

# Portfolio Construction & Asset Allocation

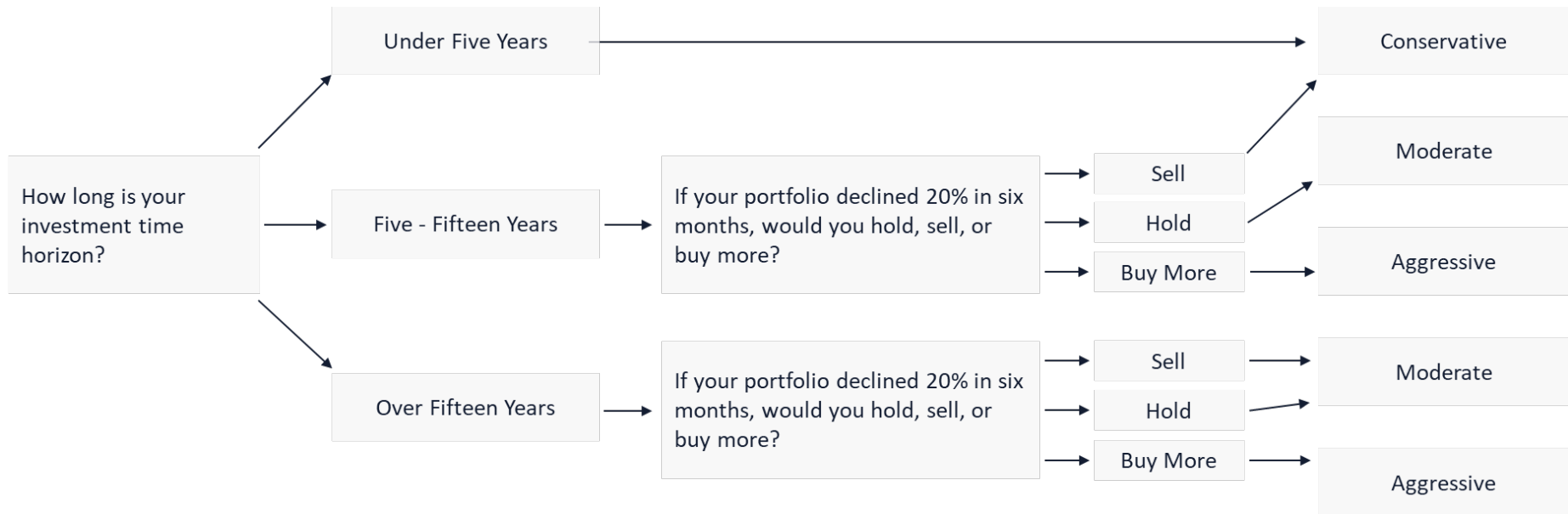
Keith Black, PhD, CFA, CAIA, FDP, CDAA



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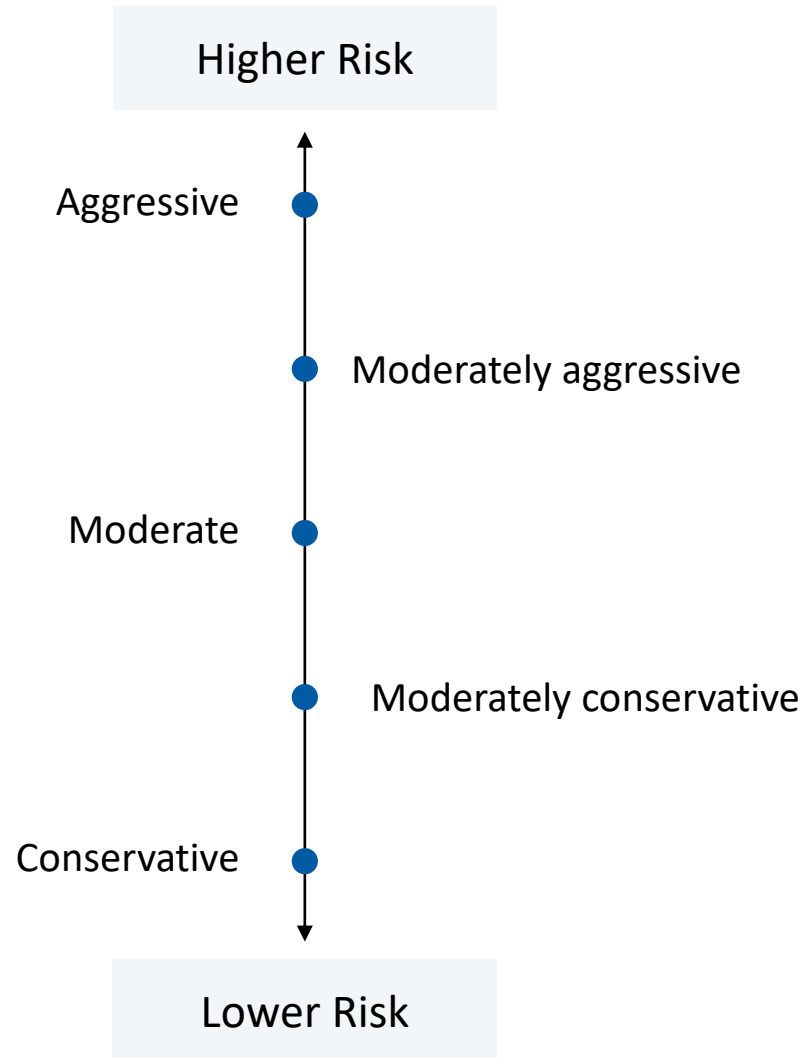
# Defining and Building Model Portfolios

# Risk Tolerance Questionnaires



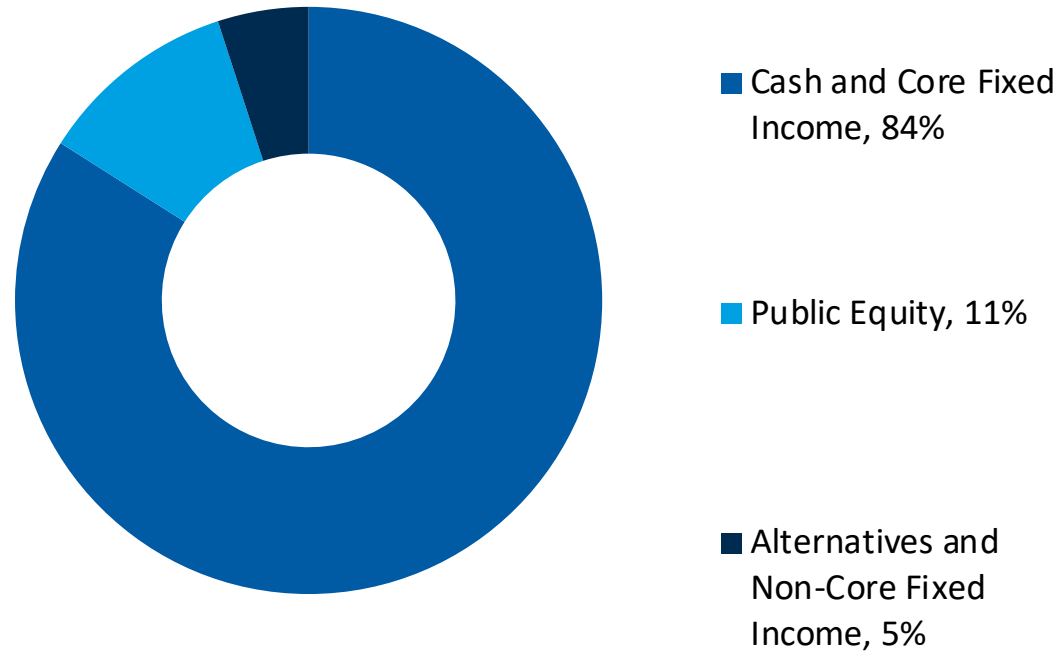
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## Model Portfolios Based on Risk Tolerance



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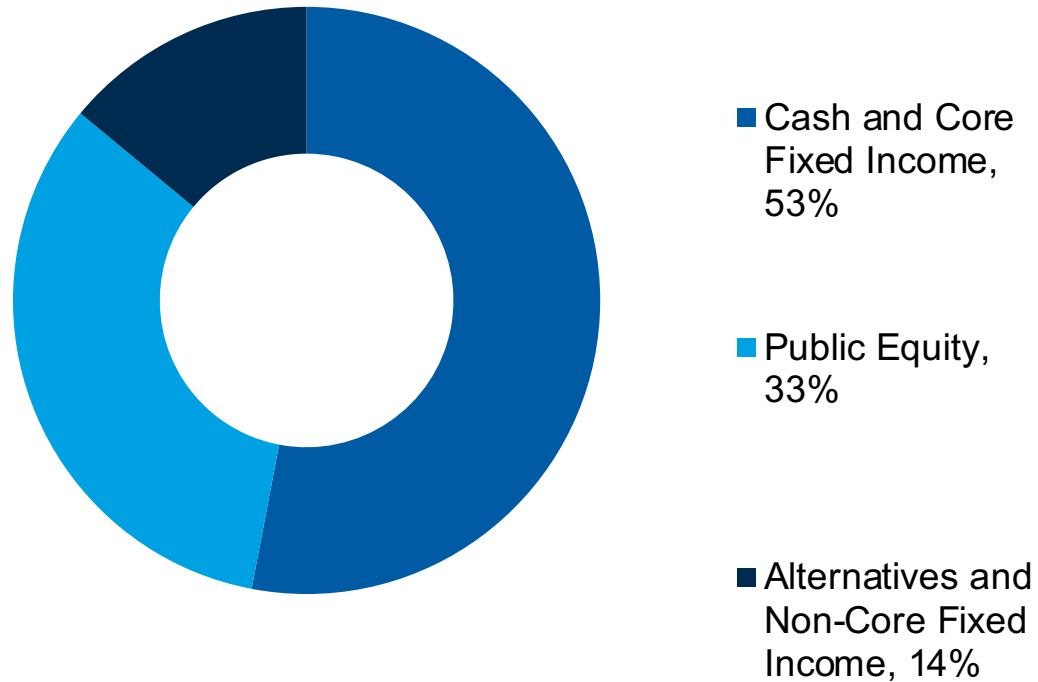
## Conservative Investors



Source: Alpha Capital

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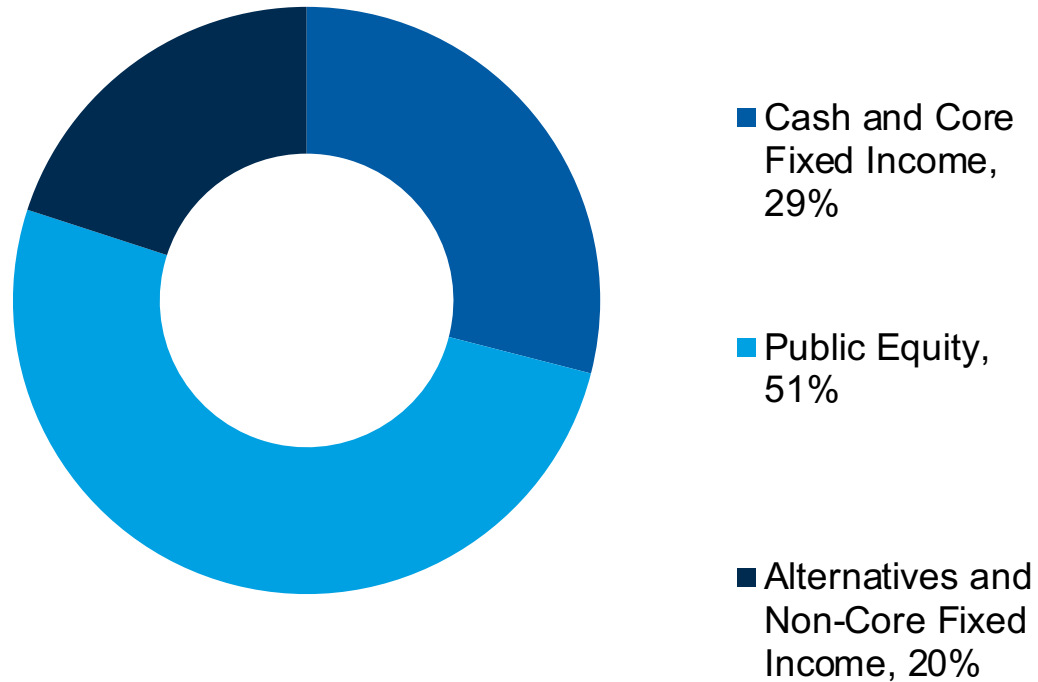
## Moderately Conservative Investors



Source: Alpha Capital

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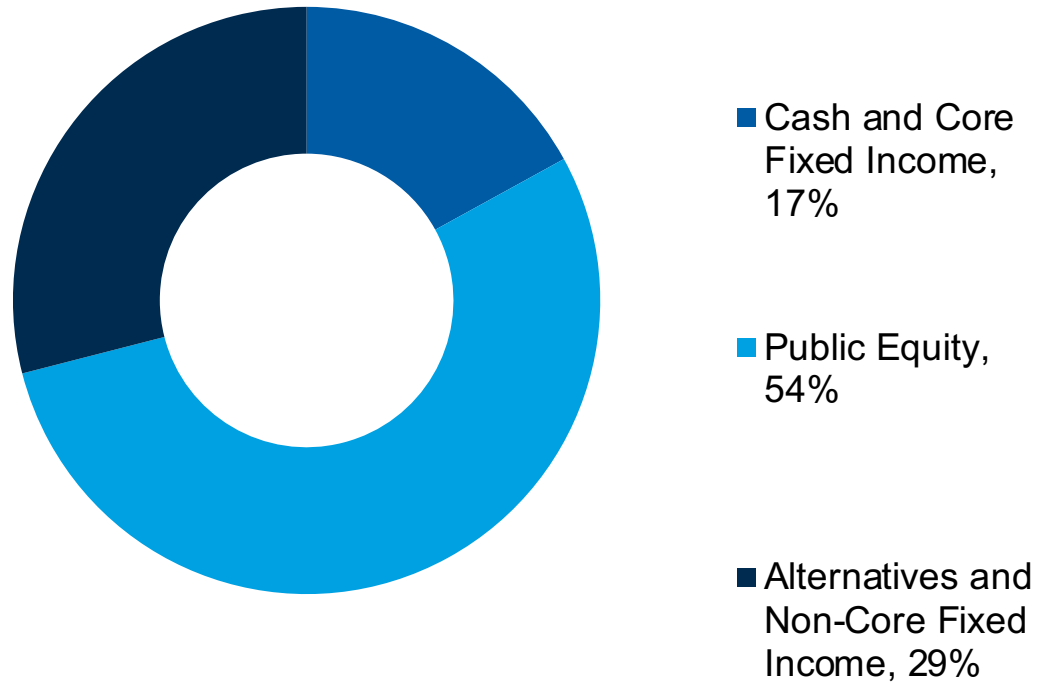
## Moderate Investors



Source: Alpha Capital

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## Moderately Aggressive Investors

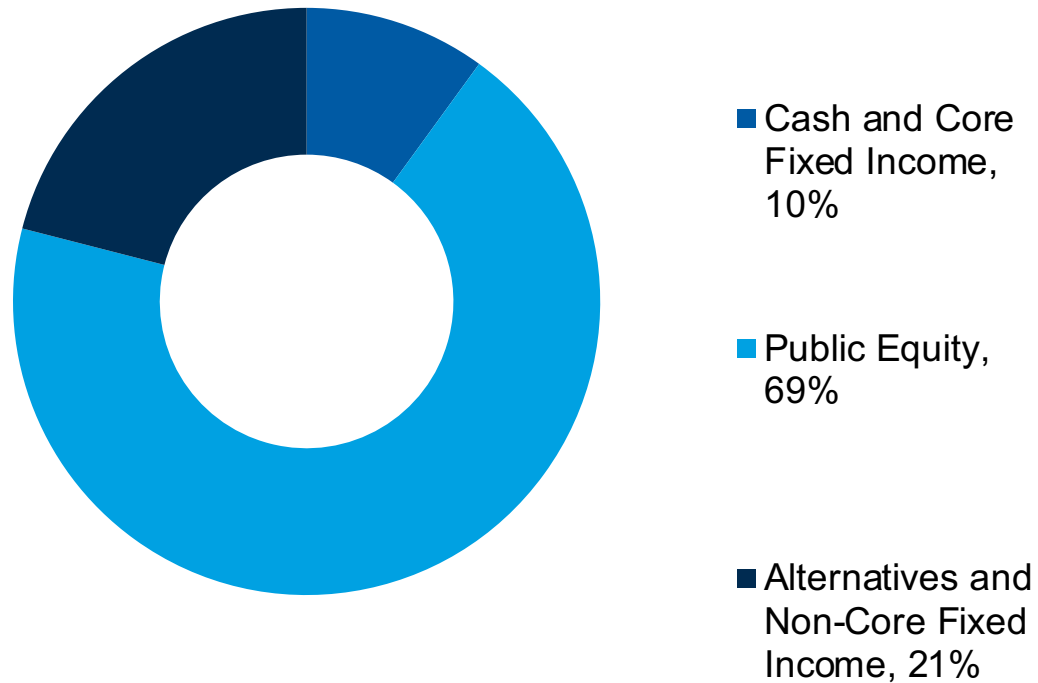


Source: Alpha Capital



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## Aggressive Investors



Source: Alpha Capital

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## Asset Allocation by Risk Tolerance

	CONSERVATIVE	MODERATELY CONSERVATIVE	MODERATE	MODERATELY AGGRESSIVE	AGGRESSIVE
Cash and Core Fixed Income	84%	53%	29%	17%	10%
Public Equity	11%	33%	51%	54%	69%
Alternatives and Non-Core Fixed Income	5%	14%	20%	29%	21%

Source: Alpha Capital

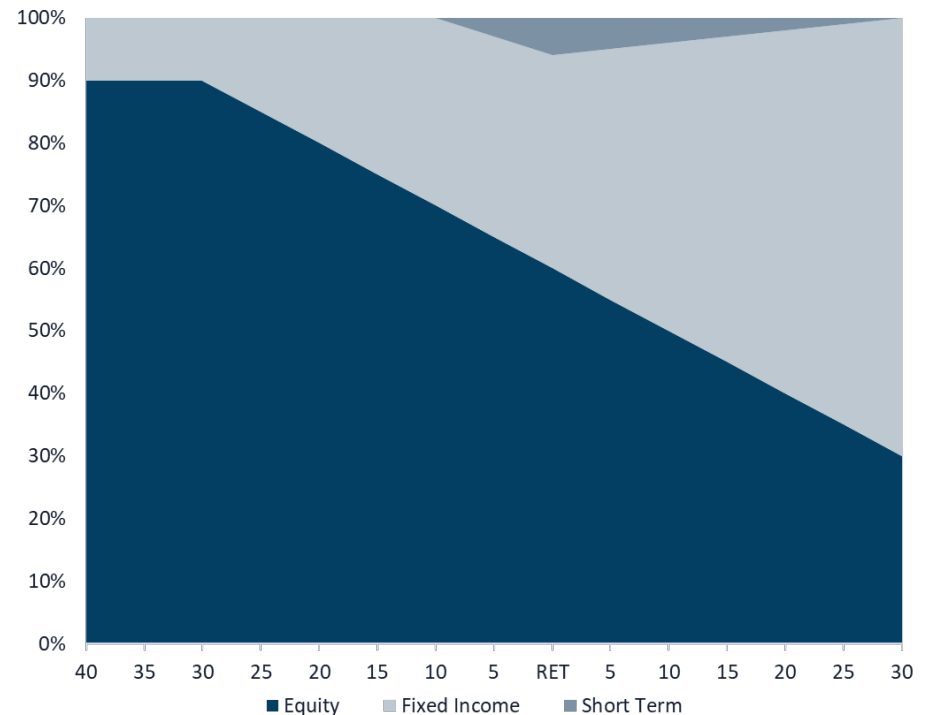
## Historical Returns of Model Portfolios

Q4 2003- Q4 2024	RETURN	STANDARD DEVIATION	MAXIMUM DRAWDOWN	GROWTH OF \$1
60/40	8.3%	9.7%	-27.4%	\$5.44
CONSERVATIVE	6.3%	4.6%	-15.0%	\$3.68
MODERATELY CONSERVATIVE	7.5%	6.5%	-17.6%	\$4.70
MODERATE	9.6%	9.4%	-28.5%	\$7.04
MODERATELY AGGRESSIVE	10.6%	10.2%	-32.0%	\$8.45
AGGRESSIVE	10.9%	12.0%	-37.1%	\$9.01

Source: Alpha Capital, PitchBook Data, Inc, S&P 500, Barclays Aggregate Bond Index

## Target-Date Funds and Changing Risk Tolerance

- Even though many investors have a reduced risk tolerance over time, retirement account participants do not frequently rebalance their portfolios.
- Target-date funds allow investors to buy into a single fund that slowly reduces risk aversion over time
  - Equity allocation may be 90% at age 25 and decline over time to 40% or less during retirement
- 60% of 401(k) participants hold target-date funds comprising over 30% of total 401(k) plan assets, more than double the level of 2007



Source: [https://www.ici.org/faqs/faq/other/faqs\\_target\\_date](https://www.ici.org/faqs/faq/other/faqs_target_date)

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# Considerations Beyond Volatility

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## Additional Goals

- Many investors have goals beyond total return and volatility risk management:
  - Inflation Protection
  - Downside Protection
  - Tax Efficiency
  - Tactical Allocations
  - Thematic Allocations or ESG

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## Inflation Protection

- Portfolios exclusively invested in stocks and fixed-rate bonds are likely to underperform during times of inflation and rising rates
- Investors can reallocate from longer-dated fixed-rate bonds to floating-rate private credit or shorter-duration fixed income
- Allocations to real assets may offer stronger inflation protection than stocks and bonds.

# Inflation Protection

Quarterly Returns	12 Mo Change in CPI	BLOOMBERG AGG BONDS	S&P 500	REAL ESTATE	OIL & GAS	COMMODITIES	PRIVATE DEBT	INFRASTRUCTURE
Low Inflation	0.6%	1.4%	4.3%	0.2%	-0.8%	0.4%	2.5%	2.6%
Medium Inflation	2.3%	0.8%	3.7%	3.2%	4.8%	-0.3%	3.2%	3.9%
High Inflation	5.2%	0.2%	-0.6%	3.9%	6.0%	1.3%	1.4%	3.3%
All time periods (Q4 2003- Q4 2023)	2.6%	0.8%	2.7%	2.4%	3.7%	0.3%	2.6%	3.4%

Source: PitchBook Data, Inc, S&P 500, Barclays Aggregate Bond Index.  
Low and High Inflation each include 25% of time periods, medium inflation is the middle 50% of observations.



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## Investors Seek Downside Protection

- Investors with a goal of downside protection may invest less in traditional equity funds.
- Downside protection may be offered by:
  - Macro and managed futures funds
  - Long-short and hedged strategies
  - Larger allocations to short-duration fixed income
  - Structured products such as principal protected notes or buffered ETFs

## Hedge Fund Strategies Can Reduce Downside Risks

	2022	2019 - 2022 Annualized	2003 – Q2 2024 Annualized
<b>S&amp;P 500</b>	-18.1%	13.2%	11.6%
<b>Bloomberg Aggregate Bond Index</b>	-13.0%	0.0%	3.1%
<b>Managed Futures</b>	11.6%	10.9%	6.6%
<b>Global Macro</b>	4.9%	7.6%	4.9%
<b>Equal Weighted Hedge Funds</b>	-6.7%	8.0%	6.2%
<b>Equity Market Neutral</b>	3.2%	6.7%	5.2%
<b>Event Driven Multi-Strategy</b>	-11.9%	8.3%	6.7%
<b>Convertible Arbitrage</b>	-7.7%	4.7%	5.5%
<b>Fixed Income Arbitrage</b>	-1.1%	1.6%	4.3%

Source: CISDM, S&P 500, Barclays Aggregate Bond Index

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## Tax-Efficient Investment Strategies

Very Long Holding  
Periods

Exchange-Traded  
Funds (ETFs)

Realizing losses to  
offset taxable gains  
and direct indexing

Tax-exempt income  
such as municipal  
bonds

Asset Location  
Strategies

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## Tax-Efficient Investment Strategies

Taxable Account	Tax-Exempt Accounts Roth IRA/Roth 401(k)	Tax-Deferred Accounts Traditional IRA/401(k)
Tax-Efficient Strategies	Higher Return Strategies	Higher Turnover Strategies
ETFs Long Holding Periods Real Estate (Depreciation) Tax-Loss Harvesting and Direct Indexing	Private Equity Venture Capital	Bonds Actively Managed Funds

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## Tactical Allocations

- Some investors stick to strategic asset allocation weights, rebalancing back to long-term target weights after market moves.
- Other investors may tactically change asset allocations in anticipation of specific market performance.
- Trend-following models, such as those used in managed futures funds, give signals to take long positions in rising markets and short positions in falling markets.
- Some investors may have market timing models, significantly increasing cash allocations during or before times of falling markets.

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## Rebalancing Strategies

- In order to stay close to model portfolio weights, investors need to rebalance by reducing holdings of the highest performing assets and increasing holdings of the lowest performing assets.
- Selling winning asset classes and buying lagging asset classes makes sure that risk stays in line with investor goals.
- Rebalancing more frequently adds value in mean-reverting markets as asset prices decline after they rise.
- Rebalancing less frequently adds value in trending markets, as it may pay to wait to sell holdings in a market that continues to rise.
- Some investors may sell options to earn premium income and bringing discipline to the rebalancing process:
  - Selling calls enforces sale of assets rising in price
  - Selling puts enforces purchase of assets declining in price

# Rebalancing Yield

- Rebalancing yield is the additional return produced by rebalancing a portfolio back to its target weights.
- Assets with higher volatility and lower correlation bring greater rebalancing yield.
- Commodities and digital assets may add significant value in rebalancing as they have high volatility, low correlation to stocks and bonds, and mean-reverting price tendencies.



Source: CME, Bigcharts.com

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## Thematic Allocations or ESG

- Rather than managing to a target return or specific asset allocation, some investors seek to take advantage of specific themes
- Investing in megatrends such as a digitizing world would overweight technology investments in search of higher returns
  - Investors allocate to companies matching their market or sector view
- Investing in strong industry or economic trends may have flat to positive performance even when broader markets are weak
- Some investors may rank environmental, social, or governance factors as important or more important than quantitative measures of risk and return
  - Investors allocate to companies that match their personal values



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# Alternative Investments in Portfolio Construction

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## Alternative Investments in Portfolio Construction

- Alternative Investments may offer substantially different performance than long-only stock and bond investments
  - Private credit and floating-rate notes
  - Managed futures and hedge funds
  - Commodities
  - Digital assets
  - Private equity and venture capital
  - Real estate and real assets

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## Private Credit and Floating-Rate Fixed Income

Long-duration fixed-rate bond investments tend to have large negative returns during times of rising rates and rising inflation

For example, you have locked in a 3% income stream at a time when market yields have risen to 6%

The longer you are locked in to that 3% coupon, the greater the price decline of the fixed income security

Investing in floating-rate notes or loans allows coupons to change when the market level of interest rates is rising

These quarterly or semi-annual interest rate changes reduce the downside price risk due to the market level of interest rates

While interest rate risk declines with floating-rate loans or notes, borrowers pay higher coupon interest rates, which could increase credit risk

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## Macro and Managed Futures Funds

- Macro and managed futures funds tactically allocate in anticipation of, or in reaction to, market trends
- Historically, managed futures funds have offered “crisis alpha,” with returns of 18% in 2008 and 11% in 2022
- Trade highly liquid macro markets using both long and short futures contracts
- Tend to do best in markets with large positive or negative returns but offer low returns in directionless or mean-reverting markets

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## Commodities

- Investing in energy, metals, and food products may bring substantial inflation protection to a portfolio
- Different economic drivers than stocks and bonds means commodities have low correlation to portfolio returns that reduces volatility risk
- Commodities may outperform stocks for long periods of time, especially during inflation and tightening Central Bank policy:
  - January 2000 to June 2008, commodities outperformed equities by over 11% annually
  - May 2020 to May 2022, commodities outperformed stocks by over 25% annually

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## Real Estate & Real Assets

- Real asset strategies include real estate, infrastructure, farmland, timberland, natural resources, oil and gas
- Many real asset strategies provide substantial income and inflation protection
- Returns to some real asset strategies, such as infrastructure or farmland, have a low correlation to equity market returns and business cycles

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## Digital Assets

- In recent years, many investors have added digital assets, such as Bitcoin and Ether, to their investment portfolio.
- The track record of digital assets is high return and high risk, such as 600% returns followed by 60% drawdowns
- Adding a small digital asset allocation to a portfolio might not increase portfolio volatility if there is a low correlation between stock and bond returns.
- Investors are encouraged to allocate no more than 1% to 5% of their portfolio to digital assets or commodities.
- The entire digital assets sector has a market capitalization of around \$2 trillion, less than the value of any of the three largest tech stocks.

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## Private Equity & Venture Capital

There are many more privately held than publicly-traded companies

Private equity and venture capital funds allow investors to access a broader universe of companies

While PE and VC funds require long-term investments of ten years, returns are often higher than public equity investments



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# Thank You!