Breaking Beta

Why and How to Diversify

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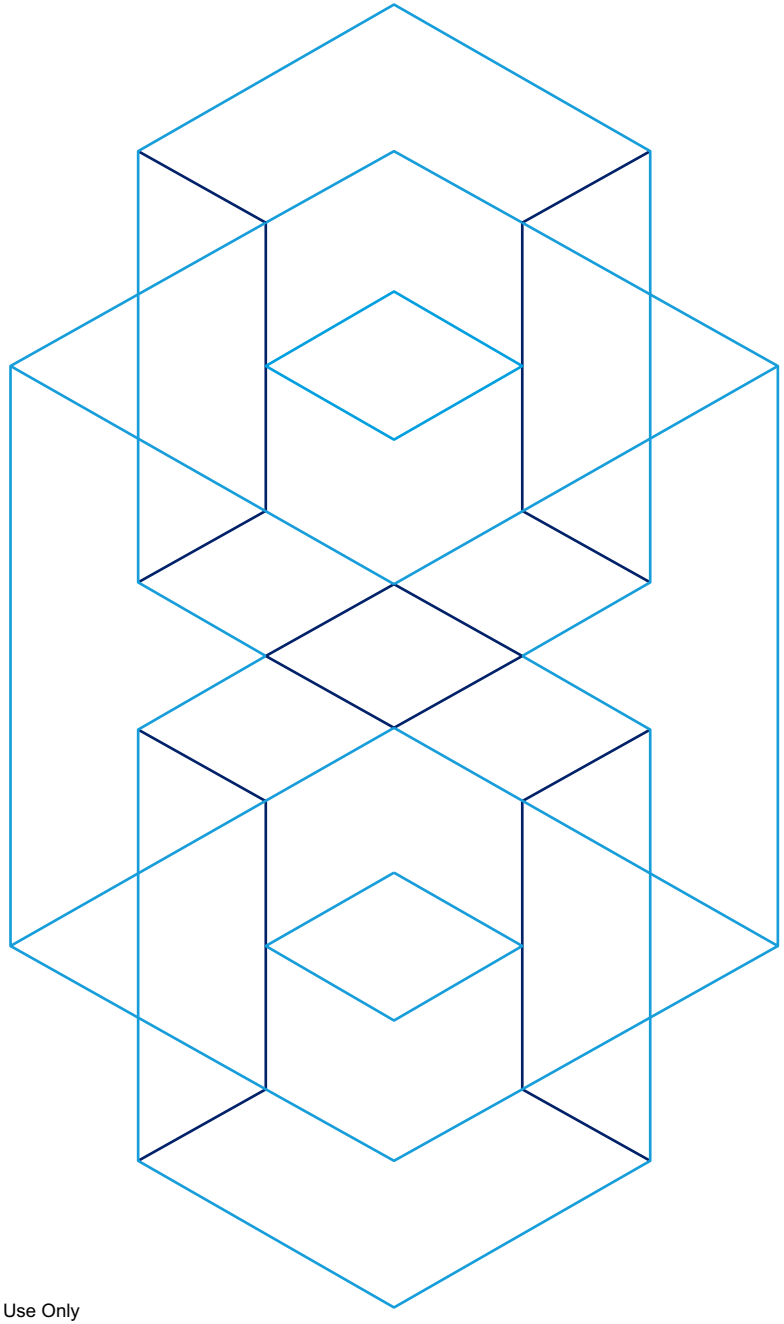
Private and Confidential

November 2022



Disclosures

This information is supplemental to the GIPS® Composite Report for Managed Futures Full Volatility strategy

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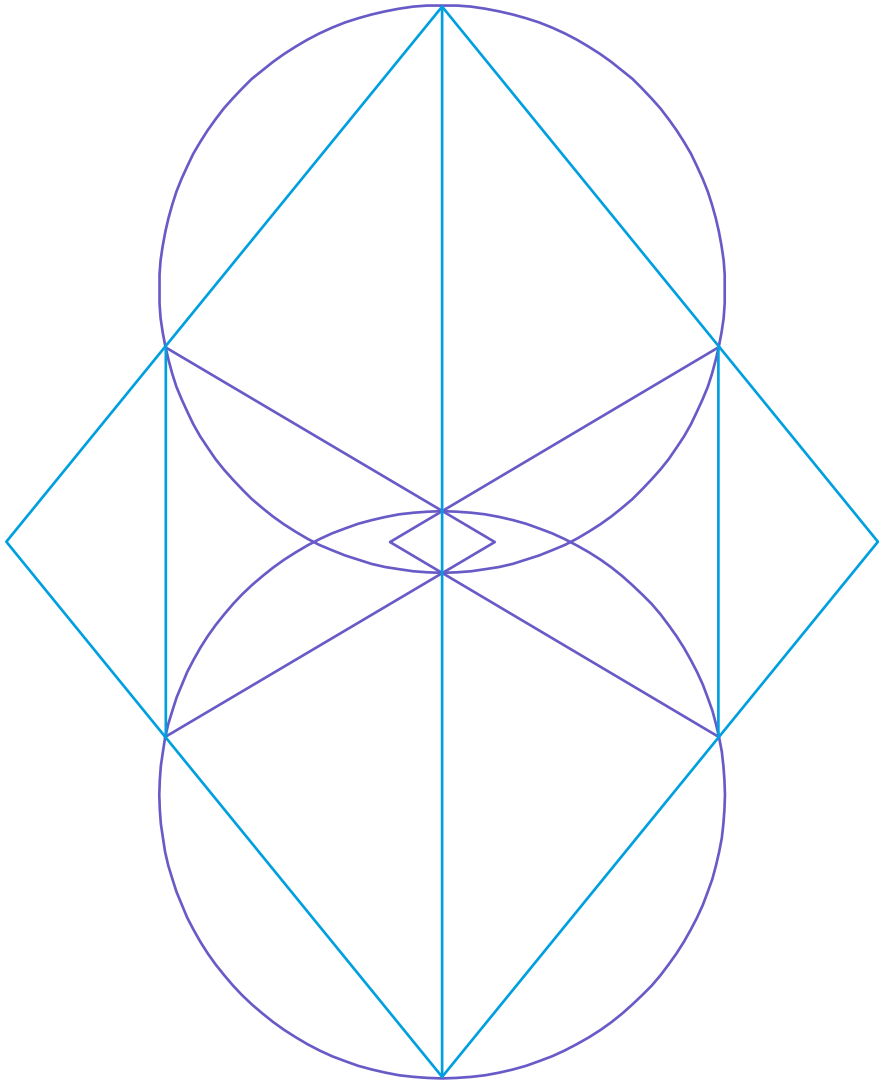
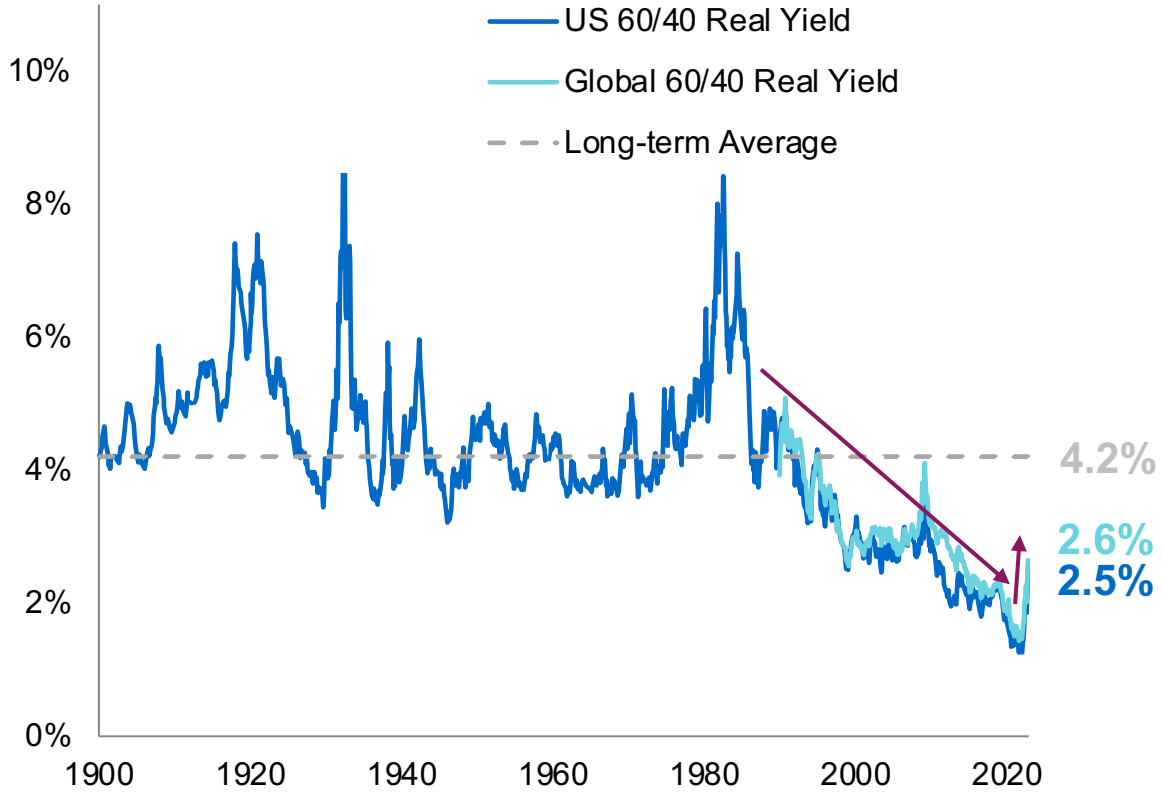
Still Not Easy



The Expected Return Picture Ain't Great

Stock and bond cheapening this year helps… a little

Simple Expected Real Return of U.S. and Global 60/40 Stock/Bond Portfolios
January 1, 1900 – September 30, 2022



Takeaways

Prospective returns look weak, even after 2022's substantial cheapening

But careful: Market timing is difficult, and investors should not expect to time their reallocations perfectly

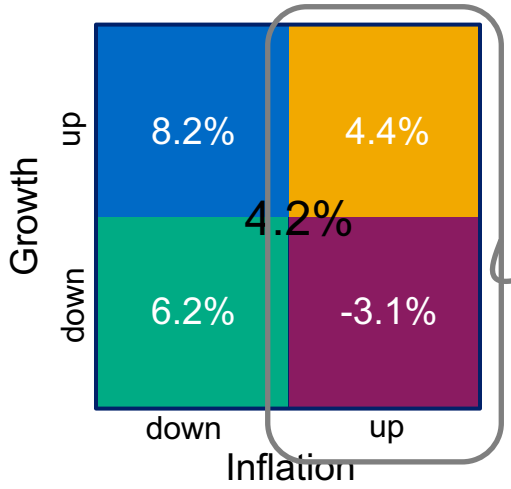
Source: AQR, Bloomberg, Robert Shiller's Data Library, Ibbotson Associates (Morningstar), Kozicki-Tinsley (2006), Federal Reserve Bank of Philadelphia, Blue Chip Economic Indicators, Consensus Economics. Earnings data through 9/30/2022. U.S. 60/40 portfolio is 60% U.S. equities and 40% long-dated Treasuries; Global 60/40 portfolio is 60% MSCI World and 40% GDP-weighted long-dated government bonds from countries in MSCI World universe. Real equity yield is simple average of two measures: (0.5 * Shiller E/P * 1.075) + 1.5% and Dividend/Price + 1.5%. The 1.5% term is assumed long term real earnings per share (EPS) growth. The 0.5 multiplier reflects the long-term payout ratio; the 1.075 multiplier accounts for EPS growth during 10-year earnings window. U.S. stock universe is S&P 500. Real bond yield is yield on long-term government bonds minus long-term expected inflation based on Blue Chip Economic Indicators, Consensus Economics and the Federal Reserve Bank of Philadelphia. Before survey data became available in 1978, expected long-term inflation is based on statistical estimates and on 1-year ahead Livingston inflation forecasts. This is one set of estimates of ex-ante real yields for equities and bonds, but other reasonable specifications should tell broadly the same story. Chart is for illustrative purposes only. Past performance is not a guarantee of future performance. Please read important disclosures in the Appendix.

Stock/Bond Portfolios Sure Seem Fairly Resilient… Right?

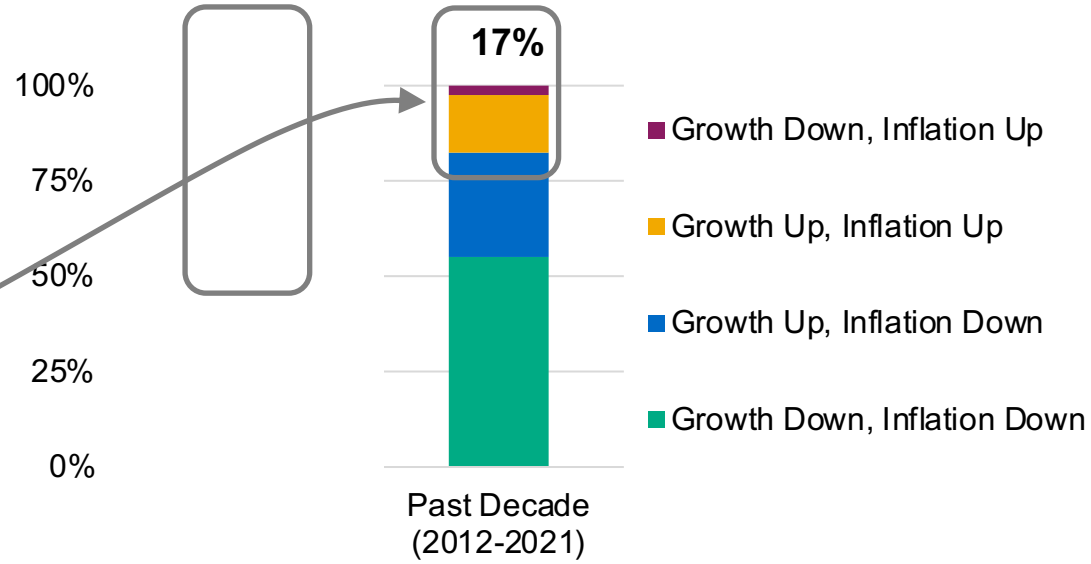
Their two "worst" macro environments happen more than you might think

Average Global 60/40 Excess Return by Macro Environment

1972 – 2021



Frequency of Macro Environments



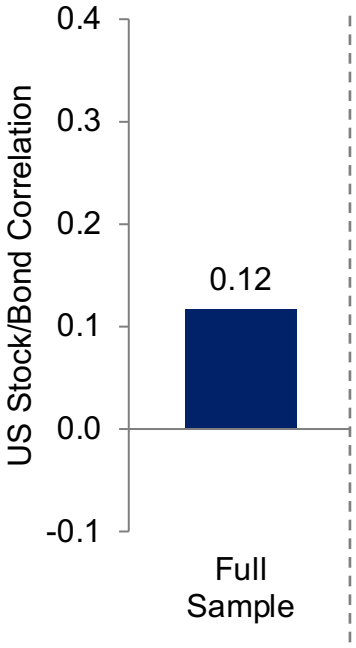
Source: AQR, Bloomberg, Ibbotson Associates (Morningstar), GFD and Datastream. U.S. 60/40 Portfolio is based on 60% S&P 500 and 40% 7-year Datastream US bond index. For stocks, prior to the S&P Ibbotson, from February 1998 through December 2021, SBBI is used from January 1926 through January 1998, and prior to SBBI, GFD is used. For bonds, prior to Datastream from January 1980 through December 2021 we use GFD US Government bonds. We use the BAML 3-Month T-bill Index from July 1992 to December 2021, and prior to this index an AQR Index is used which is constructed by extrapolating daily returns based on yield change and slope of 3-month T-Bills is used from January 1959 to June 1992. Prior to the AQR Index, the GFD 3-month Total Return T-bill Index is used. Please see Appendix for more details on the construction of the return series and macroeconomic environmental indicators. Hypothetical performance results have certain inherent limitations, some of which are disclosed in the Appendix. Past performance is not a guarantee of future performance.

Relationships We've Taken for Granted Might Also Change…

When inflation matters more, traditional assets can be less diversifying

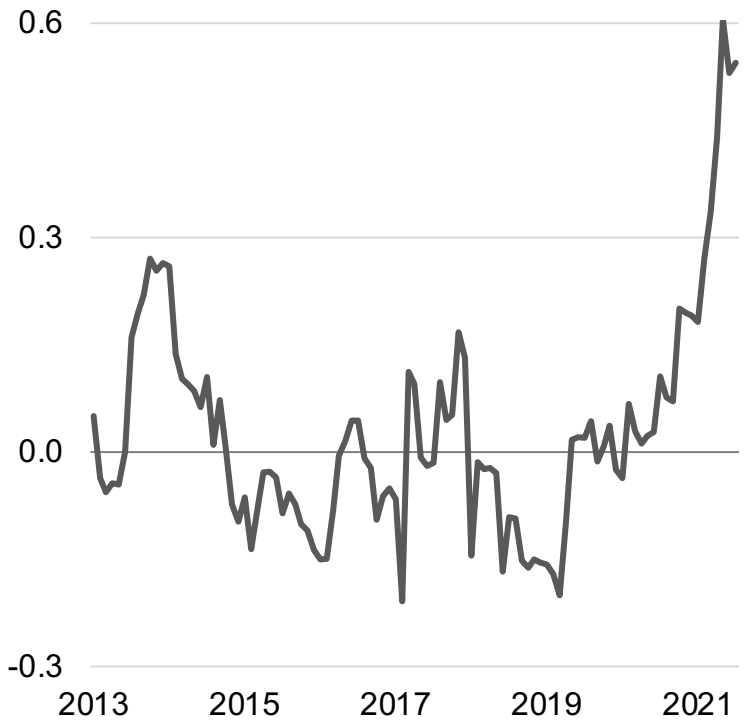
US Stock/Bond Correlation in Different Inflation versus Growth Surprise Periods

January 1, 1972 – December 31, 2021



Trailing 24-Month Correlation

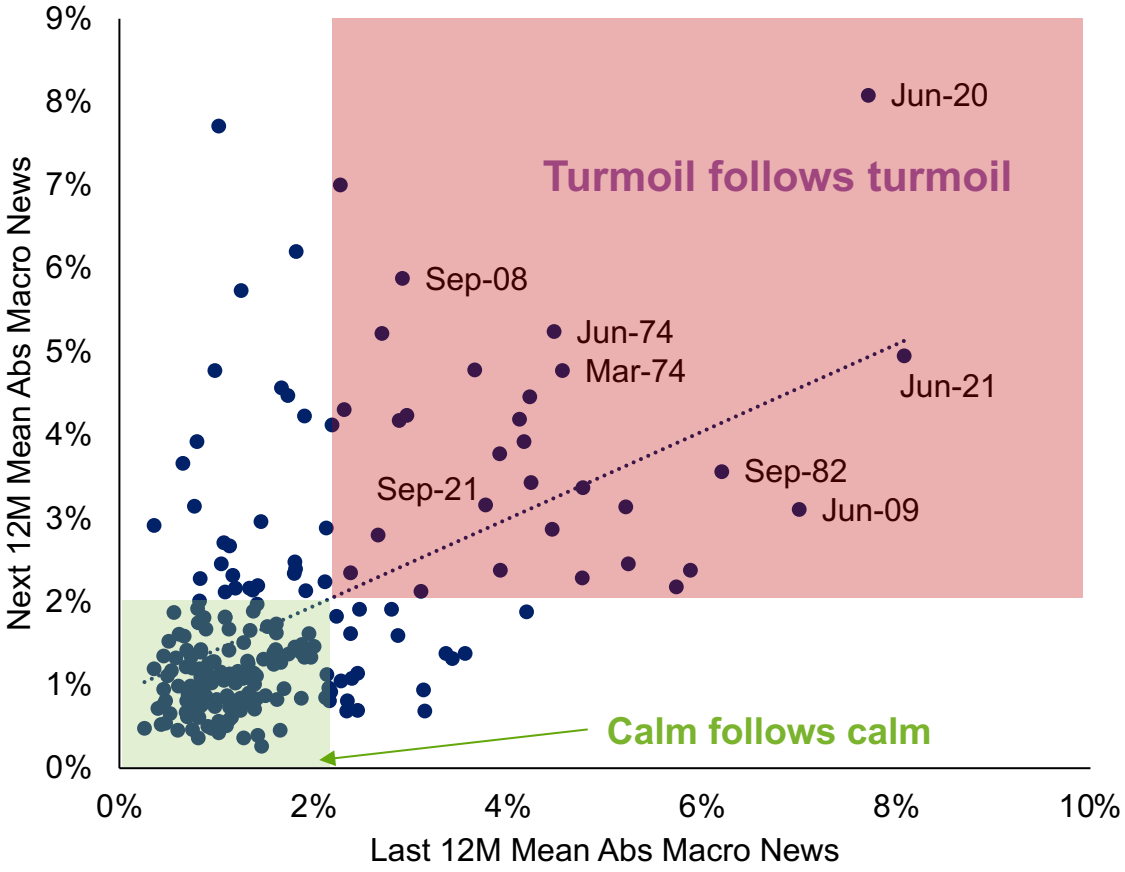
MSCI World / Barclays US Agg, Ten Years ending 6/30/2022



Sources: Bloomberg, Global Financial Data, Survey of Professional Forecasters, AQR. The above chart is an updated version of Exhibit 10 from the Q4 2020 AQR Alternative Thinking publication. US Equities are the S&P 500. US Treasuries are nominal US 10-year Treasuries. Correlations are for U.S. equities and Treasuries and are based on contemporaneous 12-month returns and surprises, at overlapping quarterly frequency. Surprise is defined as realized 12-month CPI or real GDP growth minus SPF starting forecast. Sample is divided into periods when magnitude of inflation surprise was bigger/smaller than growth surprise (ignoring sign of surprise), as a proxy for relative uncertainty. All returns are gross of fees.

What About Macroeconomic Turmoil More Generally?

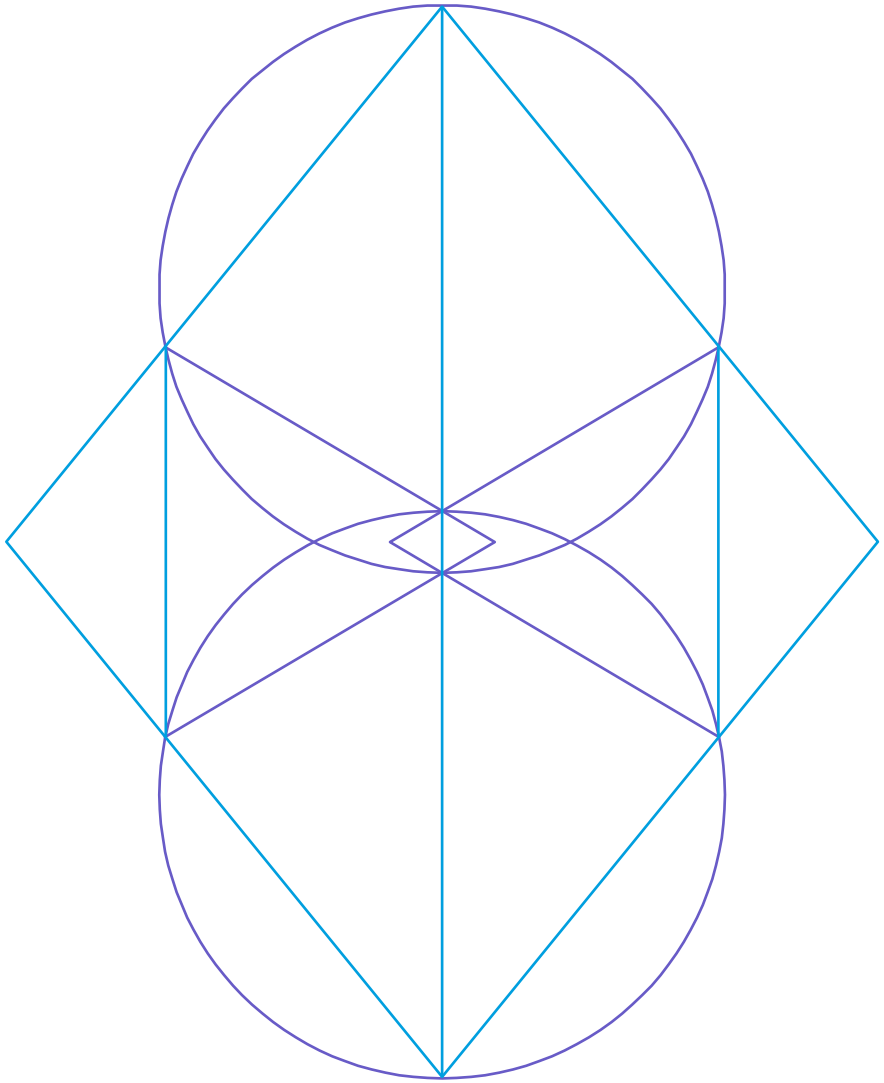
It can take time to go from "unusually crazy" to "normal crazy"



Source: AQR. Macro news is a weighed average of past 12m Real GDP surprise, Industrial Production surprise and CPI surprise as well as YoY change in Real GDP, Industrial Production and CPI.

Breaking Beta?

And a brief detour on two factors

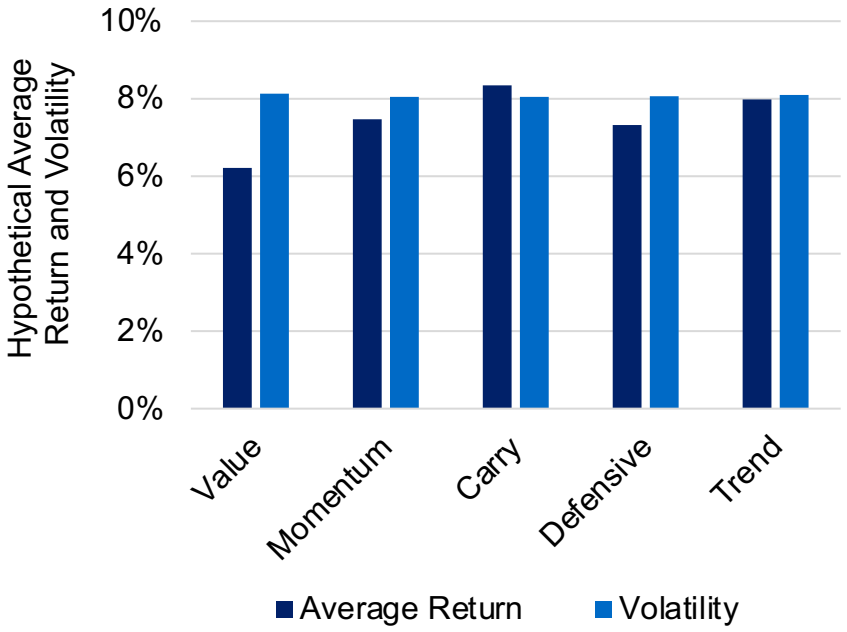


Diversify Efficiently

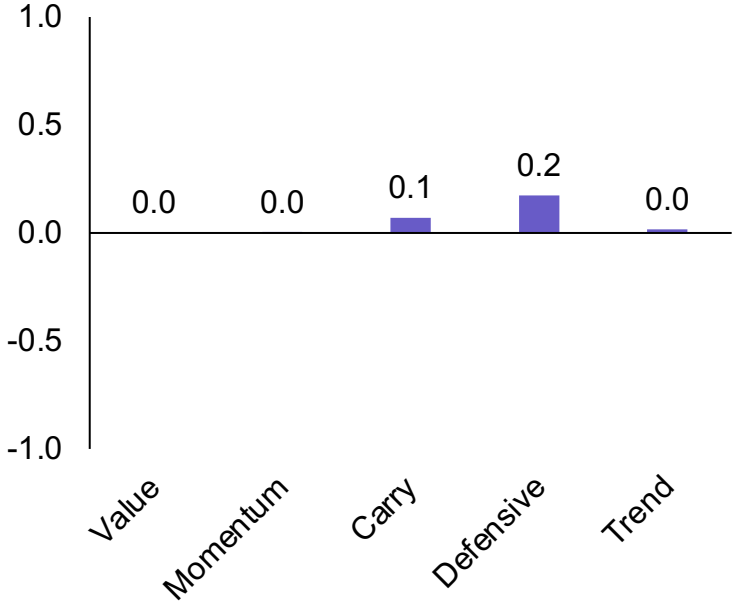
"Breaking Beta" can allow for returns that don't rely on bull markets to work

Five "Simple" Long/Short Styles

January 1, 1972 – December 31, 2021



Correlation to 60/40



Source: AQR. For illustrative purposes only. Value, Momentum, Carry, Defensive and Trend are heavily discounted backtests of style premia as described herein, and net of a 1% annual fee. Please see Appendix for more details on the construction of the return series. Global 60/40 takes 60% Global Equities and 40% Global Bonds. Global Equities is the MSCI World Index. Global Bonds is a GDP weighted composite of Australian, European, Canadian, Japanese, U.K. and U.S. 10-year government bonds. Performance data quoted does not reflect the deduction of fees. If reflected, the fees would reduce the performance quoted. Sharpe ratio is calculated as the difference in annualized arithmetic mean of monthly portfolio excess return over cash divided by annualized volatility of monthly excess returns over cash. Cash rate used is U.S. 3-Month Treasury Bills. Hypothetical performance results have certain inherent limitations, some of which are disclosed in the Appendix.

1. Value Spreads Are Still Around Tech Bubble Peak!

The value comeback may still be in its early innings

Value Spreads for Hypothetical Industry-and-Dollar-Neutral Value Portfolios*

All Country Universe**

December 1, 1994 – September 30, 2022

* Spreads are constructed using the Hypothetical Value portfolio as described below, and are adjusted to be dollar-neutral, but not necessarily beta-neutral through time.

** The Developed and Emerging weights are roughly 90%/10% and derived based on the ACWI cap-weights and ex-ante risk of each of Developed and Emerging sleeves as of 9/30/2022.

Source: AQR. Hypothetical value composite includes five value measures: book-to-price, earnings-to-price, forecast earnings-to-price, sales-to-enterprise value, and cash flow-to-enterprise value; spreads are measured based on ratios. To construct industry-neutrality, the value spreads are constructed by comparing the aforementioned value measures within each industry, which are then aggregated up to represent an entire portfolio. Hypothetical data has inherent limitations, some of which are disclosed in the Appendix. Please see the Hypothetical AQR Developed and Emerging Valuation Model Theme Descriptions in the Appendix. For illustrative purposes only and not representative of an actual portfolio AQR currently manages. Please read the Appendix for important disclosures.

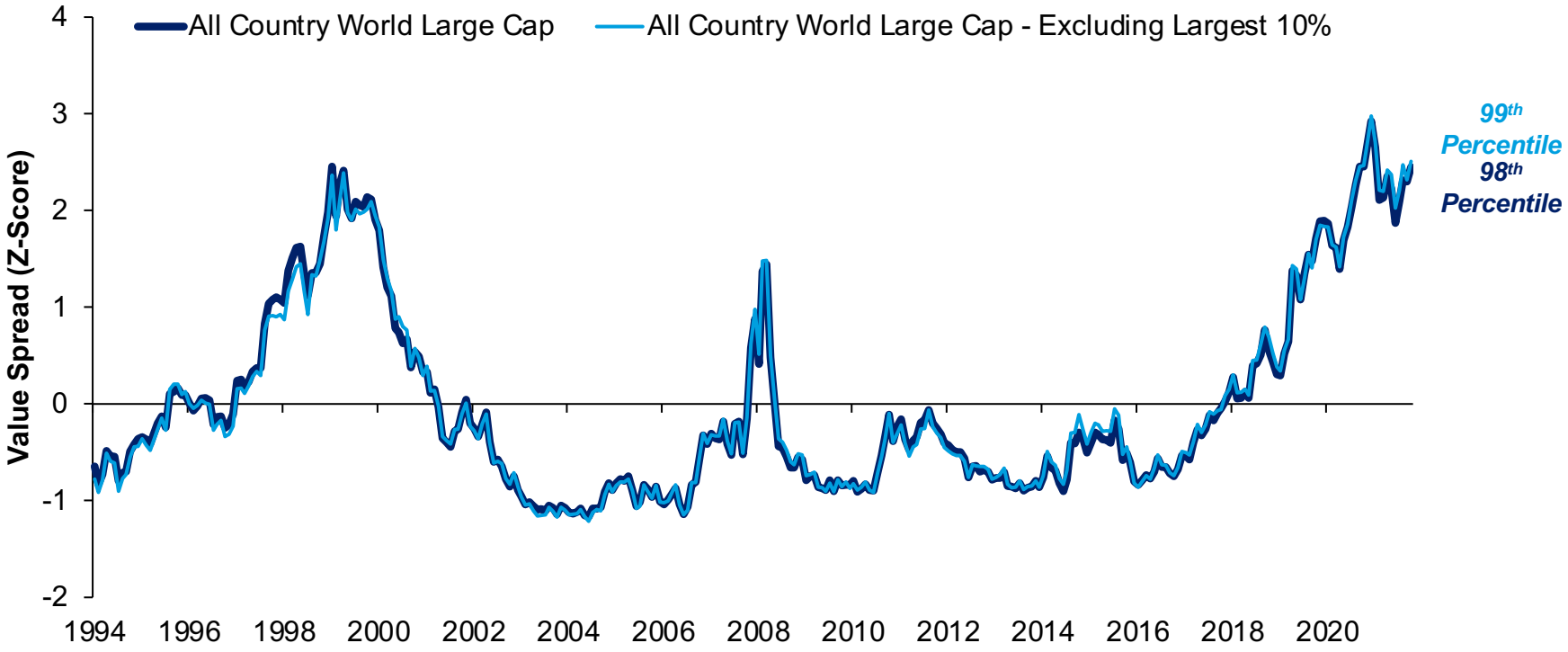
1. It's Not Just the FANGs (or Insert the Latest Acronym Here)

Removing the largest stocks doesn't change the story

Value Spreads for Hypothetical Industry-and-Dollar-Neutral Value Portfolios*

All Country Universe** with and without Largest 10% of Stocks in Each Region***

December 1, 1994 – September 30, 2022

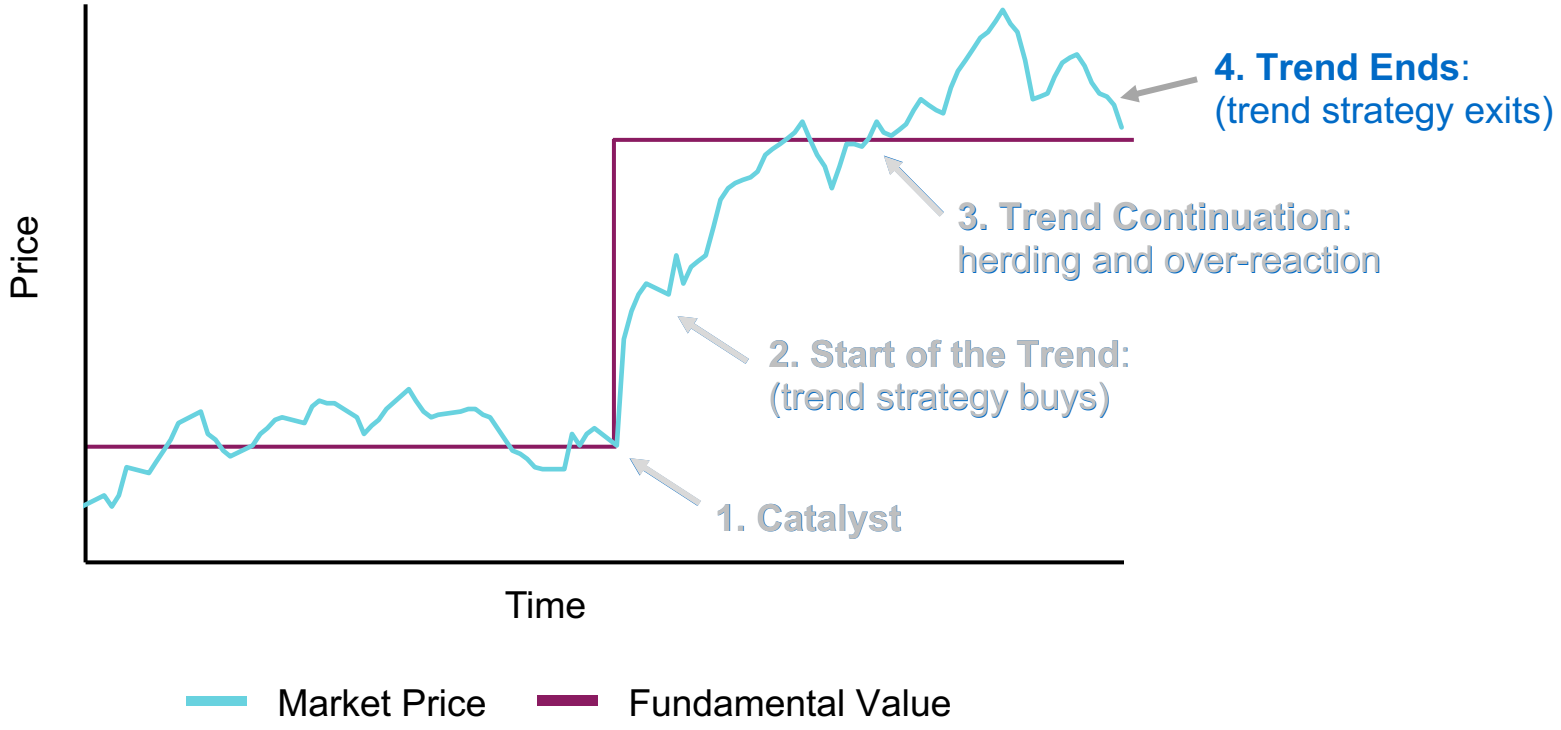


* Spreads are constructed using the Hypothetical Value portfolio as described below, and are adjusted to be dollar-neutral, but not necessarily beta-neutral through time.
** The Developed and Emerging weights are 90%/10% and derived based on the ACWI cap-weights and ex-ante risk of each of Developed and Emerging sleeves as of 9/30/2022.
*** Largest 10% of names overall are removed from both the Developed and Emerging regions.
Source: AQR. Hypothetical value composite includes five value measures: book-to-price, earnings-to-price, forecast earnings-to-price, sales-to-enterprise value, and cash flow-to-enterprise value; spreads are measured based on ratios. To construct industry-neutrality, the value spreads are constructed by comparing the aforementioned value measures within each industry, which are then aggregated up to represent an entire portfolio. Hypothetical data has inherent limitations, some of which are disclosed in the Appendix. Please see the Hypothetical AQR Global Developed and Emerging Valuation Model Theme Descriptions in the Appendix. For illustrative purposes only and not representative of an actual portfolio AQR currently manages. Please read the Appendix for important disclosures.

2. Trend-Following in a Nutshell

Markets tend to exhibit trends, which can create opportunities

Highly Stylized Managed Futures Strategy



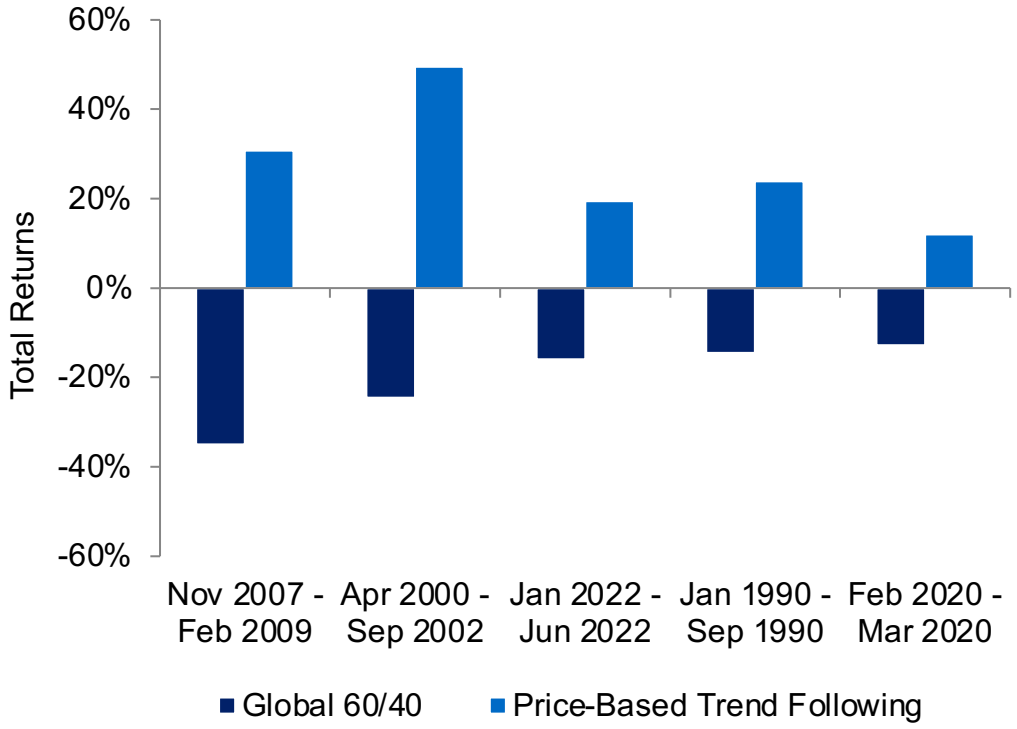
Source: AQR. The chart above is a hypothetical illustration and not representative of an actual investment. Please read important disclosures in the Appendix.

2. Trends With Benefits

Some diversifiers might even help especially when most needed

Hypothetical Trend Performance during 10 Largest Drawdowns for US 60/40 Portfolio

January 1990 – June 2022



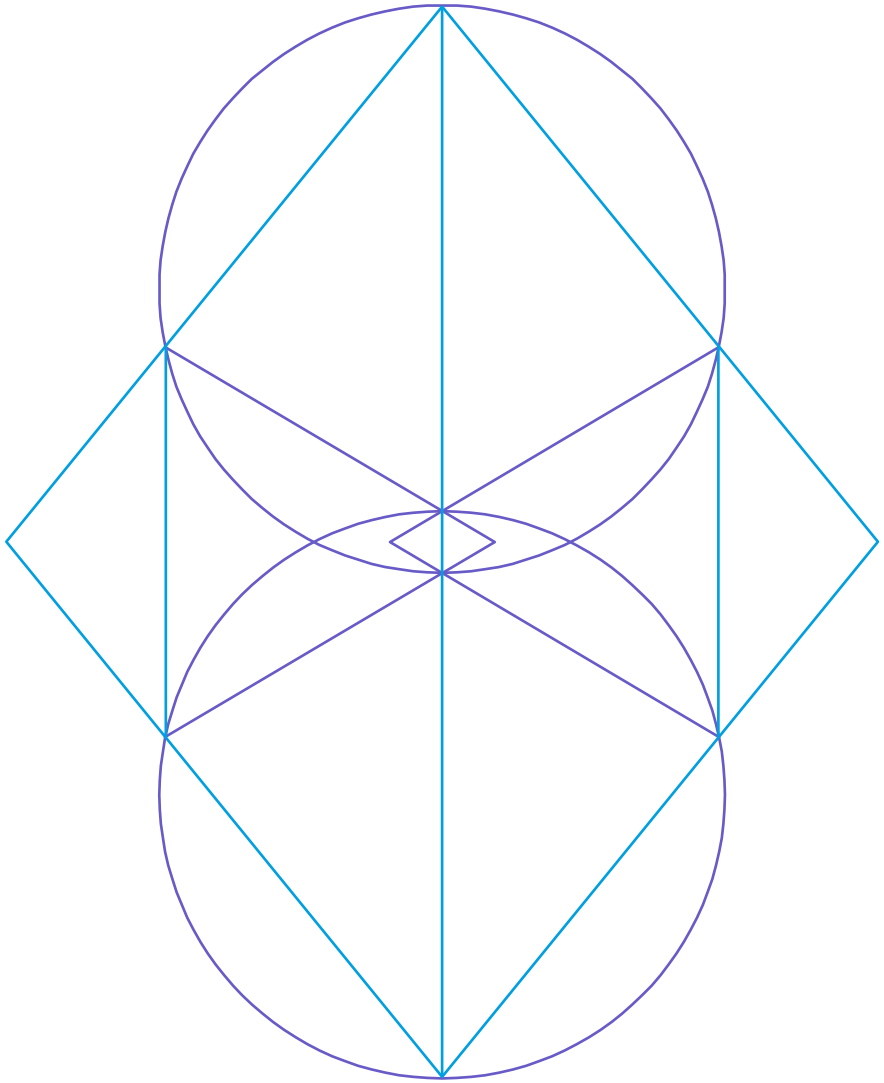
10 Worst Quarters for Private Equity

January 1990 – December 2021

	Private Equity	Price Trend
4Q 2008	-18.1%	20.3%
1Q 2020	-10.3%	5.4%
3Q 2008	-9.6%	-1.6%
1Q 2001	-6.7%	5.8%
3Q 2001	-5.9%	6.6%
3Q 2011	-5.7%	7.6%
1Q 2009	-4.9%	-0.4%
3Q 2002	-4.1%	11.2%
3Q 1998	-3.6%	8.0%
4Q 2000	-2.7%	9.2%
Average	**-7.1%**	**7.2%**

Source, left chart: AQR. The hypothetical multi-asset-class Trend Following strategy return is a backtest, gross of fees and net of estimated transaction costs. Returns of both series are excess of cash (the Merrill Lynch 3 Month Treasury Bill Index). Please see disclosures for a description of the hypothetical Trend Following strategy. These are not the returns of an actual portfolio and are for illustrative purposes only. The hypothetical put buying strategy is shown gross of both fees and transactions costs.
Source, right chart: AQR, Cambridge Associates. Private equity is a 70/30 combination of the Cambridge Associates U.S. Private Equity Index and the Cambridge Associates Global Ex-U.S. Developed Markets Private Equity Index. Price Trend is a combination of 1/3/12 month trend-following strategies across global equities, fixed income, commodities, and currencies scaled to 10% volatility as described in Hurst, Ooi and Pedersen (2014). Price Trend is net of trading costs, a simulated 2% annual management fee and a 20% performance fee (to be consistent with Ooi and Pedersen, 2014).

Living with Diversifiers

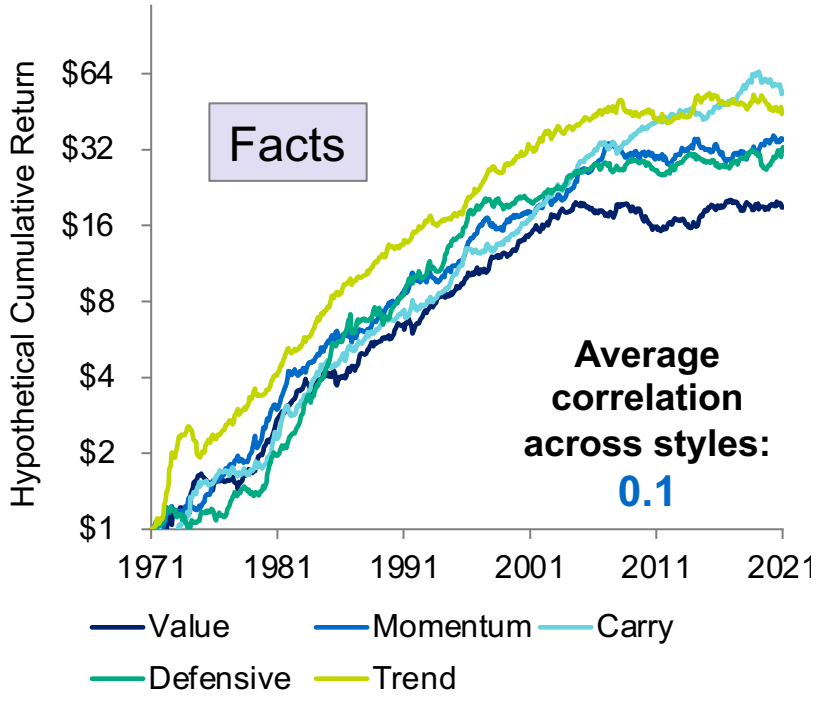


Living With Diversification

Make sure your diversifiers are themselves… diversified

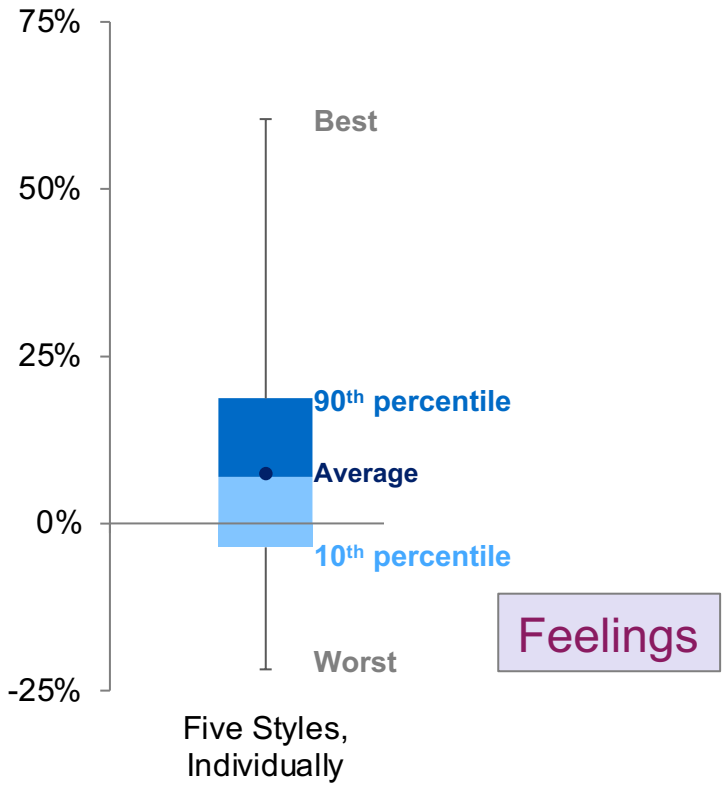
Different Strategies Pay Off at Different Times

January 1, 1972 – December 31, 2021



Range of Outcomes**

January 1, 1972 – December 31, 2021



Source: AQR. For illustrative purposes only. Value, Momentum, Carry, Defensive and Trend are heavily discounted backtests of style premia as described herein, and net of a 1% annual fee. Five Styles is a simple average of the five styles depicted here. Please see Appendix for more details on the construction of the return series. Performance data quoted does not reflect the deduction of fees. If reflected, the fees would reduce the performance quoted. For illustrative purposes, does not represent strategies that AQR currently manages. No representation is being made that any investment will achieve performance similar to those shown. Hypothetical data has inherent limitations of which some are disclosed in the appendix. Please read important disclosures in the Appendix.

Living With Diversification

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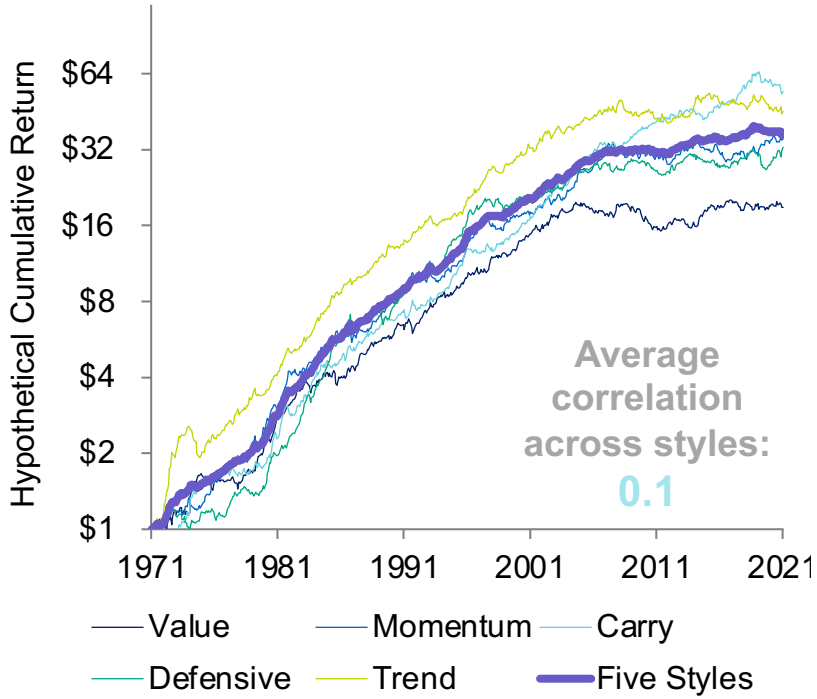
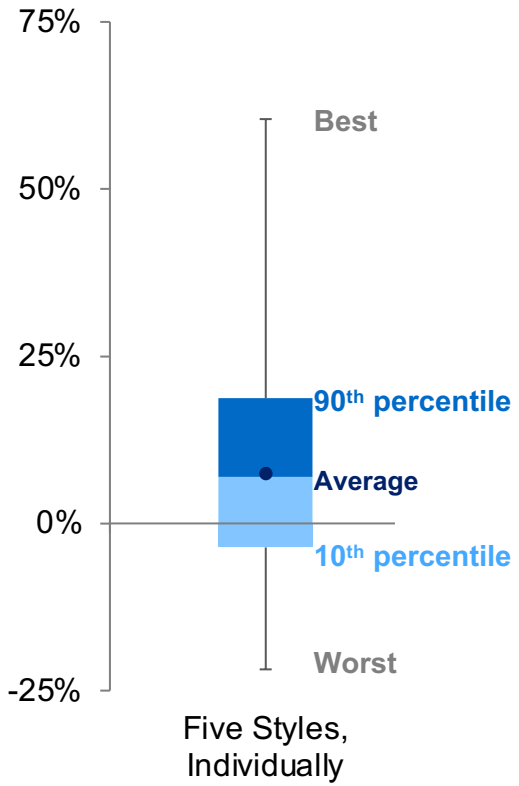
Different Strategies Pay Off at Different Times

Cumulative Return, January 1, 1972 – December 31, 2021



Range of Outcomes**

January 1, 1972 – December 31, 2021



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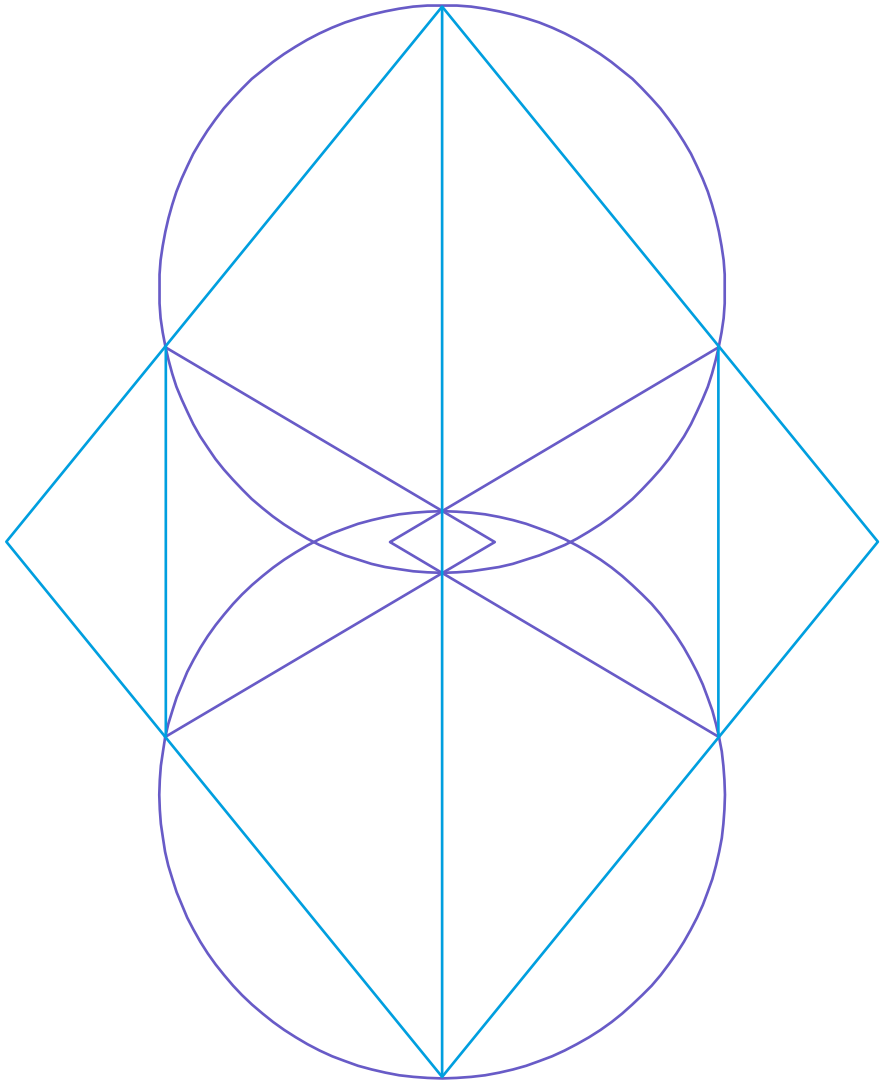
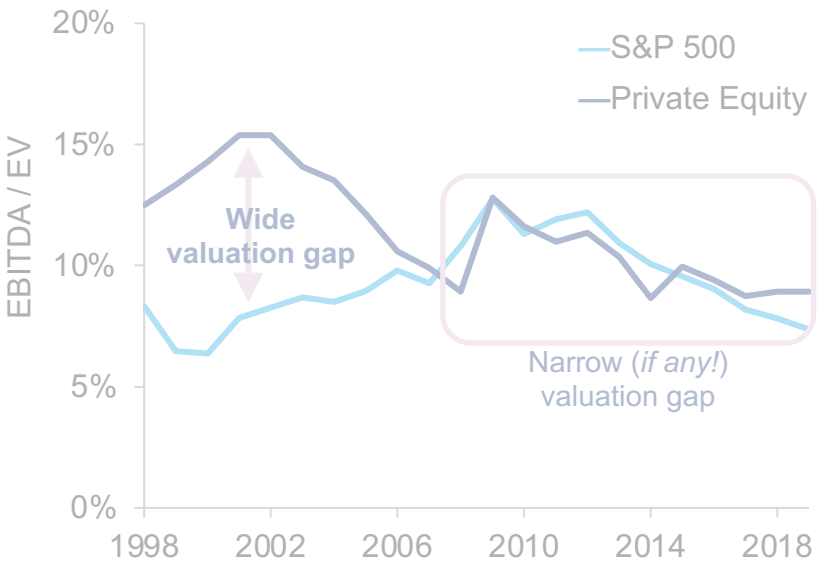
Appendix



Illiquid / Private Assets
Curb your enthusiasm

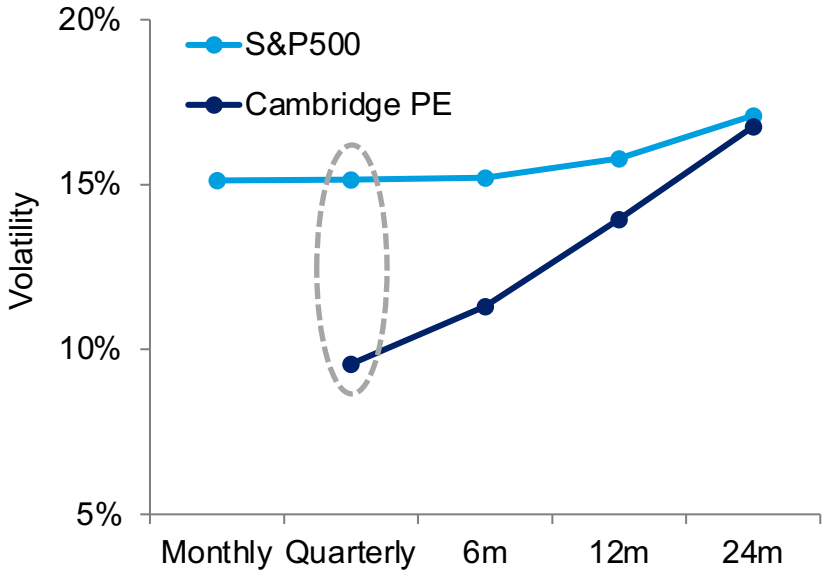
Expected Returns

Valuation Gap Between Public and Private Equity
January 1, 1998 – September 30, 2019



Portfolio Risk

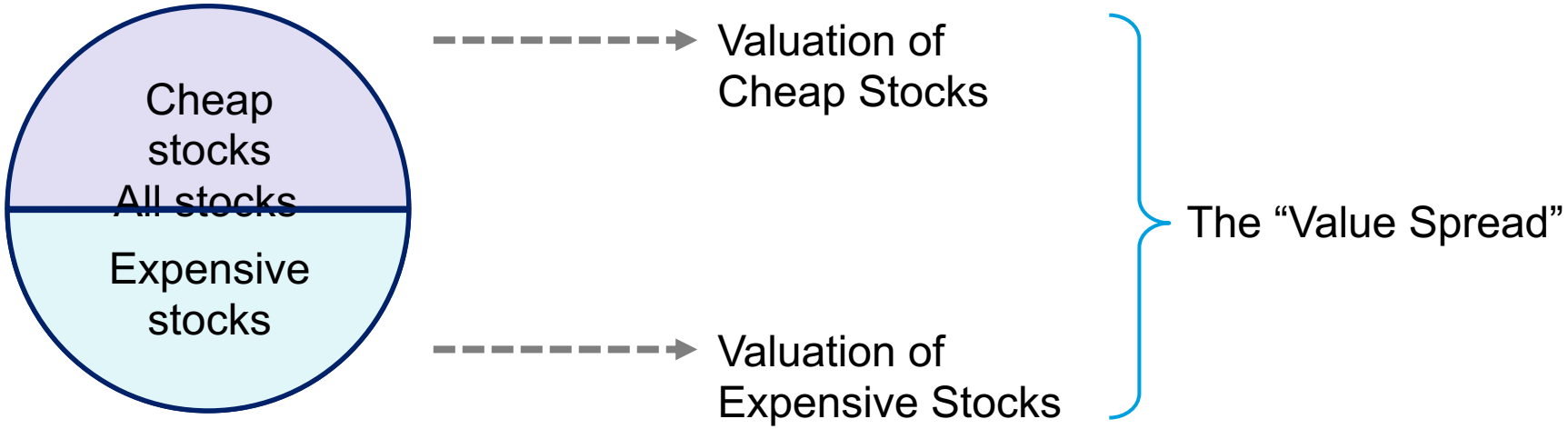
Annualized Volatility at Different Frequencies of Return
January 1986 – June 2021



Source: Left chart uses data from PitchBook Data Inc., Bain & Company, Dan Rasmussen, Verdad, Bloomberg. PE = Private Equity. The data shown is that used in the 2019 AQR paper "Demystifying Illiquid Assets: Expected Returns for Private Equity". EBITDA/EVs from 2009 to 2019 are calendar-year averages of the median EBITDA/EV from Pitchbook and the average EBITDA/EV from Bain & Company (2020). PE EBITDA/EV from 1998 to 2008, and S&P 500 EBITDA/EV from 1998 to 2018 are proprietary datasets from Dan Rasmussen, Verdad. S&P 500 EBITDA/EV for 2019 is from Bloomberg. For illustrative purposes only and not representative of a strategy that AQR currently manages. Please read important disclosures in the Appendix. Past performance is not a guarantee of future results.

1. Value's Done Pretty Well This Year… Is There Still Room to Run?

Intuition for the "Value Spread"



Source: AQR. For illustrative purposes only. Please see additional disclosures for precise definition of value spreads.

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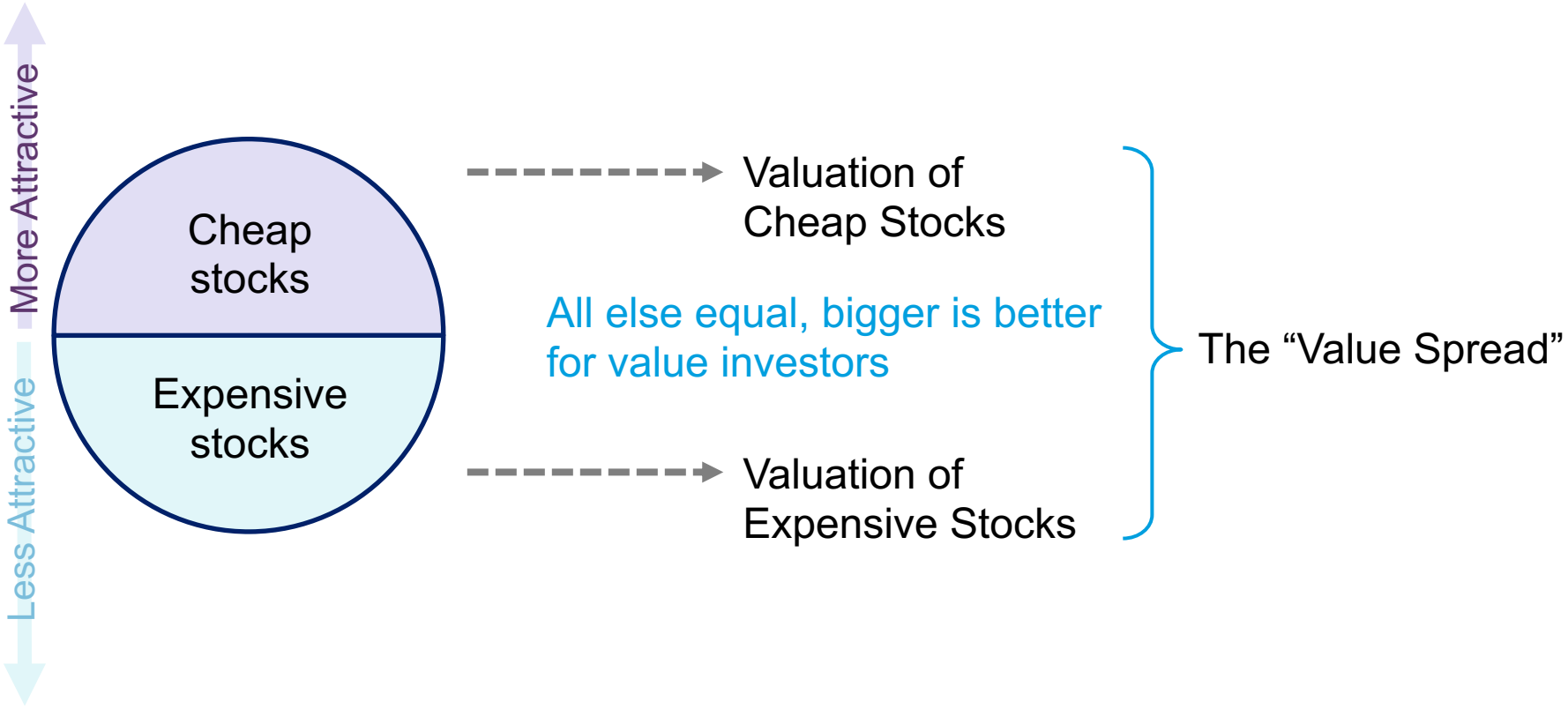

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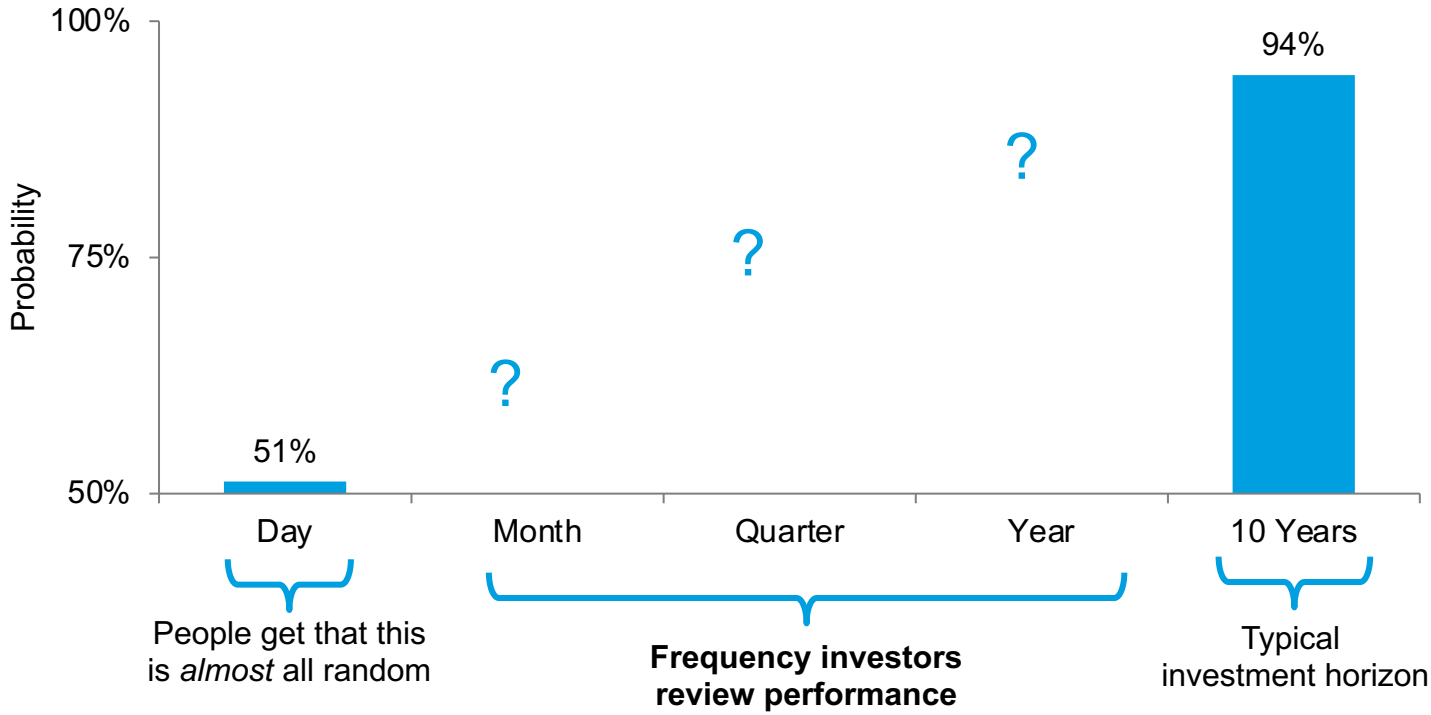
Setting Expectations

Sharpe ratios — though not perfect — can be useful

Probability of a 0.5 Sharpe Ratio Strategy Outperforming Cash



Source: AQR. Sharpe ratio is calculated as the difference in annualized arithmetic mean of monthly portfolio excess return over cash divided by annualized volatility of monthly excess returns over cash. Cash rate used is the Merrill Lynch 3 Month Treasury Bill Index. For illustrative purposes only and not representative of a strategy that AQR currently manages. Please read important disclosures in the Appendix.

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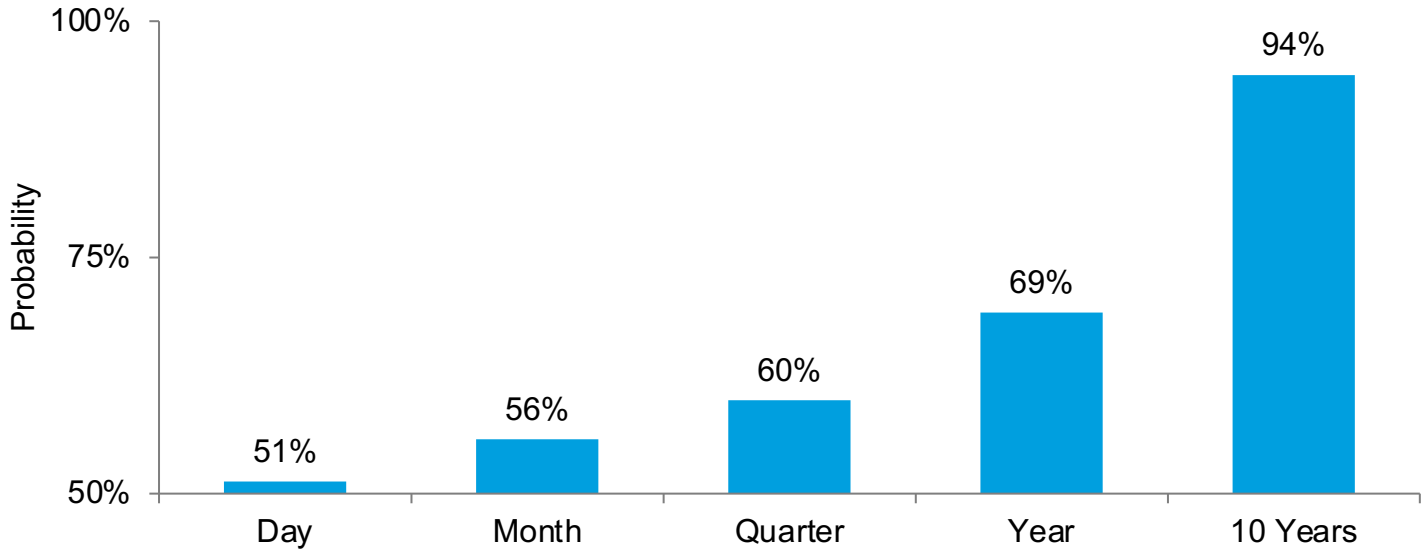

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Performance Disclosures, continued

There is a risk of substantial loss associated with trading commodities, futures, options, derivatives and other financial instruments. Before trading, investors should carefully consider their financial position and risk tolerance to determine if the proposed trading style is appropriate. Investors should realize that when trading futures, commodities, options, derivatives and other financial instruments one could lose the full balance of their account. It is also possible to lose more than the initial deposit when trading derivatives or using leverage. All funds committed to such a trading strategy should be purely risk capital.

Performance Disclosures, continued

Broad-based securities indices are unmanaged and are not subject to fees and expenses typically associated with managed accounts or investment funds. Investments cannot be made directly in an index.

The S&P 500 Index is the Standard & Poor's composite index of 500 stocks, a widely recognized, unmanaged index of common stock prices.

The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets.

The Bloomberg Barclays Global Treasury Index tracks fixed-rate local currency government debt of investment grade countries.

The Bloomberg Barclays U.S. Treasury Index is a market-capitalization weighted index that measures the performance of public obligations of the U.S. Treasury that have a remaining maturity of one year or more.

The ICE BofA US 3-Month Treasury Bill Index is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue.

The Cambridge Associates U.S. Private Equity Index and the Cambridge Associates Global Ex U.S. Developed Markets Private Equity Index are from the Cambridge Associates LLC Database.

Data Details

Hypothetical AQR Global Developed Value Factor
The Hypothetical AQR Global Developed Value Factor is the factor return of a hypothetical Value portfolio built upon 4 multiples: book-to-price (B/P), trailing-earnings-to-price (E/P), forward-earnings-to-price (FE/P) and sales-to-enterprise-value (S/EV). Each factor is built to be industry neutral and dollar-neutral by using within-industry value scores. Factor returns are gross of advisory fees and transaction costs. The universe is approximately 2,000 stocks across Europe, Japan, and U.S. The risk model used is the Barra Developed Equity Risk Model (BIMDEV_noCURR_301L).

Hypothetical AQR U.S. Large Cap, International, and Emerging Markets Valuation Theme Model Descriptions:
The AQR Value Portfolio model utilizes the full set of underlying factors that compose the Valuation theme within AQR's Global Stock Selection strategy to evaluate stocks and create a long-short, market-neutral and industry-neutral equity portfolio based exclusively on these signals. The Valuation Theme is designed to capture the tendency for relatively cheap assets to outperform relatively expensive ones. Model returns are from September 1, 1984 – September 30, 2022. Regional data begins at varying dates: Emerging (October 1994), Europe (February 1990), U.S. (January 1984), Canada (February 1990), Japan (January 1990), Australia (January 1994), Developed Asia (January 1990). The investment universes include a broad subset of liquid tradeable large cap stocks within the various regions. The risk models used are the Barra U.S. Equity Risk Model (USE3L), Barra Developed Equity Risk Model (BIMDEV_noCURR_301L), and Barra Global Equity Risk Model (GEM3L_noCurr).

Macro Sensitivity Analysis Details
Construction of indicators

Construction of Macro indicators
Each of our macro indicators combines two series, which are first normalized to Z–scores: that is, we subtract a historical mean from each observation and divide by a historical volatility. For the growth and inflation indicators we use in-sample means and volatilities because we do not have long histories of economist forecasts needed to construct the surprise series. This choice does not seem to change any major results. When we classify our quarterly 12–month periods into, say, 'growth up' and 'growth down' periods, we compare actual observations to the median so as to have an equal number of up and down observations (because we are not trying to create an investable strategy where data should be available for investors in real time, we use the full sample median).

The underlying series for our **growth** indicator are the Chicago Fed National Activity Index (CFNAI) and the "surprise" in industrial production growth over the past year. Since there is no uniquely correct proxy way to capture "growth," averaging may make the results more robust and signals appropriate humility. CFNAI takes this averaging idea to extremes as it combines 85 monthly indicators of U.S. economic activity. The other series – the difference between actual annual growth in industrial production and the consensus economist forecast a year earlier – is narrower but more directly captures the surprise effect in economic developments. We use median forecasts from the Survey of Professional Forecasters data as published by the Philadelphia Fed. While data surprises a priori have a zero mean, this series has exhibited a downward trend in recent decades, reflecting the (partly unexpected) relative decline of the U.S. manufacturing sector.

Note that our growth indicator is constructed from fundamental economic data, rather than asset market returns. Market–based proxies of economic growth – which might include equity market returns, the relative performance of cyclical industries, dividend swaps, and estimates from cross–sectional regressions of asset returns on growth surprises – are "too close" to the patterns we try to explain. Our choice brings its own challenges: macroeconomic data are backward-looking, published with lags and later revised, while asset prices are clearly forward-looking. The impact of publication lags and the mismatch between backward- and forward-looking perspectives can be mitigated by using longer windows. Thus, we use contemporaneous annual economic data and asset returns through our analysis (past-year data with quarterly overlapping observations). Arguably composite growth surprise indices are the best proxies of economic growth news, but such composites are available at best from the1990s. Forecast changes in economist surveys as well as business and consumer confidence surveys may be the next best choices because they are reasonably forward-looking and timely. We focus on U.S. data, which have the longest histories. Finally, it is not clear how real economic growth ties to expected corporate cash flow growth (e.g., earnings per share) that influence stock prices, or to real yields that influence all asset prices but especially those of bonds.

Our **inflation** indicator is also an average of two normalized series. One series measures the de–trended level of inflation (CPIYOY minus its mean, divided by volatility), while the other measures the surprise element in realized inflation (CPIYOY minus consensus economist forecast a year earlier).

Macro Sensitivity Analysis Details

Investment proxies and data sources

Investment Returns

Investment	Proxy	Source
Global Equities	MSCI World Index USD	Bloomberg
Global Bonds	GDP-weighted portfolio of G6 10-year government bonds (hedged to USD)	Global Financial Data
Global 60/40	60% Global Equities, 40% Global Bonds as defined above	As above
Multi-Asset Long/Short Style Premia	These are hypothetical long/short strategies as described in Ilmanen, Maloney and Ross (2014). Hypothetical returns are gross of fees, but are heavily discounted, as described below, to account for transaction costs and real world constraints. Each series is risk scaled to target 8% volatility. The four market-neutral multi-asset style premia (Value, Momentum, Carry and Defensive) are hypothetical long/short strategies applied in stock selection, industry allocation, country allocation in equity, fixed income and currency markets, and commodities. Each style allocates 50/50 risk weights to stock and industry selection (SS) and asset allocation (AA) strategies. For AA we use the following risk weights: 33% equity country allocation, 25% fixed income, 25% currencies, 17% commodities. We combine several data sources to produce a sufficiently long dataset: • Since 1990, we use style premia strategies as described in "Investing With Style" (2012). For SS value, momentum and defensive we use 50/50 risk weights between stock selection within industries and across industries. For SS carry we use the dividend yield strategy returns in Ken French's data library. These series incorporate t-costs, constraints and discounting. • For 1972-1989, we source value and momentum style returns from "Value and Momentum Everywhere" (Journal of Finance, 2013), defensive style returns from "Betting Against Beta" (Journal of Financial Economics, 2013), and SS carry from the dividend yield strategy returns in Ken French's data library. We construct the AA carry style premia before 1990 as well as some early histories of AA value, momentum and defensive styles using AQR in-house backtests. These backtests are similar to those described above, but over a narrower universe. We discount these historical backtests by 50% to account for t-costs and real world constraints. While the SS style premia proxies we use since 1990 are beta-neutral, the value and momentum premia before 1990, and the SS carry premium throughout, are 'only' dollar-neutral and may contain moderate empirical beta exposures. The defensive style premia are beta-neutral throughout. The multi-asset trend strategy applies 12-month trend-following strategies in four asset classes: equities, fixed income, currencies and commodities. From 1985, we use "Time Series Momentum" (Journal of Financial Economics, 2012). For 1972-1984, we use in-house backtests based on the same asset classes, but including 1-, 3- and 12-month momentum, and starting with a smaller asset universe that grows during the period as more assets become available. This series is discounted 50% until August 2012 (when AQR launched its Style Premia strategy) and 25% thereafter.	AQR

The Alternative Risk Premia Perspective

Focusing on five intuitive Premia

Value	Relatively cheap assets tend to outperform relatively expensive ones
Momentum	An asset's recent relative performance tends to continue in the near future
Carry	Higher-yielding assets tend to provide higher returns than lower-yielding assets
Defensive	Lower-risk and higher-quality assets tend to generate higher risk-adjusted returns
Trend	An asset's recent absolute performance tends to continue in the near future

The five premia implemented in the alternative premia strategy all share a number of key characteristics:

- ✓ **Persistent** Long-term evidence supported by economic intuition
- ✓ **Pervasive** Exist broadly across regions and asset groups
- ✓ **Liquid** Can be captured by trading liquid instruments
- ✓ **Dynamic** Limited static exposure to any asset or market
- ✓ **Market Neutral** Can be implemented in a market neutral manner over the long-term

Source: AQR. Past performance is not a guarantee of future performance. Please read important disclosures in the Appendix.

Performance Disclosures

Trend-Following Strategy

The Hypothetical Trend-Following Strategy model uses data from January 1880 onward. The investment strategy is based on trend-following investing which involves going long markets that have been rising and going short markets that have been falling, betting that those trends over the examined look-back periods will continue. The strategy was constructed with an equal-weighted combination of 1-month, 3-month, and 12-month trend-following strategies for 67 markets across 4 major asset classes: 29 commodities, 11 equity indices, 15 bond markets, and 12 currency pairs. Since not all markets have return data going back to 1880, we construct the strategies using the largest number of assets for which return data exist at each point in time. We use futures returns when they are available. Prior to the availability of futures data, we rely on cash index returns financed at local short rates for each country. Please see Figure 2 for additional details. The strategy targets a long-term volatility target of 10% but does not limit volatility during periods where realized volatility may be higher or lower than this number.

Hypothetical performance is gross of advisory fees and net of transaction costs, unless stated otherwise. In order to calculate net-of-fee returns, we subtracted a 2% annual management fee and a 20% performance fee from the gross-of-fee, net-of-transaction-cost returns to the strategy. Actual fees may vary depending on, among other things, the applicable fee schedule. AQR's fees are available upon request and also may be found in Part 2A of its Form ADV. The transactions costs used in the strategy are based on AQR's estimates of average transaction costs for each of the four asset classes, including market impact and commissions. The transaction costs are assumed to be twice as high from 1993 to 2002 and six times as high from 1880–1992. The transaction costs used are shown in Figure 1.

This model is not based on an actual portfolio AQR manages. The performance of the AQR Managed Futures Strategy may be greater or less than the performance of the Trend-Following Strategy due to, among other things, differences in the investment strategy pursued by the AQR Managed Futures Strategy and the number of the holdings in and composition of the AQR Managed Futures Strategy's portfolio.

The benchmark and relevant cash rate is assumed to be 3-month Treasury bills. Prior to 1929 when 3-month Treasury bills became available, the benchmark and relevant cash rate is assumed to be the NYSE call money rates (the rates for collateralized loans) through 1920, and returns on short-term government debt (certificates of indebtedness) from 1920 until 1929.

Figure 1

Asset Class	Time Period	One-Way Transaction Costs (as a % of notional traded)
Equities	1880 – 1992	0.34%
	1993 – 2002	0.11%
	2003 – Present	0.06%
Fixed Income	1880 – 1992	0.06%
	1993 – 2002	0.02%
	2003 – Present	0.01%
Currencies	1880 – 1992	0.18%
	1993 – 2002	0.06%
	2003 – Present	0.03%
Commodities	1880 – 1992	0.58%
	1993 – 2002	0.19%
	2003 – Present	0.10%

Performance Disclosures

AQR Capital Management, LLC
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