



First Quarter 2023

# Value: Why Now? Capturing the Comeback in Its Early Innings

A Long/Short Value Strategy Is as Attractive  
as It Has Been in the Past 30 Years

## Executive Summary

The value factor has delivered attractive long-term returns but has also weathered difficult short-term periods, typically when investors over-extrapolate growth. While these times are painful for investors, the subsequent recoveries are lucrative for those that stick with the factor. The 3-year stretch from 2017 to 2020 was a particularly painful period for value,

but value's strong performance in 2022 indicates it is in the early phase of its comeback.

In this piece, we summarize the evidence for why we believe long/short value continues to be an exceptional go-forward opportunity. We then review how investors can adapt their portfolios to this historic opportunity.

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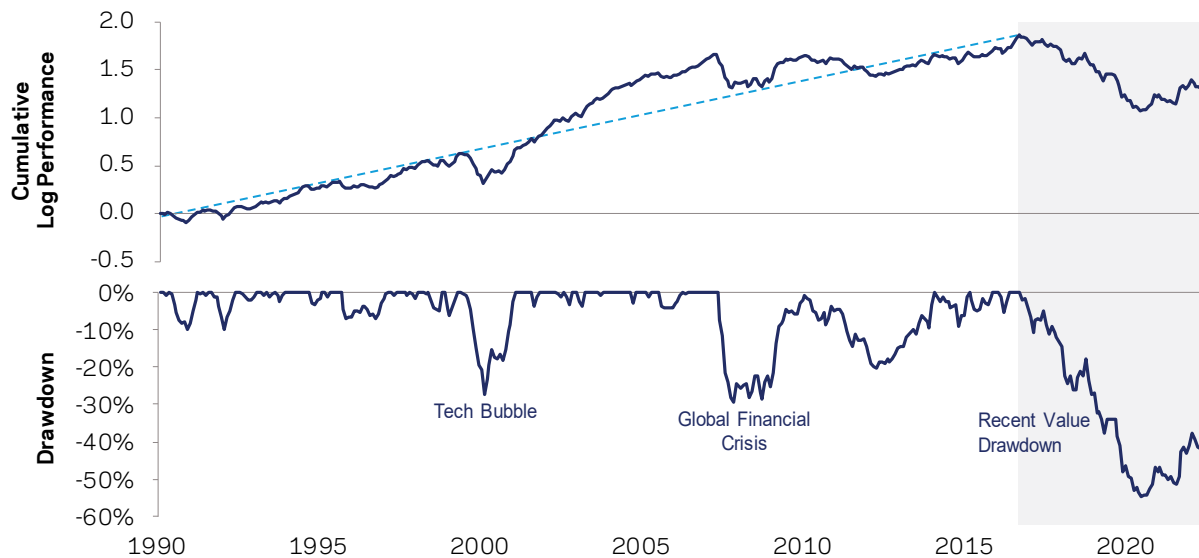
# We Believe the Value Factor Is in the Early Stages of a Comeback

The value factor - which we define as going long cheap companies and shorting expensive ones within industry<sup>1</sup> and with no overall market exposure - has delivered an attractive return over the long-term (**Exhibit 1**). However, prices occasionally become radically dislocated from fundamentals as market participants over-extrapolate growth, leading to short-term poor performance for the value factor. This was the case in 2017-2020 and was also observed during the tech bubble and the global financial crisis (**Exhibit 1**).

While these periods of irrational exuberance are painful for value investors as they develop, they are extremely lucrative as value reverses and markets return to respecting fundamentals. We believe we are currently in the early stages of a reversal, making the value factor unusually attractive on a go-forward basis.

## Exhibit 1: Hypothetical Global Value Performance

January 1, 1990 - September 30, 2022



Source: AQR. Return data is that of a Hypothetical Style Premia Standalone Developed Large Cap Value Factor net of a 2% model mgmt. fee and 20% performance fee, please see description in the Appendix. Hypothetical performance data has certain inherent limitations, some of which are discussed in disclosures. For illustrative purposes only and not representative of an actual portfolio AQR currently manages. Please read important disclosures in the Appendix. All hypothetical performance figures contained herein are in USD unless noted otherwise.

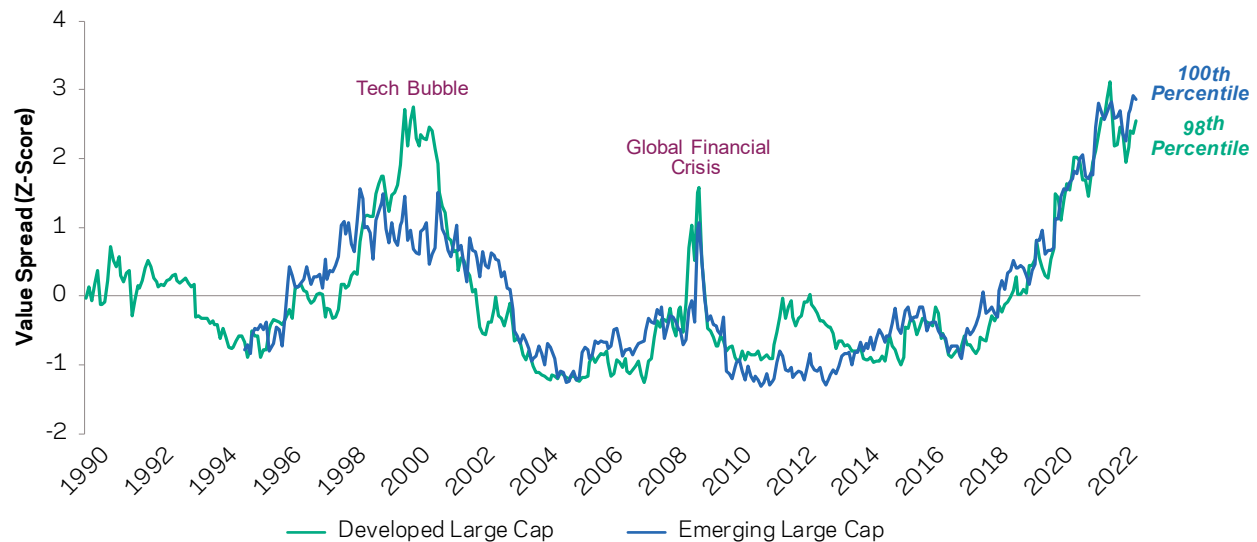
1 Within industry means for instance comparing banks vs. banks, airlines vs. airlines, software companies vs. software companies.

# Why Do We Believe Value Is Positioned for Outperformance?

The historic return opportunity in value can be viewed through two complementary lenses. First, value spreads, which measure the difference in valuation multiples between cheap and expensive companies within industry, are at extreme levels - levels similar to what we observed around the tech bubble

(**Exhibit 2**). In the US, for example, expensive companies are currently trading at a price-to-earnings multiple more than 3x that of cheap companies within industry, i.e. 34 times earnings vs 10, which is significantly higher than the 2x ratio observed historically within industry.<sup>2</sup>

**Exhibit 2: Value Spreads for Hypothetical Industry-and-Dollar-Neutral Value Portfolios\***  
January 1, 1990 - 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.

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 Global Developed and Emerging Value Factor Description in the Appendix. For illustrative purposes only and not representative of an actual portfolio AQR currently manages. Please read the Appendix for important disclosures.

You might wonder, though, whether value spreads are at extreme levels for a fundamental reason - which gets to our second lens: implied growth rates. In order to justify current valuation multiples from a fundamental perspective, expensive companies in developed

markets would have to outgrow their cheap industry peers by approximately 90% over the next five years (**Exhibit 3**). This is 3-5x higher than analyst expectations and almost 2x the maximum growth differential seen in the historical sample.

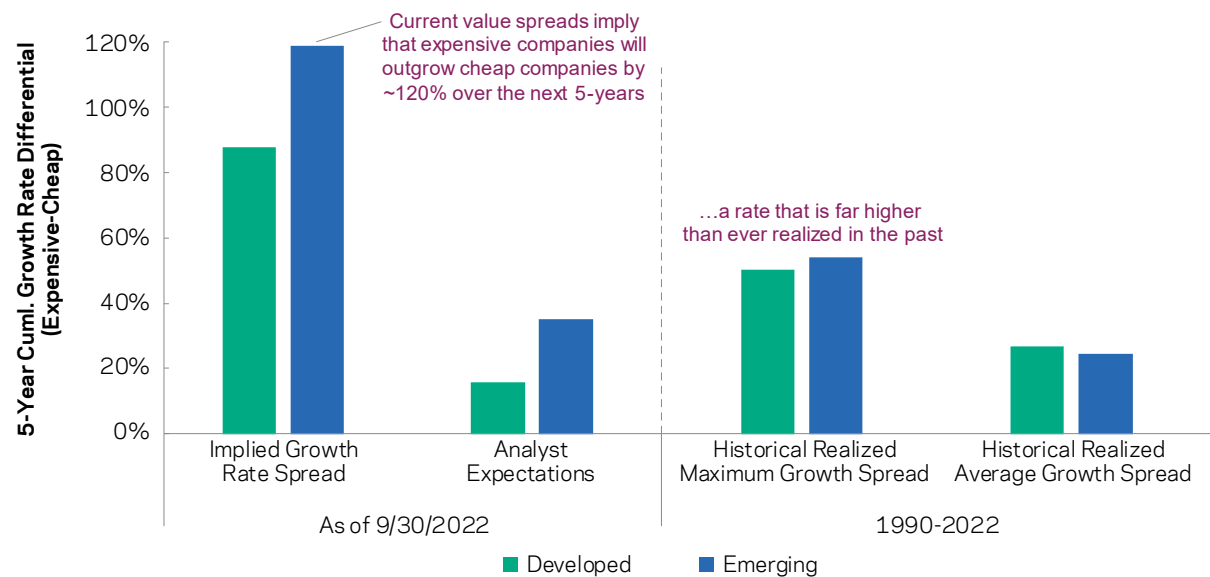
2 Note that Exhibit 2 is expressed in different units to those described in this sentence. Exhibit 2 corresponds to standard deviation events. In other words, positive numbers mean expensive stocks are more expensive than usual relative to cheap stocks, while negative numbers mean expensive stocks are less expensive than usual relative to cheap stocks.

In other words, value spreads are likely at extreme levels because market participants are over-extrapolating growth, leading to extremely attractive forward-looking expected returns

for the value factor. This overall finding is robust across various methodologies, including adjustments for intangibles, adjustments for repurchases, and exclusion of mega cap stocks.

### Exhibit 3: Hypothetical Expensive vs. Cheap Stocks: 5-Year Implied vs. Historical Growth Rate Differential

January 1, 1990 – September 30, 2022



Source: AQR. Data for Emerging begins in December 1994. The Value portfolio is formed based on five metrics: book-to-price, earnings-to-price, forecasted earnings-to-price, sales-to-price and cash flow-to-enterprise value. Please see the AQR Hypothetical Global Developed and Emerging Value Factor description in the Appendix. Implied growth rates are derived based on current valuation spreads reverting to median 5-year forward spreads, under the assumption that spread convergence comes from changes in fundamentals, while prices remain constant. Analyst expectations are based on the difference in expected (IBES median) long-term earnings growth of the most expensive stocks (growth stocks) vs. the cheapest stocks (value stocks). Historical realized growth rates are based on an average across five fundamental growth rates (book value, earnings, sales forecasted earnings and cash flow) and are calculated for a buy-and-hold value portfolio formed every month and held for the subsequent 5 years. Hypothetical data has inherent limitations, some of which are disclosed in the Appendix. Past performance is not a reliable indicator of future results.

## Value Can Do Well in Any Macroenvironment

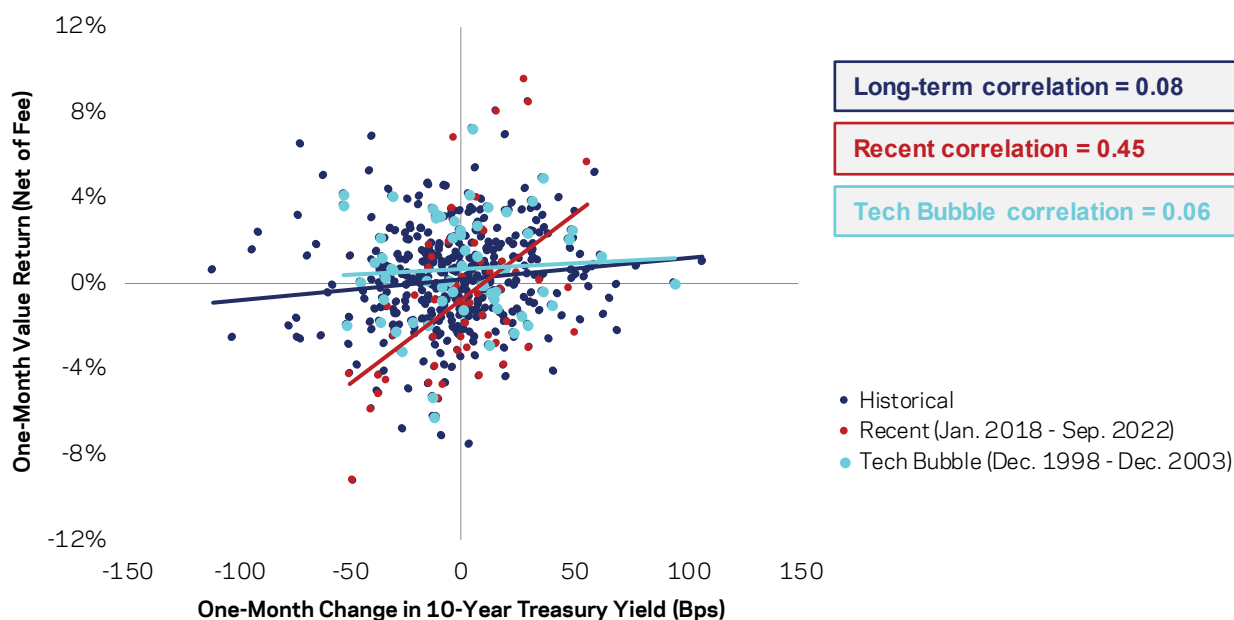
We believe the extremely attractive forecast for value is valid irrespective of the future macro environment. Why? Market-neutral, industry-neutral implementations of value have, over the long run, demonstrated low correlations to interest rate changes, recessions/recoveries, and equity market drawdowns/drawups.

At first glance, a positive relationship between value and interest rate changes may seem intuitive since expensive "growth" companies may have a relatively larger proportion of cash flows farther out in the future when compared to cheap companies. However, it turns out that this difference in the timing of cash flows, while directionally true, is simply

not large enough to matter. Why? Because, while expensive companies do tend to outgrow cheap ones, that growth advantage tends to be fleeting - it tends to collapse to low levels in 5 years. The long-run empirical evidence is consistent with this view producing a near zero correlation between value and interest rate changes (**Exhibit 4**). While the recent

short-term correlation has crept up (0.45), we believe this is temporary since it lacks an economic foundation. The second half of 2022 validated this view as the relationship between value and interest rate changes completely broke down.

**Exhibit 4: Hypothetical U.S. Value Returns vs. Changes in 10-Year Yields: Monthly**  
December 1, 1983 - September 30, 2022



Source: AQR. Long-term correlation is measured over the full period December 1983 - September 2022. Correlation represents contemporaneous relationship between Change in 10 Year U.S. Treasury Yields and Value returns. Return data is for the Hypothetical Style Premia Standalone U.S. Large Cap Value Factor net of a 2% model mgmt. fee and 20% performance fee, please see description in the Appendix. Hypothetical performance data has certain inherent limitations, some of which are discussed in disclosures. For illustrative purposes only and not representative of an actual portfolio AQR currently manages. Please read important disclosures in the Appendix. All hypothetical performance figures contained herein are in USD unless noted otherwise.

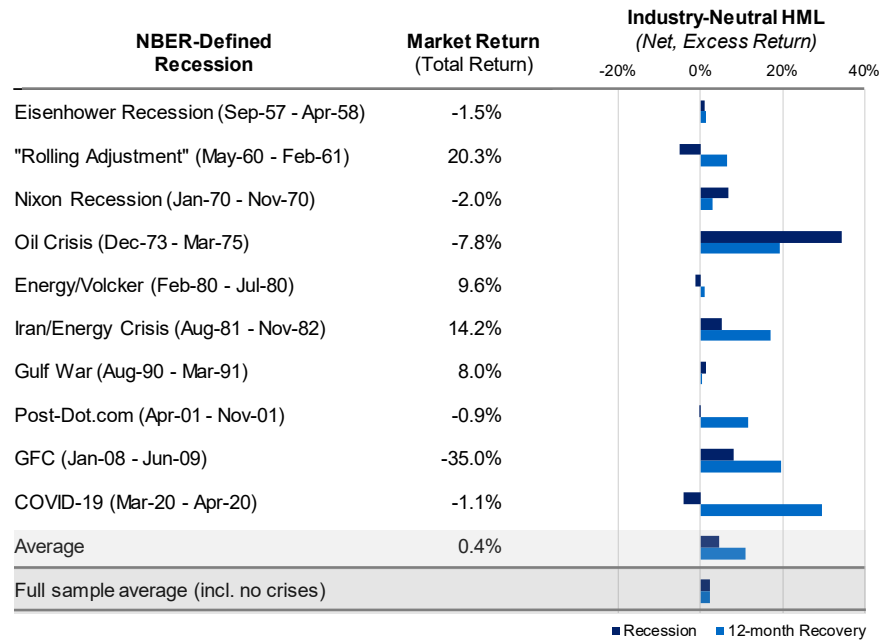
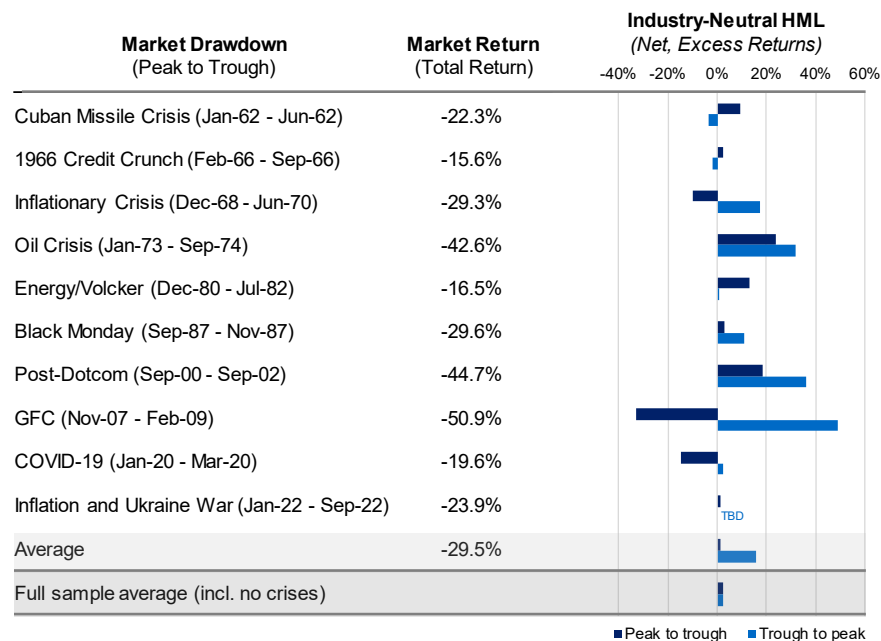
Given our belief in an industry-neutral and market-neutral implementation of value - which helps avoid cyclical exposure - we would expect no systematic relationship between value performance and economic recessions/recoveries. The historical data is consistent with this expectation (**Exhibit 5, Panel A**). In

both recessions and recoveries, value typically generates a positive return.

We get a similar prediction and empirical result when looking at equity market drawdowns and drawups - value on average generates a positive return regardless of overall market direction (**Exhibit 5, Panel B**)

**Exhibit 5: Value in Times of Economic Stress**

January 1, 1950 - September 30, 2022

**Panel A: Value Returns in 10 NBER-Defined Recessions****Panel B: Value Returns in 10 Worst Stock Market Drawdowns**

Source: AQR, Federal Reserve Bank of St. Louis. Market return is the cumulative total return of U.S. equity (S&P500) during NBER-defined recessions and in peak to trough drawdowns respectively. "Recession" is the cumulative excess return during recessions, "12-month recovery" is the cumulative excess return during the 12-months after the end of a recession. "Peak to trough" indicates return from the most recent market high (based on monthly data) to the market bottom. "Trough to peak" indicates returns from the trough to the market level equal or exceeding the prior peak. HML is High-Minus-Low using more up-to-date fundamental data with the most recent prices as described in Asness and Frazzini (2013). The HML returns are an industry-neutral academic backtest for a U.S. stock universe as described in the

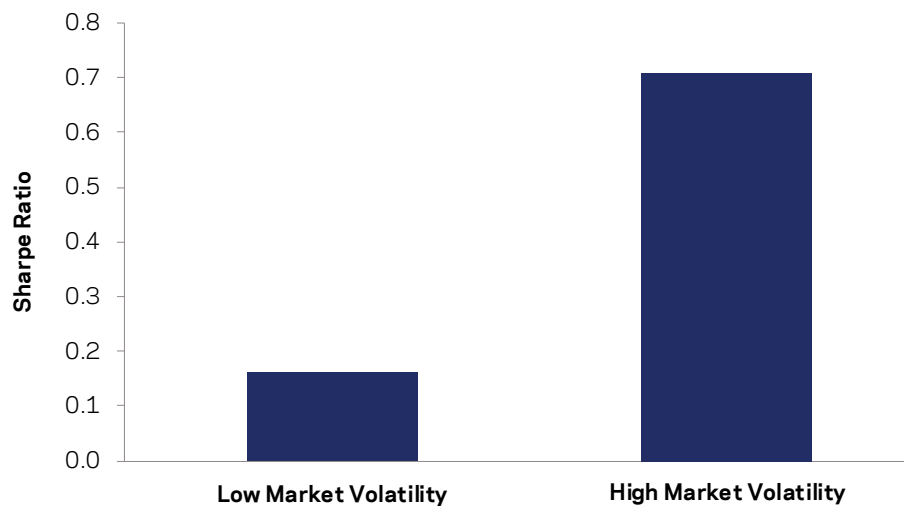
Appendix. The backtest is at 10% volatility and is net of a 2% model mgmt. fee and 20% performance fee. Please see the Hypothetical U.S. Industry Neutral HML Devil Factor description in the Appendix.

It's also important to note there is empirical evidence that value tends to do better in turbulent markets (**Exhibit 6**). In addition to the long-run evidence, value is outperforming

in the current volatile environment adding another supporting example of this phenomenon.

### Exhibit 6: Value's Sharpe Ratio in Different Market Volatility Regimes

January 1, 1990 - September 30, 2022



Source: AQR. Market volatility is ex-ante volatility of MSCI World as measured by AQR's proprietary risk model. Return data is that of a Hypothetical Style Premia Standalone Developed Large Cap Value Factor net of a 2% model mgmt. fee and 20% performance fee, please see description in the Appendix. Hypothetical performance data has certain inherent limitations, some of which are discussed in disclosures. For illustrative purposes only and not representative of an actual portfolio AQR currently manages. Please read important disclosures in the Appendix. All hypothetical performance figures contained herein are in USD unless noted otherwise.

## What Is the Outlook for Value, and What to Do About It?

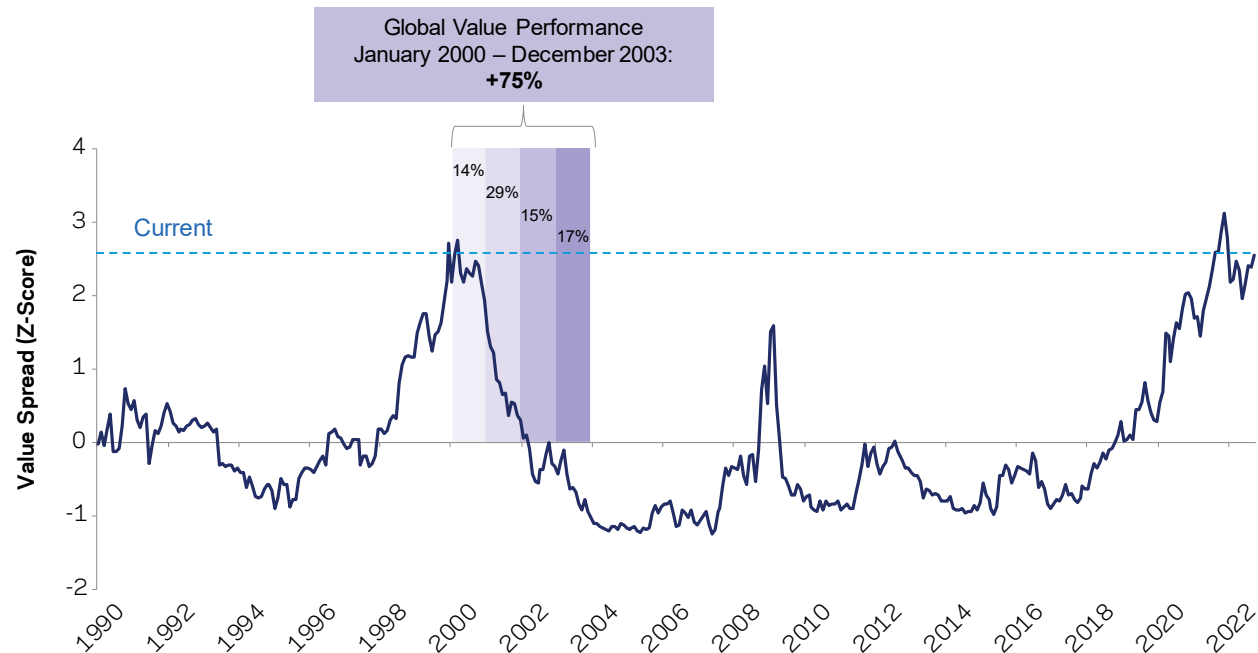
Today's extreme value spreads and the irrational growth rate differentials they imply make a long/short value strategy in stocks exceptionally attractive. So, with that in mind, what should investors expect from here? Given the similarities between the current environment and the tech bubble, we think the post-tech bubble recovery provides a useful

analog to the potential duration and scale of the comeback for investors. The tech bubble illustrates that after a dislocation of this magnitude, value's above average performance can last for multiple years (**Exhibit 7**) and may exceed 50% cumulatively as the value spread normalizes.



## Exhibit 7: Global Composite Value Spread and Hypothetical Global Value Backtest Net Performance

January 1, 1990 – September 30, 2022



Source: AQR. 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. 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. Please see the Hypothetical Global Developed Value Factor Description in the Appendix. Return data is the Hypothetical AQR Style Premia Global Value Backtest, which targets roughly 7% volatility over time, is net of trading costs, is net of 2% management and 20% performance fees, and is excess of cash returns proxied by 3m T-bills. Please see Appendix for more detail on data and construction. For illustrative purposes only and not representative of any portfolio that AQR currently manages. Hypothetical data has inherent limitations, some of which are disclosed in the Appendix.

What should investors do about the current historic value opportunity? For those who want to be tactical, there is a great opportunity allocating to a long/short value strategy. For less tactically-oriented investors, it is a good time to assess your equity factor exposures and make sure you don't have a bet against value. If you do, an allocation to a capital efficient long/short value strategy can correct the situation. For investors requiring beta-1 exposure, it's important to remember that a long/short value strategy can be easily combined with your benchmark of choice. Either way, whether investing in a standalone long/short value strategy or packaging it with beta, we believe adding more value exposure now is beneficial and will ultimately deliver an outsized payoff as value spreads and implied growth rates revert to rational levels.

# Appendix

## **Hypothetical Style Premia Standalone Developed and U.S. Large Cap Value Factors:**

This is an AQR model return of a Value theoretical long/short style portfolio, and is based on monthly returns, undiscounted, net of transaction costs, net of 2% model mgmt. fee and 20% performance fee, excess of a cash rate proxied by the ICE BofAML U.S. 3 Mo. T-bill, and scaled to 7% annualized volatility. The strategy is designed to take long positions in the assets with the strongest style attributes and short positions in the assets with the weakest style attributes, while seeking to ensure the portfolio is market-neutral. The portfolio only uses Value signals that are considered to be well-known, and does not include the full suite of proprietary signals AQR may include in some portfolios. The investment universe includes a broad subset of liquid tradeable large and mid cap stocks within the relevant region. The risk model used are the Barra U.S. and Developed Equity Risk Models.

## **Hypothetical Global Developed and Emerging Value Factors:**

The Hypothetical Value Factor is the factor return for the relevant region (Global Developed, Emerging) of a hypothetical Value portfolio built upon 5 multiples: book-to-price (B/P), trailing-earnings-to-price (E/P), forward-earnings-to-price (FE/P), sales-to-enterprise-value (S/EV) and cash flow-to-enterprise value (CF/EV). Each factor is built to be industry neutral and dollar-neutral by using within-industry value scores. Factor returns are gross of transaction costs. The investment universe includes a broad subset of liquid tradeable large and mid-cap stocks within the relevant region. The risk models used are proprietary, internally developed risk models.

## **Hypothetical U.S. Industry Neutral HML Devil Factor:**

The U.S. Industry-Neutral HML Devil Backtest is based on an academic construction of the Fama French HML factor, which roughly represents Value (High minus Low). This factor follows the methodology as described on the Fama French data library website [https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data\\_Library/f-f\\_5\\_factors\\_2x3.html](https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/f-f_5_factors_2x3.html), and has gone through the following adjustments by AQR: industry-neutralized and dollar-neutralized and net of a 2% model mgmt. fee and 20% performance fee.

## **Hypothetical AQR Style Premia Global Value Backtest:**

This is an AQR backtest of a Value theoretical long/short style portfolio is based on monthly returns, undiscounted, net of transaction costs, net of 2% model mgmt. fee and 20% performance fee, excess of a cash rate proxied by the ICE BofAML U.S. 3 Mo. T-bill, and scaled to 7% annualized volatility. The strategy is designed to take long positions in the assets with the strongest style attributes and short positions in the assets with the weakest style attributes, while seeking to ensure the portfolio is market-neutral. The portfolio only uses Value signals that are considered to be well-known, and does not include the full suite of proprietary signals AQR may include in some portfolios. The universe is approximately 2,000 stocks across Europe, Japan, and U.S. The risk model used is the Barra Developed Equity Risk Model.

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