DECADES OF DATA: EUROPE EX UK

1900–2022

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Key Points

- Basing investment decisions on the extrapolation of capital markets returns from recent, relatively short periods is a common mistake. A core tenet of our research process is to "know the history," which is the underlying theme of our Decades of Data publication.
- European equity investors are compensated for the additional risk of holding stocks in the long run and have also consistently outpaced inflation over long-term holding periods.
- Earnings growth and dividend reinvestment are the primary contributors to equity returns, while the impact of valuation rerating is ultimately negligible due to mean reversion.
- Starting equity valuations are a useful indicator for long-term subsequent equity returns. For bonds, starting yields are a reasonable proxy for setting nominal return expectations.
- We also provide context around the historic market environment in 2022, including the inflation surge to 40-year highs, record bond market declines, and equity market drawdown.

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Executive Summary

- **Basing investment decisions on the extrapolation of capital markets returns from recent, relatively short periods is a common mistake.** Viable conclusions about long-term expected returns cannot be drawn from return data for periods shorter than several decades. Even then, investors should be mindful that long-term statistics are beginning- and end-point sensitive and that returns are more variable than commonly assumed. Still, consideration of shorter time periods within a longer-term context can provide a powerful framework for evaluating current market conditions.

- **Eurozone equities (-12.3%) and bonds (-21.8%) declined sharply in 2022, buffeted by surging inflation and energy prices, tightening central bank policy, and slowing economic growth.** Eurozone stocks posted their first annual decline since 2018 (-12.7%), with the drawdown slightly less severe than the average experience when calendar year performance turns negative (-16.0%.) Still, the Eurozone equity correction in 2022 followed a strong performance run in the three years prior when shares returned more than 50% cumulative, which was the strongest three-year return since the period ended in 2007. The Eurozone bond drawdown was the worst on record, as low starting yields failed to offset capital losses from the 290-basis point (bp) surge in ten-year government bond yields (also the largest on record.) Indeed, ten-year euro area bond yields started the year at just 0.25%, with the European Central Bank's benchmark deposit rate at -0.50%. Performance in 2022 was an important reminder of the outsized impact external shocks (in this case, primarily Russia's invasion of Ukraine) can have on capital markets performance.

- **Eurozone consumer price inflation was a prominent market theme in 2022.** Inflation accelerated to a peak of 10.6% year-over-year in October, the highest rate since 1981. The inflationary spike resulted from a confluence of factors, including the strong post-COVID demand recovery, supply-chain constraints, and Russia's invasion of Ukraine that catalyzed higher commodity prices. Resurgent consumer prices bucked their long-term downtrend since the high inflation environment of the 1970s and 1980s. In fact, October's inflation reading was more than 6x its trailing ten-year average, an unprecedented reversal according to our data since the early 1950s. This rapid inflation spike was a key factor behind the increased correlation of equity and bond returns. And although inflation climbed to extreme levels based on recent memory, higher levels have been reached historically.

Executive Summary (continued)

- **Recent Eurozone equity returns have struggled to keep up with their long-term average.** For the full history analyzed (1951–2022), investors in Eurozone stocks have earned a 10.1% nominal average annual compound return (AACR). Over the past ten years, however, Eurozone equities posted a nominal AACR of 7.1%. Relatively weak performance has persisted for some time, as the rolling ten-year AACR for Eurozone equities has been below the full-period average for much of the past 15 years. However, rolling AACR analyses are sensitive to the timing of beginning and end points, even over ten-year periods. Monthly rolling ten-year AACRs reached their highest point this cycle in December 2021 at 10.4%, which was the strongest ten-year return since the period ended December 2006. The 2021 year-end mark coincided with the height of the 2011 European Sovereign Debt Crisis—when Eurozone stocks returned -15.2%—rolling out of the data set, reinforcing that even longer-term return views can be skewed by short-term market fluctuations.

- **Eurozone equities, bonds, and cash all outpaced inflation over very long-term periods, based on data since the mid-20th century.** Across all rolling 50-year periods since 1951, real AACRs for Eurozone stocks ranged from 3.7% to 8.7%, outpacing inflation by the widest margin. Eurozone bonds and cash also gained in real terms, with returns ranging from 1.8% to 3.5% and from 0.3% to 0.8%, respectively. Benchmark Eurozone government bonds and cash produced full-period AACRs of 5.3% and 3.6%, respectively, since 1950, which represents a significantly narrower spread vis-à-vis the average inflation rate of 3.8% per annum. Still, given that euro area inflation remains above the yield on offer for core ten-year government bonds, investors may struggle to earn a positive real return in the near term.

- **Over the long term, Eurozone equity investors are typically compensated for the additional risk of holding stocks.** Since 1950, Eurozone equity returns exceeded bond returns during 69% of all five-year periods, 77% of all ten-year periods, and 95% of all 25-year periods (calculated on a nominal basis using rolling monthly data). While equities tend to outperform in the long term, underperformance over rolling five-year periods is not uncommon, as equities are prone to larger drawdowns than bonds. Such periods are a reminder of the ballast that fixed income allocations have traditionally provided portfolios. Investor's experience in 2022 challenged this conventional wisdom, although the key differentiator in this episode was that bond yields started at historically low levels. In such cases, investors may need to consider other avenues to effectively diversify portfolios.

Executive Summary (continued)

- **Earnings growth and dividend reinvestment are the primary contributors to equity total return over time, while valuation multiple rerating is ultimately negligible due to mean reversion.** Earnings growth provided the highest degree of return contribution since 1969, on average, but can vary significantly from decade to decade. Dividends provide a steady stream of reliable income, but the magnitude of their contribution is weaker, coming in at just half of the contribution provided by earnings. The primary driver of performance so far this decade (2020–22) has been earnings growth, as the strong earnings rebound in 2021 and 2022 more than offset the pandemic-driven earnings contraction in 2020.
- **Starting valuations are a useful indicator for long-term (ten+ years) subsequent equity returns.** Normalized valuations and subsequent returns have a stronger relationship over long time periods (e.g., ten-year subsequent returns), but starting valuations alone do not completely explain subsequent returns—many factors can influence equity performance. Since 1979, our cyclically adjusted price-to–cash earnings (CAPCE) ratio for Europe ex UK stocks has explained 73% of the variation in subsequent ten-year real returns, a strong yet imperfect guide to future performance. At year-end 2022, Europe ex UK equity valuations ended in the 70th percentile of historical observations. When Europe ex UK valuations have been between the 25th percentile and 75th percentile, the median subsequent real return has been 6.1% annualized.
- **High- or low-valuation environments alone are not a catalyst for market reversals and may persist for several years; waiting for valuations to mean revert can be an exercise in frustration.** Low valuations provide what famed investment analyst Benjamin Graham called "a margin of safety." High valuations, on the other hand, typically price in lofty projections for the future, providing little room for error. Despite uncertainty regarding the timing of market reversals, the historical record for Eurozone equities is clear—periods of low valuations are followed by higher long-term subsequent returns, while periods of high valuations are followed by poorer long-term returns.

Executive Summary (continued)

- **Equity dividend yields are an important driver of total returns but are not a useful valuation indicator.** For Europe ex UK stocks, higher starting dividend yields (i.e., lower equity prices relative to dividends) have typically been associated with higher subsequent ten-year returns relative to long-term averages. Dividend yields are currently in the 43rd percentile of the historical distribution, where subsequent real ten-year returns have been about 5% annualized. Dividend yields fail to capture the whole picture, however, as many other factors influence equity market returns. Still, the importance of dividend reinvestment as a driver of total return should not be understated. In fact, since 1969, Europe ex UK companies managed to maintain a net positive average dividend growth rate during recessions, even as earnings contracted in these periods given their sensitivity to the economic cycle.
- **Subsequent nominal ten-year Eurozone bond returns closely track the starting yield, suggesting that yields are a reasonable proxy for forward return expectations.** Since hitting all-time lows in December 2020, Eurozone ten-year bond yields have climbed more than 340 bps, ending 2022 at 3.15%, which has improved their forward return prospects. In fact, when yields historically were +/- 50 bps from today's starting levels, subsequent nominal ten-year AACRs notched a median of around 5% annualized. Falling yields were a boon for European bond investors over the past 40 years, with Eurozone bonds returning 6.1% annualized since 1981, but that paradigm reversed sharply in 2022. While bonds proved to be a poor diversifier, given their low yields heading into today's environment, future returns are likely to look better given the steep backup in yields.

Executive Summary (continued)

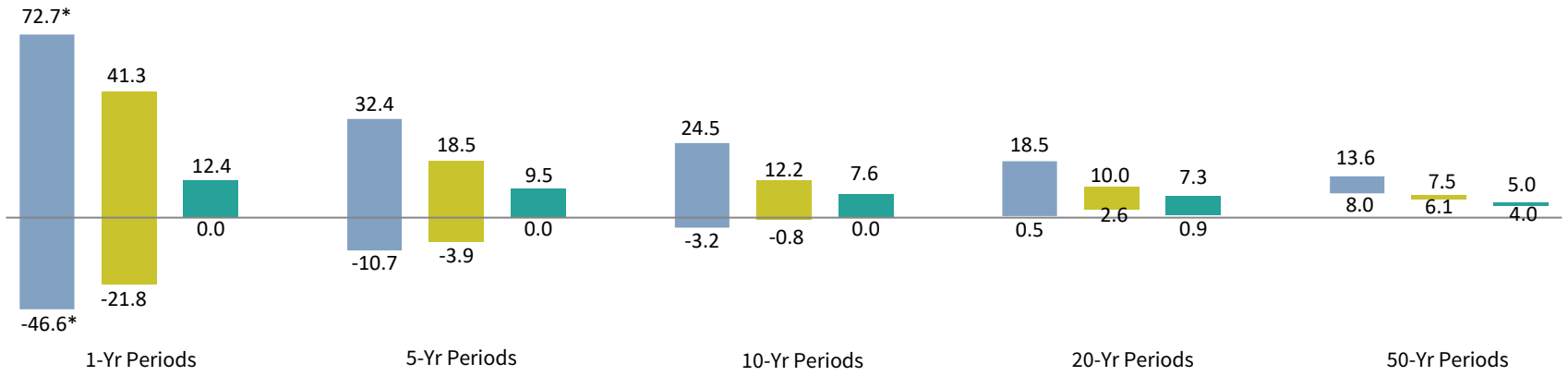
- **There is a distinct inverse relationship between the level of government bond yields and equity valuations in European markets.** Many have argued in recent years that high stock valuations, particularly in the United States, are justified (or at least in part explained) by the low level of government bond yields. The reasoning is straightforward; when discount rates fall, the present value of future cash flows increases, thus pushing up valuations. However, government bond yields do not tell the whole story. Since 1979, ten-year European government bond yields have explained only 44% of the variation in equity market valuations. The relationship is not universal, however, and there are periods when equity valuations and yields have moved together. For example, in the early 2000s period preceding the Global Financial Crisis (GFC), there was a positive relationship, in that equity valuations and yields both increased. Given the possibility of differences across market environments, investors must consider the drivers of changes in interest rates, rather than their outright levels, and what impact such drivers may have on equity markets.
- **The relationship between asset prices and inflation is complex and nuanced.** Inflation's impact on Eurozone equity returns is unclear. Median stock performance was the lowest during seventh-decile inflationary periods, but equities experienced the largest downside during fourth-decile inflationary environments. The highest inflationary periods can erode nominal returns, but upside and median performance across the other inflationary deciles are largely similar. In nominal terms, bonds exhibit limited downside during periods of high inflation, as historically higher yield levels helped offset capital losses as bond prices fell. However, bond markets do suffer in real terms when consumer price levels increase 3% annualized or more.

The range of investment returns narrows as holding periods increase

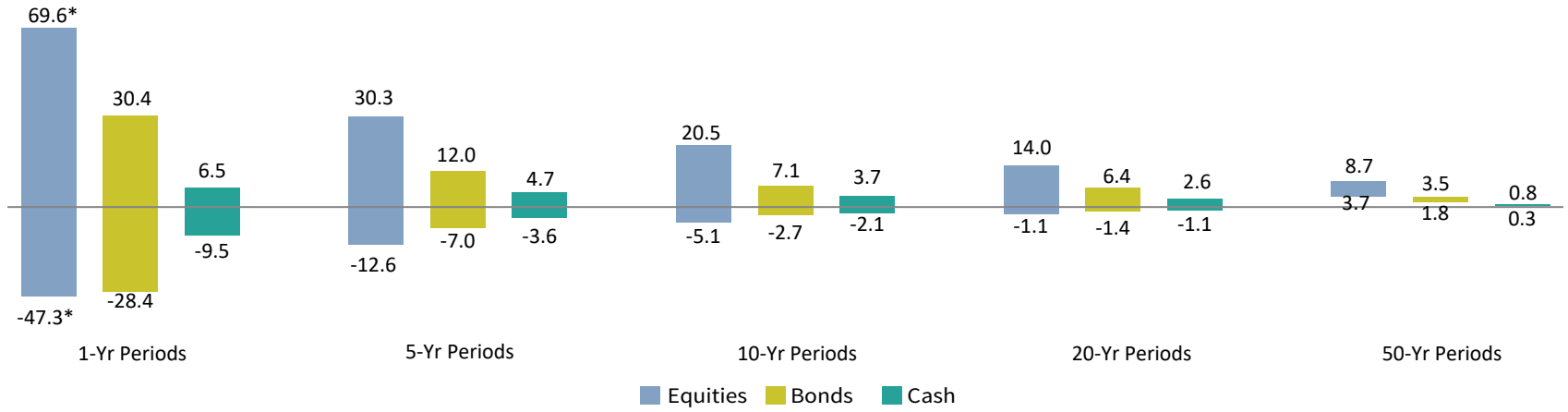
RANGE OF EQUITY, BOND, AND CASH RETURNS FOR VARIOUS ROLLING MONTHLY TIME HORIZONS

1951–2022 • Average Annual Compound Return (%)

Nominal Returns



Real Returns



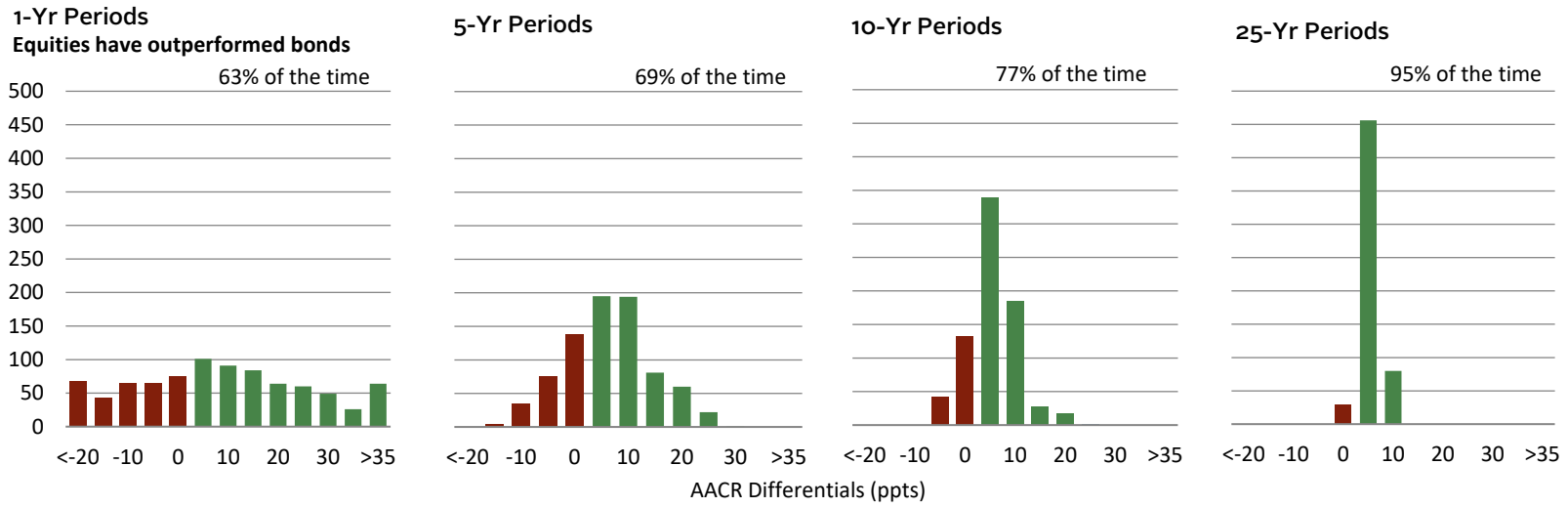
* Axis capped for scaling purposes.

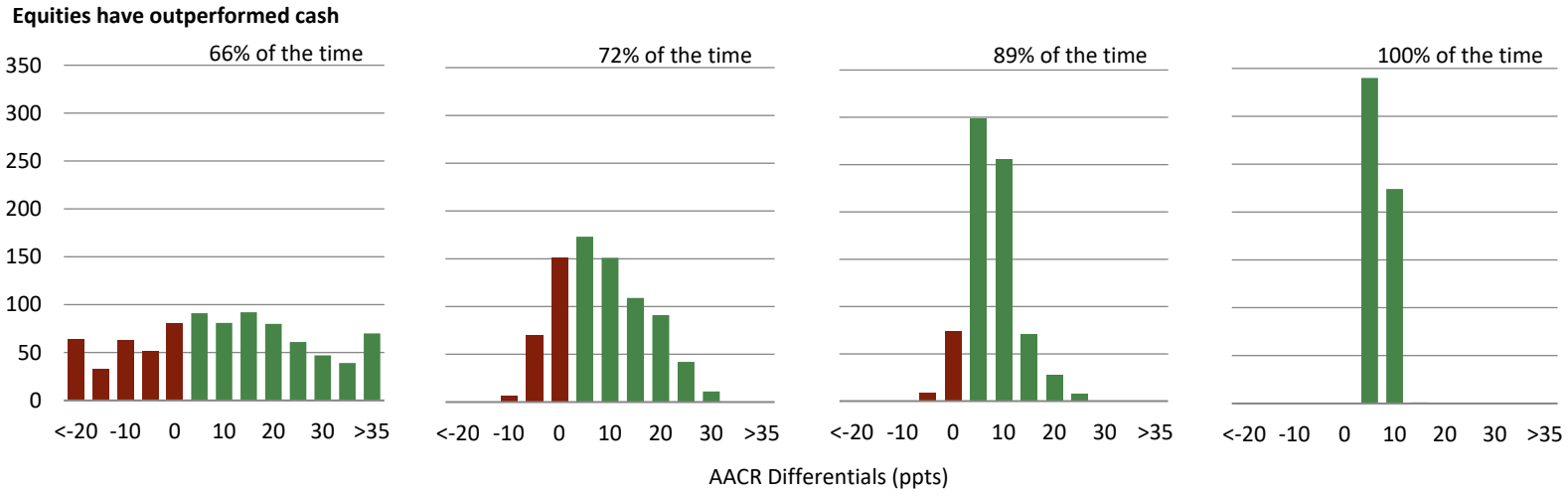
Sources: Global Financial Data, Inc. and Thomson Reuters Datastream.

Equities outperform bonds and cash over the long term, but can underperform in the short run

EXCESS RETURNS OF EQUITIES OVER BONDS AND CASH

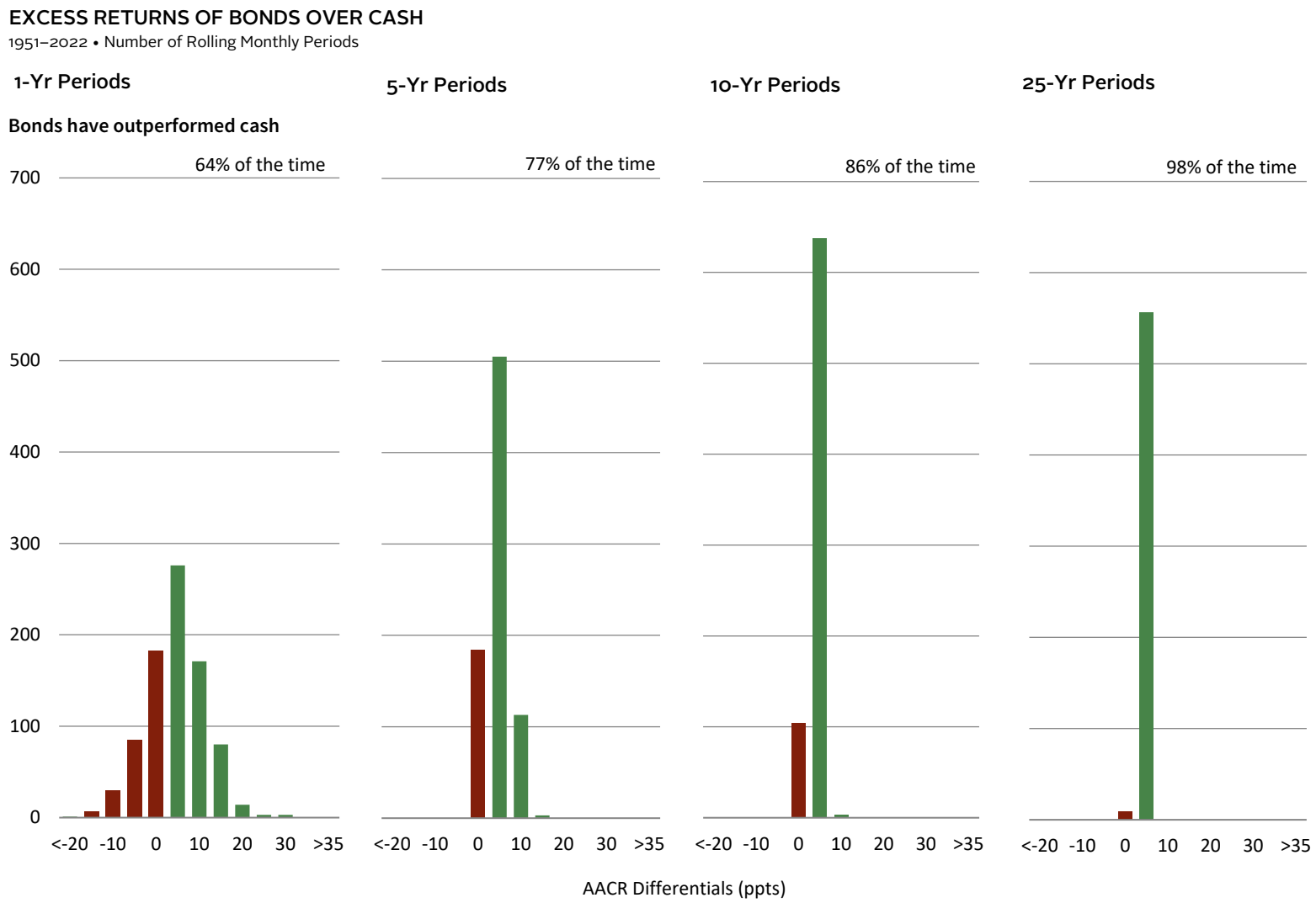
1951–2022 • Number of Rolling Monthly Periods





Source: Global Financial Data, Inc.
Notes: Buckets represent ranges of 5 percentage points each with the label denoting the high end of the range, inclusive. For example, the "0" bucket corresponds to the number of rolling monthly periods in which the excess return of equities over bonds/cash was greater than -5 but equal to or less than zero.

Eurozone bonds tend to outperform cash, particularly over longer periods

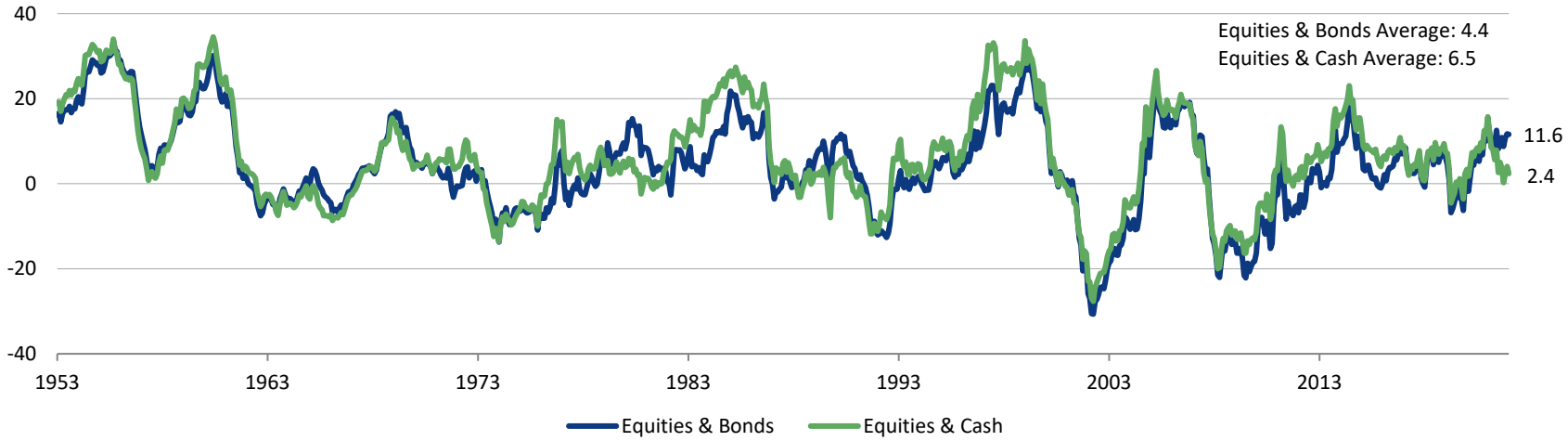


Source: Global Financial Data, Inc.
Notes: Buckets represent ranges of 5 percentage points each with the label denoting the high end of the range, inclusive. For example, the "0" bucket corresponds to the number of rolling monthly periods in which the excess return of bonds over cash was greater than -5 but equal to or less than zero.

Equities outperform bonds and cash by a wide margin; bonds outperform cash to a lesser degree

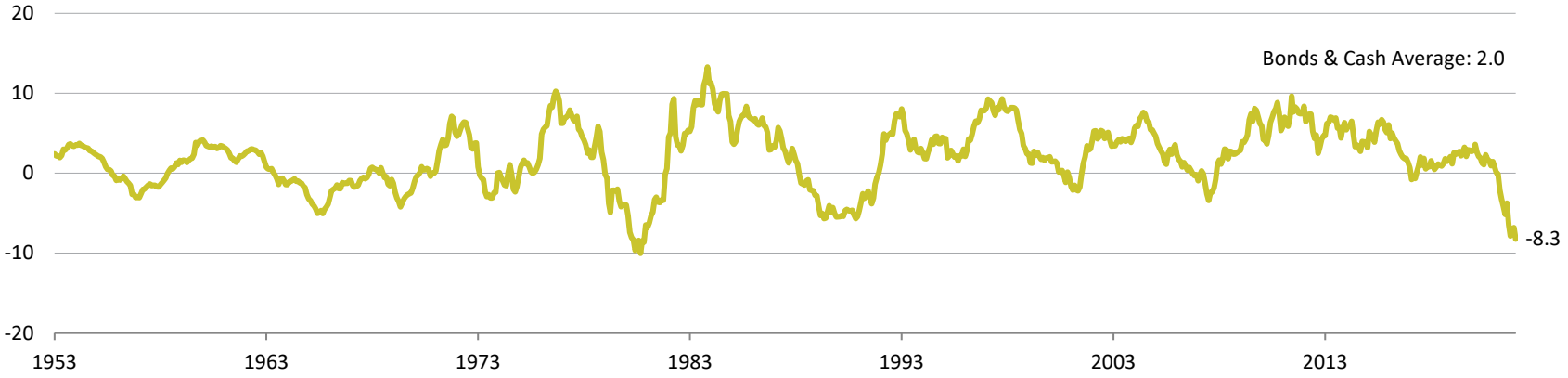
AACR OF ROLLING MONTHLY 3-YR RETURN DIFFERENTIAL BETWEEN EQUITIES, BONDS, AND CASH RETURNS

1953–2022 • Percent (%)



AACR OF ROLLING MONTHLY 3-YR RETURN DIFFERENTIAL BETWEEN BONDS AND CASH RETURNS

1953–2022 • Percent (%)

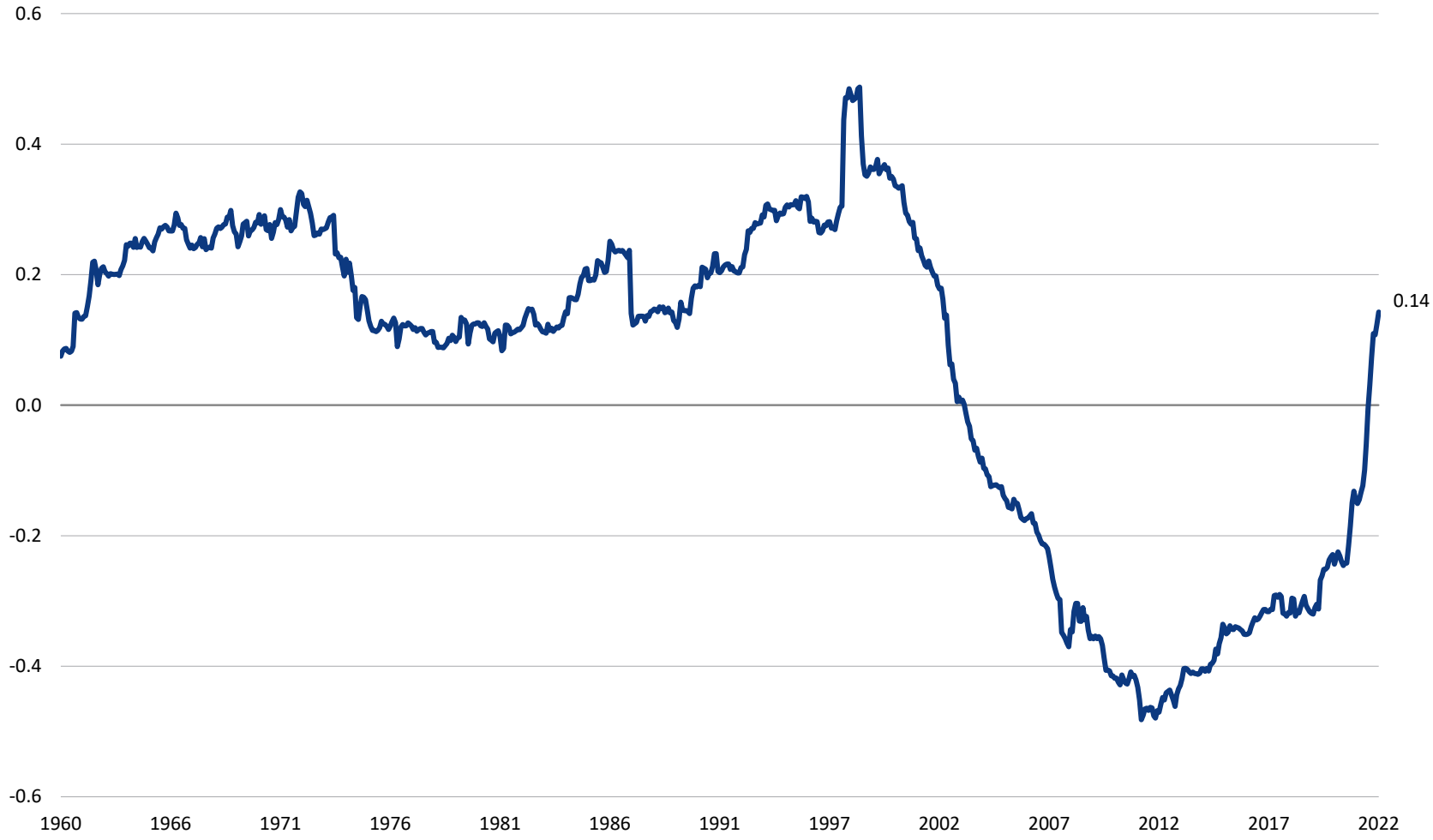


Source: Global Financial Data, Inc.

Stock-bond correlation has increased rapidly, due in part to sharply higher inflation rates

ROLLING 10-YR CORRELATIONS OF STOCK AND BOND RETURNS

December 31, 1960 – December 31, 2022 • Correlation Coefficient

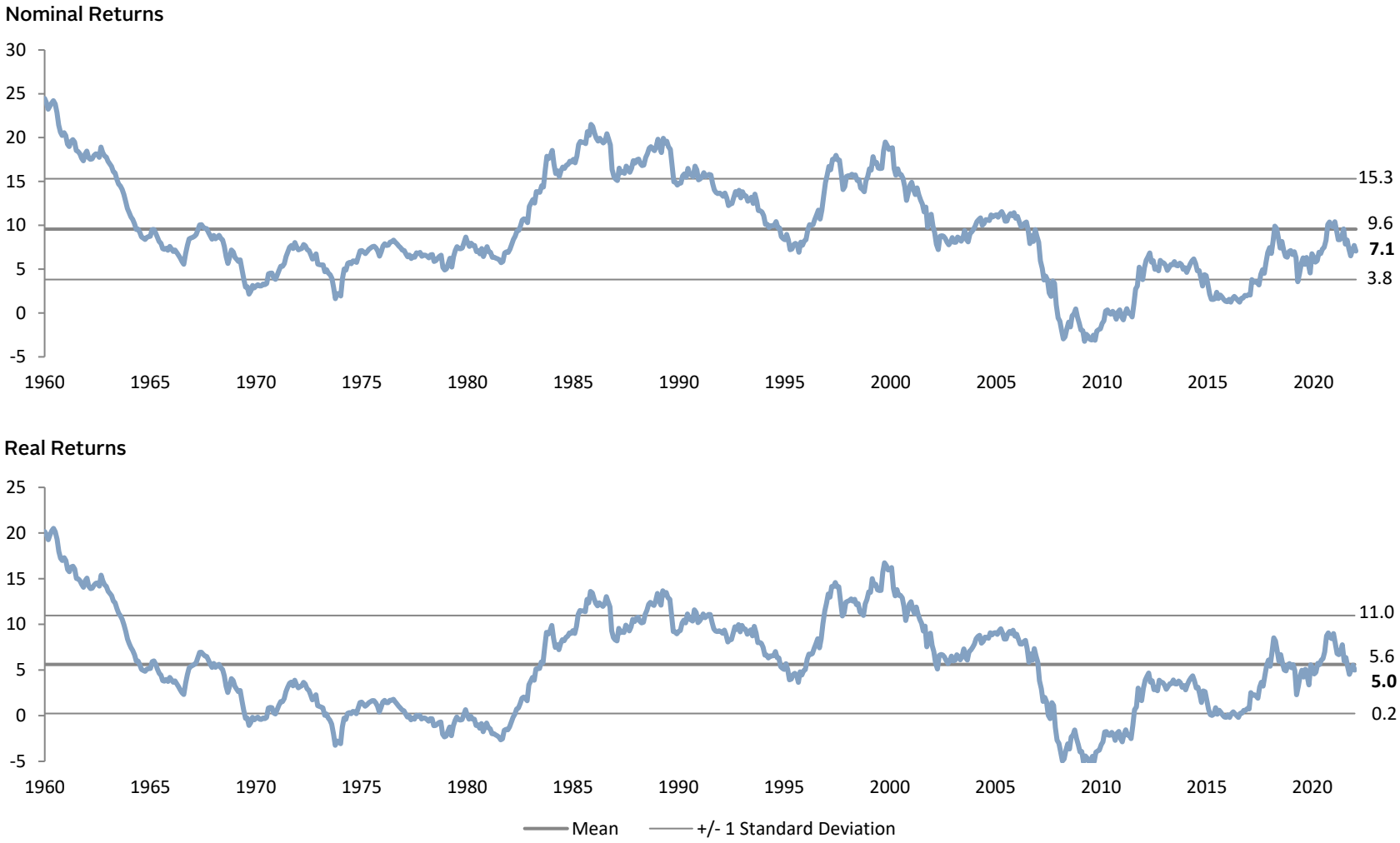


Source: Global Financial Data, Inc.
Notes: Data begin on January 31, 1951. All return data are monthly.

Equity performance tends to cycle about long-term averages

ROLLING MONTHLY EQUITY TOTAL RETURN 10-YR AACR

1960–2022 • Percent (%)

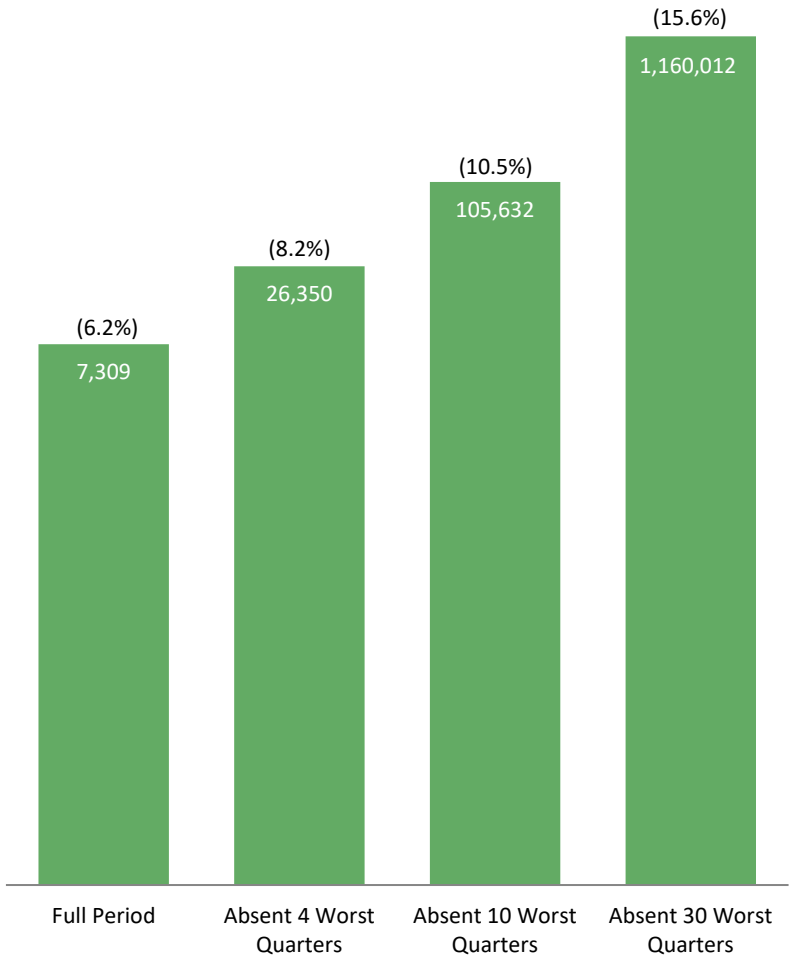


Sources: Global Financial Data, Inc. and Thomson Reuters Datastream.

Attempting to time the market is a risky proposition

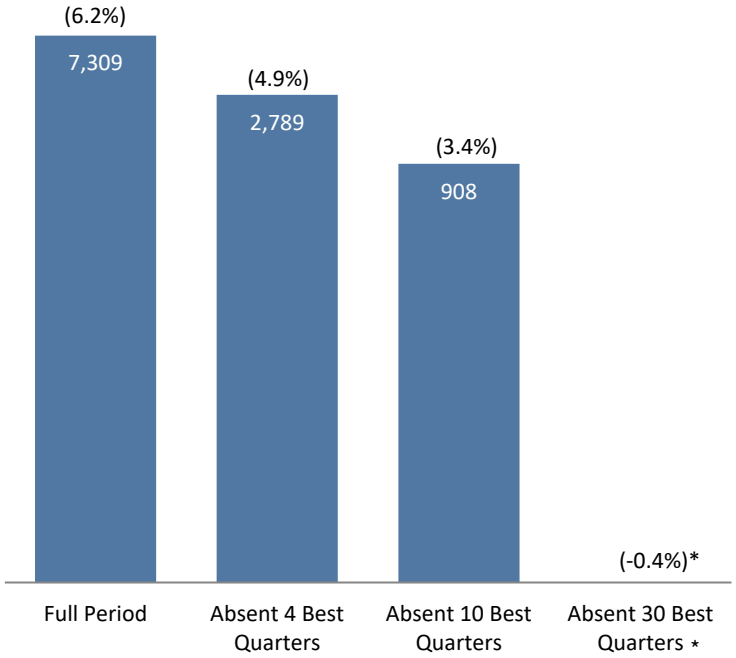
CUMULATIVE REAL WEALTH ABSENT WORST QUARTERS

1951–2022 • January 1, 1951 = 1 • AACR (%) in Parentheses



CUMULATIVE REAL WEALTH ABSENT BEST QUARTERS

1951–2022 • January 1, 1951 = 1 • AACR (%) in Parentheses



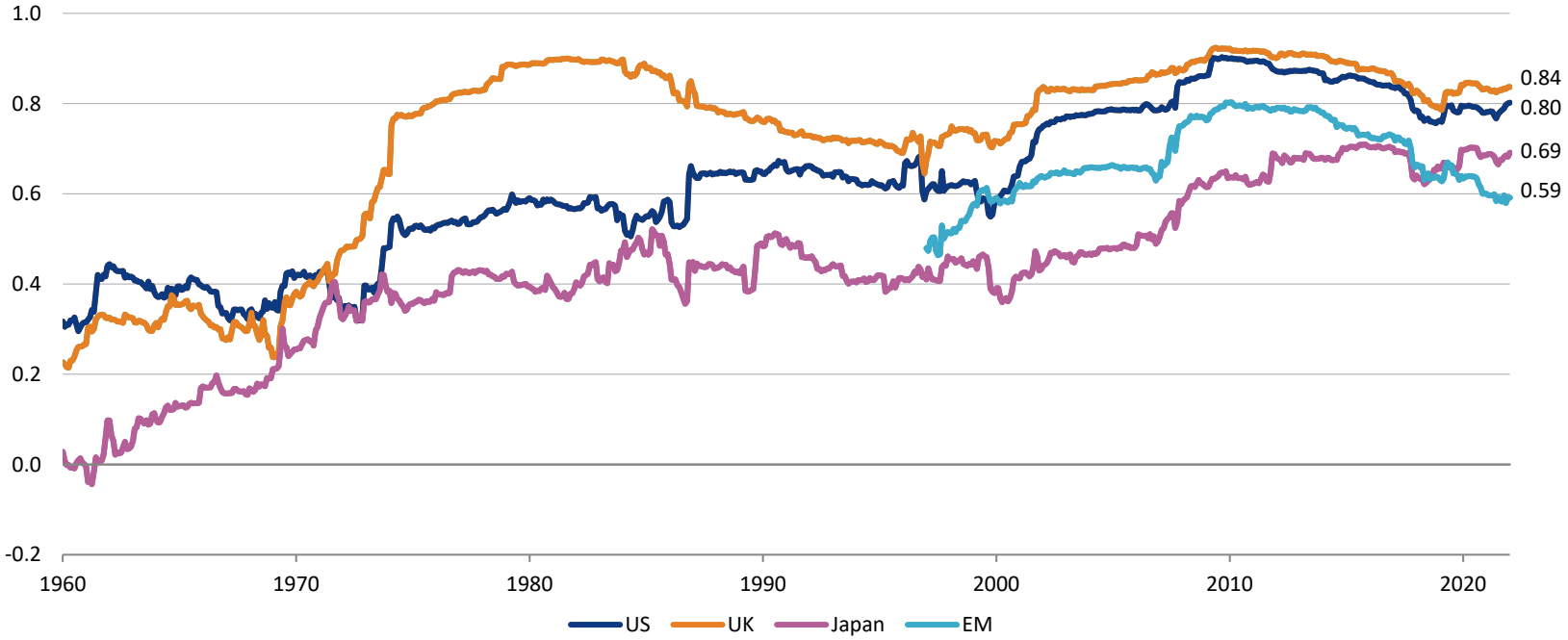
* Cumulative real wealth absent 30 best quarters is -24. Axis capped for scaling purposes.

Sources: Global Financial Data, Inc. and Thomson Reuters Datastream.
Note: Cumulative real wealth is shown on a logarithmic scale.

Equity market correlations with other regions have increased in recent decades

ROLLING 10-YR CORRELATIONS: EUROPE EX UK EQUITY VS GLOBAL PEERS

December 31, 1960 – December 31, 2022 • Correlation Coefficient



CORRELATION MATRIX

January 31, 1951 – December 31, 2022

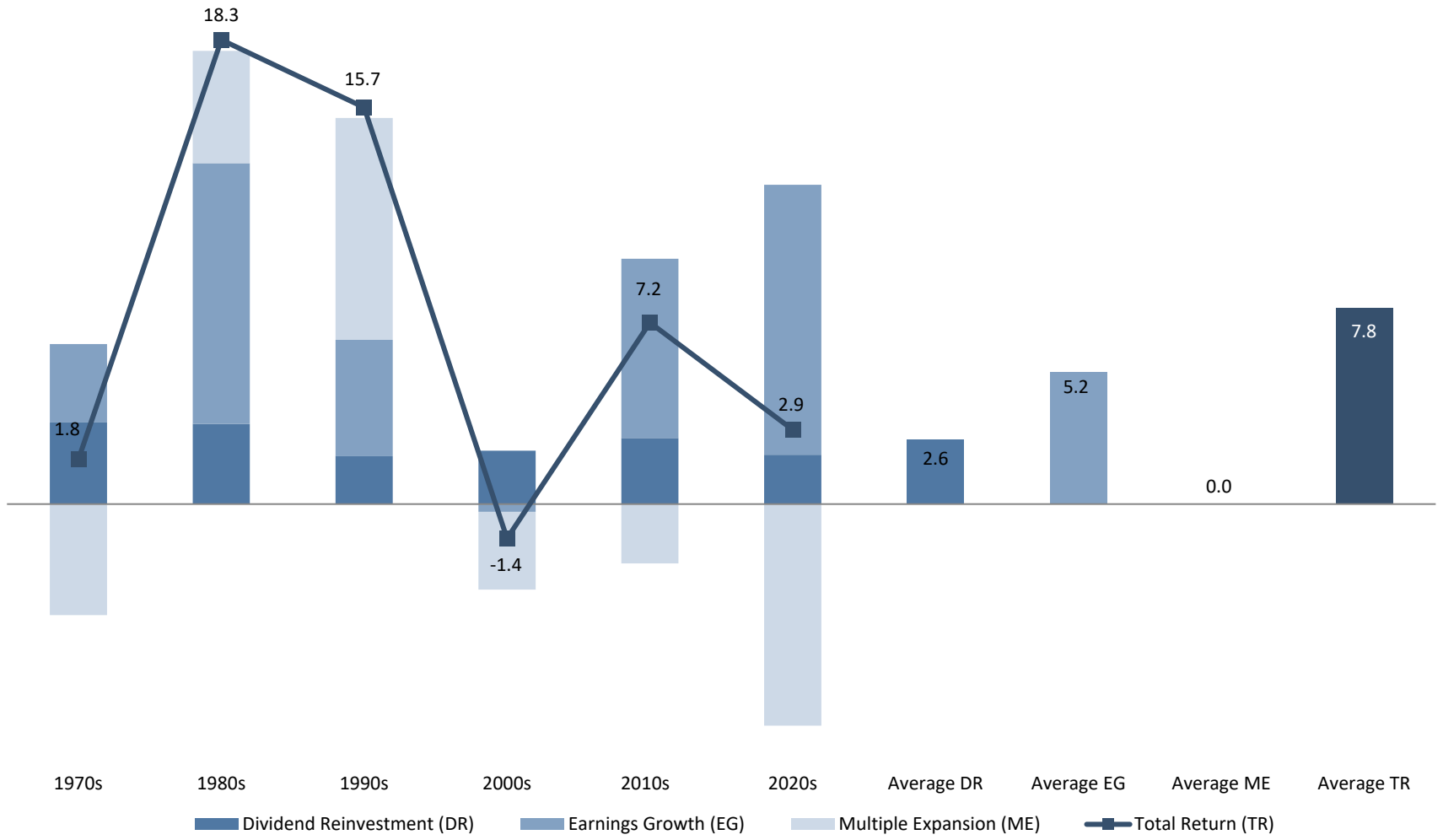
	Europe ex UK	US	UK	Japan	EM
Europe ex UK	1.00				
US	0.66	1.00			
UK	0.69	0.56	1.00		
Japan	0.43	0.36	0.31	1.00	
EM	0.63	0.66	0.63	0.50	1.00

Sources: FTSE International Limited, Global Financial Data, Inc., MSCI Inc., Standard & Poor's, and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Data for Europe ex UK, US, UK, and Japan begin on January 31, 1951. Data for EM begin on January 31, 1988. All return data are monthly. EM returns are in USD terms. All other returns are in local currency.

Earnings growth and dividend reinvestment drive equity market returns in the long run

BREAKDOWN OF TOTAL RETURN AACR OVER TIME

1970–2022 • Percent (%)

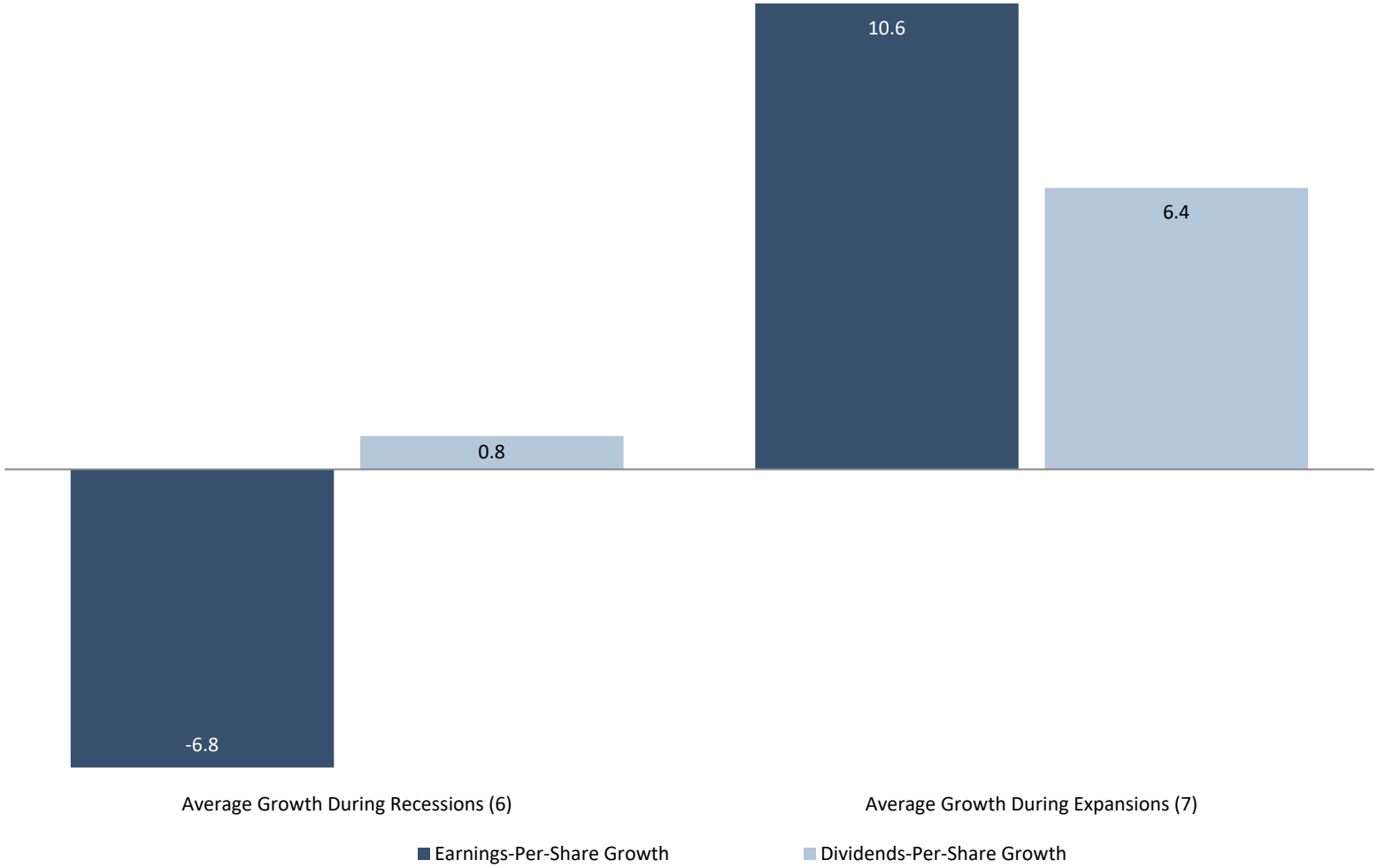


Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Note: Figures will not sum exactly to total return calculation because of combining cross terms.

Dividend payouts are more resilient than earnings during recessionary periods

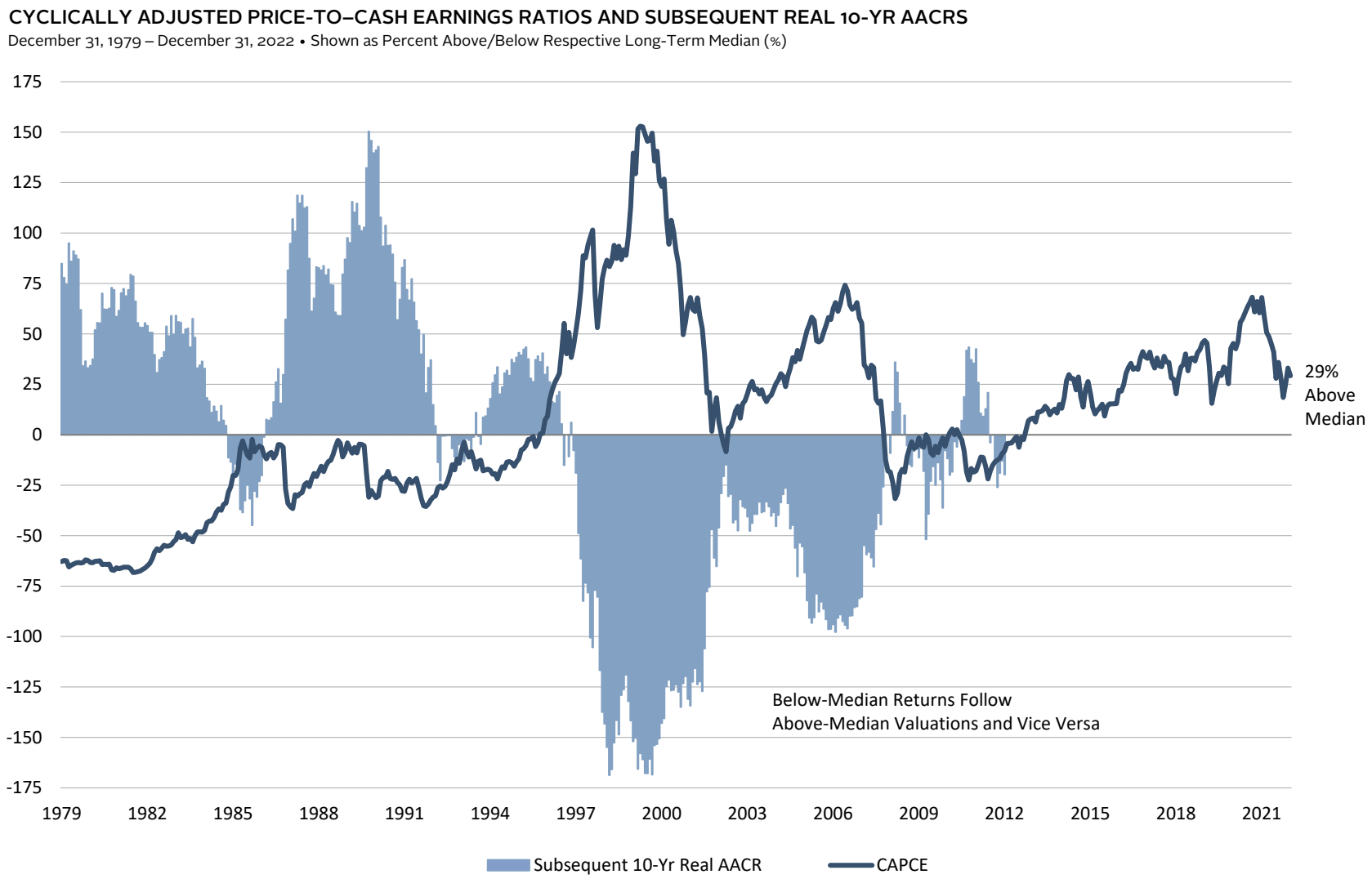
MSCI EUROPE EX UK EARNINGS PER SHARE AND DIVIDENDS PER SHARE YEAR-OVER-YEAR CHANGE

1969–2022 • Percent (%)



Sources: Euro Area Business Cycle Network, Eurostat, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Recessions and expansions defined by Euro Area Business Cycle Network economic peak-to-trough dates. Numbers in parentheses indicate the number of recessions and expansions experienced over the period.

Elevated starting valuations portend weak subsequent returns and vice versa



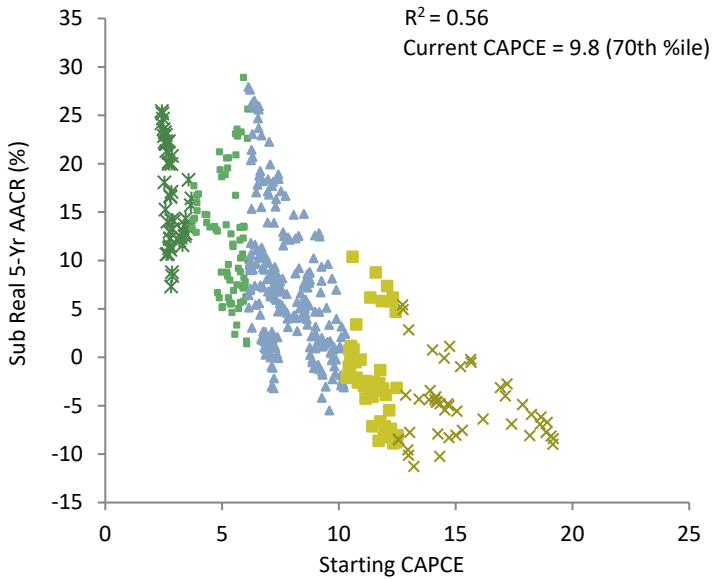
Sources: Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Chart shows percent above/below median for returns and valuations. Line shows point-in-time cyclically adjusted price-to–cash earnings (CAPCE) ratios. Bars are based on monthly data and show subsequent rolling ten-year real average annual compound returns (AACRs) as a percentage above/below the long-term median ten-year real return of 6.5% since 1979. For example, the first data point shows that the real AACR for the period 1979–88 was 84.8% above the median ten-year real return.

Starting valuations are a useful guide in setting long-term equity return expectations

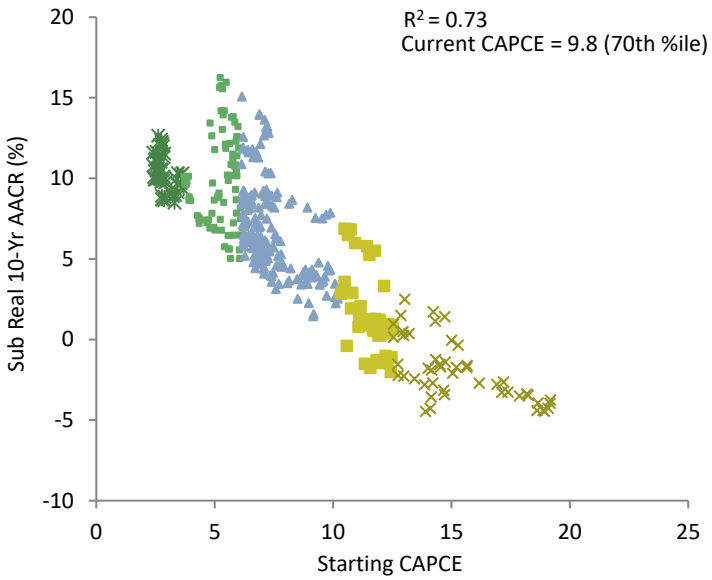
RELATIONSHIP BETWEEN CYCLICALLY ADJUSTED PRICE-TO–CASH EARNINGS RATIOS AND SUBSEQUENT REAL 5- AND 10-YR AACRS

December 31, 1979 – December 31, 2022

Initial Valuation and Subsequent 5-Yr AACR



Initial Valuation and Subsequent 10-Yr AACR



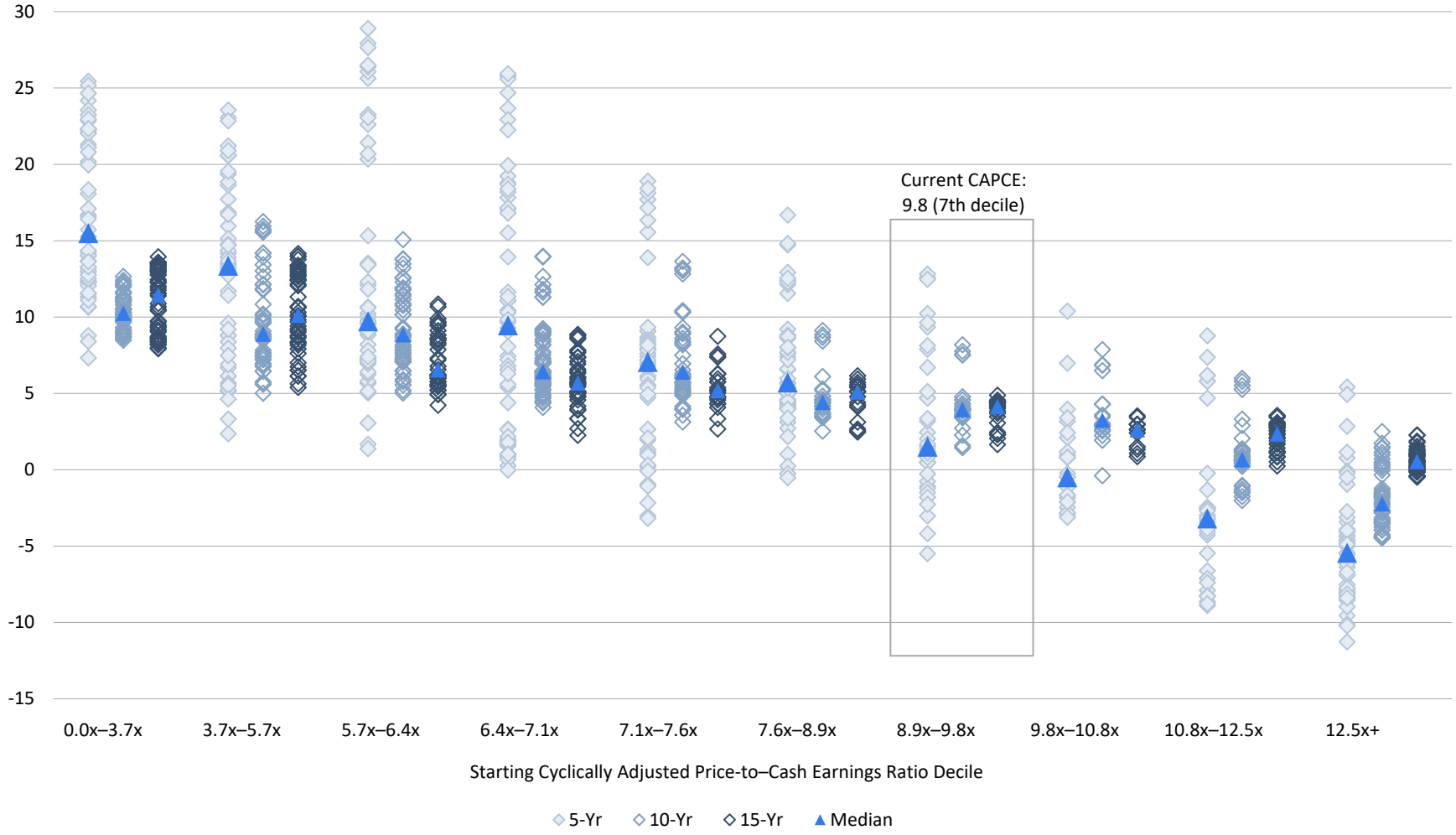
P/CE Ratio Percentile	Starting Cyclically Adjusted Price-to–Cash Earnings Ratio			Subsequent Real 5-Yr AACR (%)			Starting Cyclically Adjusted Price-to–Cash Earnings Ratio			Subsequent Real 10-Yr AACR (%)		
	Median	High	Low	Median	High	Low	Median	High	Low	Median	High	Low
0–10	2.8	3.7	2.4	15.5	25.4	7.3	2.8	3.7	2.4	10.3	12.7	8.5
10–25	5.4	6.1	3.7	12.3	28.9	1.4	5.4	6.1	3.7	9.7	16.2	5.0
25–75	7.4	10.3	6.1	6.6	27.9	-5.5	7.1	10.2	6.1	6.1	15.1	1.4
75–90	11.6	12.5	10.3	-2.5	10.4	-8.9	11.7	12.5	10.3	0.9	6.9	-2.0
90–100	14.7	19.2	12.6	-5.2	5.4	-11.3	14.7	19.2	12.6	-2.2	2.5	-4.5
Overall	**7.2**	**19.2**	**2.4**	**6.8**	**28.9**	**-11.3**	**6.9**	**19.2**	**2.4**	**6.5**	**16.2**	**-4.5**

Sources: Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Data are monthly. The last full five-year period was January 1, 2018, to December 31, 2022, and the last full ten-year period was January 1, 2013, to December 31, 2022.

Starting normalized valuations are more meaningful as holding periods increase

DISTRIBUTION OF SUBSEQUENT REAL RETURNS FROM STARTING NORMALIZED VALUATION DECILES

December 31, 1979 – December 31, 2022 • Subsequent Real Return AACR (%)

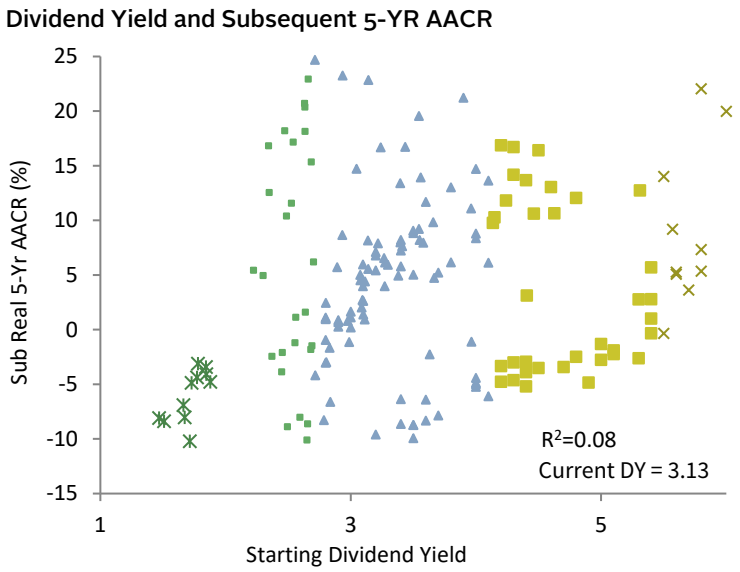


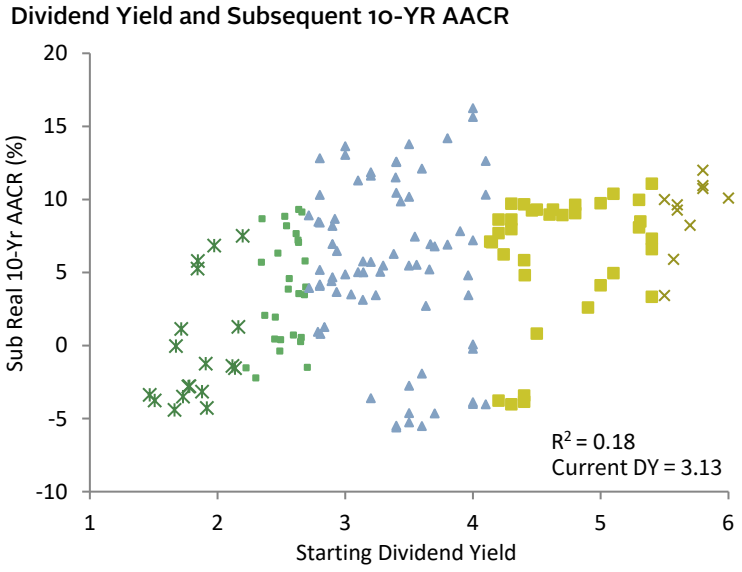
Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Data are monthly. The last full five-year period was January 1, 2018, to December 31, 2022, the last full ten-year period was January 1, 2013, to December 31, 2022, and the last full 15-year period was January 1, 2008, to December 31, 2022.

Dividend yield is a key driver of return, but the relationship with subsequent performance is weak

RELATIONSHIP BETWEEN DIVIDEND YIELDS AND SUBSEQUENT REAL AACRS

Fourth Quarter 1969 – Fourth Quarter 2022





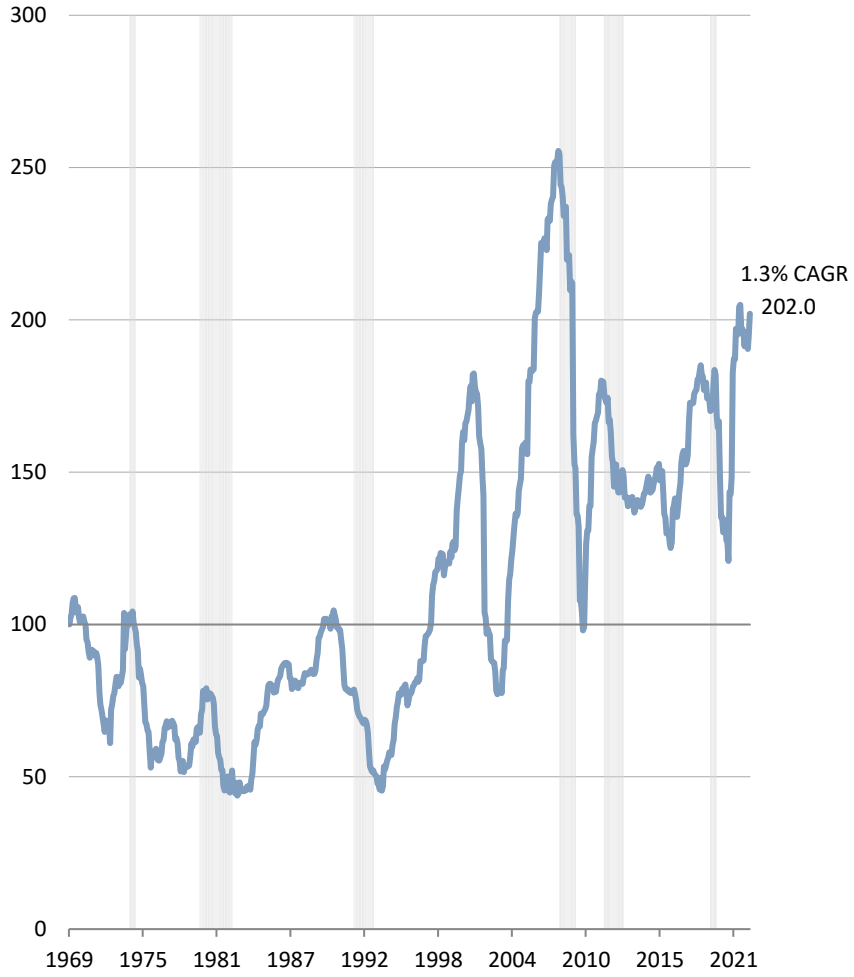
Dividend Yield Percentile	Starting Period Dividend Yield (%)			Subsequent Real 5-Yr AACR (%)			Starting Period Dividend Yield (%)			Subsequent Real 10-Yr AACR (%)		
	Median	High	Low	Median	High	Low	Median	High	Low	Median	High	Low
0–10	1.7	1.9	1.5	-4.9	-3.1	-10.2	1.8	2.2	1.5	-1.5	7.5	-4.4
10–25	2.6	2.7	2.2	5.4	26.1	-10.1	2.6	2.7	2.2	3.9	9.3	-2.2
25–75	3.3	4.1	2.7	5.0	28.9	-9.9	3.4	4.1	2.7	5.5	16.2	-5.6
75–90	4.5	5.4	4.1	1.0	16.9	-5.2	4.5	5.4	4.1	8.0	11.1	-4.0
90–100	6.0	6.6	5.5	12.3	24.7	-0.3	6.0	6.6	5.5	10.1	12.7	3.4
Overall	**3.4**	**6.6**	**1.5**	**4.7**	**28.9**	**-10.2**	**3.4**	**6.6**	**1.5**	**5.9**	**16.2**	**-5.6**

Sources: Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Data are quarterly. The last full five-year period was first quarter 2018 through fourth quarter 2022. The last full ten-year period was first quarter 2013 through fourth quarter 2022. Outliers are not shown on graph but are included in R2.

European earnings trend stalled post-GFC as ROE struggled to hold above median levels

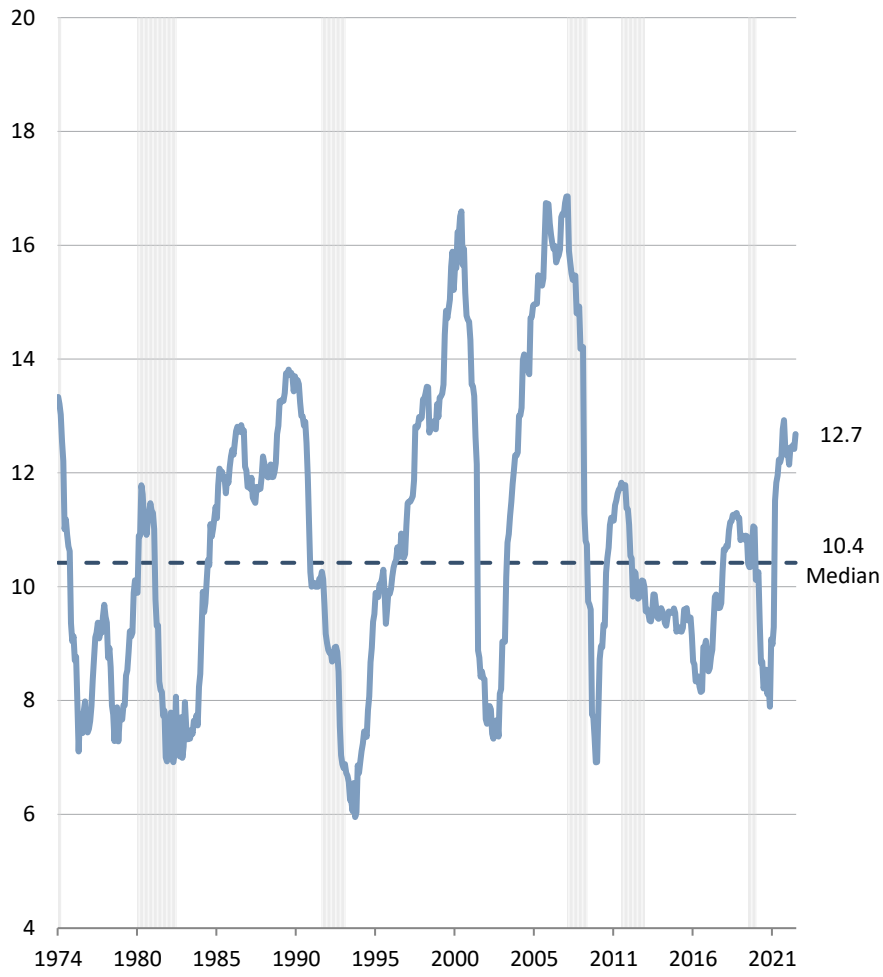
REAL EARNINGS PER SHARE OVER TIME

December 31, 1969 – December 31, 2022 • December 31, 1969 = 100



RETURN ON EQUITY

December 31, 1974 – December 31, 2022 • Percent (%)

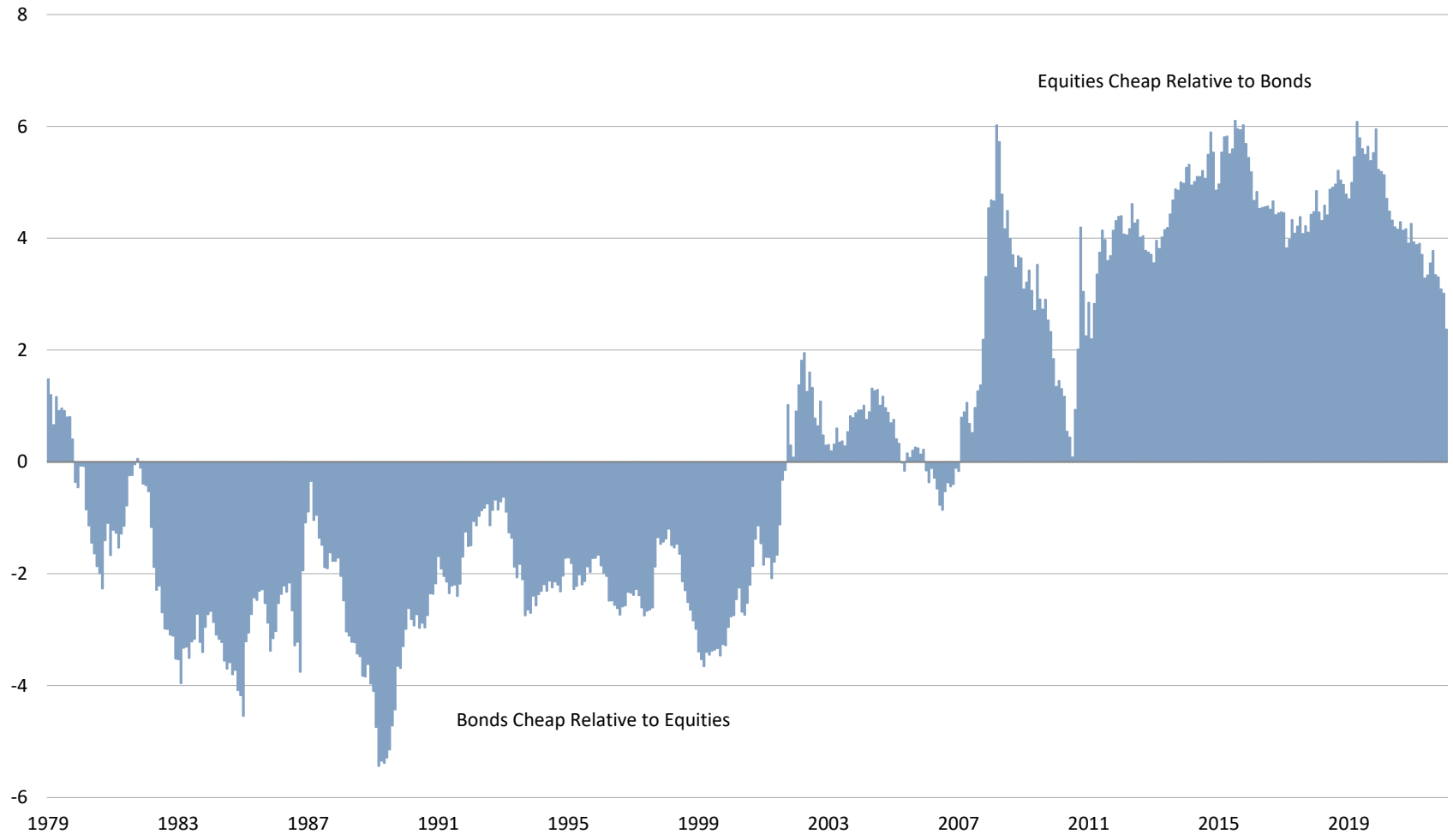


Sources: Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Real earnings per share and return on equity are based on the MSCI Europe ex UK Index. Recessions are defined by Euro Area Business Cycle Network economic peak-to-trough dates.

The relationship between equity and bond valuations has shifted over time

SHILLER EARNINGS YIELDS VERSUS 10-YR BOND YIELDS

1979–2022



Sources: Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: Data are monthly. Chart shows the spread between the normalized earnings yields and ten-year bond yields calculated as earnings yield minus bond yield. Normalized earnings yields are based on the Shiller P/E ratio.

Starting bond yields are a reasonable barometer for prospective nominal returns

RELATIONSHIP BETWEEN GOVERNMENT BOND YIELDS AND SUBSEQUENT 10-YR AACRS

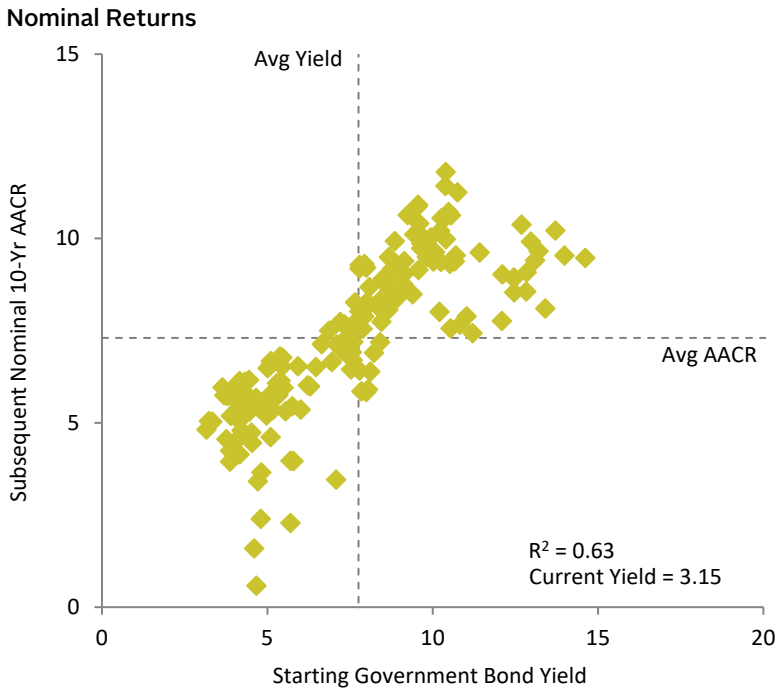
1970–2022 • Percent (%)

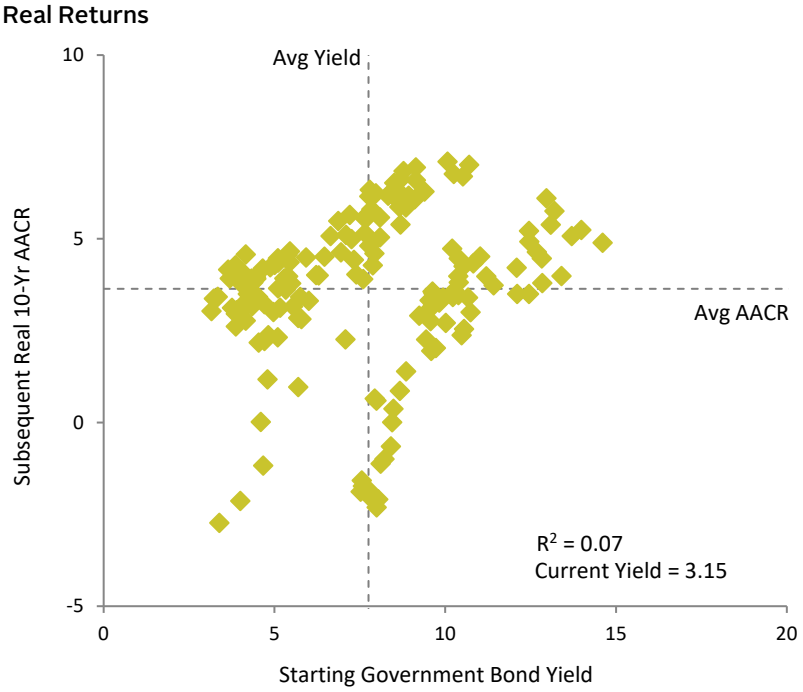
Source: Global Financial Data, Inc.
Notes: Data are monthly. The last full ten-year period was January 1, 2013, to December 31, 2022.

The starting yield-subsequent return relationship is weaker when accounting for inflation

RELATIONSHIP BETWEEN GOVERNMENT BOND YIELDS AND SUBSEQUENT 10-YR AACRS

1970–2022 • Percent (%)





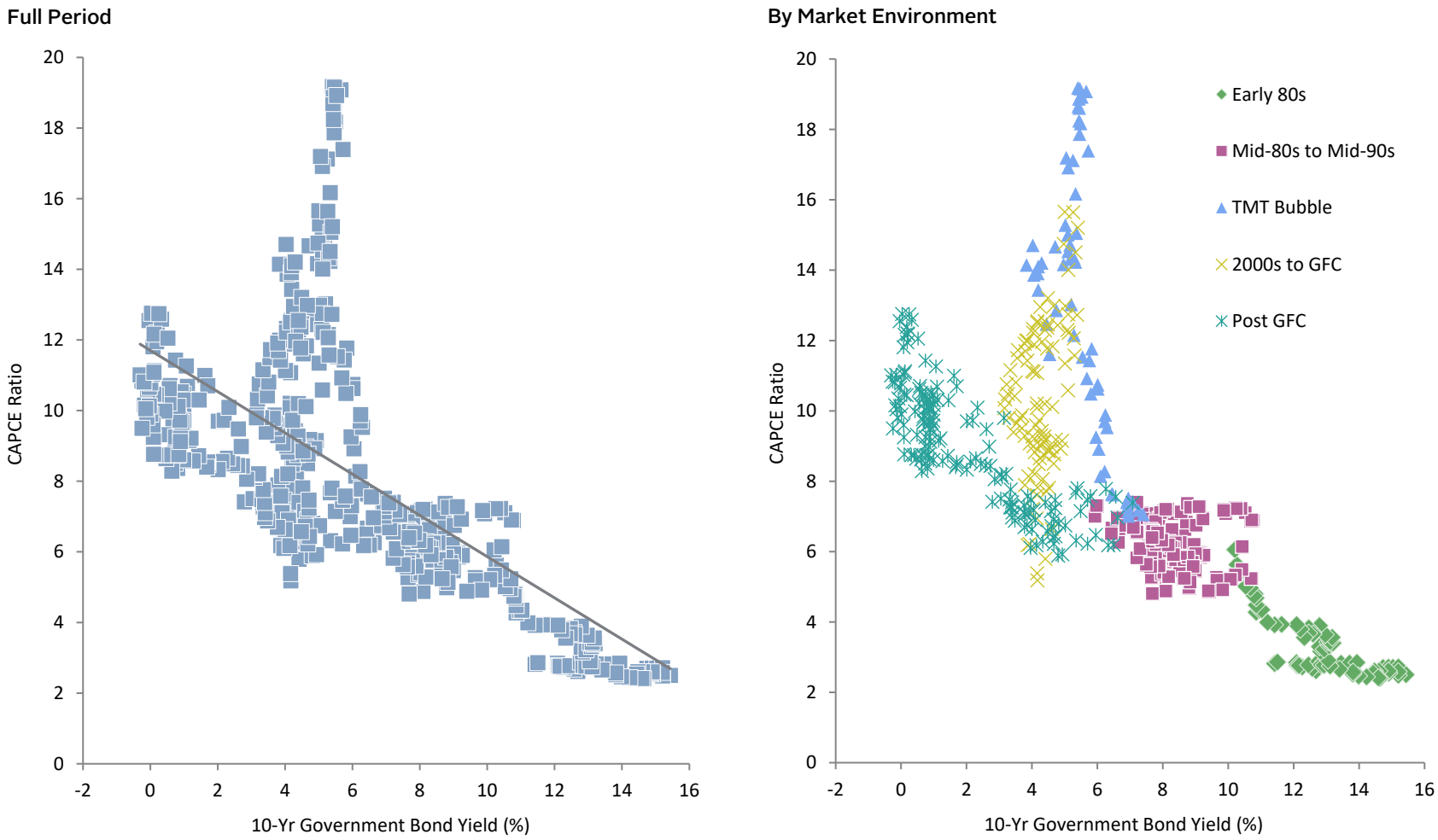
Yield	Starting Period Government Bond Yields			Subsequent Nominal 10-Yr AACR (%)			
Quartiles	Mean	High	Low	Mean	High	Low	Std Dev
First	4.17	4.97	3.16	4.64	6.16	-0.81	1.64
Second	6.42	7.79	5.01	6.42	9.28	2.28	1.38
Third	8.68	9.66	7.84	8.64	10.91	5.83	1.27
Fourth	11.76	15.44	9.73	9.51	11.80	7.43	1.04
Overall	**7.76**	**15.44**	**3.16**	**7.30**	**11.80**	**-0.81**	**2.33**

	Starting Period Government Bond Yields			Subsequent Real 10-Yr AACR (%)			
	Mean	High	Low	Mean	High	Low	Std Dev
First	4.17	4.97	3.16	2.93	4.58	-2.73	1.62
Second	6.42	7.79	5.01	3.64	6.33	-1.88	2.04
Third	8.68	9.66	7.84	3.55	6.94	-2.31	2.90
Fourth	11.76	15.44	9.73	4.43	7.10	2.03	1.23
Overall	**7.76**	**15.44**	**3.16**	**3.64**	**7.10**	**-2.73**	**2.10**

Source: Global Financial Data, Inc.
Notes: Data are quarterly. The last full ten-year period was first quarter 2013 through fourth quarter 2022.

Low (high) bond yields are generally associated with higher (lower) equity valuations

RELATIONSHIP BETWEEN EQUITY VALUATIONS AND 10-YR GOVERNMENT BOND YIELDS
December 31, 1979 – December 31, 2022

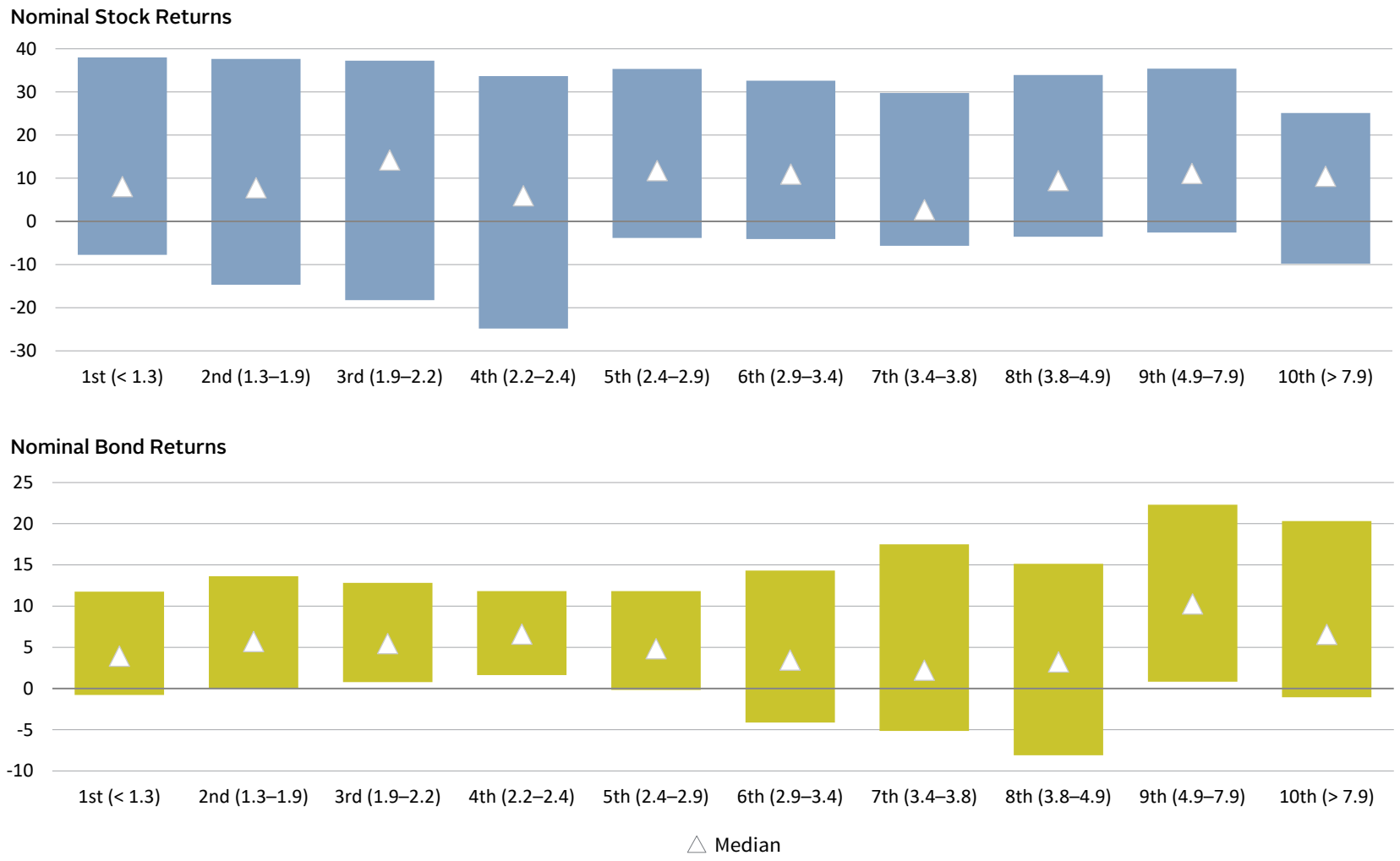


Sources: Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.
Notes: "TMT Bubble" refers to the late-1990s period of rising equity prices, particularly for internet-related companies. This period is also commonly referred to as the "dot-com" bubble. TMT stands for technology, media, and telecommunications. Data are monthly.

Median equity returns are similar across regimes; higher yields support bonds during inflationary bouts

ROLLING 3-YR NOMINAL STOCK AND BOND RETURNS BY INFLATION DECILE

January 31, 1951 – December 31, 2022 • AACR (%)

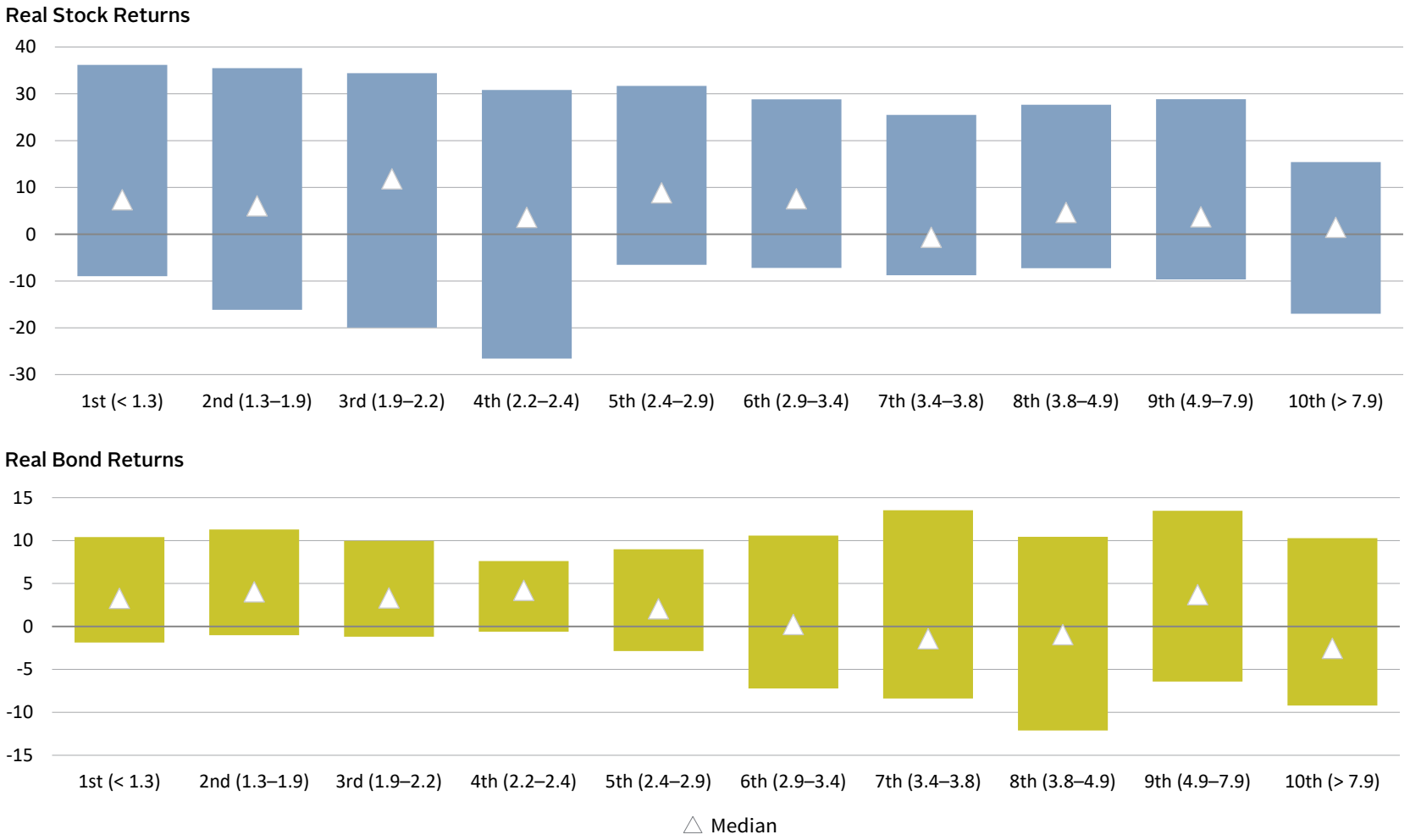


Sources: Global Financial Data, Inc. and Thomson Reuters Datastream.
Note: X-axis data in parentheses are inflation ranges by decile.

High inflation diminishes bond performance, while equities are relatively resilient

ROLLING 3-YR REAL STOCK AND BOND RETURNS BY INFLATION DECILE

January 31, 1951 – December 31, 2022 • AACR (%)

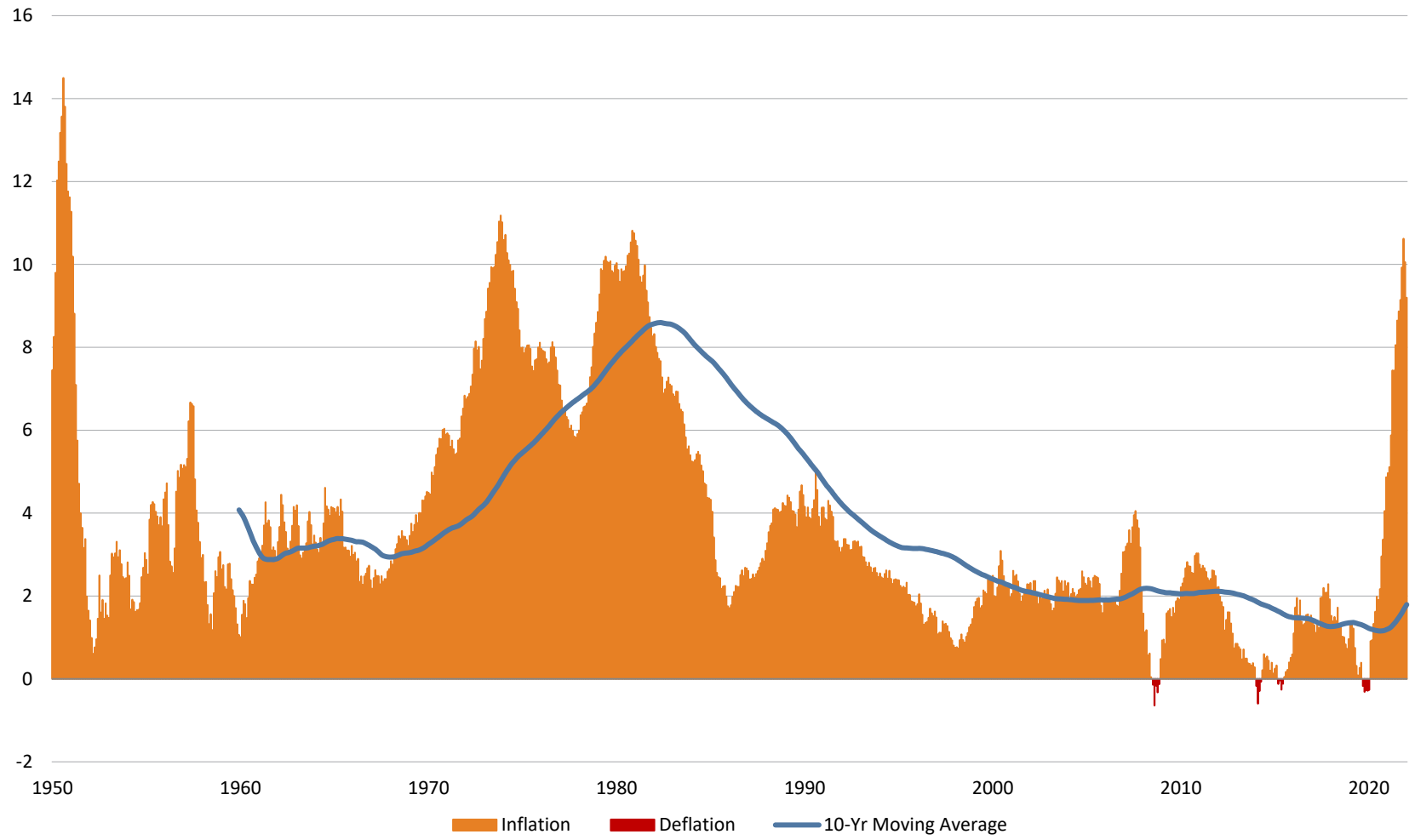


Sources: Global Financial Data, Inc. and Thomson Reuters Datastream.
Note: X-axis data in parentheses are inflation ranges by decile.

Inflation spiked well above trend in 2022, but has reached higher levels historically

EUROZONE INFLATION

1950–2022 • Year-Over-Year (%)



Sources: Global Financial Data, Inc. and Thomson Reuters Datastream.
Notes: Data are monthly. Moving average begins ten years after the first monthly observation.

Graham Landrith, Mark Sintetos, and Ilona Vdovina also contributed to this report.