SSgA High Yield Corporate Credit	3/18/2022	State Street
SSgA EMD Hard Index Fund	3/14/2022	State Street

Manager	Inception Date	Data Source
SSgA US TIPS Index Fund	3/17/2022	State Street
Principal USPA	4/6/2022	State Street
SSgA REITs Index Fund	3/10/2022	State Street
SSgA Core Fixed Income Index Fund	3/17/2022	State Street
SSgA Short-Term Gov't/Credit Index Fund	3/17/2022	State Street
Cash	3/22/2022	State Street

Policy Index Composition

As of 5/1/2023	Policy Index	Growth	Income	Inflation Protection	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	18%	31.0%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	7%	12.1%			
Bloomberg US Aggregate Index	3%				17.6%
Bloomberg 1-3 Year Gov/Credit Index	13%				76.5%
Bloomberg US Corporate High Yield Index	10%		62.5%		
Bloomberg US TIPS 0-5 Year	3%			33.3%	
JPM EMBI Global Diversified Index	6%		37.5%		
NFI-ODCE Equal-Weighted Index	2%			22.2%	
Wilshire US REIT Index	4%			44.5%	
90 Day US Treasury Bill Index	1%				5.9%

As of 1/1/2023	Policy Index	Growth	Income	Inflation Protection	Risk Mitigation
Russell 1000	18%	36.0%			
Russell 2000	5%	10.0%			
MSCI World ex U.S.	15%	30.0%			
MSCI World ex U.S. Small Cap	5%	10.0%			
MSCI Emerging Markets	7%	14.0%			
Bloomberg US Aggregate Index	7%				28.0%
Bloomberg 1-3 Year Gov/Credit Index	15%				60.0%
Bloomberg US Corporate High Yield Index	10%		62.5%		
Bloomberg US TIPS 0-5 Year	3%			33.3%	
JPM EMBI Global Diversified Index	6%		37.5%		
NFI-ODCE Equal-Weighted Index	2%			22.2%	
Wilshire US REIT Index	4%			44.5%	
90 Day US Treasury Bill Index	3%				12.0%

As of 3/31/2022	Policy Index	Growth	Income	Inflation Protection	Risk Mitigation
Russell 3000	23%	46.0%			
MSCI ACWI ex USA IMI	20%	40.0%			
MSCI Emerging Markets IMI	7%	14.0%			
Bloomberg US Aggregate Index	7%				28.0%
Bloomberg 1-3 Year Gov/Credit Index	15%				60.0%
Bloomberg US Corporate High Yield Index	10%		62.5%		
Bloomberg US TIPS 0-5 Year	3%			33.3%	
50% JPM EMBI GD/50% JPM GBI EM GD	6%		37.5%		
NCREIF Property Index	2%			22.2%	
Wilshire US REIT Index	4%			44.5%	
90 Day US Treasury Bill Index	3%				12.0%

Custom Benchmark Composition

Benchmark	Time period	Composition
Policy Index -Broad Benchmark	4/1/2022 - Present	70% MSCI ACWI IMI (Net) and 30% Bloomberg Global Multiverse.
Spliced SSgA EMD Hard Benchmark	7/1/2022 - Present	100% JPM EMBI Global Diversified Index
Spliced SSgA EMD Hard Benchmark	3/14/2022 - 6/30/2022	100% JPM EMBI Global Core Index
Spliced SSgA U.S. High Yield Index	12/1/2022 - Present	100% ICE BofA US High yield Master II Constrained
Spliced SSgA U.S. High Yield Index	3/18/2022 - 11/30/2022	100% Bloomberg U.S. High Yield Very Liquid Index

Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return [Risk free Rate + Portfolio Beta x (Market Return Risk free Rate)].

Benchmark R squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book to Market: The ratio of book value per share to market price per share. Growth managers typically have low book to market ratios while value managers typically have high book to market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price to Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price to earnings ratios whereas value managers hold stocks with low price to earnings ratios.

R Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

Sortino Ratio: Measures the risk adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from 1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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