

BlackRock®

October 2021

Market risk monitor

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The story

- **Risk sentiment remains robust and asset correlations relatively low – keeping the environment constructive for risk-taking.**
- **Yet we see the path narrowing for further gains in risk assets. Traditional valuation metrics show only median levels compensation for risk in U.S. and European equities at a time of heightened uncertainty on the growth and inflation outlook. We see little compensation for risk in fixed income broadly.**
- **Current valuations depend on low interest rates even as inflation has risen. Our pro-risk stance is based on a view that central banks will respond much less to higher inflation than in the past, keeping the rise in nominal government bond yields in check – our *new nominal* theme. But the risk to our view is a change in their reaction function away from that implied by new policy frameworks.**
- **We see less risk of an individual equity driver causing a sharp unwind. The value factor is not nearly as much of a drag on performance as before. Equity pullbacks have been shallower compared with 2020, keeping the resulting volatility spikes milder.**

Risk assets are still benefitting from the vaccine-driven restart that has spread beyond the U.S. Our indicators confirm that risk sentiment remains robust. Lingering nervousness over what lies beyond the economic restart continues to drive periodic bouts of volatility and jumps in the pricing of expected market volatility – but the spikes are less striking than earlier in the year. Interest rate volatility remains at historically rock-bottom levels, even with the rise in long-term government bond yields.

Investors continue to be well rewarded for taking risk, but the path is narrowing for further gains in risk assets and valuations show little compensation for taking risk in fixed income more broadly. We maintain our tactical pro-risk stance but acknowledge risks of markets and policymakers misreading the current inflation surge. This could result in a surge in inflation expectations, central banks tightening policy prematurely or markets trying to anticipate a sharp tightening of monetary policy.

Within equity drivers, the importance of both the value and volatility factors has reduced, partly reflecting the rebound in value and small cap shares this year. Oil remains a limited driver so far – despite the big gains in crude oil prices.

Risk overview

In our Market Risk Monitor, we demonstrate some of the elements of market risk that we keep a close eye on. The table below provides an overview of the market pricing of risks we monitor and where they stand both in terms of level and directional changes over the quarter.

Element of risk	Level	Direction of change
Volatility		
Concentration		
Regime		
Persistence		
Valuation		



High/rising



Neutral/unchanged



Low/falling

Notes: This material represents BII's assessment of the market environment as of October 2021 and is not intended to be a forecast of future events or a guarantee of future results. This information should not be relied upon by the reader as research or investment advice regarding any funds, strategy or security in particular.

Volatility

Expected volatility is a strong indicator of the risk of an asset. Volatility can be measured in different ways, but most often it involves tracking the standard deviation of returns over some sample period and capturing the dispersion – or potential dispersion of returns – over time. The biggest challenge in forecasting volatility is the speed with which it can change. Sometimes it surges rapidly, and the magnitude can be very large. As a result, the risks of assets and portfolios can change significantly, even when the underlying holdings are static.

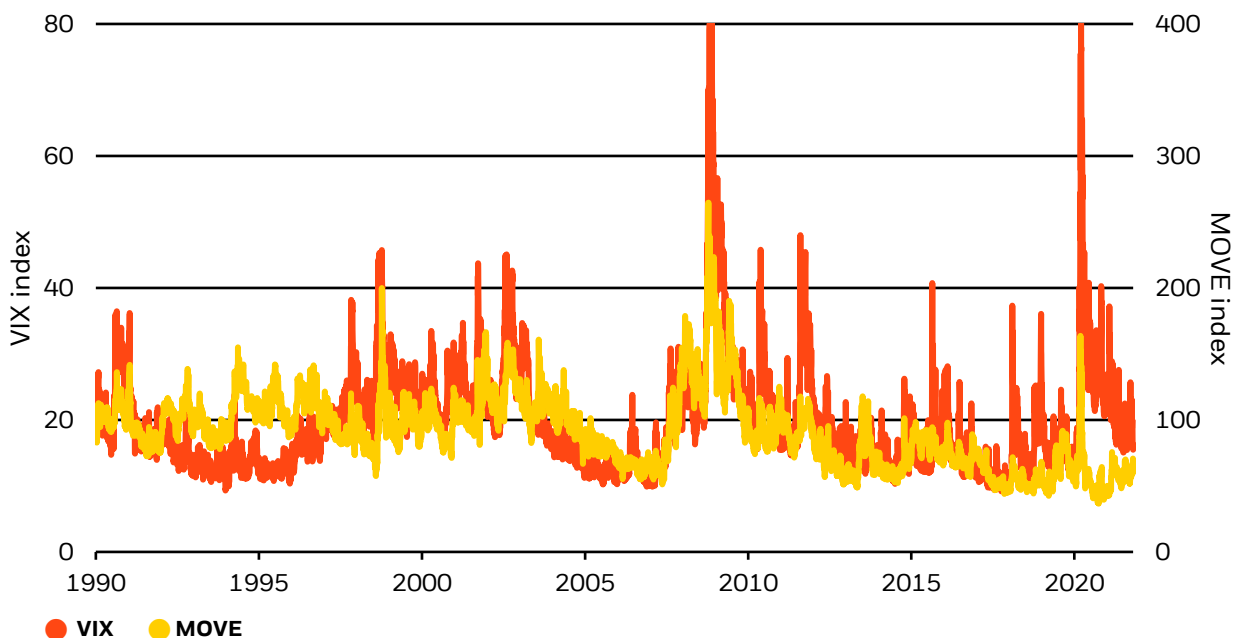
The volatility chart shows the evolution of S&P 500 and U.S. Treasury implied volatility – the VIX and the MOVE indexes respectively. Implied volatility is the option market's pricing of future volatility. The two markets have historically been correlated during periods of systemic risk, such as in 2008.

The VIX index has retreated after climbing in September during the equity market retreat. It still remains below the levels seen earlier this year and has gradually started to return to pre-Covid levels. The repeated, if short-lived, spikes during the year highlight the underlying nervousness about what comes beyond the economic restart and the potential for a wide range of outcomes. The MOVE index – a measure of bond market volatility – remains subdued even with the climb in U.S. Treasury yields in recent weeks. That perhaps reflects how central bank purchases of government bonds are helping limit interest rate volatility, helping underpin risk assets.

Volatility through time

US equity and Treasury implied volatility, 1990-2021

[View interactive chart](#)



Index data provided for illustrative purposes only. Indices are unmanaged and it is not possible to invest directly in an index

Sources: BlackRock Risk and Quantitative Analysis and BlackRock Investment Institute, with data from Bloomberg and Bank of America Merrill Lynch, October 2021. Notes: Charts based on the Chicago Board Options Exchange Volatility Index (VIX) and the Merrill Option Volatility Expectations (MOVE)® indices.

Concentration

The inter-relationship between assets is as important as the volatility of individual assets. Diversification is a key element of portfolio risk. Like volatility, correlations can change a great deal over time. Sometimes this change is slow; other times it can be very rapid and subject to jumps. This can induce enormous changes in portfolio risk.

The correlations chart shows a range of assets as represented by their respective indexes. These assets include bonds and equities of various kinds, and others such as commodities. In times of stress, returns of different asset classes tend to be highly correlated, implying a lack of diversification.

Correlations are generally medium to high. The correlation of EM and investment grade debt with DM government debt is on the high side, showing the duration risk from any push higher in long-term yields. That has been reflected in total returns this year. At the same time, the typically negative correlation in returns between DM equities and government debt is closer to zero now, suggesting reduced diversification for multi-asset portfolios.

Correlation across asset classes

Current correlations and correlations versus history. September 2021

[View interactive chart](#)

	Index-linked debt	DM gov. debt	IG debt	EM gov. debt (\$)	HY debt	DM equity	DM small-cap equity	EM equity	Private markets	Commodities	Current correlations
Index-linked debt		0.75	0.65	0.57	0.23	0.12	-0.08	-0.07	0.11	-0.13	
DM gov. debt	19%		0.91	0.65	0.14	-0.08	-0.30	-0.20	0.00	-0.43	
IG debt	28%	87%		0.71	0.37	0.01	-0.20	-0.09	0.06	-0.28	
EM gov. debt (\$)	75%	88%	57%		0.51	0.22	0.05	0.28	0.27	-0.23	
HY debt	64%	58%	44%	33%		0.59	0.54	0.46	0.57	0.40	
DM equity	78%	66%	45%	36%	27%		0.86	0.54	0.87	0.43	
DM small-cap equity	60%	33%	20%	22%	22%	3%		0.63	0.79	0.60	
EM equity	33%	28%	14%	8%	17%	22%	33%		0.48	0.30	
Private markets	41%	38%	14%	13%	19%	50%	39%	9%		0.36	
Commodities	25%	11%	11%	0%	20%	47%	82%	26%	42%		
Correlations vs. history											

High

Medium to high

Low

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Source: BlackRock Risk and Quantitative Analysis and BlackRock Investment Institute, with data from Bloomberg and Refinitiv Datastream, September 2021. Notes: Correlation is based on a short-term (40 day) half-life using 252 days of data. Indexes used are the Bloomberg Barclays World Govt Inflation Linked bonds TR USD for index-linked debt; Citi WGBI 7-10yr local currency for DM gov debt; Bloomberg Barclays Global Aggregate Corporate Total Return Index USD for IG debt; J.P. Morgan EMBI Plus Composite USD for EM gov debt; Bloomberg Barclays U.S. Corporate High Yield Total Return Index for HY debt; MSCI World Gross Total Return Index local currency for DM equity; MSCI Daily TR Gross Small Cap World USD for DM small cap equity; MSCI Daily TR Gross EM USD for EM equity. For private markets, we use the S&P Listed Private Equity Total Return Index USD for listed private equity, the S&P Global Infrastructure Total Return USD for Infrastructure and the FTSE EPRA NAREIT Developed TR USD for property. For commodities, we use the Bloomberg Commodities Index. The upper diagonal shows the current cross-asset correlation based on 252 days of data, with more weight put on the last 40 days because that timeframe is consistent with our models for measuring short-term risk. The closer the number is to zero (either positive or negative), the weaker the correlation (see numbers in green). A higher number (positive or negative) indicates a strong correlation between asset classes (see the numbers in dark red). The lower diagonal is the percentile rank of this correlation over a five-year period. A green percentage number indicates that the current correlation is close to its five-year average.

Regime

The regime map is a two-dimensional representation of the market risk environment in which we plot the market risk sentiment and the strength of asset correlations. Positive risk sentiment implies that, in broad terms, riskier assets are outperforming assets perceived as lower risk, such as government bonds. Negative risk sentiment implies that riskier assets are underperforming low-risk assets. Increasing correlations might suggest a market-wide response to a common underlying theme, such as the 2013 “taper tantrum.”

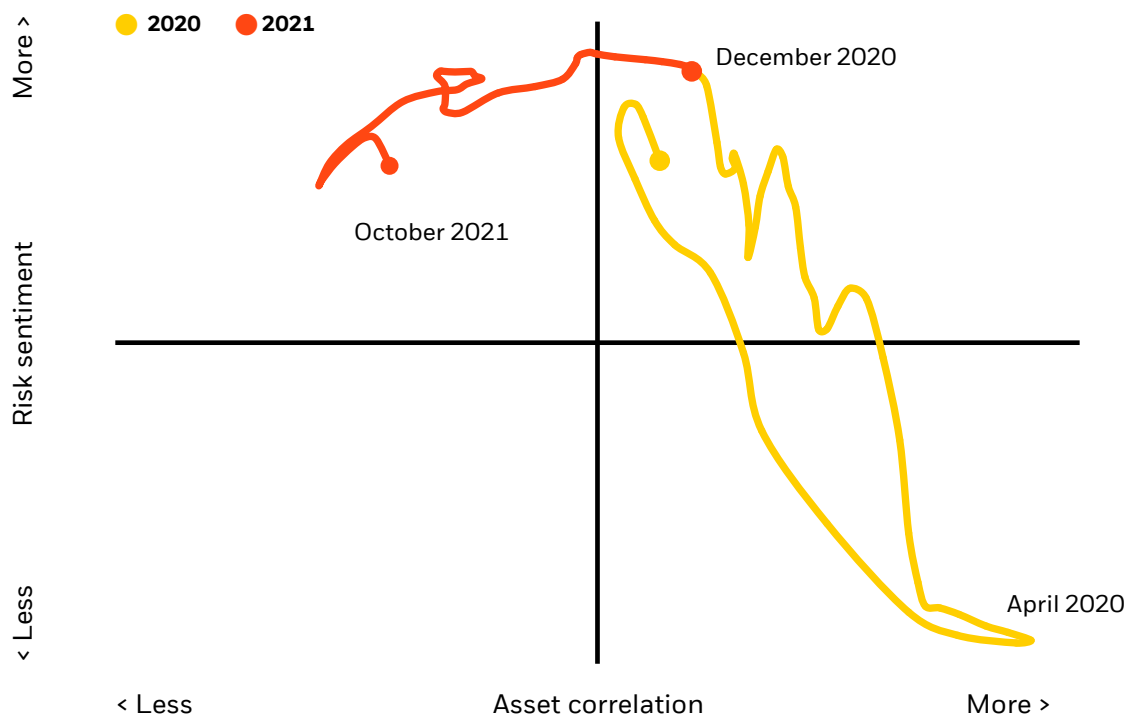
The possibility of rapid changes in short-term asset correlations can make it difficult for investors to ensure portfolios are appropriately positioned for the immediate future. When there is greater correlation among assets (represented by the right side of the regime map), it is harder to diversify and risk is greater. When asset prices are less correlated (the left side of the map), investors have more opportunities to diversify their portfolios.

When the location of both series – risk sentiment and asset correlation – on the map is relatively stable, forecasting risk and return is easier. But when market conditions are volatile and the location of both series varies rapidly, anticipating risk and return can be significantly more challenging. The map shows we remain in an environment of lower asset correlation and high risk sentiment overall, so investors are being rewarded for taking risk. This is in line our pro-risk stance on a tactical horizon, which is supported by a broadening global economic restart and still negative real interest rates. See our [Global Outlook](#) published in September 2021.

Concentration and risk appetite

Market risk sentiment and strength of asset correlations 2020-2021

[View interactive chart](#)



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Source: BlackRock Risk and Quantitative Analysis and BlackRock Investment Institute, October 2021. Risk sentiment shows our estimate of reward to risk based on our Risk Tolerance Index (RTI). The RTI is calculated as the rank correlation between risk (measured by annualised volatility) and the return of the asset classes shown in the concentration tab. The return series for each asset class is estimated as the weighted moving average of daily returns over a rolling 40-day window. We use a 40-day period because our work finds it has historically worked the best for our short-term risk management purposes. Asset correlation is based on our Multi-Asset Correlation (MAC) index in the concentration tab. The MAC gauges the level of diversification across asset classes – stronger correlations provide less diversification, and weaker correlations provide more diversification. This helps us uncover the relative importance of a common driver of returns across these asset classes. The data is then rescaled so it can be more directly compared.

Persistence

Sometimes asset returns move far from where they started on very low volatility. When asset returns trend for an extended period, standard risk measures such as volatility fail to capture the risk associated with these moves. Monitoring trending market drivers – such as size and value, or oil prices – make it possible to gauge this risk over time.

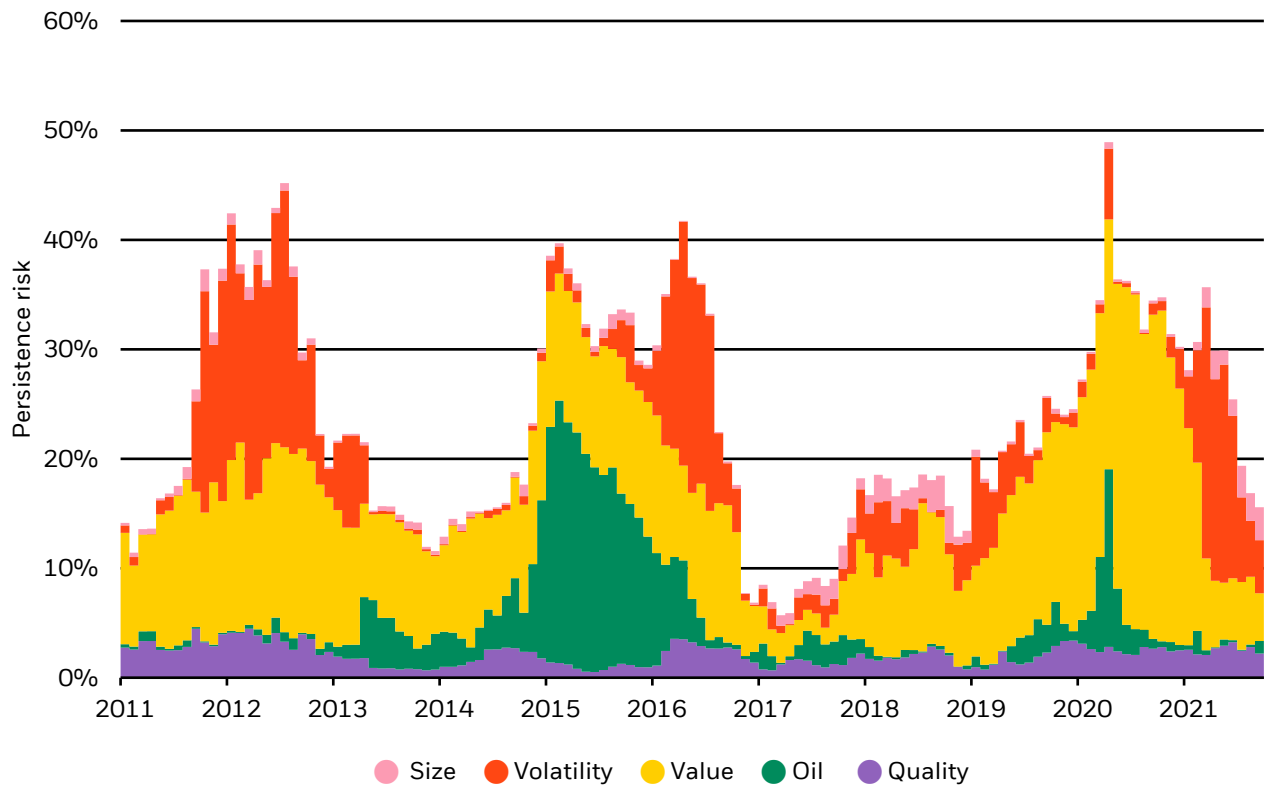
The persistence chart shows the extent to which these market drivers explain one-year price momentum in global equities. For instance, it was the oil price that drove the equity market when crude prices plunged in 2015-2016 and again last year when oil prices went negative (see the green bars in the chart). Since 2018, it has been the systematic underperformance of value stocks and lately the outperformance of low-volatility stocks.

Higher overall persistence risk – when the bars in the chart are higher – shows that there is a greater amount of momentum behind a certain theme and the potential for a swifter fall in equity markets if that investment theme loses popularity. Overall persistence risk has dipped during the course of 2021. Value and volatility have been the main drivers of global equities over the last 12 months, though both fell in significance in the third quarter and are now some way below pre-Covid levels. Value is not nearly as much of a drag on performance as before. Oil grew in significance in September, although the size of the increase pales in comparison to the one experienced when oil prices turned negative in April 2020. Overall, the lack of a strong driver suggests less risk that one of these drivers could power a sharp reversal in risk assets.

Market drivers of global equity performance

Persistence in market themes, 2011-2021

[View interactive chart](#)



Index data provided for illustrative purposes only. Indexes are unmanaged and it is not possible to invest directly in an index. Sources: BlackRock Risk and Quantitative Analysis and BlackRock Investment Institute, with data from Bloomberg and Refinitiv Datastream, October 2021. Notes: Our chosen drivers may change over time. Size is determined by measures such as market cap and total assets. Volatility is determined by measures such as the one-year price range and one-year standard deviation. Value is determined by traditional valuation measures such as book value to price and cash flow to price. Quality is determined by measures of profitability such as return on equity and return on assets. Oil's persistence as a market driver is calculated using the oil price.

Valuation

Assets and securities that become expensive or cheap relative to their long-term norm can be risky simply because of valuation. Stretched valuations may be indicative of elevated conditional risk in the market, but the short-term correlation between valuation and return is inconsistent and therefore difficult to forecast. Valuation itself is sometimes an elusive concept to capture.

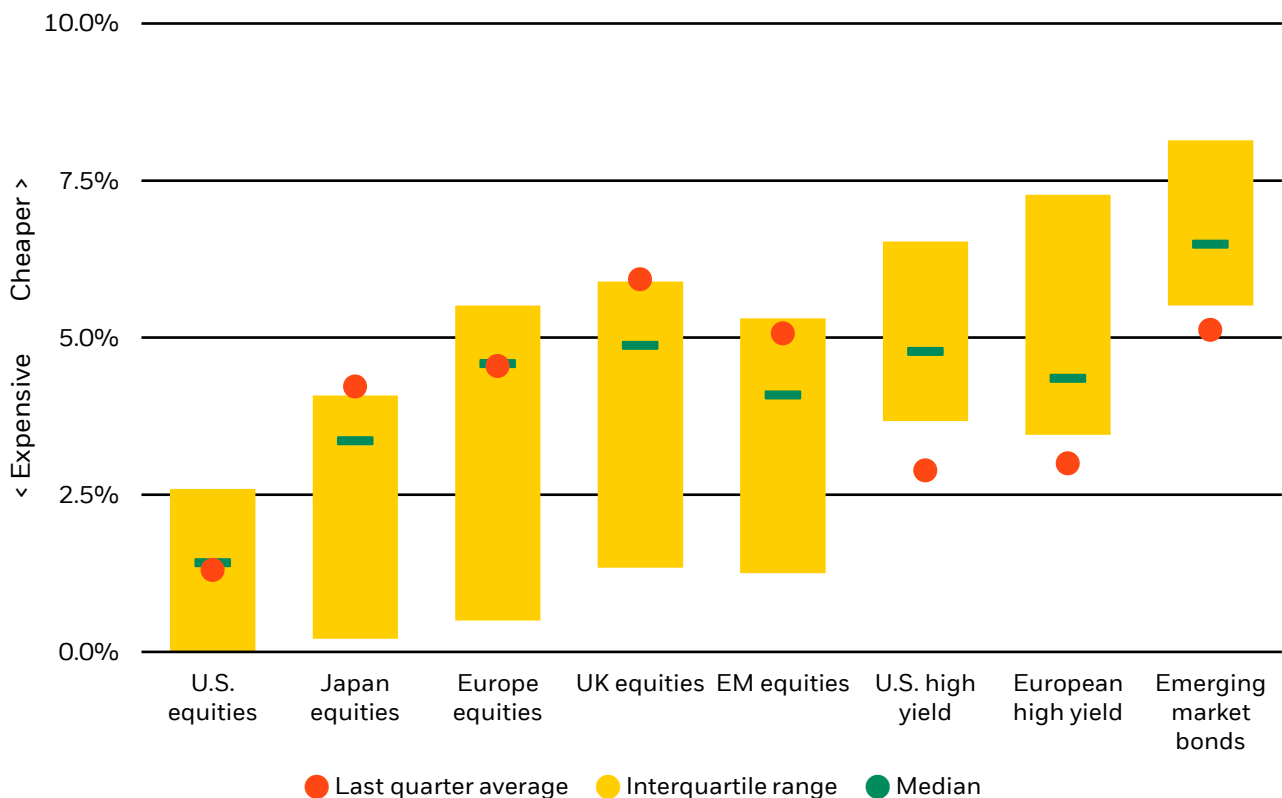
The chart illustrates this through the compensation for risk that investors receive as the earnings yield or credit spread relative to U.S. 10-year Treasury yield. The chart suggests that equity valuations are within or near the historical interquartile range, implying fair compensation for risk-taking. By contrast, relatively risky bonds show some stretched valuations with spreads at the narrow end of the long-term historical distribution. We see valuation risk overall as higher now compared with Q1 because of the wide range of potential outcomes beyond the restart. Potential returns in line with or below historical median levels is probably insufficient for such a wide range of outcomes.

Historically low interest rates – especially real yields – are the core justification for current asset valuations. But whether low rates persist will depend crucially on the interplay between interest rates, inflation and debt following the policy revolution in response to the Covid-19 shock. For more see [Testing debt tolerance](#) from February 2021.

[View interactive chart](#)

Historical distribution of equity and bond yields

Long-term distribution of equity earnings yields and credit relative to 10-year government bond yields



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Sources: BlackRock Risk and Quantitative Analysis and BlackRock Investment Institute, with data from Bloomberg and Refinitiv Datastream, October 2021. Notes: The chart shows the long-term distribution of cyclically adjusted earnings yields for major global equity markets relative to the 10-year government bond yield in those markets. For fixed income we use yield spreads versus government bonds. Indices used are: S&P 500, Japan TOPIX, MSCI Europe, FTSE All-Share, MSCI Emerging Markets, Bloomberg Barclays US and European High Yield, JP Morgan EMBI Index. Valuation period is based on data since 2000.

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