

# Introduction to Real Estate

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Prepared for Florida Public Pension Trustee School and not for further distribution

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REAL ESTATE CORPORATION

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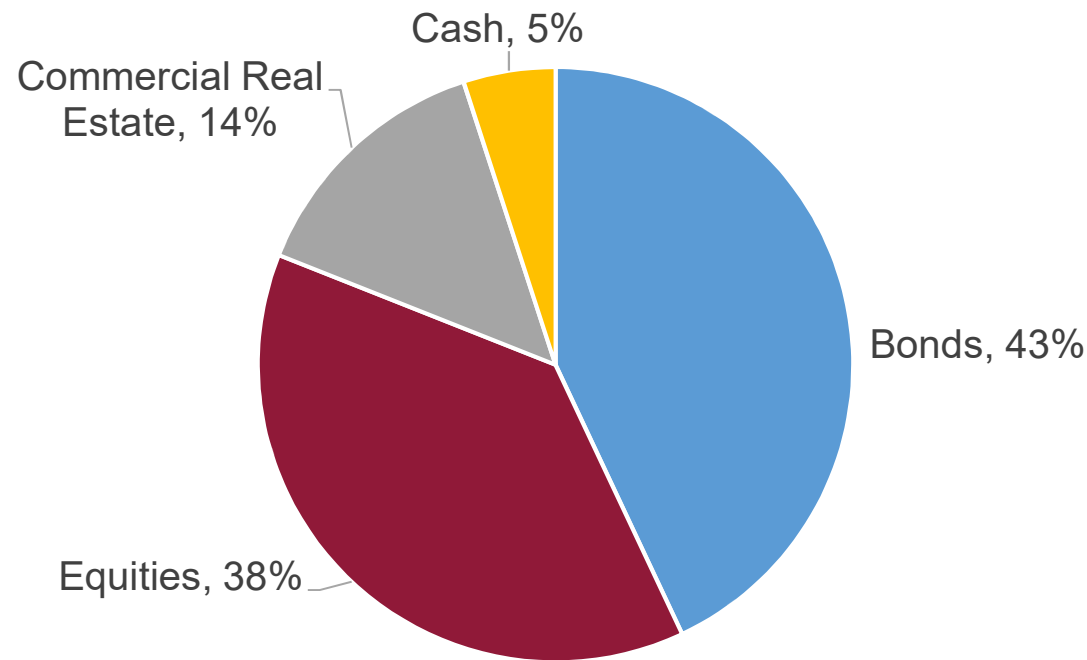
# Rational for Investing

- Risk-Adjusted return potential
- Diversification potential
- Income
- Inflation hedge potential
- Downside Protection
- Large investable universe
- Low correlation to public markets

# Role in Portfolio

Real Estate target allocations within U.S. institutional investors typically ranges from 5%-20%

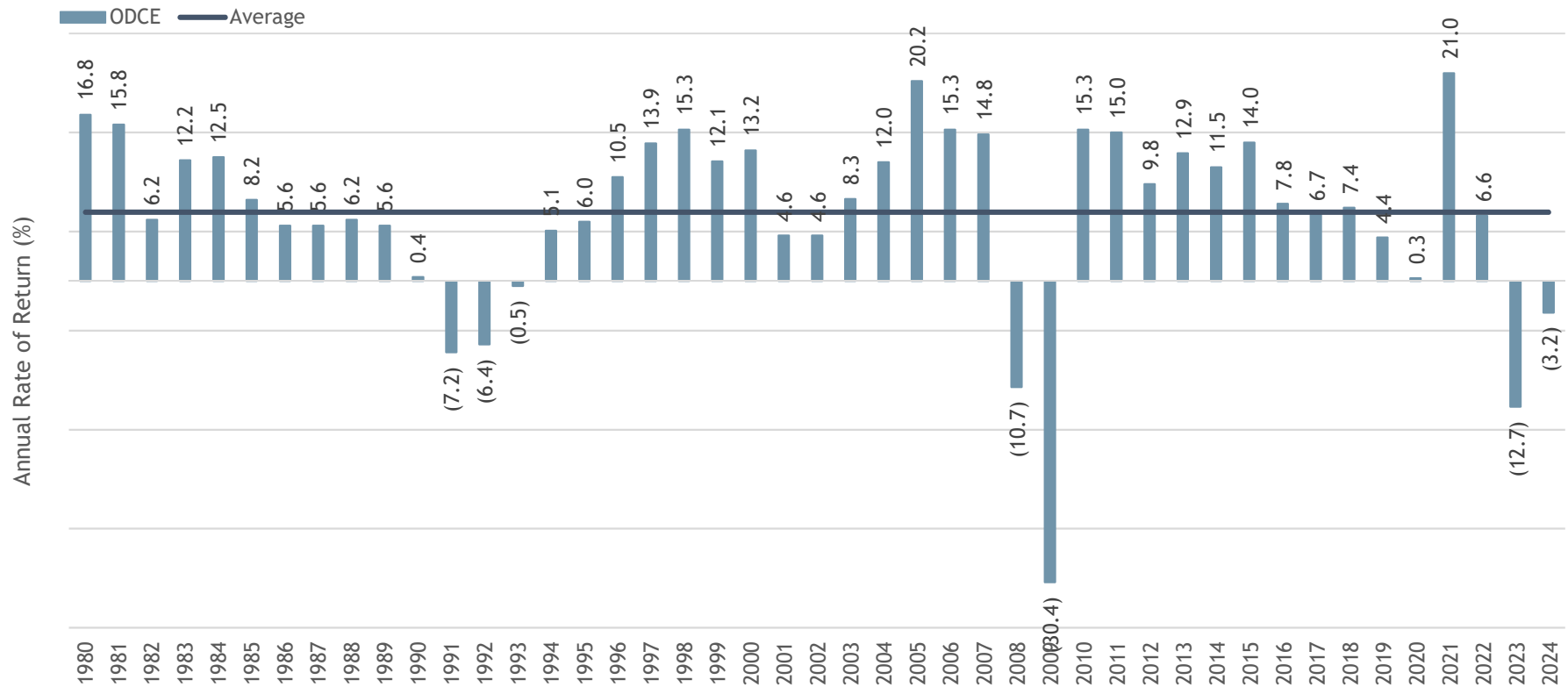
Commercial Real Estate of U.S. Investable Universe



Source: NAREIT Analysis; Stock and bond data from Board of Governors of the Federal Reserve, Financial Accounts of the United States, 2021:Q4; commercial real estate market size data based on NAREIT analysis of CoStar property data and CoStar estimates of commercial real estate market size.

# Historical NCREIF ODCE Total Returns

- NCREIF Core Index has returned 6.9% since inception



## • NCREIF ODCE Index - Total Net Return

Source: NCREIF. Data as of 12/2024. The National Council of Real Estate Investment Fiduciaries ("NCREIF") Fund Index Open End Diversified Core Equity ("NFI-ODCE") is an unmanaged index published by NCREIF. The NFI-ODCE is an index of investment returns reporting on both a historical and current basis on the results of certain open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. There are currently 25 active funds included in the index. The NFI-ODCE is a fund-level capitalization-weighted time-weighted return index with an inception date of 12/31/1977. The NFI-ODCE includes investments at ownership share, leverage ratios, and numerous other data points. The degree of leverage varies among funds included in the NFI-ODCE.. The degree of leverage varies among funds included in the NFI-ODCE.

# Total Return and Volatility

## Asset Class Index Risk and Return Metrics, 1980 to 2024

	Total Return	Standard Deviation	Sharpe Ratio	Maximum Drawdown
<b>S&amp;P 500 Index</b>	<b>12.23%</b>	<b>16.2</b>	<b>0.50</b>	<b>-45.80%</b>
<b>FTSE NAREIT REIT Index (Public Market)</b>	<b>10.11%</b>	<b>17.8</b>	<b>0.33</b>	<b>-64.58%</b>
<b>NCREIF ODCE Index Net (Private Market)</b>	<b>6.47%</b>	<b>5.5</b>	<b>0.41</b>	<b>-36.61%</b>
<b>Bloomberg U.S. Aggregate Index</b>	<b>6.89%</b>	<b>6.2</b>	<b>0.43</b>	<b>-15.93%</b>

Source: Investment Metrics, based on data from Standard & Poor's; NCREIF ODCE Net,

FTSE Nareit and Bloomberg Barclays. Longest Common Period Quarterly Return

Data as of 03/31/1980 to 06/30/2024

# Correlation Metrics

Correlation, 1980 to 2024				
	NCREIF ODCE Index (Private Market) 2	S&P 500 Index 1	Bloomberg U.S. Aggregate Index 4	FTSE NAREIT REIT Index (Public Market) 3
NCREIF ODCE Index Net (Private Market) 2	1.00			
S&P 500 Index 1	0.02	1.00		
Bloomberg U.S. Aggregate Index 4	-0.12	0.14	1.00	
FTSE NAREIT REIT Index (Public Market) 3	0.09	0.65	0.30	1.00

Source: Investment Metrics, based on data from 1)Standard & Poor's; 2)NCREIF ODCE Net, 3)FTSE NAREIT and 4)Bloomberg Barclays. Longest Common Period Quarterly Return

Data as of 03/31/1980 to 06/30/2024

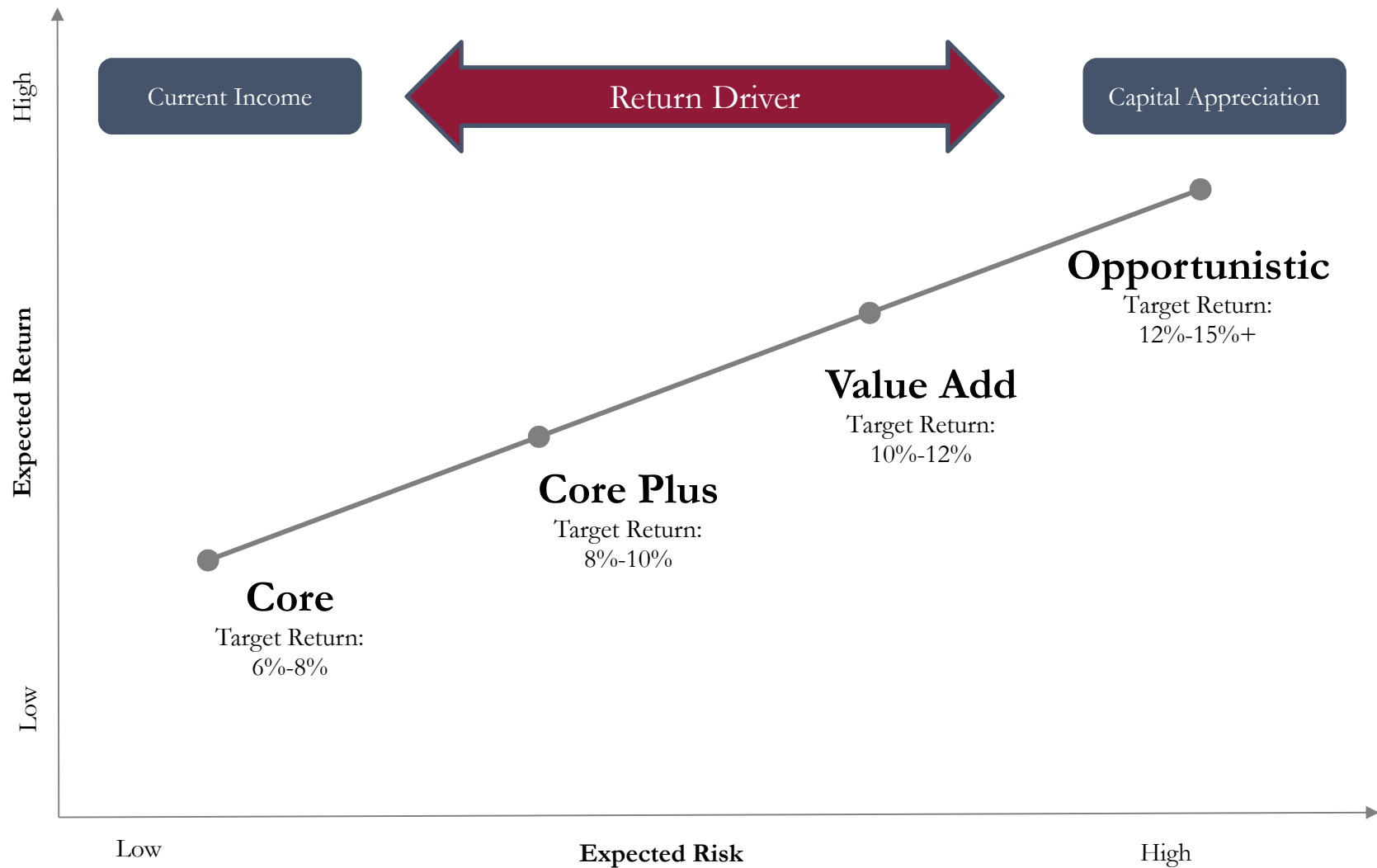
# Real Estate Investment Vehicles

	Equity	Debt
P r i v a t e	<p>Open and Closed End Funds</p> <p>Commingled Fund and Separate Accounts</p> <p>Non-Traded REIT</p>	<p>Senior Loans</p> <p>Mezzanine Debt</p> <p>Mortgage Loan Direct Investment</p>
P u b l i c	<p>REIT Stocks</p> <p>Publicly Traded Real Estate Operating Companies (REOC)</p> <p>Real Estate Investment Trust (REITS)/Mutual Fund &amp; ETF</p>	<p>Commercial Mortgage - Backed Securities (CMBS)</p> <p>Debt Funds</p>

Source: Seeking Alpha



# Real Estate Equity Strategies



# Real Estate Equity Strategy Details

Strategy	Fund Structure	Strategy	Time Horizon	Return Drivers	Leverage
Core	Open-End	Stabilized, income-producing assets	Long-term	Primarily Income with modest appreciation	Low (15%-35%)
Core Plus	Open-End	Stabilized assets with light value add	Long-term	Income with moderate appreciation	Moderate (35-50%)
Value-Add	Closed-End (10-Year Fund)	Assets that need to be repositioned or renovated	3-5 years	Income and appreciation	Moderate (40%-60%)
Opportunistic	Closed-End (10-Year Fund)	Development or re-development with significant lease-up risk	5-7 years	Appreciation	High (60%-80%)

# Traditional or Core Property Sectors



Office

Key at 12<sup>th</sup>, Oakland, CA



Industrial

Amazon Lakeland, FL



Multi-Family

Ancora Orlando, FL



Retail

Parker Ranch Center Waimea, HI

Source: NAREIT Analysis; Stock and bond data from Board of Governors of the Federal Reserve, Financial Accounts of the United States, 2021:Q4; commercial real estate market size data based on NAREIT analysis of CoStar property data and CoStar estimates of commercial real estate market size.

# Core Property Sectors

“Core” Property Types	Example Types	Comments
Industrial	<ul style="list-style-type: none"> <li>- Warehouses</li> <li>- Flex industrial</li> <li>- R&amp;D space</li> </ul>	<ul style="list-style-type: none"> <li>- Benefits from increase in ecommerce and general economic activity growth</li> <li>- Longer term leases that can lag current market rents creating opportunity; limited capex required once built</li> </ul>
Multifamily	<ul style="list-style-type: none"> <li>- High rise apartments</li> <li>- Garden style apartments</li> </ul>	<ul style="list-style-type: none"> <li>- Benefits from job growth and demographic trends</li> <li>- Short-term leases (usually 1 year) captures changing market conditions quickly</li> </ul>
Office	<ul style="list-style-type: none"> <li>- CBD office</li> <li>- Suburban office</li> </ul>	<ul style="list-style-type: none"> <li>- Long-term leases that can lag market rents and requires continued in-office job growth</li> <li>- Covid impact likely to produce increased weakness</li> </ul>
Retail	<ul style="list-style-type: none"> <li>- Shopping malls</li> <li>- Grocery-anchored centers</li> </ul>	<ul style="list-style-type: none"> <li>- Leases often contain base rent plus percent of sales</li> <li>- Weakness from online penetration over past decade</li> </ul>
Hotel	<ul style="list-style-type: none"> <li>- Full service</li> <li>- Limited service</li> <li>- Extended stay</li> </ul>	<ul style="list-style-type: none"> <li>- Sometimes bucketed as a “core” sector but a much different operating model with elevated risks</li> <li>- Operationally intensive asset class with volatile revenue streams with pricing reset daily</li> </ul>

# Non-Core Property Sectors

“Non- Core” Property Types	Example Types	Comments
Healthcare	<ul style="list-style-type: none"> <li>- Life science</li> <li>- Medical office</li> </ul>	<ul style="list-style-type: none"> <li>- Driven by healthcare spending and demographic trends</li> <li>- Long-term leases with high quality tenants</li> </ul>
Self-Storage	<ul style="list-style-type: none"> <li>- Retail self-storage</li> <li>- Container storage</li> <li>- Vehicle storage</li> </ul>	<ul style="list-style-type: none"> <li>- Demand from demographics and lifestyle transitions</li> <li>- Short term leases capture evolving market conditions</li> </ul>
Senior Housing	<ul style="list-style-type: none"> <li>- Independent living</li> <li>- Assisted living</li> <li>- Skilled nursing</li> </ul>	<ul style="list-style-type: none"> <li>- Demographic trends and healthcare spending drives demand</li> <li>- Product type and revenue source (private pay vs. gov’t subsidized) important drivers of return</li> </ul>
Student Housing	<ul style="list-style-type: none"> <li>- Apartments near large university campuses</li> </ul>	<ul style="list-style-type: none"> <li>- Demographics of higher education matters to occupancy</li> <li>- Annual leases that require adult co-signers</li> </ul>
Other Niche	<ul style="list-style-type: none"> <li>- Data centers</li> <li>- Manufactured housing</li> <li>- Leisure assets (ski resorts/marinas)</li> </ul>	<ul style="list-style-type: none"> <li>- Specialized operations required</li> <li>- Shorter track record as established institutional asset classes</li> </ul>

# Components of Total Return

Real estate returns are generated through Income and Appreciation

- Income - Rental income generated by a property
- Capital Appreciation - Value may increase or decrease over the holding period
- Leverage - May enhance returns in both directions

# Real Estate Valuation

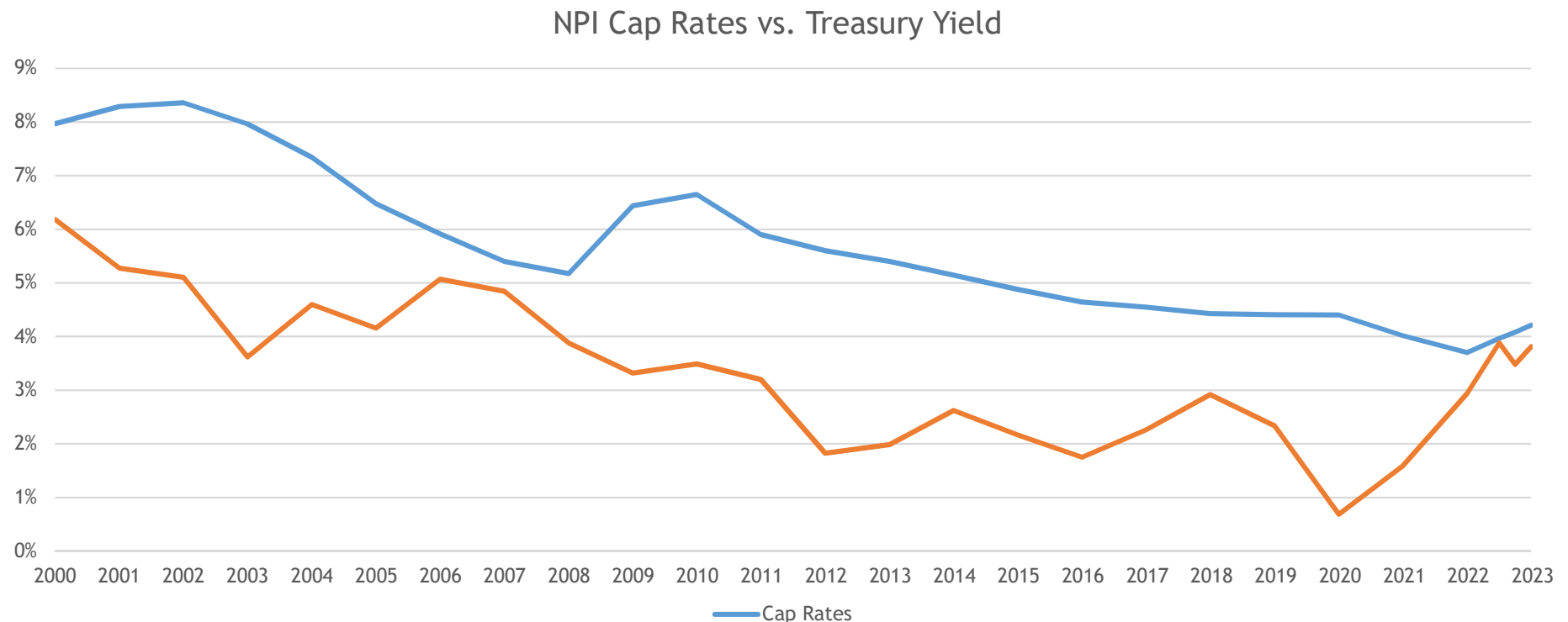
Capitalization (“Cap”) Rates are the common industry valuation metric within real estate

$$\text{Cap Rate} = \frac{\text{Net Operating Income ("NOI")}}{\text{Market Value}}$$

Cap Rate Example	
Asset Value	\$10,000,000
Gross Revenue (Rental Income)	\$700,000
Operating Expenses	\$200,000
Net Operating Income (“NOI”)	\$500,000
Cap Rate	5%

# Cap Rate Impact on Real Estate

- Higher rates tend to put upward pressure on cap rates
- Higher cap rates create lower valuations, all else being equal



Source: NCREIF, Federal Reserve Economic Data, as of 6/30/2023



# Sector Dispersion

## Annual Total Investment Return by Sector

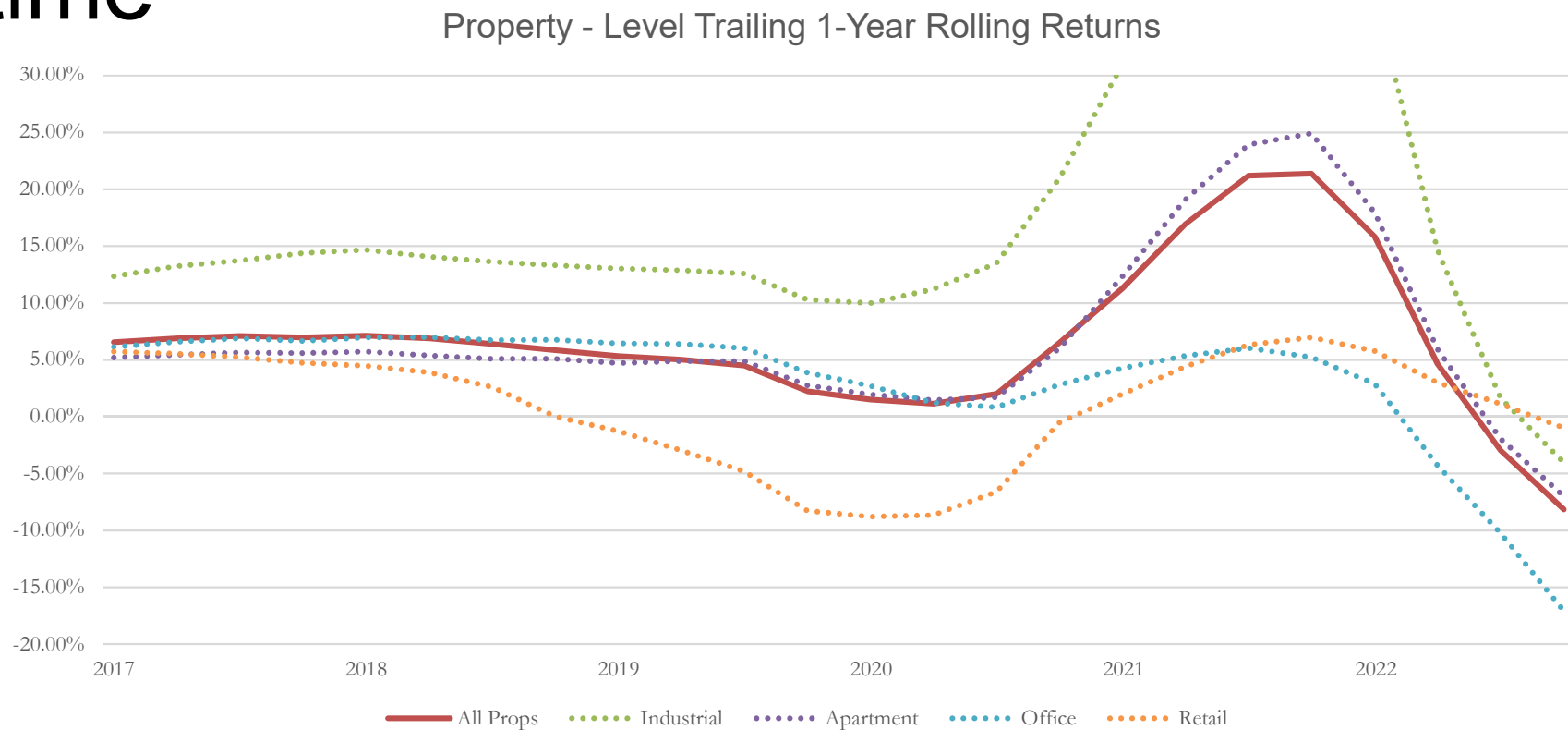
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<i>Best</i>	OFF	RET	RET	APT	APT	RET	RET	IND	RET	IND	IND	IND	IND	IND	IND	IND	RET
	IND	IND	APT	RET	IND	APT	IND	RET	IND	RET	APT	OFF	OFF	APT	APT	APT	IND
	RET	OFF	IND	OFF	RET	IND	APT	OFF	OFF	APT	OFF	APT	APT	OFF	OFF	RET	APT
<i>Worst</i>	APT	APT	OFF	IND	OFF	OFF	OFF	APT	APT	OFF	RET	RET	RET	RET	RET	OFF	OFF

For illustrative purposes only

Source: PREA Research, NCREIF 2023

# Sector Dispersion

Unique sector characteristics create relative performance variability over time



Source: NCREIF, returns unlevered and gross of fee, data as of 6/30/2023

# Performance Evaluation

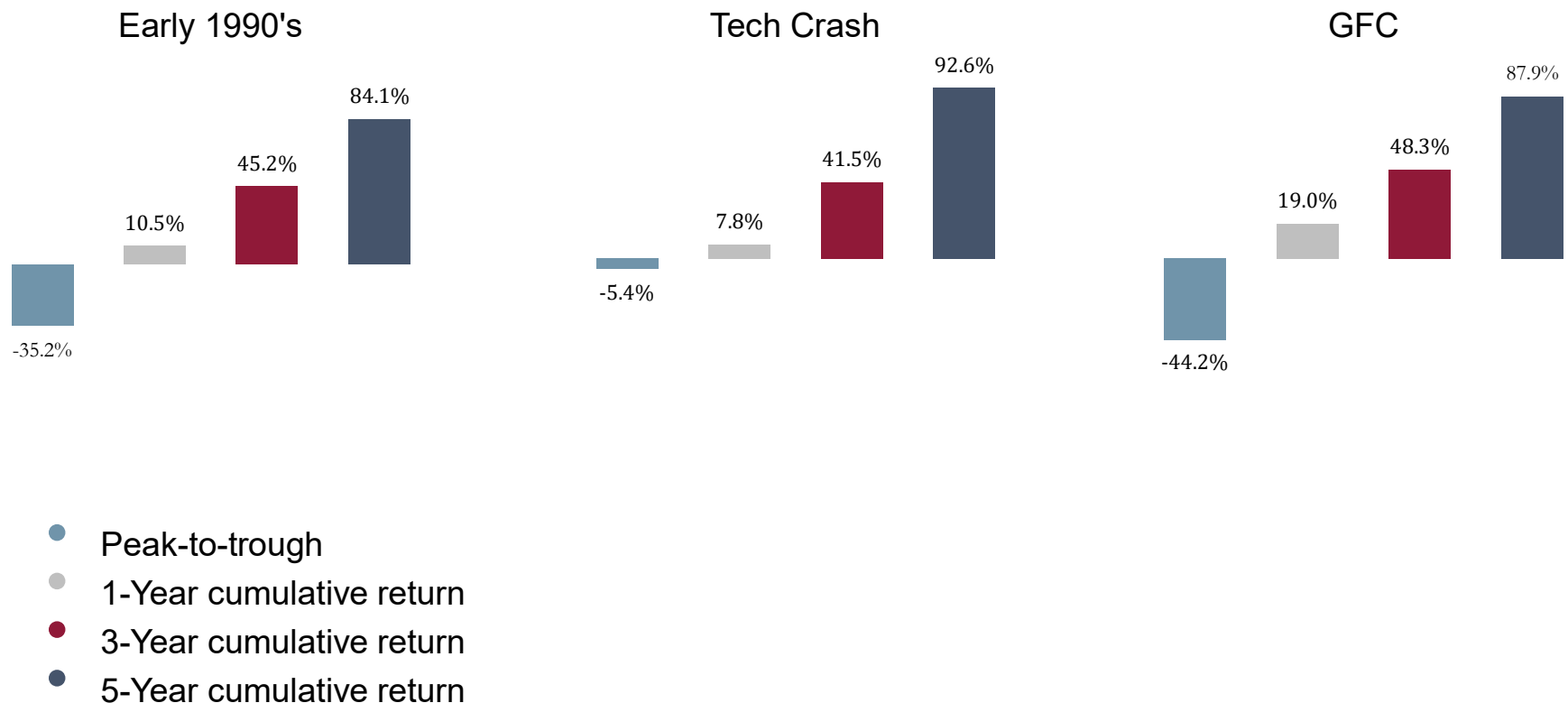
**Benchmark** – standard point of reference against which the performance of an investment can be measured.

**Index** - a hypothetical portfolio of securities designed to represent the relative asset class, market or market segment.

Benchmarks	
P r i v a t e	NCREIF Fund Index (NFI ODCE) - Open End Diversified Core Equity
	NCREIF Property Index (NPI)
P u b l i c	FTSE NAREIT US REIT Index
	MSCI US REIT Index
	Wilshire US Real Estate Securities Index

# Core Real Estate Post- Drawdown

- Real estate returns tend to be strong following declines



Source: NCREIF; Peak-to-trough declines represent gross asset appreciation during the relevant time periods, cumulative returns represent net ODCE total returns during the relevant time periods  
Early 1990's includes Q3 1989-Q4 1995 (Q4 1995 represents 100 in cumulative returns going forward); Tech crash includes Q1 2001-Q3 2002 and Global Financial Crisis includes Q1 2008-Q1 2010

# Real Estate Risks & Considerations

- Debt or Equity
- Illiquid asset class (private)
- Lagged valuations (appraisal-based)
- Geographic Considerations
- Interest rate sensitivity
- Regulatory risk
- Leveraged asset class
- Lagged and limited benchmarks



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## Equity Investing

Brad Penter, CFA, CAIA  
Vice President

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# What is Public Equity?

- Public equity is an investor's ownership interest of a business or other type of asset. It is represented on a company's balance sheet by subtracting the company's assets by its liabilities.
- Companies can raise capital to grow its business by issuing publicly traded stocks to investors.
- Public equity is liquid, as most publicly traded stocks are available and easily traded daily.
- Stock market prices should reflect all available, relevant information about the actual value of the underlying assets of a business.



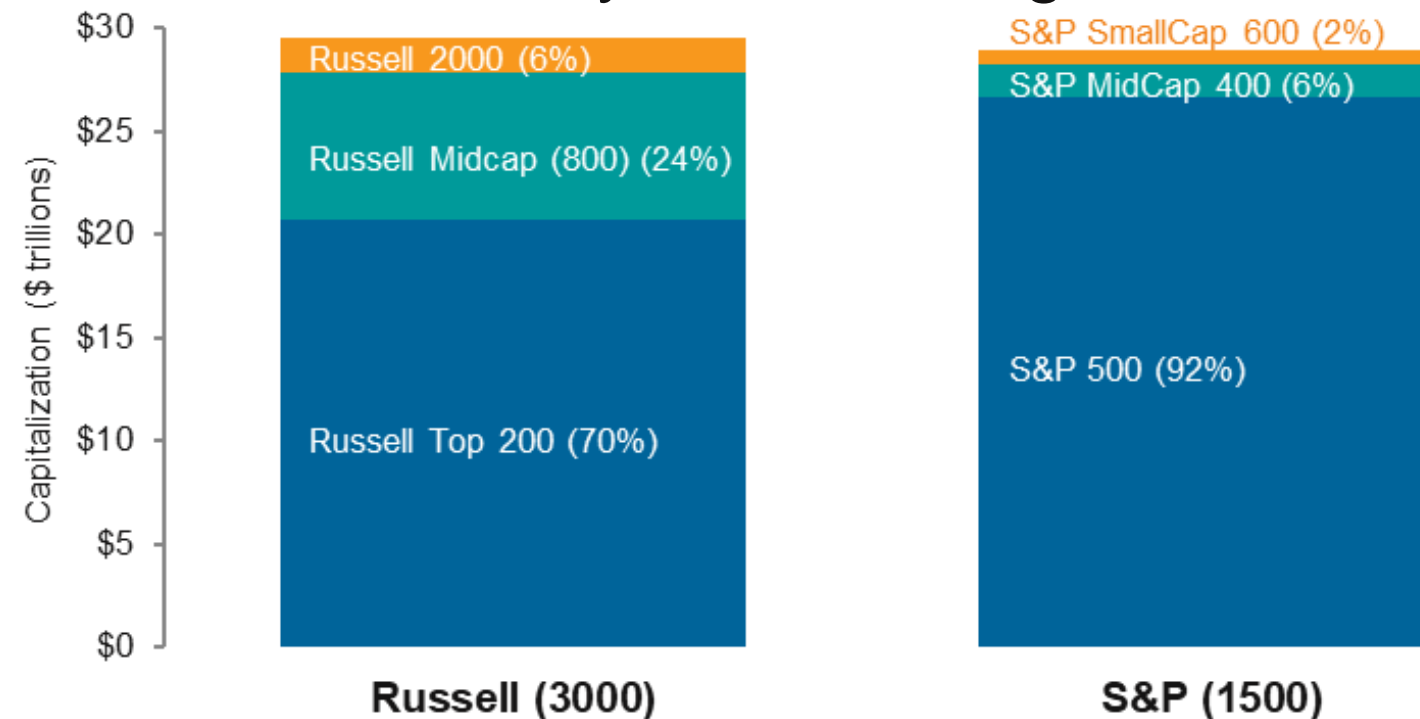
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# Breaking Down the Market

- Public equities can be broken down into various categories:
  - Capitalization: found by multiplying the total number of a company's outstanding shares by the current market price of one share. Equity Markets are divided by market cap into Large (greater than \$10 billion), Mid (\$2 to \$10 billion), and Small (\$250 million to \$2 billion).
  - Region: U.S. (domestic) and non-U.S. (international), developed markets vs. emerging markets. The current breakdown of the world equity markets is ~60% U.S. and ~40% ex-U.S. The international market is ~2/3 developed and 1/3 emerging markets.
  - Style: generally defined by the investment approach or objective, and characteristics of the business. Markets are divided by growth vs. value, cyclical versus defensive, etc.

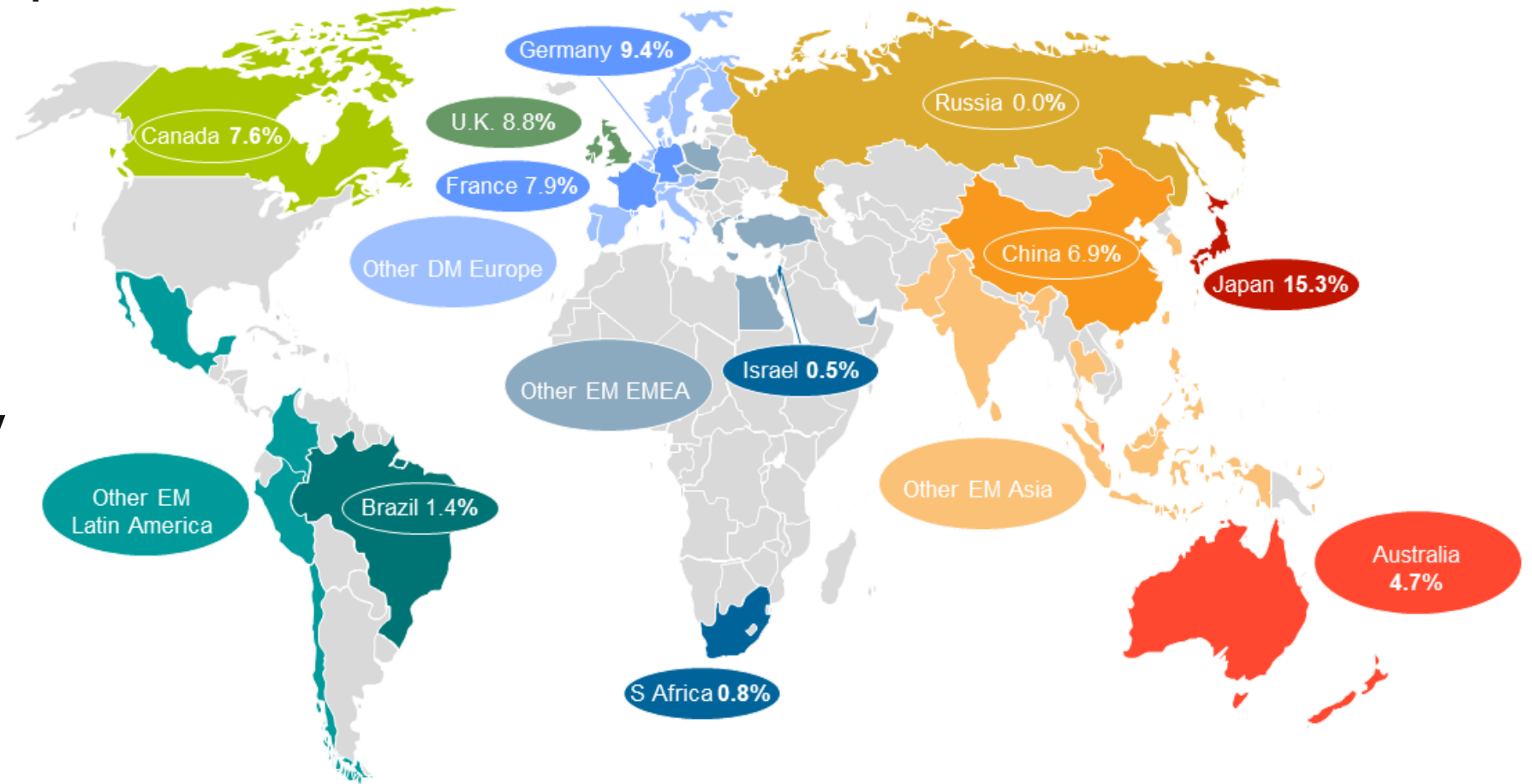
# U.S Equity Benchmarks

- Russell's broad market index covers approximately 98% of the U.S. market with approximately 3000 securities; and the S&P's broad market benchmark captures approximately 96% of the market with about 1,500 securities.
- Despite their popularity with pundits, the Dow Jones and NASDAQ are relatively concentrated and rarely used amongst institutional investors.



# Non-U.S Equity Benchmarks

- MSCI ACWI ex US Index:
  - includes large and mid cap stocks in developed (EAFE) and emerging markets (EM).
  - Total market cap = approx. \$26 trillion or 85% of companies by market cap listed outside the U.S.
  - 67% developed markets
  - 33% emerging markets



Source: MSCI country weights as of 03/31/2024

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# Equity Investing Styles

- Value Investing: strategies that seek companies that are undervalued relative to the market, with low price-to-earnings or price-to-book ratios.
- Growth: strategies that seek companies experiencing faster growth in revenue and earnings relative to the market, with high price-to-earnings or price-to-book ratios.
- Quantitative Investing: strategies that utilize a statistical model to systematically rank securities based on criteria that have been identified by managers to generate excess returns. Aims to remove human emotion and subjectivity.
- Fundamental Investing: investment approach that focuses on identifying the intrinsic value of a company through intense financial statement analysis, speaking with company management, evaluating macro trends, and determining where there is unrecognized value.

# Why Invest in Public Equity?

- Public equity historically has offered higher long-term returns than all asset classes, other than private equity.
- Stocks tend to offer long-term protection against price inflation, However, they do not necessarily provide short-term inflation protection.

Returns for Periods Ended December 31, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15 Years	Last 20 Years	Last 25 Years
Russell 3000 Index (Broad US)	12.07	25.96	8.54	15.16	11.48	13.84	9.67	7.74
Russell 1000 Index (Large Cap US)	11.96	26.53	8.97	15.52	11.80	14.02	9.78	7.72
Russell 2000 Index (Small Cap US)	14.03	16.93	2.22	9.97	7.16	11.30	8.11	7.91
MSCI ACWI ex US Index (Non-US)	9.75	15.62	1.55	7.08	3.83	6.74	5.68	--
MSCI EAFE Index (Developed ex-US)	10.42	18.24	4.02	8.16	4.28	6.93	5.59	4.43
MSCI Emerging Markets Index (Emerging Markets)	7.86	9.83	(5.08)	3.69	2.66	6.56	6.83	--

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# Equity Returns

$$\text{Equity Return} = \text{Capital Appreciation} + \text{Income} \pm \text{Valuation Adjustment}$$

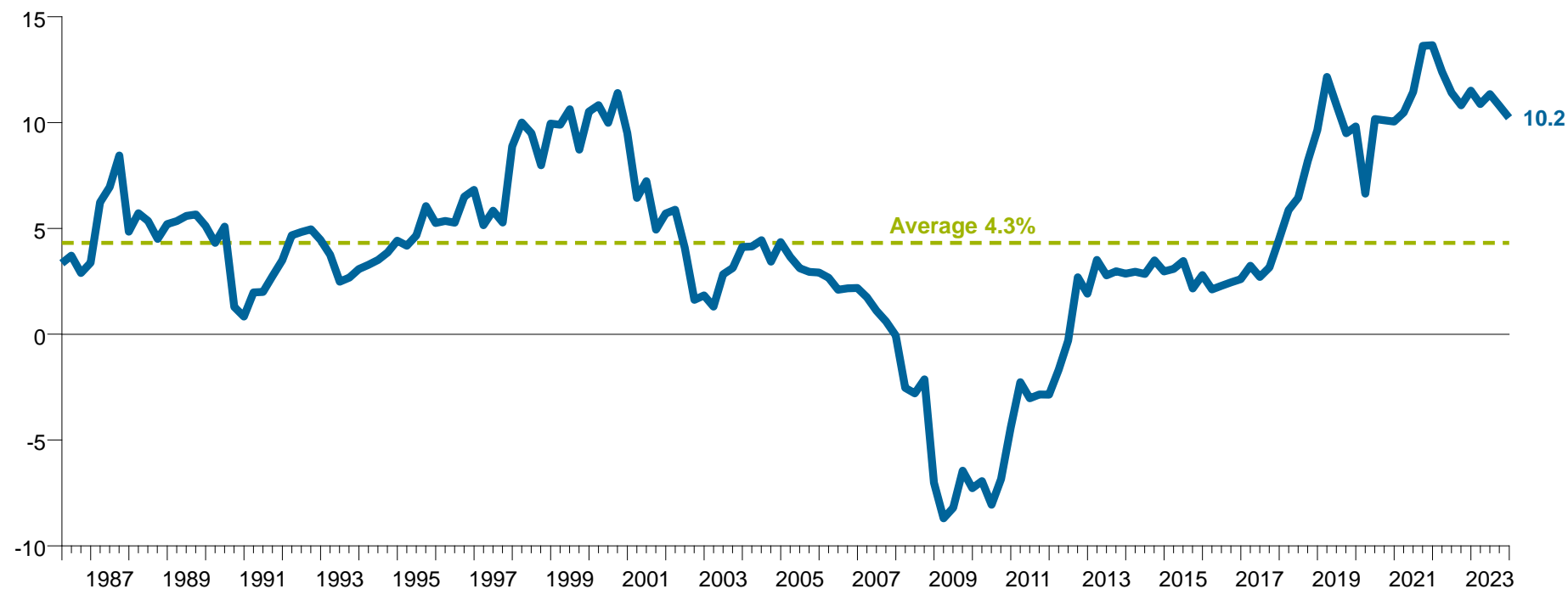
## Components of Equity Returns:

- Capital Appreciation comes from a combination of real earnings growth and inflation.
- Income comes from a combination of dividends and share buybacks.
- Stock valuations are adjusted based on an investor's discount rate. When discount rates increase, stock valuations decrease, when discount rates fall, stock valuations increase.

# Equity Risk Premium

- The equity risk premium is the incremental return an equity investor expects to receive when investing in the stock market for incurring the additional risk compared to a risk-free investment like government bonds. The equity risk premium will fluctuate over time based on market fundamentals and investor psychology.

S&P 500 Rolling 40 Quarter Excess Return Relative to Bloomberg Aggregate



Sources: Bloomberg, S&P Dow Jones Indices

# Why does Risk Matter?

- Beyond the negative psychology of experiencing large losses, the sequence of returns matter for public funds' equity portfolios. Compounding hard dollars means that more consistent performance (i.e. lower standard deviation) results in better outcomes. This is especially important for public funds experiencing negative cash flows.

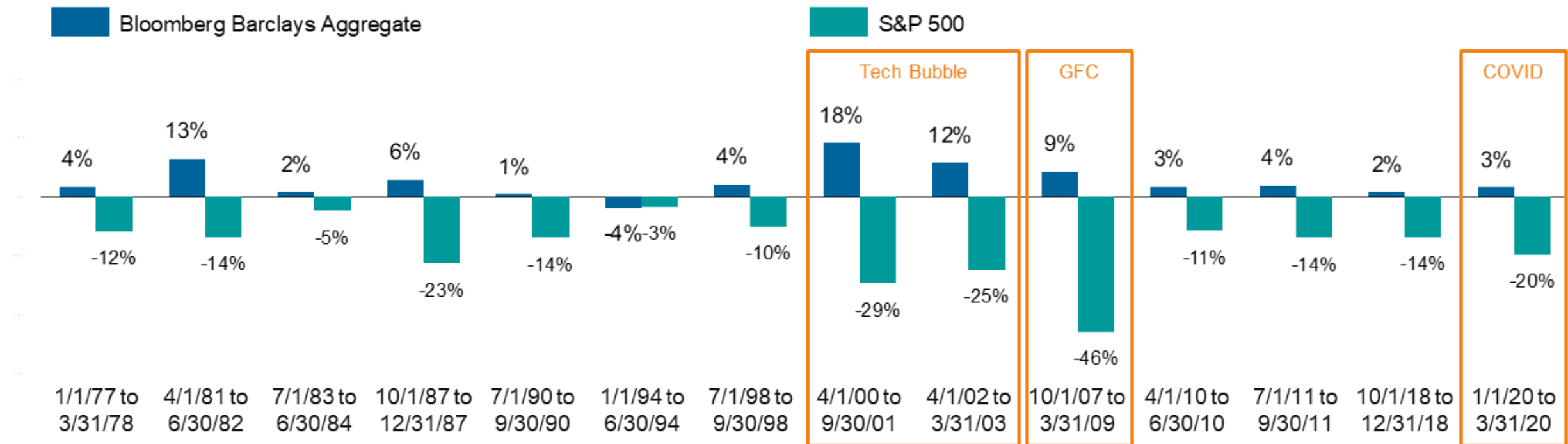
	Average 10-Year Return	Standard Deviation	Compounded Return
Equity Portfolio 1	8.70%	17.00%	7.50%
Equity Portfolio 2	8.70%	20.00%	7.00%
Equity Portfolio 3	8.20%	17.00%	7.00%



# Equity's Role

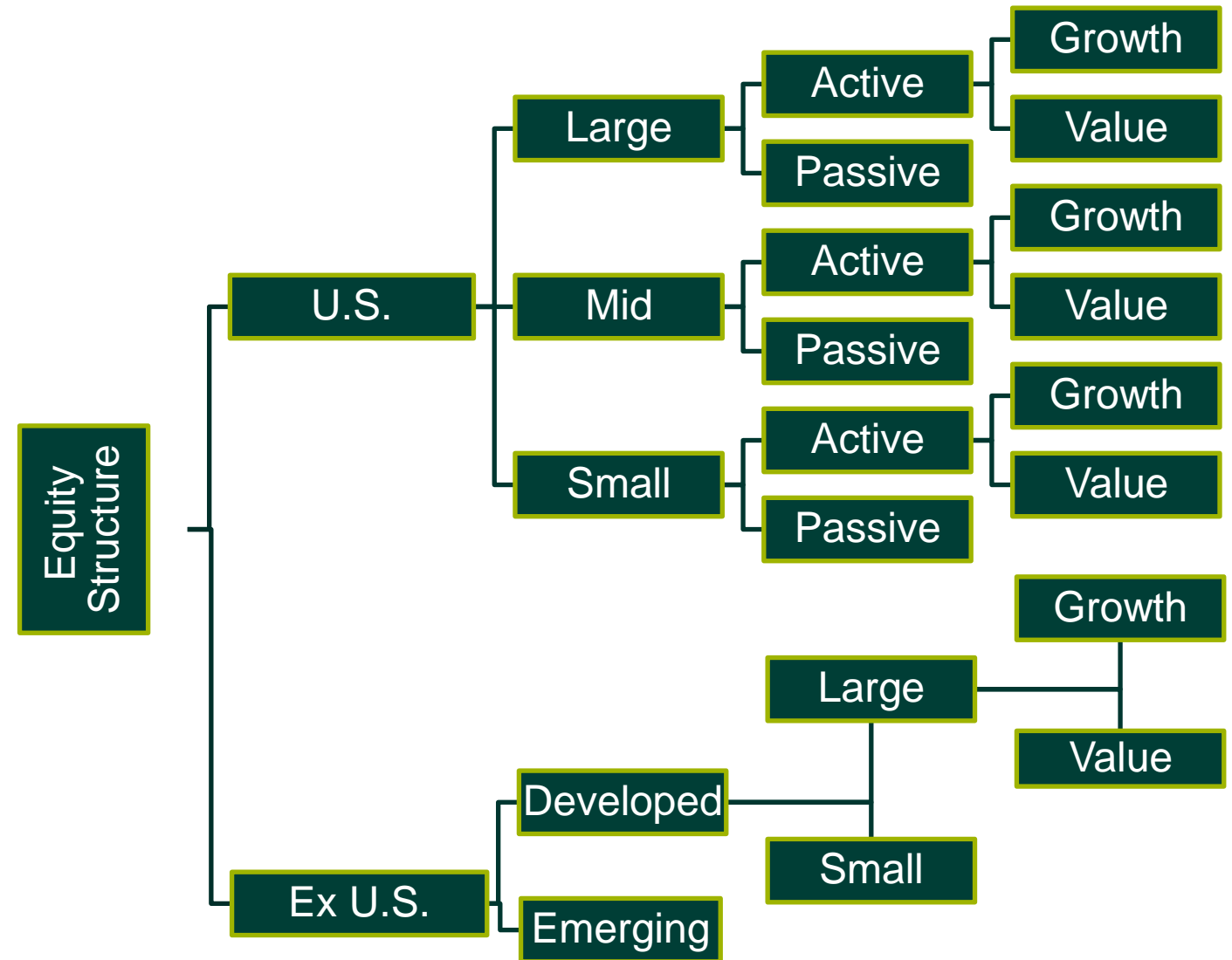
Equity's role within an investor's asset allocation is to provide long-term growth. The role of fixed income is to serve as a low-risk, diversifying anchor against the growth of equity investments.

Cumulative Returns for U.S. Equity Declining Periods



# Equity Portfolio Structure

- When designing an equity portfolio, the typical starting point is neutral to the market (no biases). Deviations are warranted only where there are opportunities to strategically add value.
- Equity portfolios are typically broken down by:
  - Region
  - Market Capitalization
  - Style
  - Active versus Passive



# Active versus Passive Investing

- Passive Investing: strategy that involves buying and holding a diverse portfolio of securities, typically aiming to match the performance of a specific market index. Passive investing incurs significantly lower investment management fees compared to active management fees.
- Active Investing: strategy that seeks to achieve excess returns (net of fees) relative to a market index by exploiting market inefficiencies through sector allocation and stock selection.

Average Annualized 3-Year Excess Return (gross) - Median Active Manager over last 20 Years (ending March 31, 2024)					
Large Cap vs. Russell 1000 Index	Mid Cap vs. Russell Mid Index	Small Cap vs. Russell 2000 Index	Non-U.S. vs. MSCI ACWI ex-U.S. Index	Developed vs. MSCI EAFE Index	Emerging Markets vs. MSCI EM Index
-0.11%	-0.32%	1.12%	1.23%	0.96%	0.95%

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# Evaluating Performance

- When evaluating active managers, they should have two benchmarks:
  - A market index, which represents the universe of securities the sub-advisor could buy (the passive alternative for achieving the same market exposure); and
  - A style group of sub-advisors who follow a similar investment strategy (the active alternatives to achieving similar market exposure).
- Over the long-term active managers, regardless of style, should outperform an appropriate market index or there is no value in paying active fees. Over the shorter-term, styles of investing will go in and out of favor and during these shorter periods managers can be most effectively evaluated against managers of similar style (style groups).

# Evaluating Performance

- Equity portfolio attribution is determined by three factors:
  - Sector Allocation: relative return attributed to the manager's decision to over- or under-weight a sector relative to the index weighting.
  - Security Selection: added return contribution made by individual stock selection within a given sector.
  - Regional Allocation: relative return attributed to the manager's decision to over- or under-weight a country relative to the index weighting.

Attribution Effects by Sector vs. Russell 2000 Growth Index  
One Quarter Ended September 30, 2020

Sector	Manager Eff Weight	Index Eff Weight	Manager Return	Index Return	Sector Concentration	Security Selection	Asset Allocation
Communication Services	2.93%	2.60%	(2.50)%	(1.32)%	(0.02)%	(0.07)%	-
Consumer Discretionary	13.29%	13.18%	26.13%	17.09%	(0.07)%	1.22%	-
Consumer Staples	1.30%	3.24%	(3.55)%	9.78%	(0.03)%	(0.20)%	-
Energy	0.00%	0.17%	0.00%	(6.00)%	0.02%	0.00%	-
Financials	8.12%	4.26%	3.47%	5.07%	(0.06)%	(0.10)%	-
Health Care	30.84%	33.35%	15.47%	4.38%	0.08%	3.41%	-
Industrials	14.57%	13.55%	12.55%	15.32%	0.08%	(0.37)%	-
Information Technology	22.37%	21.30%	2.24%	3.19%	0.01%	(0.23)%	-
Materials	1.89%	2.70%	9.03%	6.53%	0.01%	0.05%	-
Real Estate	4.70%	3.84%	14.77%	6.71%	(0.03)%	0.39%	-
Utilities	0.00%	1.81%	0.00%	(3.67)%	0.21%	0.00%	-
Non Equity	2.60%	0.00%	-	-	-	-	(0.51)%
Total	-	-	10.95%	7.16%	0.20%	4.11%	(0.51)%

# Market Timing

Given the volatility of equity, it should be treated as a long-term holding. Timing the market is incredibly difficult and few investors have been consistently successful at moving in and out of public equity at the right time.

## S&P 500 Index Best Days: 1994–2023



## S&P 500 Index Average Annual Total Returns: 1994–2023



Sources: Ned Davis Research, Morningstar, and Hartford Funds

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# Key Takeaways

- Equity is a core building block for providing growth to any institutional investor's portfolio, exhibiting high return expectations with higher risk.
- Equity portfolios can be broken down by size (market cap), style (value versus growth), and region (U.S., ex-U.S., emerging markets). Investment managers can be broken down into active or passive. Active managers can be further broken down by their implementation style (quantitative, fundamental, etc.)
- Active equity managers should be evaluated relative to a benchmark (passive alternative) and peer group (active alternatives). Investors should evaluate performance based on both returns and risk.
- The equity market is volatile and investors should avoid timing the market. Open public funds have a near perpetual time horizon to absorb market volatility and equity should be treated as a long-term investment.