

# Piano Cleveland

October 16, 2024

Review as of September 30, 2024

Presented by:

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- 
- I. Investment Policy Statement
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# Investment Policy Statement



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**Piano International Association of North Ohio  
dba Cleveland International Piano Competition (CIPC)  
Endowment Fund**

This Investment Policy Statement covers the Cleveland International Piano Competition (CIPC) Endowment Fund (Fund), which comprises the following account(s):

CLEVELAND INTL PIANO COMPETITION 21-75-073-5983568

## **I. Purpose**

The purposes of this Investment Policy Statement (IPS) are (i) to document PNC's and CIPC's understanding of the investment goals and guidelines for the portfolio, including the investment objective, risk tolerance, investment restrictions and asset allocation ranges, (ii) to communicate CIPC's investment goals and guidelines to the Fund's Investment Adviser (currently PNC Institutional Asset Management, or PNC), and (iii) to establish a basis upon which to evaluate the attainment of portfolio objectives.

The purposes of the Fund are to perpetuate and support CIPC and to assure the financial security and long-term success of CIPC.

## **II. Investor Profile**

### **A. Investment Time Horizon:**

The period of time during which the assets will be invested is expected to be for perpetuity.

### **B. Portfolio Risk Tolerance:**

Investment theory and historical capital market return data suggest that over long periods of time there is a relationship between the level of risk assumed and the level of return that can be expected in a portfolio, although there can be no guarantee of returns. In general, higher risk (e.g. return volatility) is associated with higher return. Given this relationship between risk and return, a fundamental step in determining the investment policy is the determination of an appropriate risk tolerance profile. There are a number of factors that influence the risk profile for a portfolio, including: sustainability of income, liquidity, return objectives, time horizon and investment experience. Based on CIPC's and PNC's understanding, CIPC advises PNC that the portfolio risk tolerance is best described as: Willing to take moderate risk as long as the investments have a greater potential for growth over time.

### **C. Investment Objectives:**

The overall investment objective for this portfolio is Growth.

CIPC established the Fund to cover emergency needs intending to withdraw no more than 5% of the Fund's value annually. Donors have made additional contributions to endow specific prizes or activities, making those funds restricted in nature. CIPC will withdraw those restricted funds pursuant to applicable restrictions on such withdrawals and for the use of such funds for the designated prizes and activities.

The Fund shall be operated in accordance with all federal laws and regulations applicable to an endowment fund of an Internal Revenue Code 501(c)(3) entity. It is subject to Internal Revenue Service reporting requirements.

It is the intent of the CIPC Investment Committee that the Fund's Investment Advisor provide a diversified investment portfolio that will enable the Fund to replace

withdrawals over time through total returns (dividends plus interest minus fees, plus or minus price changes affecting the value of securities).

### **III. Restrictions and Limitations**

- No security (other than an index fund) shall comprise more than 10% of the Fund
- All securities will be liquid (i.e. can be turned into cash in three business days)
- No securities will be purchased on margin (The Fund may not borrow for any purpose)
- Fixed income vehicles (except commingled "junk" bond vehicles) must hold a majority of securities rated single-A or better
- Direct investments in derivative securities, futures, or options are not permitted (Mutual funds that utilize these vehicles for the purpose of hedging, rather than speculation, are permitted)
- No Security position where a loss in excess of 100% is possible (e.g. short sales) may be utilized (Mutual funds that short may be purchased, since the Fund's maximum downside exposure is 100% for any mutual fund purchases)
- Stocks, bonds, exchange traded funds (ETFs), cash equivalent vehicles and no-load mutual funds are permissible investments
- Mutual funds which carry a load (i.e. sales charge) are prohibited

### **IV. Strategic Asset Allocation**

Based on the Fund's risk tolerance and investment objective, CIPC expects that the Fund's Investment Adviser will use a Growth with Alternative Investments blend strategy. CIPC understands that the growth strategy seeks capital appreciation, and is designed for investors with intermediate to long-term financial goals. The strategy pursues its investment objective by investing primarily in equity securities, with some fixed income and alternative investments to assist in moderating the volatility typically experienced in an all equity portfolio. The absolute level of income generated by this strategy is expected to be modest.

### **Asset Class Proposed Allocation (%)**

<b>Asset Classes</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Strategic Target</b>
Equities	50%	70%	65%
Fixed Income	5%	20%	10%
Alternative Assets	15%	35%	25%
			100%

### **V. Strategic Considerations**

CIPC understands that the Strategic Asset Allocation represents a customized investment framework with baseline allocation percentages for each major asset class that the Fund's Investment Adviser has developed. The Fund's Investment Adviser has developed the allocation using both quantitative and qualitative input, data and processes. CIPC expects the Fund's Investment Adviser to invest the assets of this portfolio among various diversified classes of investments. The baseline Strategic Asset

Allocation is a long-term strategic asset allocation that considers equity, fixed income, alternative assets and cash according to the Fund's risk profile. The Fund's Investment Adviser may make tactical changes from time to time in the baseline Strategic Asset Allocation. In addition, the Fund's investments may vary from the baseline allocation due to changes in the value of assets in the account, market conditions and account specific events, such as instructions from CIPC.

#### **VI. Investment Authority**

CIPC has appointed PNC as the Fund's Investment Adviser. PNC's investment authority for the accounts in the portfolio is defined as:

##### **Account Name Account Number**

CLEVELAND INTL PIANO COMPETITION 21-75-073-5983568

##### **Investment Authority**

Full/Sole Discretion

#### **VII. Performance Measurement**

The Fund's performance will be measured in accordance with industry standards and against appropriate benchmarks.

#### **VIII. Additional Comments**

No Additional Comments

#### **IX. Signator's Role**

CIPC understands that as financial circumstances, goals, investment objectives and preferences change, it is important that CIPC communicate those changes to the Fund's Investment Adviser so that appropriate adjustments can be made in the portfolio. The undersigned agree(s) that this IPS applies to all of the accounts that constitute the Fund in the aggregate. The Fund's Investment Adviser may manage each account to its stated investment objective as long as all accounts in the aggregate comply with this IPS. Each of CIPC and the Fund's Investment Adviser is signing this IPS in the capacity defined by the governing instrument for each account listed in this IPS. This IPS is subject to the terms and conditions, including the standard of care and limitations of liability, of the documents, which constitute the governing instruments for the applicable account(s). This IPS has been accepted and approved

By:

  
Petrus Van Der Westhulzen,  
Chief Executive Officer and President

4/18/17  
Date

# Portfolio Review

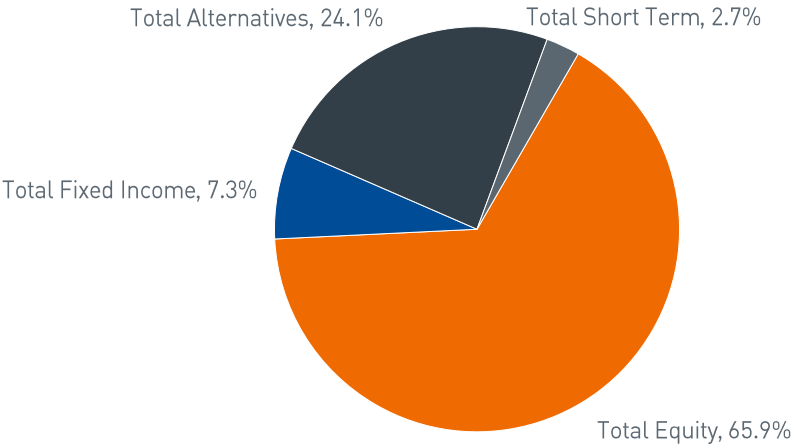


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# Asset Allocation

Piano Cleveland  
As of September 30, 2024

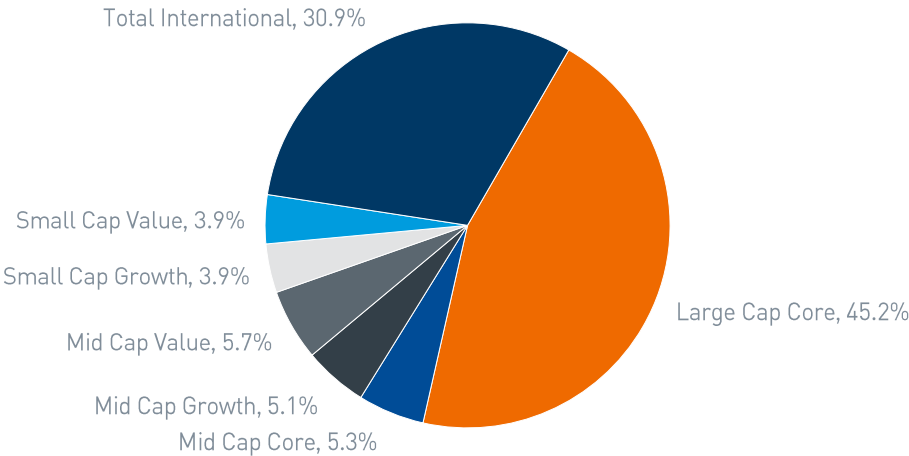


Description	Market Value (\$)	Portfolio Allocation	Policy Target	Policy Range
Total Equity	949,244	65.9%	65%	50-70%
Large Cap Equity	429,154	29.8%	30%	
Mid Cap Equity	152,414	10.6%	10%	
Small Cap Equity	73,964	5.1%	5%	
Total International	293,712	20.4%	20%	
Total Fixed Income	105,508	7.3%	10%	5-20%
Total Alternatives	347,576	24.1%	25%	15-35%
Total Short Term	39,056	2.7%		
Total Portfolio	1,441,384	100.0%	100.0%	

# Equity Asset Allocation

Piano Cleveland

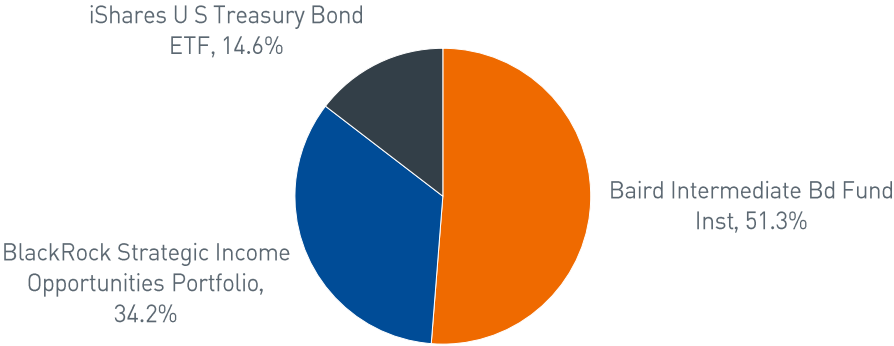
As of September 30, 2024



Description	Market Value (\$)	Equity Allocation	Portfolio Allocation
Large Cap Core	429,154	45.2%	29.8%
Mid Cap Core	50,206	5.3%	3.5%
Mid Cap Growth	48,415	5.1%	3.4%
Mid Cap Value	53,793	5.7%	3.7%
Small Cap Growth	37,424	3.9%	2.6%
Small Cap Value	36,540	3.9%	2.5%
Total International	293,712	30.9%	20.4%
Total Equity	949,244	100.0%	65.9%

# Fixed Income Asset Allocation

Piano Cleveland  
As of September 30, 2024



Description	Market Value (\$)	Fixed Income Allocation	Portfolio Allocation
Baird Intermediate Bd Fund Inst	54,095	51.3%	3.8%
BlackRock Strategic Income Opportunities Portfolio	36,029	34.2%	2.5%
iShares U S Treasury Bond ETF	15,383	14.6%	1.1%
Total Fixed Income	105,508	100.0%	7.3%

# Alternative Asset Allocation

Description	Market Value (\$)	Alternative Allocation	Portfolio Allocation
American Beacon Mgd	53,691	15.4%	3.7%
Angel Oak Multi-Strategy Income Fund Instl Class	90,045	25.9%	6.2%
BlackRock Event Driven Eq Inst	106,258	30.6%	7.4%
Eaton Vance Global Macro Absolute Return Advantage	97,582	28.1%	6.8%
Total Alternatives	347,576	100.0%	24.1%

# Portfolio Holdings

Piano Cleveland

As of September 30, 2024



Description	Ticker	Units	Market Value (\$)	% of Market Value
<b>Large Cap Core</b>				
iShares Core S&P 500 ETF	IVV	744	429,154	29.8%
<b>Mid Cap Core</b>				
Principal MidCap R6	PMAQX	1,093	50,206	3.5%
<b>Mid Cap Growth</b>				
Madison Mid Cap Fund-R6	MMCRX	2,665	48,415	3.4%
<b>Mid Cap Value</b>				
Harbor Mid Cap Value-Ret	HNMVX	1,937	53,793	3.7%
<b>Small Cap Growth</b>				
Meridian Small Cap Grow-Rtr	MSGRX	2,778	37,424	2.6%
<b>Small Cap Value</b>				
AMG Rr Sm Cap Val-I	ARSIX	2,244	36,540	2.5%
<b>Total International</b>				
Artisan International Small Mid Institutional	APHJX	955	18,092	1.3%
iShares MSCI EAFE Value ETF	EFV	1,408	81,002	5.6%
Oakmark Intl Sm Cap-R6	OAZEX	893	18,951	1.3%
Pzena Emerg Mkts Value-Inst	PZIEX	2,151	30,585	2.1%
Seafarer Overseas Growth & Income Inst	SIGIX	2,810	36,562	2.5%
Touchstone Sands Cptl Emerging Markets Gr Inst	TSRMX	1,857	29,781	2.1%
WCM Focused Intl Growth-Ins	WCMIX	2,997	78,739	5.5%
<b>Total Equity</b>			<b>949,244</b>	<b>65.9%</b>

# Portfolio Holdings (Continued)

Piano Cleveland

As of September 30, 2024



Description	Ticker	Units	Market Value (\$)	% of Market Value
<b>Fixed Income</b>				
Baird Intermediate Bd Fund Inst	BIMIX	5,132	54,095	3.8%
BlackRock Strategic Income Opportunities Portfolio	BSIIX	3,734	36,029	2.5%
iShares U S Treasury Bond ETF	GOVT	656	15,383	1.1%
<b>Total Fixed Income</b>			<b>105,508</b>	<b>7.3%</b>
<b>Alternatives</b>				
American Beacon Mgd	AHLIX	5,290	53,691	3.7%
Angel Oak Multi-Strategy Income Fund Instl Class	ANGIX	10,256	90,045	6.2%
BlackRock Event Driven Eq Inst	BILPX	10,346	106,258	7.4%
Eaton Vance Global Macro Absolute Return Advantage	EGRSX	9,061	97,582	6.8%
<b>Total Alternatives</b>			<b>347,576</b>	<b>24.1%</b>
<b>Short Term</b>				
Blackrock Liquid Funds FedFund	TFDXX	2,727	2,727	0.2%
Cash & Equivl	-	36,329	36,329	2.5%
<b>Total Short Term</b>			<b>39,056</b>	<b>2.7%</b>
<b>Total Portfolio</b>			<b>1,441,384</b>	<b>100.0%</b>

# Investment Performance

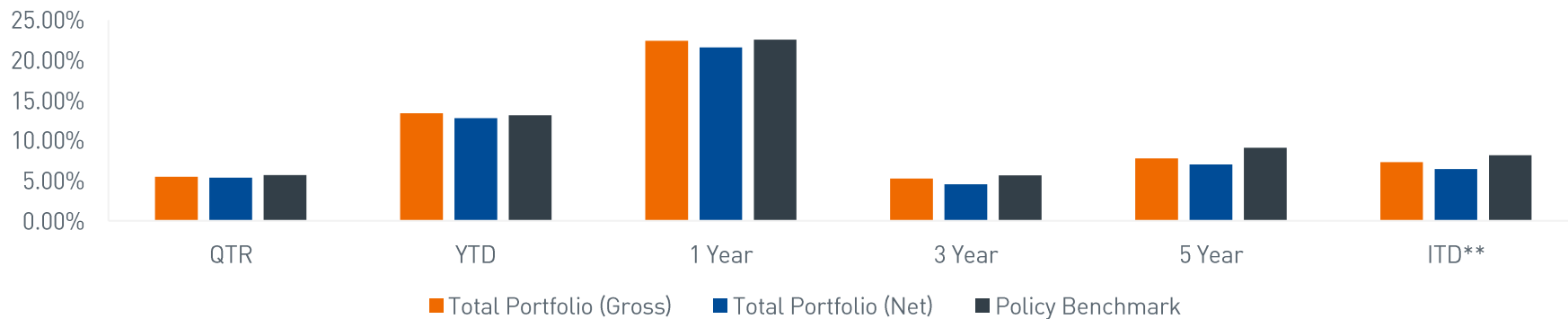


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# Total Portfolio Performance

Piano Cleveland

As of September 30, 2024



Description	QTR	YTD	1 Year	3 Year	5 Year	ITD**
<b>Total Portfolio (Gross)</b>	<b>5.49%</b>	<b>13.42%</b>	<b>22.45%</b>	<b>5.27%</b>	<b>7.77%</b>	<b>7.30%</b>
<b>Total Portfolio (Net)</b>	<b>5.37%</b>	<b>12.80%</b>	<b>21.61%</b>	<b>4.57%</b>	<b>7.03%</b>	<b>6.45%</b>
Policy Benchmark*	5.71%	13.15%	22.59%	5.65%	9.12%	8.19%
Blended Benchmark*	5.24%	13.74%	22.90%	5.77%	9.05%	7.91%
Allocation Benchmark*	5.42%	13.28%	22.14%	4.82%	7.58%	7.10%
<b>Total Equity</b>	<b>7.38%</b>	<b>18.09%</b>	<b>31.09%</b>	<b>7.08%</b>	<b>10.73%</b>	<b>9.97%</b>
Equity Policy Benchmark*	7.41%	17.56%	31.13%	7.75%	12.21%	11.08%
S&P 500 TR	5.89%	22.08%	36.35%	11.91%	15.98%	14.26%
Russell Midcap	9.21%	14.63%	29.33%	5.75%	11.30%	10.86%
Russell 2000	9.27%	11.17%	26.67%	1.84%	9.39%	8.77%
MSCI EAFE Net	7.26%	12.99%	24.77%	5.48%	8.20%	6.86%
<b>Total Fixed Income</b>	<b>4.31%</b>	<b>5.23%</b>	<b>10.66%</b>	<b>0.62%</b>	<b>1.66%</b>	<b>2.26%</b>
Bloomberg Int Govt/Credit	4.17%	4.68%	9.45%	0.17%	1.26%	1.96%
<b>Total Alternatives</b>	<b>1.61%</b>	<b>5.56%</b>	<b>7.90%</b>	<b>2.95%</b>	<b>2.96%</b>	<b>3.13%</b>
HFRX Global Hedge	2.12%	5.08%	6.86%	1.20%	3.30%	2.52%

\*See Appendix – Policy Benchmark Composition for description of benchmarks.

\*\*Inception date is 12/01/2015

Total Portfolio (Gross) shows performance gross of advisory fees and separately managed account (SMA) fees. Total Portfolio (Net) shows performance net of advisory fees, transaction costs, and all manager fees. Performance reflects reinvestment of dividends, interest and capital gain distributions and rebalancing. Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. Past performance is not guarantee of future results.

# Manager Performance

Piano Cleveland

As of September 30, 2024



Description	QTR	YTD	1 Year	3 Year	5 Year
<b>Large Cap Core</b>	<b>5.81%</b>	<b>21.97%</b>	<b>36.20%</b>	<b>11.98%</b>	<b>15.83%</b>
iShares Core S&P 500 ETF	5.81%	21.97%	36.20%	11.63%	15.78%
S&P 500 TR	5.89%	22.08%	36.35%	11.91%	15.98%
<b>Mid Cap Growth</b>	<b>7.20%</b>	<b>12.58%</b>	<b>28.72%</b>	<b>11.88%</b>	<b>12.30%</b>
Madison Mid Cap Fund-R6	7.20%	12.58%	28.72%	11.88%	12.30%
Russell Midcap Growth	6.54%	12.91%	29.33%	2.32%	11.48%
<b>Mid Cap Core</b>	<b>11.53%</b>	<b>13.85%</b>	<b>28.04%</b>	<b>3.78%</b>	<b>8.90%</b>
Principal MidCap R6	11.56%	-	-	-	-
Russell Midcap	9.21%	-	-	-	-
<b>Mid Cap Value</b>	<b>9.81%</b>	<b>17.09%</b>	<b>28.01%</b>	<b>-</b>	<b>-</b>
Harbor Mid Cap Value-Ret	10.99%	-	-	-	-
Russell Midcap Value	10.08%	-	-	-	-
<b>Small Cap Growth</b>	<b>6.02%</b>	<b>8.11%</b>	<b>18.07%</b>	<b>-1.84%</b>	<b>8.39%</b>
Meridian Small Cap Grow-Rtr	8.11%	-	-	-	-
Russell 2000 Growth	8.41%	-	-	-	-
<b>Small Cap Value</b>	<b>4.76%</b>	<b>6.48%</b>	<b>15.72%</b>	<b>-</b>	<b>-</b>
AMG Rr Sm Cap Val-I	4.76%	6.48%	15.72%	-	-
Russell 2000 Value	10.15%	9.22%	25.88%	-	-
<b>Total International</b>	<b>8.65%</b>	<b>12.77%</b>	<b>23.56%</b>	<b>0.53%</b>	<b>6.22%</b>
iShares MSCI EAFE Value ETF	8.55%	13.84%	23.44%	-	-
MSCI EAFE Value Net	8.89%	13.79%	23.14%	-	-

\*\*Inception date is 12/01/2015

Performance is shown gross of advisory fees and separately managed account (SMA) fees. The effect of advisory fees on the portfolio could be material. If these fees were reflected, returns would be lower. Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. Past performance is not guarantee of future results.



# Manager Performance (Continued)

Piano Cleveland

As of September 30, 2024



Description	QTR	YTD	1 Year	3 Year	5 Year
Pzena Emerg Mkts Value-Inst	11.01%	16.65%	23.50%	-	-
<i>MSCI Emerging Market Net</i>	8.72%	16.86%	26.05%	-	-
Oakmark Intl Sm Cap-R6	11.98%	9.16%	21.87%	4.31%	9.68%
<i>MSCI ACWI ex USA SMID Value Net USD</i>	9.55%	12.40%	23.13%	4.62%	7.48%
Seafarer Overseas Growth & Income Inst	15.50%	12.26%	21.72%	3.66%	8.10%
<i>MSCI Emerging Market Net</i>	8.72%	16.86%	26.05%	0.40%	5.75%
Touchstone Sands Cptl Emerging Markets Gr Inst	8.82%	14.41%	21.42%	-9.88%	-
<i>MSCI Emerging Market Net</i>	8.72%	16.86%	26.05%	0.40%	-
WCM Focused Intl Growth-Ins	4.66%	15.42%	29.03%	0.35%	10.26%
<i>MSCI ACWI ex USA Growth Net</i>	6.92%	14.06%	26.75%	0.81%	7.09%
<b>Fixed Income</b>	<b>4.31%</b>	<b>5.23%</b>	<b>10.66%</b>	<b>0.62%</b>	<b>1.66%</b>
BlackRock Strategic Income Opportunities Portfol	4.37%	6.12%	11.97%	-	-
<i>Bloomberg US Universal</i>	5.20%	4.91%	12.08%	-	-
Baird Intermediate Bd Fund Inst	4.14%	5.02%	9.90%	0.29%	1.53%
<i>Bloomberg Int Govt/Cr</i>	4.17%	4.68%	9.45%	0.17%	1.26%
iShares U S Treasury Bond ETF	4.74%	5.20%	-	-	-
<i>ICE U.S. Treasury Core Bond Index</i>	4.74%	3.99%	-	-	-
<b>Total Alternatives</b>	<b>1.61%</b>	<b>5.56%</b>	<b>7.90%</b>	<b>2.95%</b>	<b>2.96%</b>
Eaton Vance Global Macro Absolute Return Advanta	1.80%	7.48%	10.68%	4.80%	5.50%
<i>HFRX Macro-CTA Index</i>	-0.78%	3.77%	2.46%	1.68%	1.83%
American Beacon Mgd	-4.87%	2.42%	-0.28%	4.08%	-
<i>HFRX Macro-CTA Index</i>	-0.78%	3.77%	2.46%	1.68%	-
BlackRock Event Driven Eq Inst	2.60%	2.80%	6.56%	2.95%	-
<i>HFRX Event Driven</i>	2.61%	3.86%	5.27%	-1.69%	-
Angel Oak Multi-Strategy Income Fund Instl Class	4.41%	8.43%	11.59%	0.11%	-
<i>HFRX Relative Value Arbitrage Index</i>	3.30%	4.43%	6.40%	0.19%	-

**\*\*Inception date is 12/01/2015**

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# Manager Performance (Continued)

Piano Cleveland

As of September 30, 2024



Description	QTR	YTD	1 Year	3 Year	5 Year
<b>Total Short Term</b>	<b>1.29%</b>	<b>3.95%</b>	<b>5.32%</b>	<b>3.70%</b>	<b>2.35%</b>
Blackrock Liquid Funds FedFund	1.33%	3.98%	5.36%	-	-
<i>Bloomberg US Treasury Bill 1-3 Month Blend</i>	1.36%	4.08%	5.52%	-	-
Cash & Equivl	1.29%	3.95%	5.32%	3.71%	2.36%
<i>Bloomberg US Treasury Bill 1-3 Month Blend</i>	1.36%	4.08%	5.52%	3.57%	2.33%

**\*\*Inception date is 12/01/2015**  
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# Benchmark Composition

Piano Cleveland

As of September 30, 2024

## Total Portfolio

### Policy Benchmark

December 2015	%
S&P 500 TR	30.00
HFRX Global Hedge	25.00
MSCI ACWI Ex US Net	20.00
Russell Midcap	10.00
Bloomberg Int Govt/Cr	10.00
Russell 2000	5.00

### Blended Benchmark

December 2015	%
MSCI ACWI Net	65.00
Bloomberg Int Govt/Cr	10.00
HFRX Global Hedge	25.00

### Allocation Benchmark

September 2024	%
S&P 500 TR	29.68
Russell 2000 Value	2.57
Russell 2000 Growth	2.64
Russell Midcap	3.45
Russell Midcap Growth	3.37
Russell Midcap Value	3.76
MSCI Emerging Market Net	6.49
Bloomberg Int Govt/Cr	3.78
HFRX Event Driven	7.46
HFRX Relative Value Arbitrage Index	6.27
HFRX Macro-CTA Index	10.54
MSCI EAFE Value Net	5.63
MSCI ACWI ex USA Growth Net	5.59
Bloomberg US Universal	2.51
ICE U.S. Treasury Core Bond Index	1.07
Bloomberg US Treasury Bill 1-3 Mon	2.60
MSCI ACWI Ex USA SMID Growth Net USD	1.26
MSCI ACWI ex USA SMID Value Net USD	1.31

Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. Indices performance results do not represent, and are not necessarily indicative of, the results that may be achieved in accounts investing in the corresponding investment strategy; actual account returns may vary significantly.

For definitions of Indices/Benchmarks used in this presentation, please refer to [www.pnc.com/indexdefinitions](http://www.pnc.com/indexdefinitions).

# Benchmark Composition

Piano Cleveland

As of September 30, 2024



**Equity:**

Equity Policy Benchmark- December 2015	%
S&P 500 TR	45.00
MSCI ACWI Ex US Net	30.00
Russell Midcap	15.00
Russell 2000	10.00

*Indices are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that an account may incur. Indices performance results do not represent, and are not necessarily indicative of, the results that may be achieved in accounts investing in the corresponding investment strategy; actual account returns may vary significantly.*

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# **Thank you for your business.**

**How can we better serve your needs?**



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# Taking Stock of the Markets

Investment Strategy

September 2024



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# Key Macro and Market Themes

The path forward is highly dependent on notable themes

Despite expectations that market volatility will increase in the fourth quarter, falling inflation should act as a tailwind for markets as global central banks ease monetary policy.

## Macroeconomics

1. Easing monetary policy
2. Choppy inflation
3. Normalizing labor market

## Markets

1. Narrow earnings growth
2. Narrow market leadership
3. Higher market volatility

Scan the QR code using your smartphone's camera app to watch a video in which Dan Brady, PNC's Managing Director of Investment Strategy, discusses Key Macro and Market Themes.



# Investment Process and Asset Allocations

Each facet of analysis plays a critical role in our decision-making

As central banks begin to cut interest rates and “recalibrate” monetary policy to support the business cycle, we believe the reward/risk balance at elevated valuations supports diversified, high-quality portfolios.

## Investment Process Insights



**Business  
Cycle**

### Global central bank easing cycle begins

We continue to believe the path forward is less about inflation, and more dependent on labor markets normalizing back to pre-pandemic trends, rather than signaling a slowdown.



**Valuations**

### A global earnings reacceleration is needed to bring down multiples

As financial conditions have eased ahead of central bank rate cuts, valuations are rising. Earnings growth reacceleration is needed, to prevent valuations from becoming extended.



**Technical**

### Long-term momentum remains positive as markets sit near all-time highs

In our view, equity markets sitting near all-time highs should be viewed positively as global equity market momentum remains a tailwind.



**Equities**

### The global outlook is dependent on earnings growth

We continue to favor quality, global allocations that can weather elevated inflation and high interest rates, amid a slowing economy.



**Fixed  
Income**

### Rate cuts and easing financial conditions support credit markets

As the Fed eases interest rates and interest rate volatility falls, we believe credit markets are attractive given improving fundamentals and high-income generation.



**Alternative**

### Broad opportunity set for long-term investors

Alternative investments offer various return/risk correlation and liquidity profiles for differentiated alpha, potentially aiding risk-adjusted performance and dampening volatility.



# Economic and Equity Markets Dashboard

Markets driven by a dovish Fed, disinflation and resilient economic data

The Federal Reserve (Fed) kicked off its easing cycle by cutting the policy rate by 50 basis points. Cooling inflation has allowed the Fed to focus on achieving a “soft landing”, and support markets in the fourth quarter.

## Economic Data Dashboard

<b>3.0%</b> <i>PRIOR: 1.6%</i> <b>U.S. REAL GDP</b> <b>2Q 2024</b>	<b>4.2%</b> <i>PRIOR: 4.3%</i> <b>UNEMPLOYMENT</b> <b>RATE</b>	<b>2.5%</b> <i>PRIOR: 2.9%</i> <b>CPI</b> <b>ANNUAL CHANGE</b>
<b>3.78%</b> <i>PRIOR: 3.90%</i> <b>10-YEAR U.S.</b> <b>TREASURY YIELD</b>	<b>3.8%</b> <i>PRIOR: 3.6%</i> <b>ANNUAL HOURLY</b> <b>WAGE GROWTH</b>	<b>2.5%</b> <i>PRIOR: 4.2%</i> <b>ANNUAL U.S. RETAIL</b> <b>SALES GROWTH</b>
<b>14BASISPOINTS</b> <i>PRIOR: -2 BPS</i> <b>2YR/10YR YIELD</b> <b>CURVE INVERSION</b>	<b>142,000</b> <i>PRIOR: 89,000 (REVISED)</i> <b>MONTHLY PAYROLL</b> <b>REPORT ADDITIONS</b>	<b>\$3.20/GAL</b> <i>PRIOR: \$3.33/GAL</i> <b>NATIONAL AVERAGE</b> <b>GASOLINE PRICE</b>

## Equity Market Highlights

	<b>Consensus Estimates</b> <b>Earnings Growth</b>	
	<b>2024E</b>	
	<b>EPS</b> <b>GROWTH</b>	<b>NTM</b> <b>P/E</b>
<b>S&amp;P 500®</b>	9.4%	21.6x
<b>“Magnificent 7”* stocks</b>	42.3%	33.9x
<b>Russell 2000®</b>	-4.3%	24.9x
<b>MSCI World ex USA</b>	9.0%	14.1x
<b>MSCI EM IMI</b>	19.4%	12.6x
<b>S&amp;P 500 EPS</b>	<b>9/30/24</b>	<b>12/31/23</b>
<b>Strategists’ Median Est.</b>	\$241	\$231
<b>Bull Case</b>	\$258	\$250
<b>Bear Case</b>	\$225	\$221

\*“Magnificent 7” stocks includes Microsoft Corp.; Apple Inc.; Nvidia Corp.; Alphabet Inc.; Amazon.com, Inc.; Meta Platforms, Inc. and Tesla Inc.  
As of 9/30/2024. Source: Bloomberg L.P., FactSet®, FactSet® is a registered trademark of FactSet Research Systems, Inc., and its affiliates.

# Easing Cycle Makes Cash Yields Less Attractive

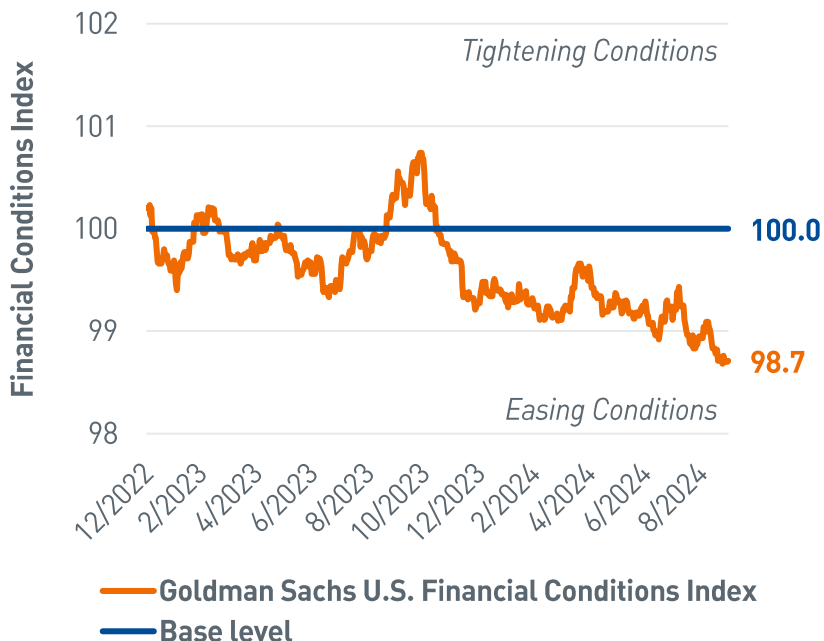
Fed rate cuts support valuations as cash yields are expected to keep falling

**Interest rate cuts  
should support easy  
financial conditions but  
lowers cash yields**

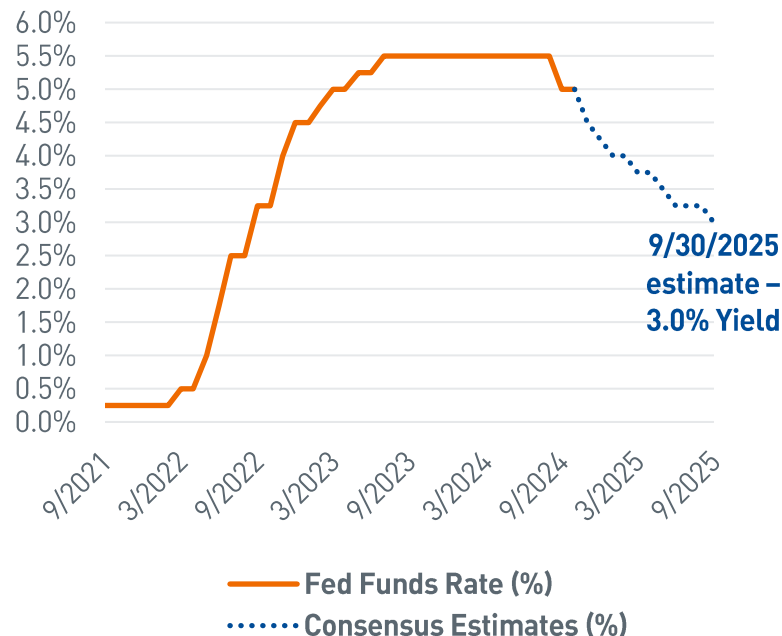
The Fed's 50-basis-point rate cut in September continues to support the narrative of easing financial conditions, which began late last year.

Should the Fed continue to cut interest rates as consensus expects, cash yields could meaningfully decline within a year's time.

## Fed Easing is Supportive of Financial Conditions



## Cash Yields Expected to Rapidly Fall in 2025

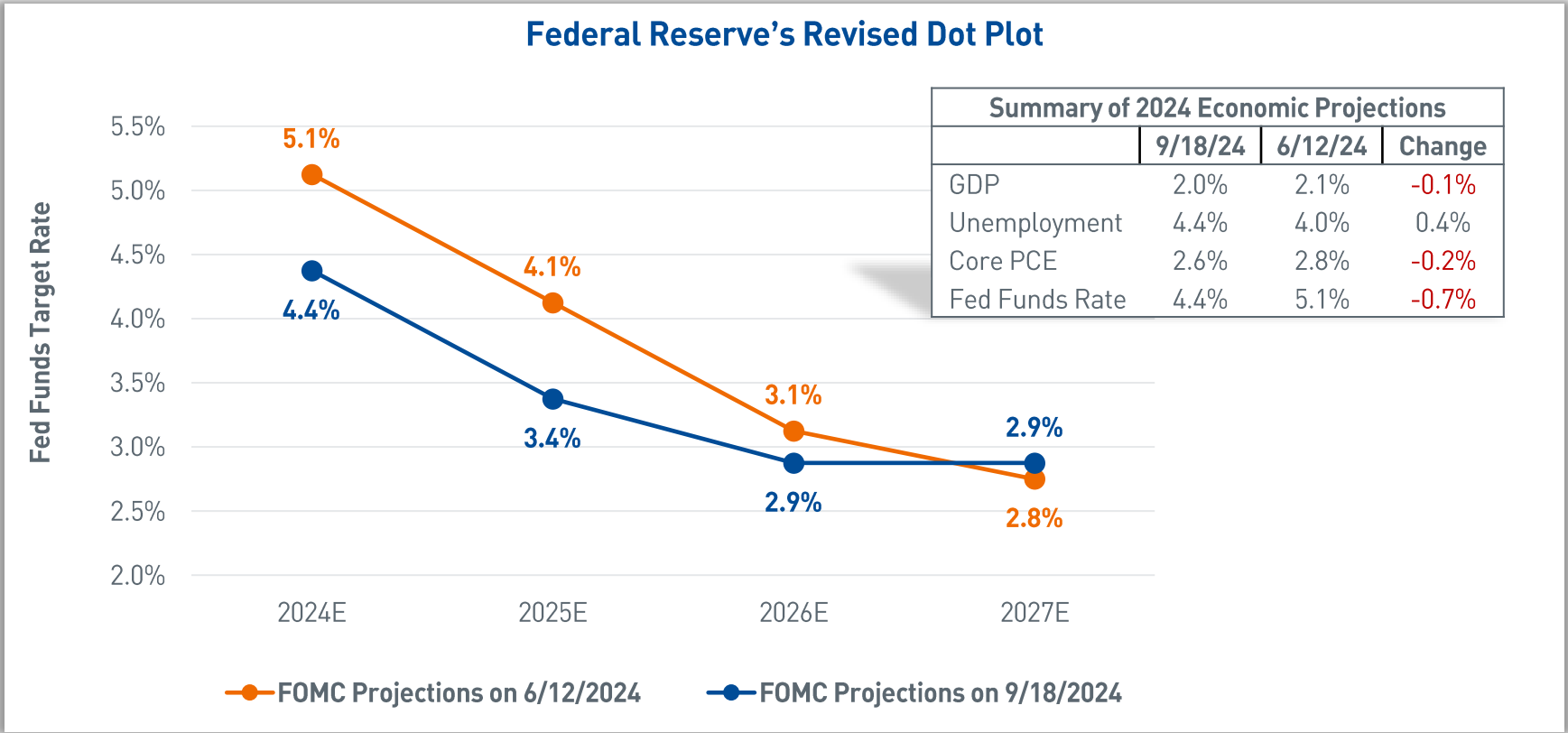


# Federal Reserve's Rate Cut Cycle Begins

The “recalibration” of monetary policy is a tailwind for markets

Updated “dot plot”  
signals rate cuts into  
2025 and beyond

The Federal Reserve lowered the policy rate by 50 basis points (bps) in September and signaled an additional 50 bps of cuts for this year, followed by another 150 bps of cuts over the next two years, until it reaches a projected 2.9% terminal rate.



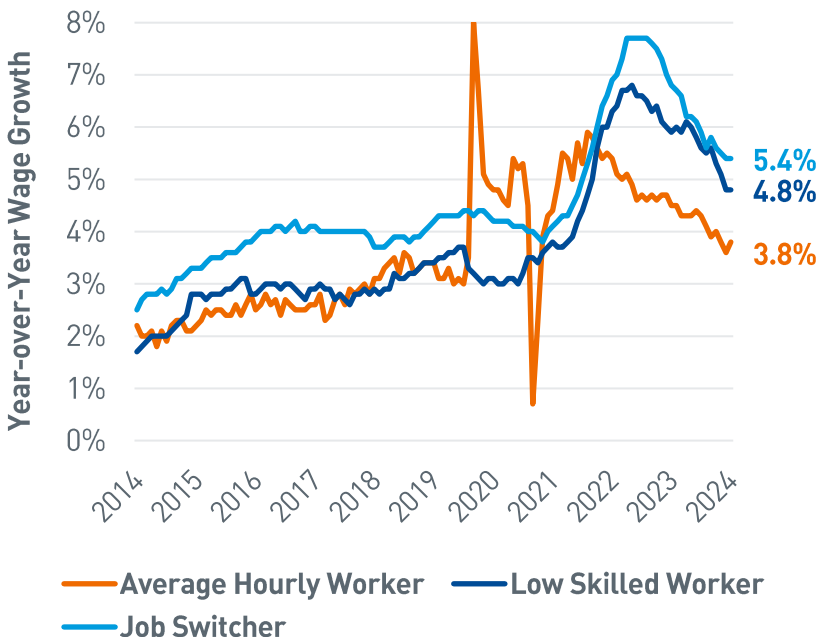
# Labor Market Data

Wage growth remains resilient as key demographics see labor force growth

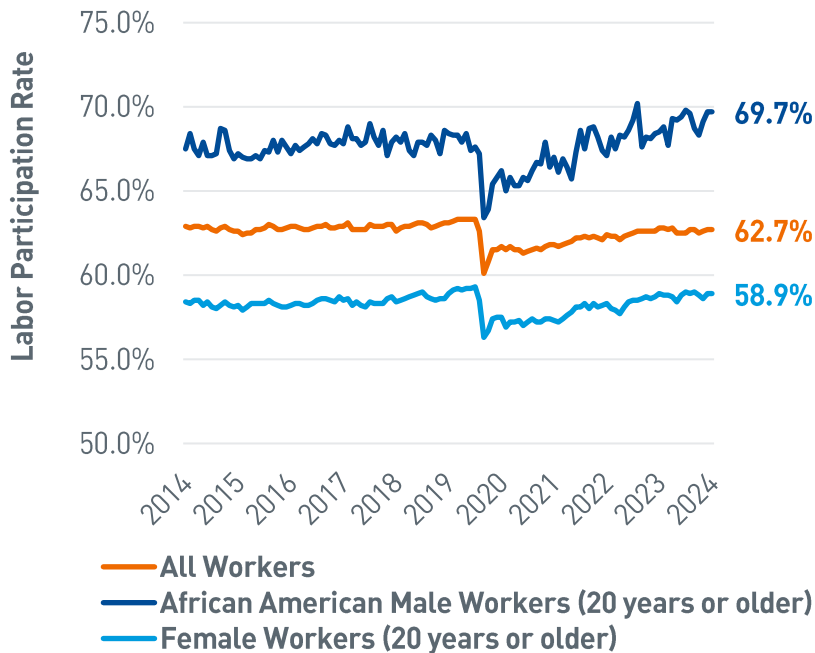
**Underlying data show resilience in wage growth and a rise in labor participation**

Strong wage growth is a significant reason high inflation has not caused a big slowdown in consumption, especially for “job switchers” and entry-level positions. Certain demographics are just now seeing labor participation rates normalize back to 2019 trends, a testament to long-term difficulties caused by the pandemic.

**Resilience Seen in Atlanta Fed Wage Tracker**



**Labor Force Participation Rates Rise**



# Record Yield Curve Inversion

The path to normalization does not always lead to recession

Not all inverted yield curves have led to a recession

The inverted yield curve has been a significant headwind for the Financials and Real Estate sectors, but the degree of steepening has depended on Fed rate cuts. While a normalized yield curve has historically occurred before a recession starts, like any other leading indicator, it does not have a perfect track record.

## Longest Yield Curve Inversion on Record



## Inverted Yield Curve Head Fakes

Date Inversion Ended	Did a recession start in 9 months?	S&P 500® 1-year return
June 30, 1989	No	9.6%
July 28, 1998	No	19.4%
March 28, 2006	No	11.3%

As of 9/30/2024. Source: Bloomberg L.P.  
Indices are unmanaged, not available for direct investment, and not subject to management fees, transaction costs or other types of expenses that an account may incur.

# Economic Indicators and the U.S. Election

Key market-based indicators we are monitoring leading up to the elections

There is no clear predictor as each election is influenced by unique factors

An inflation-related metric with historical accuracy in aligning with election outcomes is the “Misery Index,” or the sum of the unemployment and CPI rates. Another relationship that appears to have a strong association with presidential elections is the 3-month return of the S&P 500® leading up to the election.

## Misery Index

Election Year	3-month Index Change	Incumbent Outcome	Positive Association*
1960	6.7%	Lost	Yes
1964	-8.0%	Won	Yes
1968	23.7%	Lost	Yes
1972	-13.7%	Won	Yes
1976	-19.4%	Lost	No
1980	13.6%	Lost	Yes
1984	-1.2%	Won	Yes
1988	-6.0%	Won	Yes
1992	3.3%	Lost	Yes
1996	-1.3%	Won	Yes
2000	11.0%	Lost	Yes
2004	-1.0%	Won	Yes
2008	46.3%	Lost	Yes
2012	-22.2%	Won	Yes
2016	23.3%	Lost	Yes
2020	69.5%	Lost	Yes

## S&P 500 Return

Election Year	3-month S&P 500 Return	Incumbent Outcome	Positive Association*
1960	-0.74%	Lost	Yes
1964	2.63%	Won	Yes
1968	6.45%	Lost	No
1972	6.91%	Won	Yes
1976	-0.09%	Lost	Yes
1980	6.73%	Lost	No
1984	4.80%	Won	Yes
1988	1.91%	Won	Yes
1992	-1.22%	Lost	Yes
1996	8.17%	Won	Yes
2000	-3.21%	Lost	Yes
2004	2.16%	Won	Yes
2008	-19.48%	Lost	Yes
2012	2.45%	Won	Yes
2016	-1.90%	Lost	Yes
2020	2.26%	Lost	No

\*Row is highlighted blue in years when the market-based indicators did not accurately foretell the election outcome.  
As of 9/30/2024. Source: PNC, Strategas Research Partners, Inc.

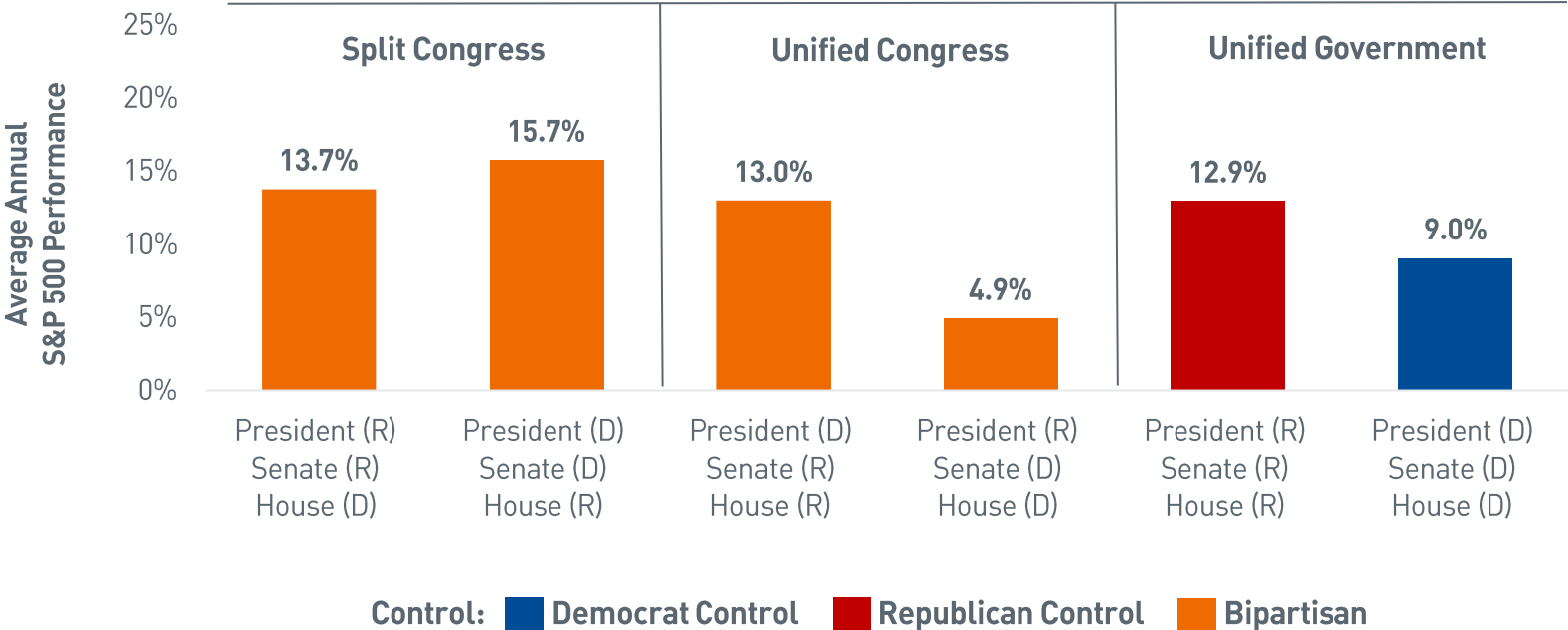
# U.S. Elections Take Centerstage in 2024

In the long-run, markets are driven by earnings growth, not political elections

**Markets have  
performed best under  
divided governments**

Investors tend to focus on the broader composition of the government in Washington as divided government limits policy action to only the most supported, bipartisan legislation, which introduces less uncertainty for markets.

**Partisan Control, Average Annual S&P 500® Performance  
(1933-2023, excludes 2001-2002\*)**



Scan the QR code using your smartphone's camera app to watch a video in which Dan Brady, PNC's Managing Director of Investment Strategy, discusses how U.S. Elections take centerstage.



\*Data excludes 2001-2002 when Senator James M. Jeffords left the Republican party in 2001 to become an Independent and caucus with Democrats.  
As of 9/30/2024. Source: Strategas Research Partners Inc., PNC

# Thinking Through Potential Scenarios

Where do we go from here?

We have high conviction that our base case remains in place for some time, with a low probability that macroeconomic headwinds or tailwinds could pull the business cycle in a different direction.

Factors	Base case: Decelerating growth (70%)	Bear case: Stagflation (20%)	Bull case: Growth reaccelerates (10%)
<b>Inflation</b>	Choppy, but lower	Reaccelerates	Moderately higher as demand improves
<b>Monetary policy</b>	Steadily loosens with rate cuts	Tightens along with potential rate hikes	Remains supportive
<b>Labor market</b>	Fewer workers, but higher wage growth	Unemployment rises, wage growth slows	Productivity improves
<b>Earnings outlook</b>	Modest decline but uneven across sectors	Broad-based decline	Broad-based reacceleration
<b>2024 S&amp;P 500® earnings growth rate</b>	8% to 10%	0% to 5%	10% to 12%
<b>Trough forward P/E</b>	19x - 20x	15x -17x	20x - 22x
<b>Path of long-term interest rates</b>	Range-bound due to inflation	Range-bound due to inflation	Moderately higher as demand improves



# Geopolitical Disruptions Create Market Volatility

Markets tend to recover within a few weeks following a disruptive event

**In periods of volatility,  
focus on market  
fundamentals**

Absent periods in which oil production was materially impacted, markets have historically demonstrated resilience in the face of geopolitical conflict. In our view, the market’s long-term path remains driven by corporate earnings.

## S&P 500® Performance Returns Following Geopolitical Disruptions

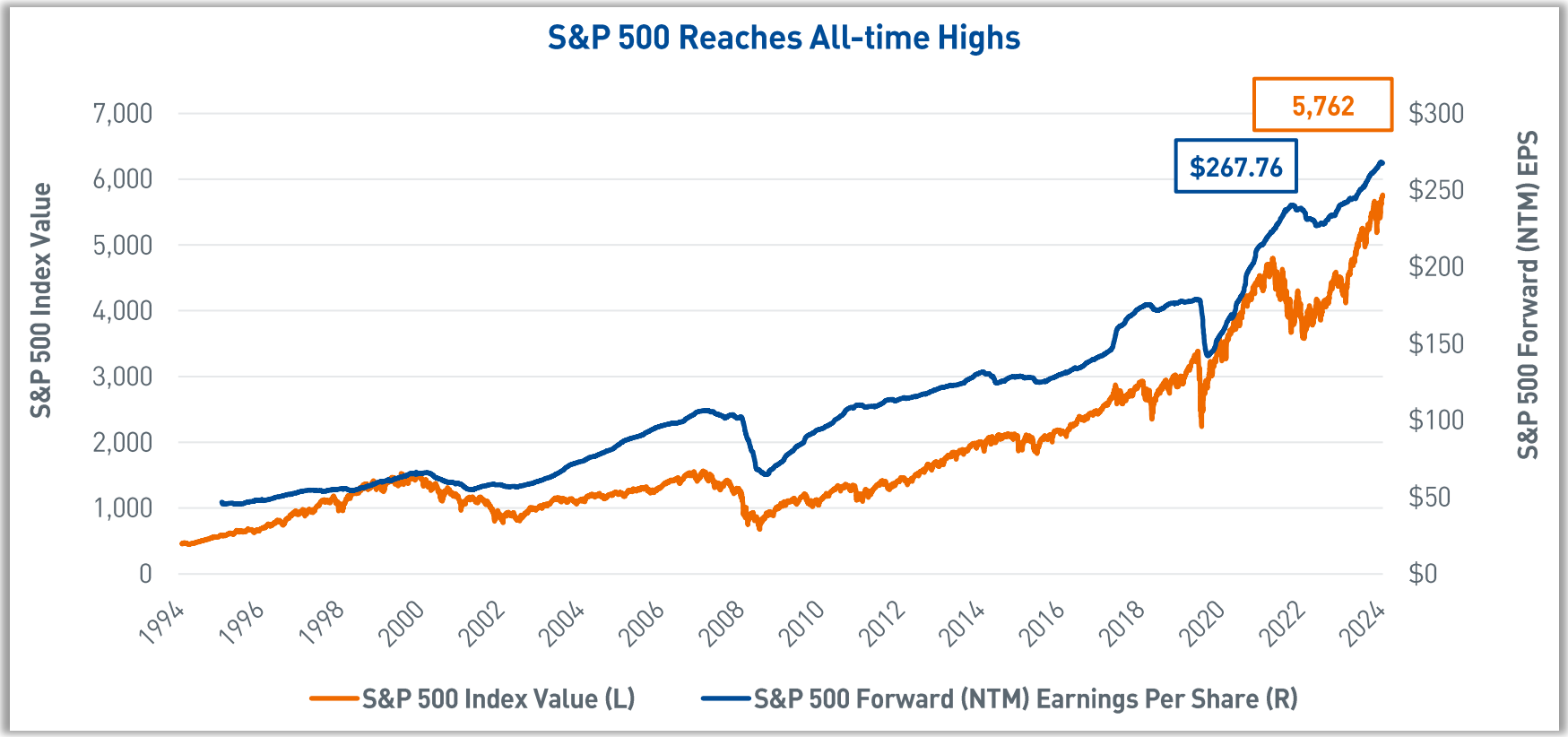
Event	Date	1-day	7-day	60-day
Invasion of Poland	9/1/1939	1.1%	11.8%	17.0%
Cuban Missile Crisis	10/23/1962	-2.7%	1.4%	14.0%
Oil Embargo	10/16/1973	0.1%	-0.8%	-14.7%
Iraq Invades Kuwait	8/2/1990	-1.1%	-4.7%	-9.8%
September 11th	9/11/2001	-4.9%	-8.1%	2.8%
Iraq War Begins	3/20/2003	0.2%	-0.5%	5.6%
Russia Invades Crimea	2/20/2014	0.6%	1.0%	2.7%
Houthis Attack Saudi Oil Infrastructure	9/15/2019	-0.3%	-0.5%	3.1%
Russia Invades Ukraine	2/24/2022	2.3%	0.4%	0.4%
Hamas Attacks Israel	10/7/2023	0.6%	0.5%	6.3%

# S&P 500 Index and Forward Earnings

Earnings drive stock prices in the long run

**Consensus earnings estimates for the S&P 500 continue to rise**

Consensus earnings estimates for the S&P 500 have pushed to all-time highs, however earnings growth has yet to meaningfully broaden. As we approach year-end, we expect the slowing expansion phase of the cycle to continue.



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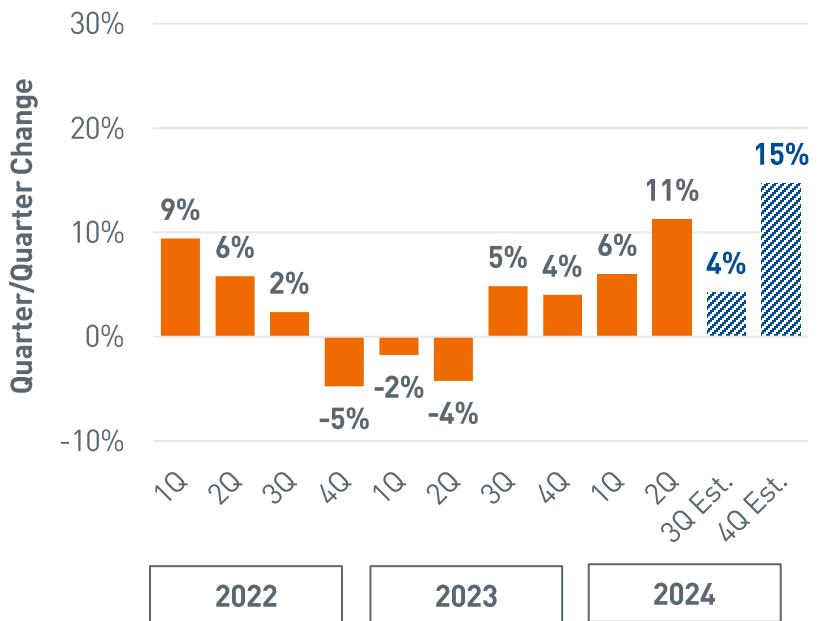
# S&P 500 Earnings Outlook

The positive trend in earnings revisions masks narrow market breadth

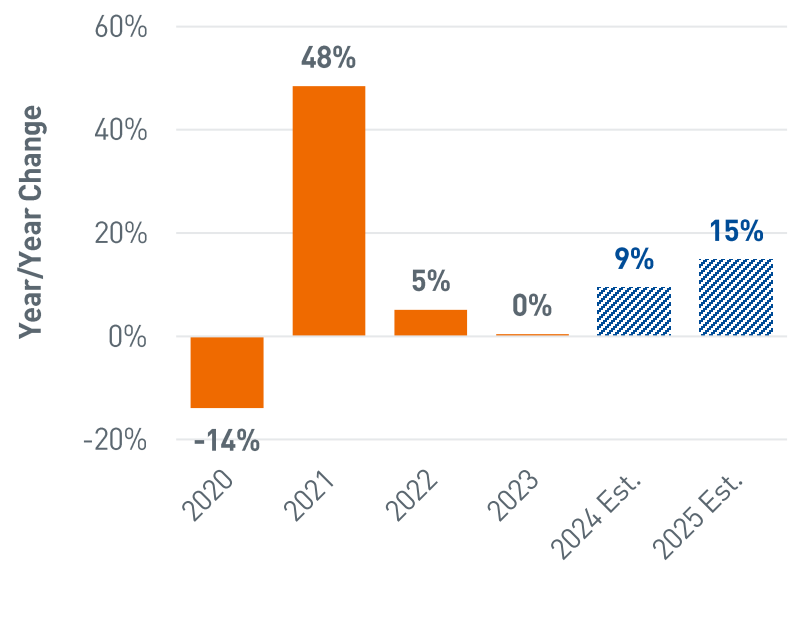
The S&P 500 reaches all-time highs as forward earnings estimates rise

Consensus earnings growth for the third quarter stands at 4.5%, but excluding the “Magnificent 7” stocks\*, it falls to just 1.5%. The third quarter estimate has been cut by more than half since the beginning of second quarter earnings season, further supporting the Fed’s decision to ease policy.

Quarterly S&P 500 Earnings Growth



Annual S&P 500 Earnings Growth



Scan the QR code using your smartphone's camera app to watch a video in which Dan Brady, PNC's Managing Director of Investment Strategy, discusses the S&P 500 outlook.



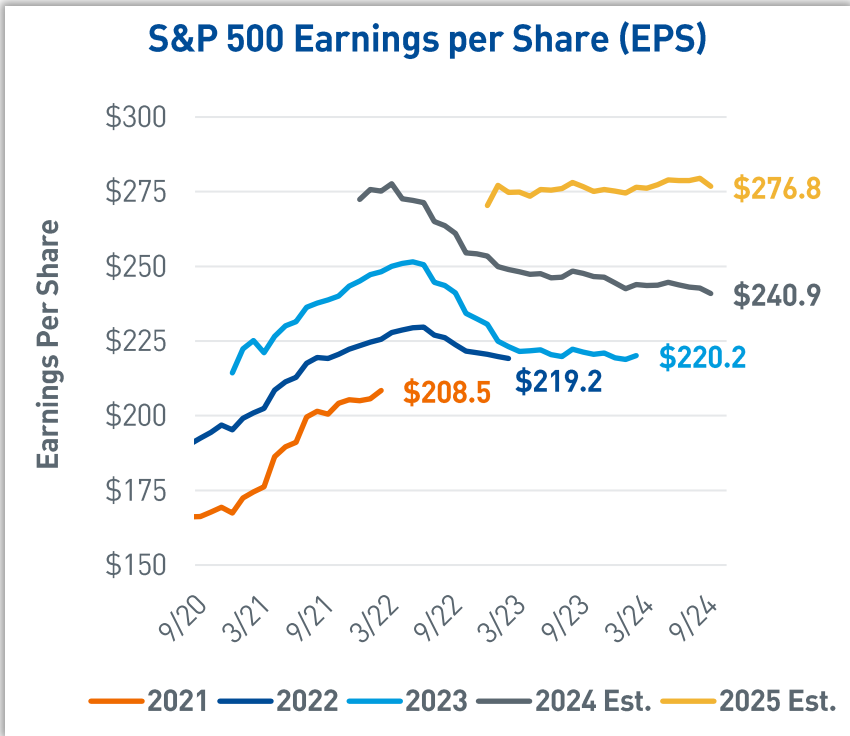
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# S&P 500 Earnings and Valuations

Valuation scenario analysis and the equity risk premium

Risks are rising for future multiple expansion, should earnings growth fade

We believe the S&P 500 earnings growth estimate for 2024 may prove optimistic given it has been driven by a concentrated handful of mega-cap growth stocks. It can be helpful for investors to see different scenarios in which equity markets can climb higher or pull back, without being considered under- or overvalued.



### Implied S&P 500 Price Level using Earnings per Share (EPS) and Forward Price-to-Earnings

NTM EPS	Hypothetical Scenario	Price to Earnings (P/E NTM)				
		18.6x	20.1x	21.6x	23.1x	24.6x
\$201	25% downside	3,735	4,036	4,338	4,639	4,940
\$241	10% downside	4,482	4,844	5,205	5,566	5,928
\$268	*NTM Consensus Est.	4,980	5,382	5,783	6,185	6,587
\$295	10% upside	5,478	5,920	6,362	6,803	7,245
\$335	25% upside	6,225	6,727	7,229	7,731	8,233

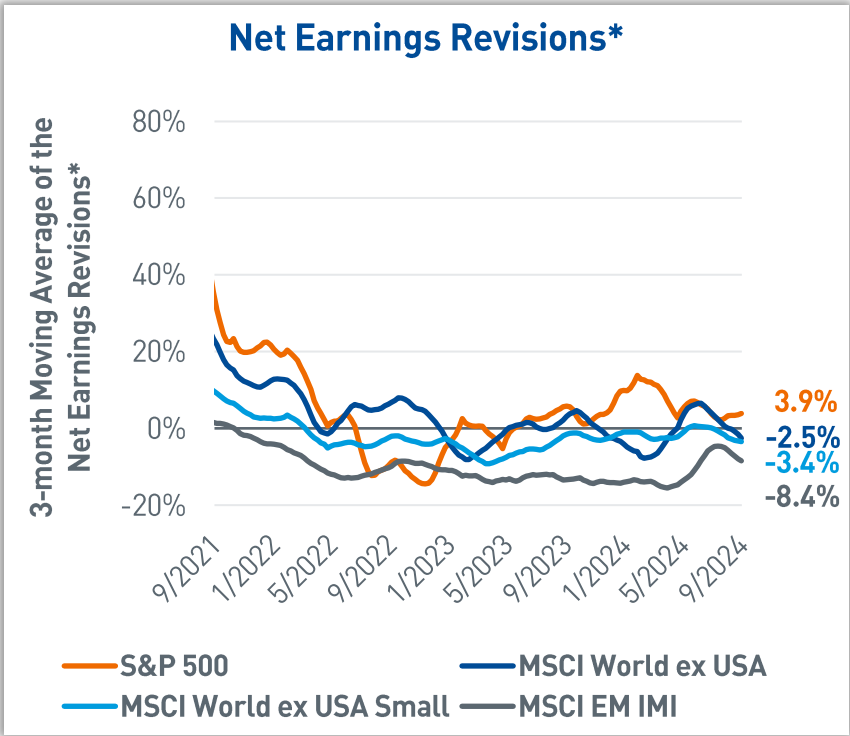
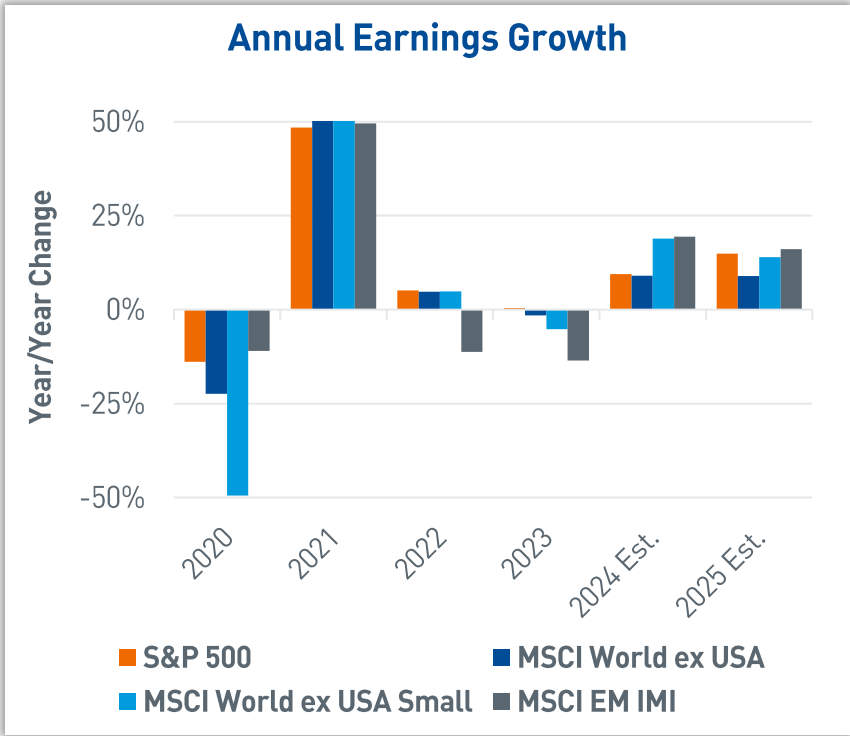
As of 9/30/2024. Source: FactSet®, FactSet® is a registered trademark of FactSet Research Systems, Inc., and its affiliates.

# International Earnings Outlook

Earnings growth outlook may be vulnerable to macro and geopolitical risks

An earnings growth rebound is at risk if net earnings revisions remain negative

The developed and emerging market earnings outlooks have weakened due to signs of slowing economic growth in Europe and persistent geopolitical risks. The emerging markets earnings growth rate remains at risk of ongoing negative revisions, despite recent surprise stimulus measures in China.



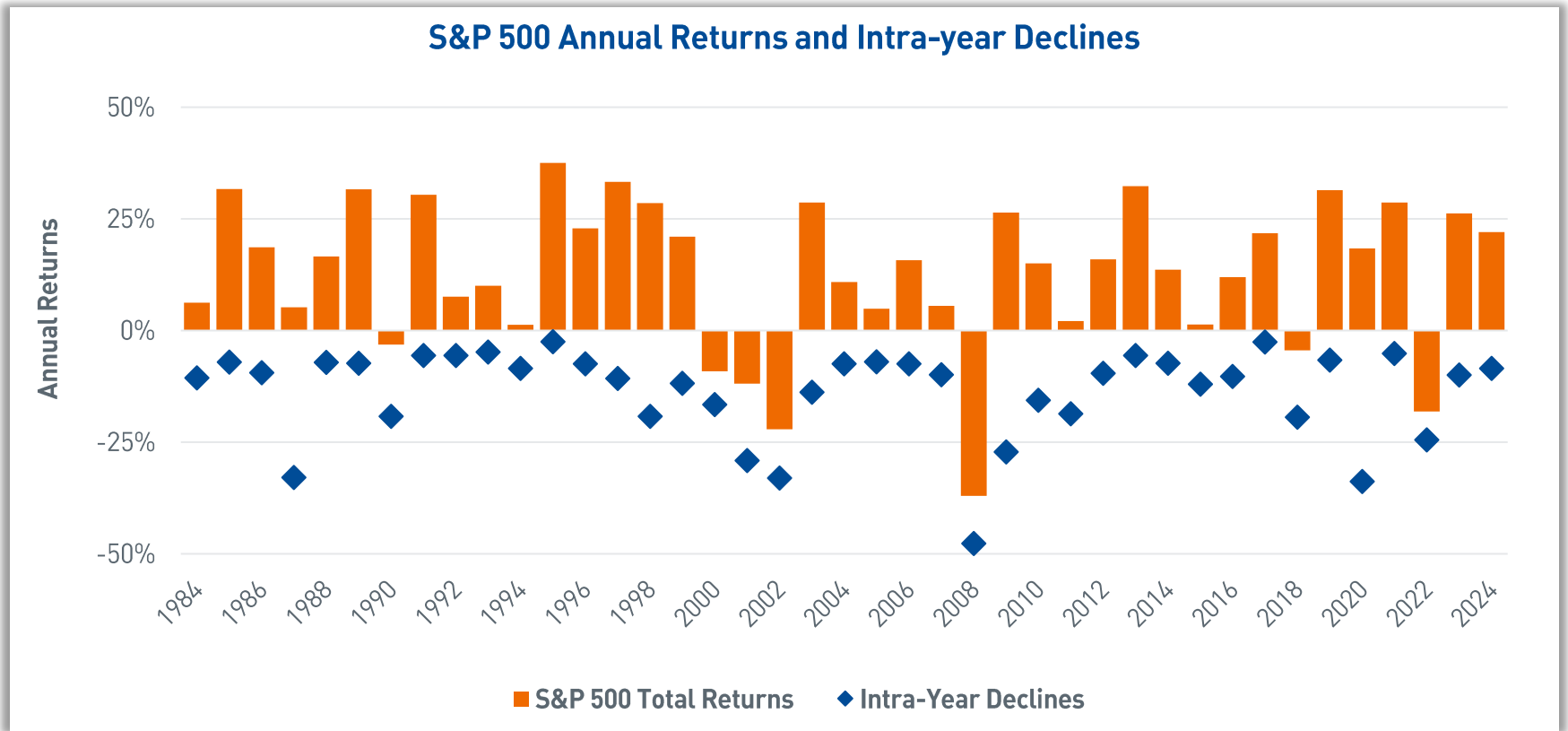
\*Three-month moving average of the number of companies upgrading guidance minus those downgrading guidance over the total number of companies revising guidance. As of 9/30/2024. Source: FactSet®, FactSet® is a registered trademark of FactSet Research Systems, Inc., and its affiliates. Indices are unmanaged, not available for direct investment, and not subject to management fees, transaction costs or other types of expenses that an account may incur.

# S&P 500 Market Volatility

The future path of volatility remains dependent on the path of monetary policy

**Pullbacks happen,  
even in positive  
returning years**

Even in years of positive performance, intra-year pullbacks can be sizeable, so it is critical to analyze pullbacks in different phases of the cycle. Drawdowns are a poor guide for how a year ultimately turns out, so it is important to stay invested.

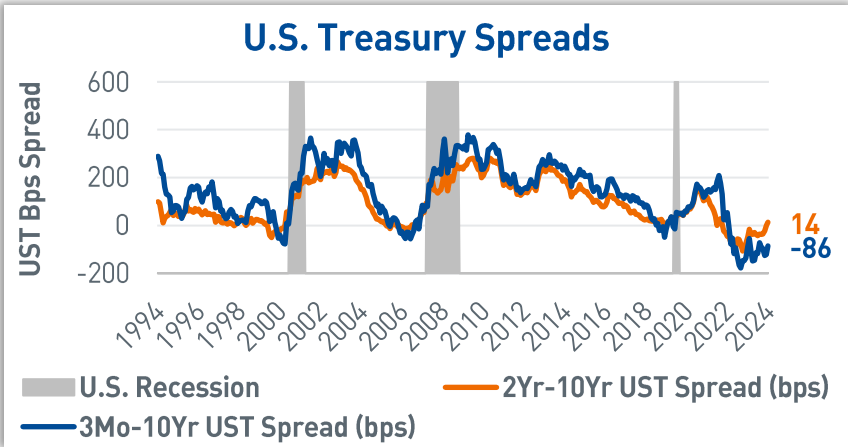
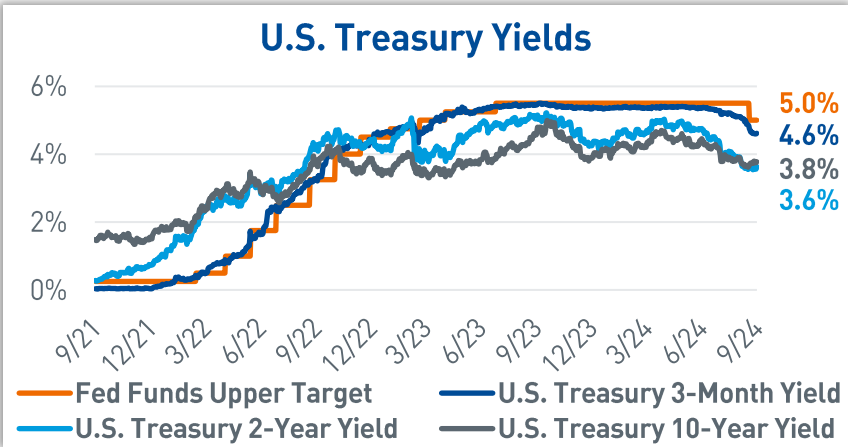
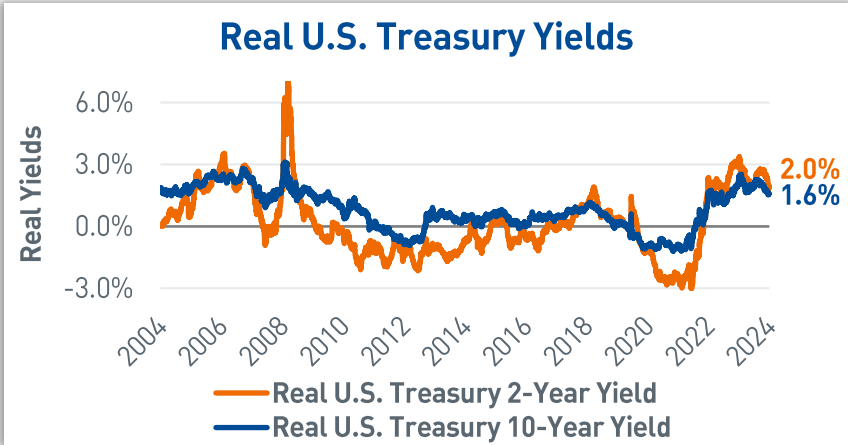
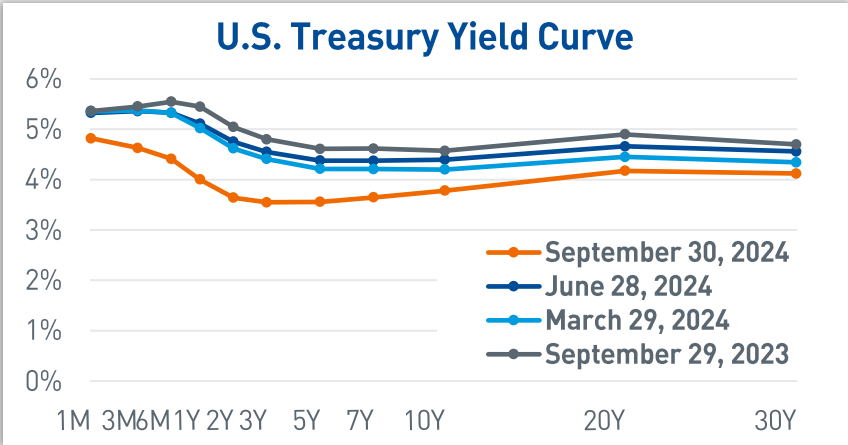


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# Interest Rates

U.S. Treasury markets still suggest the economic outlook remains uncertain

U.S. Treasury (UST) spreads have remained inverted for the longest period on record, and we believe this implies concern that tight monetary policy remains a headwind for global markets.



# Asset Class Performance

Leadership is cyclical and changes with the business cycle

While the first half of 2024 had concentrated performance leadership, the second half of the year has displayed the importance of diversification in a highly uncertain business cycle.

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD		LEGEND
EM 82.36	Small-Cap 26.85		EM 18.68				Small-Cap 21.31	EM 36.83		Large Value 31.93	Large Growth 33.47			Large Growth 30.03	Large Growth 28.16		Large Cap S&P 500®
High Yield 58.21	Mid-Cap 26.64		Mid-Cap 17.88				Mid-Cap 20.74	Large Growth 27.44		Large Cap 31.49	Small-Cap 19.96			Large Cap 26.29	Large Cap 22.08		Large Growth S&P 500 Growth
Mid-Cap 37.38	EM 19.90		Large Value 17.68	Small-Cap 38.82	Large Growth 14.89		Large Value 17.40	Intl Dev 24.21		Large Growth 31.13	Large Cap 18.40	Large Growth 32.01		Large Value 22.23	EM 16.26		Large Value S&P 500 Value
Intl Dev 33.67	High Yield 15.12		Intl Dev 16.41	Mid-Cap 33.50	Large Cap 13.69		High Yield 17.13	Large Cap 21.83		Mid-Cap 26.20	EM 18.39	Large Cap 28.71		60/40 17.98	Large Value 15.36		Mid-Cap S&P 400®
Large Growth 31.57	Large Value 15.10		Small-Cap 16.35	Large Growth 32.75	Large Value 12.36		Large Cap 11.96	Mid-Cap 16.24		Small-Cap 25.52	60/40 14.04	Large Value 24.90		Intl Dev 17.94	60/40 15.03		Small-Cap Russell 2000®
Small-Cap 27.17	Large Cap 15.06	Core Bond 7.84	Large Cap 16.00	Large Cap 32.39	60/40 10.60		EM 9.90	Large Value 15.36		Intl Dev 22.49	Mid-Cap 13.66	Mid-Cap 24.76		Small-Cap 16.93	Mid-Cap 13.54		Intl Dev MSCI World ex USA
Large Cap 26.46	Large Growth 15.05	High Yield 4.98	High Yield 15.81	Large Value 31.99	Mid-Cap 9.77	Large Growth 5.52	60/40 8.23	Small-Cap 14.65		60/40 22.38	Intl Dev 7.59	60/40 16.61		Mid-Cap 16.44	Intl Dev 13.10		EM MSCI EM
Large Value 21.18	60/40 11.65	Large Growth 4.65	Large Growth 14.61	Intl Dev 21.02	Core Bond 5.97	Large Cap 1.38	Large Growth 6.89	60/40 14.52		EM 17.65	Core Bond 7.51	Small-Cap 14.82		High Yield 13.44	Small-Cap 11.17		Core Bond Bloomberg US Aggregate
60/40 18.25	Intl Dev 8.95	60/40 4.40	60/40 11.29	60/40 18.62	Small-Cap 4.89	60/40 1.05	Intl Dev 2.75	High Yield 7.50		High Yield 14.32	High Yield 7.11	Intl Dev 12.62		EM 11.67	High Yield 8.00		High Yield Bloomberg US Corp High Yield
Core Bond 5.93	Core Bond 6.54	Large Cap 2.11	Core Bond 4.21	High Yield 7.44	High Yield 2.45	Core Bond 0.55	Core Bond 2.65	Core Bond 3.54	Core Bond 0.01	Core Bond 8.72	Large Value 1.36	High Yield 5.28		Core Bond 5.53	Core Bond 4.45		60/40 60% S&P 500 / 40% Bloomberg US Agg
		Large Value -0.48		Core Bond -2.02	EM -1.79	Mid-Cap -2.18			Large Growth -0.01			EM -0.28	Large Value -5.22				POSITIVE RETURNS
		Mid-Cap -1.73		EM -2.20	Intl Dev -4.32	Intl Dev -3.04			High Yield -2.08			Core Bond -1.54	High Yield -11.19				
		Small-Cap -4.18				Large Value -3.13			60/40 -2.63				Core Bond -13.01				
		Intl Dev -12.21				Small-Cap -4.41			Large Cap -4.38				Mid-Cap -13.06				
		EM -19.49				High Yield -4.47			Large Value -8.95				Intl Dev -14.29				
						EM -13.86			Small-Cap -11.01				60/40 -16.07				
									Mid-Cap -11.08				Large Cap -18.11				
									Intl Dev -14.09				EM -19.83				
									EM -15.05				Small-Cap -20.44				
													Large Growth -29.41				
																	NEGATIVE RETURNS

As of 9/30/2024. Source: Morningstar, PNC. MSCI USA IMI Real Estate 25/50 Index includes the historical results of the MSCI USA IMI Real Estate Index prior to 2017. Indices are unmanaged, not available for direct investment, and not subject to management fees, transaction costs or other types of expenses that an account may incur.



# Index Total Returns - Equity

Softer inflation and resilient economic data helped to fuel a market rotation

**PNC Capital Market  
Projections**  
10 Year Forecast (2024-33)

			Trailing Total Returns								10 Year Forecast (2024-33)		
Index			1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	Return	Volatility
U.S. EQUITY	U.S. Equity	Russell 3000	2.1%	6.2%	20.6%	35.2%	10.3%	15.3%	12.8%	13.8%	10.6%	8.30%	16.90%
	LCC	S&P 500	2.1%	5.9%	22.1%	36.4%	11.9%	16.0%	13.4%	14.1%	10.7%	8.45%	17.30%
	LCG	S&P 500 Growth	2.8%	3.7%	28.2%	41.1%	10.1%	17.6%	15.2%	15.7%	12.0%	8.15%	17.80%
	LCV	S&P 500 Value	1.1%	9.1%	15.4%	31.1%	13.1%	13.2%	10.8%	12.1%	9.0%		
	Sector	S&P 500 Communication Services	4.6%	1.7%	28.8%	42.9%	6.5%	14.6%	9.8%	11.2%	8.8%		
	Sector	S&P 500 Consumer Discretionary	7.1%	7.8%	13.9%	28.1%	4.8%	12.1%	13.1%	15.8%	11.3%		
	Sector	S&P 500 Consumer Staples	0.9%	9.0%	18.7%	25.3%	10.4%	10.0%	9.6%	11.5%	10.2%		
	Sector	S&P 500 Energy	-2.7%	-2.3%	8.4%	0.8%	24.1%	13.9%	4.0%	6.7%	7.6%		
	Sector	S&P 500 Financials	-0.5%	10.7%	21.9%	39.0%	8.6%	12.4%	11.5%	11.3%	5.7%		
	Sector	S&P 500 Health Care	-1.7%	6.1%	14.4%	21.7%	8.4%	13.4%	11.1%	13.9%	10.8%		
	Sector	S&P 500 Industrials	3.4%	11.5%	20.2%	35.9%	13.4%	13.8%	11.7%	13.5%	9.9%		
	Sector	S&P 500 Information Technology	2.5%	1.6%	30.3%	52.7%	19.9%	26.7%	22.4%	20.2%	15.9%		
	Sector	S&P 500 Materials	2.6%	9.7%	14.1%	25.2%	9.1%	13.0%	9.1%	10.5%	8.9%		
	Sector	S&P 500 Real Estate	3.3%	17.2%	14.3%	35.8%	3.7%	6.2%	8.9%	11.8%	8.7%		
	Sector	S&P 500 Utilities	6.6%	19.4%	30.6%	41.8%	11.7%	8.0%	10.4%	11.0%	10.0%	9.00%	20.80%
	MCC	S&P MidCap 400	1.2%	6.9%	13.5%	26.8%	7.5%	11.8%	10.3%	12.3%	10.3%	8.95%	20.20%
	MCG	S&P MidCap 400 Growth	1.1%	4.6%	16.9%	28.5%	6.3%	11.6%	10.6%	12.6%	10.6%	9.05%	22.30%
	MCV	S&P MidCap 400 Value	1.2%	9.5%	10.0%	25.0%	8.5%	11.5%	9.7%	11.8%	9.8%	9.40%	22.00%
	SCC	Russell 2000	0.7%	9.3%	11.2%	26.8%	1.8%	9.4%	8.8%	10.6%	8.5%	9.45%	23.90%
	SCG	Russell 2000 Growth	1.3%	8.4%	13.2%	27.7%	-0.4%	8.8%	8.9%	11.1%	9.0%	9.00%	23.70%
	SCV	Russell 2000 Value	0.1%	10.2%	9.2%	25.9%	3.8%	9.3%	8.2%	9.8%	7.7%	8.00%	23.60%
	REITs	MSCI USA IMI REAL ESTATE 25-50	3.1%	17.0%	12.8%	32.9%	1.5%	3.8%	--	--	--	8.30%	16.90%
NON-U.S. EQUITY	Non-U.S. Equity	MSCI ACWI Ex USA IMI	2.7%	8.2%	13.9%	25.1%	3.7%	7.7%	5.3%	5.7%	6.3%		
	ILCC	MSCI World ex USA	1.1%	7.8%	13.1%	25.0%	5.6%	8.4%	5.7%	6.0%	6.1%	8.80%	18.80%
	ILCG	MSCI World Ex USA Growth	0.5%	5.9%	12.1%	26.2%	2.0%	7.8%	6.4%	6.7%	6.6%	8.90%	18.30%
	ILCV	MSCI World Ex USA Value	1.7%	9.7%	14.1%	23.9%	9.1%	8.5%	4.7%	5.1%	5.5%	8.70%	20.20%
	ISCC	MSCI World Ex USA Small Cap	2.7%	10.4%	11.5%	23.4%	0.0%	6.9%	6.0%	6.9%	7.0%	9.30%	21.40%
	ISCG	MSCI World Ex USA Small Cap Growth	2.5%	10.0%	11.0%	23.4%	-3.6%	6.0%	6.2%	7.3%	7.0%	9.50%	21.40%
	ISCV	MSCI World Ex USA Small Cap Value	2.9%	10.9%	12.1%	23.3%	3.6%	7.4%	5.6%	6.4%	7.1%	9.10%	21.60%
	EM	MSCI Emerging Markets IMI	6.2%	8.2%	16.3%	25.6%	1.0%	6.5%	4.2%	4.4%	7.5%	9.80%	24.60%
	Global Equity	MSCI All Country	2.3%	6.6%	18.7%	31.8%	8.1%	12.2%	9.4%	9.6%	8.3%		
	INFRA	S&P Global Infrastructure	3.8%	13.2%	17.1%	29.7%	8.6%	6.0%	5.4%	6.6%	7.3%	8.50%	17.60%

As of 9/30/2024. Source: Morningstar, Inc., FactSet®, FactSet® is a registered trademark of FactSet Research Systems, Inc., and its affiliates. Indices are unmanaged, not available for direct investment, and not subject to management fees, transaction costs or other types of expenses that an account may incur.

# Index Total Returns – Fixed Income and Alternatives

Fixed income aided by cooling economic data and a decline in interest rates

PNC Capital Market  
Projections  
10 Year Forecast (2024-33)

			Trailing Total Returns									10 Year Forecast (2024-33)	
Index			1 Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	Return	Volatility
FIXED INCOME	MUNI	Bloomberg Municipal Bond	1.0%	2.7%	2.3%	10.4%	0.1%	1.4%	2.5%	3.2%	3.6%	3.20%	4.95%
	SHORT MUNI	Bloomberg Municipal 1-3 Year	0.4%	1.9%	2.6%	5.4%	1.3%	1.4%	1.3%	1.3%	1.9%	2.40%	1.40%
	CORE	Bloomberg US Aggregate	1.3%	5.2%	4.4%	11.6%	-1.4%	0.3%	1.8%	2.6%	3.2%	4.50%	4.30%
	SHORT	Bloomberg US Aggregate 1-3 Year	0.8%	3.0%	4.4%	7.2%	1.5%	1.6%	1.6%	1.6%	2.3%	3.70%	1.45%
	INTERM	Bloomberg US Govt/Credit Intermediate	1.1%	4.2%	4.7%	9.4%	0.2%	1.3%	2.0%	2.4%	3.0%	4.20%	3.40%
	LONG	Bloomberg US Govt/Credit Long	2.3%	8.0%	3.5%	17.2%	-6.2%	-2.0%	2.3%	4.2%	4.6%	5.80%	11.10%
	TIPS	Bloomberg US Treasury US TIPS	1.5%	4.1%	4.9%	9.8%	-0.6%	2.6%	2.5%	3.2%	3.6%	4.90%	6.50%
	BILLS	Bloomberg US Treasury Bills 1-3 Month	0.4%	1.4%	4.1%	5.5%	3.6%	2.3%	1.6%	1.1%	1.6%	3.50%	0.50%
	HY	Bloomberg US Corporate High Yield	1.6%	5.3%	8.0%	15.7%	3.1%	4.7%	5.0%	6.9%	6.7%	6.30%	10.50%
	LLOAN	Morningstar LSTA U.S. Leveraged Loan	0.7%	2.0%	6.5%	9.6%	6.5%	5.7%	4.9%	5.4%	5.0%	4.90%	7.75%
IBND	Bloomberg Global Aggregate	1.7%	7.0%	3.6%	12.0%	-3.1%	-0.8%	0.6%	1.3%	2.5%	5.50%	8.80%	
EMD	Bloomberg EM USD Aggregate	1.8%	5.8%	8.2%	16.9%	-0.2%	1.4%	3.2%	4.9%	5.8%	6.30%	9.60%	
ALTERNATIVES	Hedge Funds	HFRX Global Hedge Fund (USD)	0.5%	0.8%	6.6%	5.4%	0.7%	3.1%	1.7%	1.9%	1.4%	5.60%	7.00%
	Equity Hedge	HFRX Equity Hedge	0.1%	1.8%	12.5%	8.5%	4.1%	5.7%	3.4%	2.8%	1.9%		
	Event Driven	HFRX Event Driven	1.3%	1.3%	3.0%	5.2%	-1.9%	2.3%	0.4%	1.9%	1.9%		
	Macro-CTA	HFRX Macro	-1.2%	-2.4%	1.8%	2.6%	1.3%	1.9%	1.3%	0.0%	1.0%		
	Relative Value	HFRX Relative Value Arbitrage	1.0%	1.4%	7.0%	3.8%	-0.6%	1.8%	1.0%	2.3%	1.1%		
	Private Capital	Burgiss Global Private Capital		0.9%	2.2%	4.6%	5.0%	12.3%	11.5%	12.6%	12.2%		
	Private Equity	Burgiss Global Private Equity		0.8%	1.9%	4.4%	3.7%	14.6%	13.8%	14.7%	14.0%		
		Burgiss Global Private Equity ex-Venture Capital		1.2%	2.4%	6.0%	6.6%	14.6%	13.5%	14.5%	14.3%	10.65%	21.90%
		Burgiss Global Venture Capital		-0.4%	0.8%	-0.4%	-3.5%	14.8%	15.1%	15.5%	12.9%		
		Burgiss Global Early-Stage Venture Capital		-1.0%	0.2%	-2.9%	-2.0%	14.7%	14.7%	15.1%	12.7%		
		Burgiss Global Late-Stage Venture Capital		-0.1%	0.9%	0.7%	-4.8%	15.3%	16.3%	17.2%	14.9%		
		Burgiss Global Expansion Capital		1.5%	1.3%	3.4%	1.3%	7.9%	7.0%	8.5%	8.8%		
		Burgiss Global Buyout		1.2%	2.4%	6.3%	7.7%	15.1%	13.9%	14.9%	14.6%		
	Private Debt	Burgiss Global Private Debt		2.1%	4.1%	9.2%	8.0%	8.4%	7.5%	9.9%	9.6%	7.70%	15.00%
	Real Assets	Burgiss Global Private Real Assets		1.1%	1.8%	2.1%	7.8%	6.9%	7.0%	7.7%	8.0%		
		Burgiss Global Real Estate		-0.3%	-1.1%	-6.0%	3.2%	4.8%	7.1%	7.5%	6.6%	8.30%	12.70%
Burgiss Global Infrastructure			2.1%	3.1%	7.9%	9.8%	9.0%	9.1%	8.9%	9.3%			
Burgiss Global Natural Resources			2.4%	6.3%	9.5%	13.5%	8.3%	3.6%	6.4%	9.7%			
Bloomberg Commodity		4.9%	0.7%	5.9%	1.0%	3.7%	7.8%	0.0%	-0.4%	-0.5%	6.20%	17.50%	

\*Private alternative investments are subject to reporting lag; data is available as of most recent reported data; Burgiss Global Private Equity ex-Venture Capital Funds Index, Burgiss Global Private Debt Funds Index, and Burgiss Global Real Estate Funds Index as of 6/30/2024.

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# Appendix



**PNC**  
INSTITUTIONAL  
ASSET MANAGEMENT

# I-Hub Online Solutions

## Overview and Enhancements

PNC Institutional Asset Management invests in technology to help institutional investors. Our I-Hub solution includes:

ONLINE ACCOUNT ACCESS	REPORTING CAPABILITIES
<ul style="list-style-type: none"><li>• Access from any device</li><li>• Customized access for each user</li><li>• Dedicated technical support</li><li>• Messaging including sending documents securely</li><li>• Document retrieval for statements, investment policy statement, fee invoices and more.</li></ul>	<ul style="list-style-type: none"><li>• Customizable reporting of key account information</li><li>• Benefit payment inquiry access and reporting</li><li>• Paperless statements for authorized persons</li></ul>
OPERATIONAL CAPABILITIES	SECURITY FEATURES
<ul style="list-style-type: none"><li>• Ability to initiate and manage cash processing</li><li>• Ability to initiate and manage benefit payments</li><li>• Ability to process mutual fund, equity, and fixed income trades</li><li>• Ability to process wires for alternative investment capital calls</li></ul>	<ul style="list-style-type: none"><li>• Unique login credential with strict password parameters</li><li>• Dual authentication with each login requires additional one-time passcode be sent to email, phone (voice) or text</li><li>• Customizable approval flows for your organization</li><li>• Emails sent to authorized persons for withdrawals that exceed thresholds by withdrawal type</li></ul>
LATEST SYSTEM ENHANCEMENTS	
<ul style="list-style-type: none"><li>• Requirement for One-Time Passcode (OTP) with each login to assist with preventing fraud. Expanded options to receive the OTP include voice call or text message.</li><li>• Allowing a current authorized person to utilize I-Hub to request a new authorized signer be added. The new Authorized Signers form is executed within I-Hub using e-Sign.</li><li>• Messaging enhancement to include the Investment Advisor in addition to the existing options of the Institutional Trust Officer and I-Hub Support.</li></ul>	

If you have questions, or would like an I-Hub demo, please reach out to your  
Institutional Trust Officer or contact

**I-Hub Support at 1-877-636-9703 or [pnc.i-hub.support@pnc.com](mailto:pnc.i-hub.support@pnc.com)**

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