

## Section 9: Global Valuation Chartbook

15<sup>th</sup> September 2022

### Equities: Is the Market Cheap?

a.k.a. Marrying the ‘Macro’ with the ‘Micro’

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#### Section 9: Valuation Overview

*While absolute valuation has limited use for timing cyclical bull and bear markets (see structural asset allocation no 14, May 2006: “Does Valuation Matter”), it does provide insights into market sensitivities to challenging (or indeed positive) economic environments. Added to that, relative valuation can be particularly insightful – especially as a key building block for allocating between asset classes and geographies. This is why we dedicate a section of the quarterly global asset allocation to the analysis of valuation metrics.*

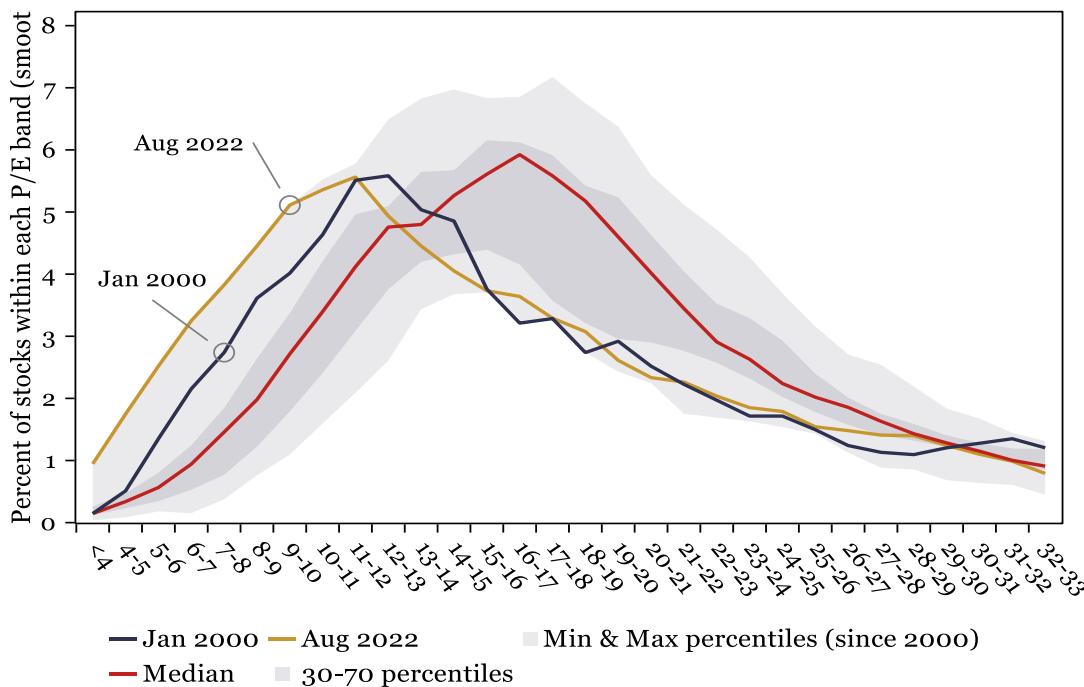
#### Introduction

Markets are already meaningfully off from their highs at the start of this year.

Despite that, though, US monetary policy continues to tighten rapidly, with the chances of a 100bps rate hike at next week’s meeting growing over the course of this week. Macro indicators also continue to point to a rising likelihood of recession in 2023: The yield curve remains inverted, leading economic indicators are contracting, whilst other macro indicators are also consistent with that message (i.e. the likelihood of a US/global recession in 2023). Consensus earnings forecasts, in contrast, continue to anticipate rising EPS and margins in 2023 (despite those growing economic challenges).

All of that supports the expectation that the bear market is alive and well.

#### Fig 9: Distribution of individual underlying single stock PERs (US market)



Source: Longview Economics, Macrobond

Having bottomed in June 2022, however, the S&P500 rallied from oversold levels through to mid-August, aided by a strong Q2 earnings season (and resilient consensus earnings, [for detail see – Quant Monthly No. 6, available HERE](#)).

The key question for this (valuation) analysis, though, is: Does valuation provide any insights into how far this bear market may have left to run? In particular, **with the S&P500 down 18.5% this year, are stocks cheap on a valuation basis?**

## Key Rationale

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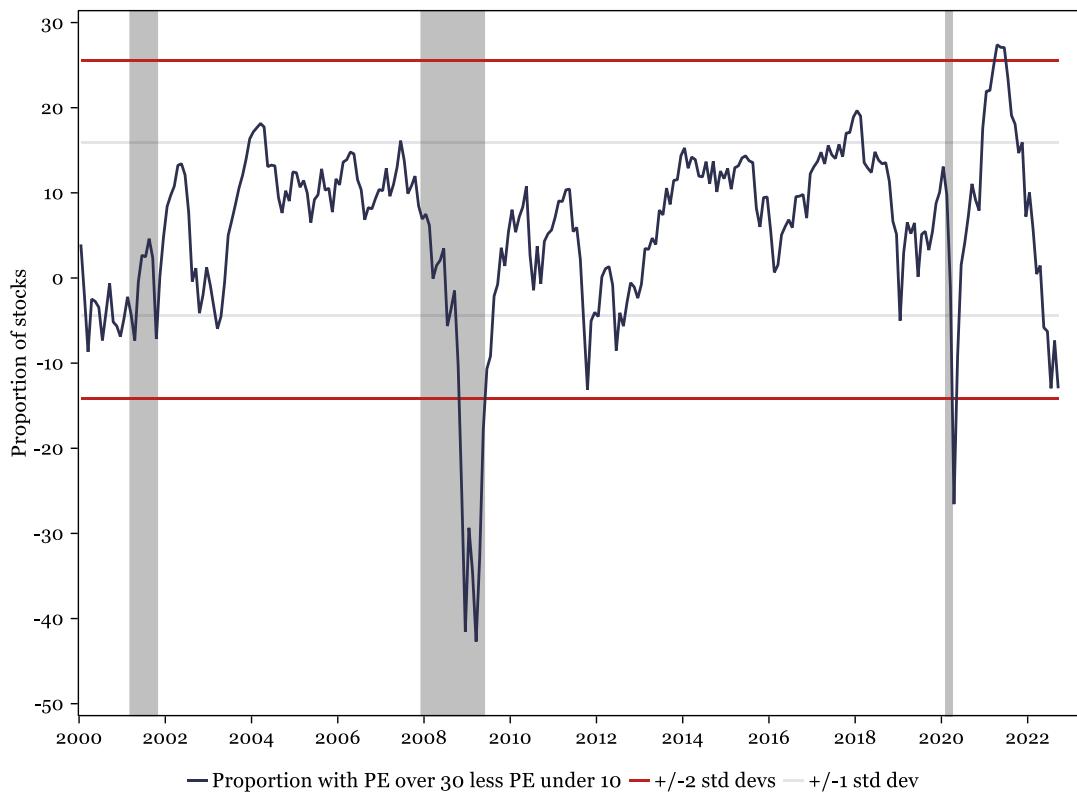
There are multiple ways to assess the valuation factor in equity markets. In this analysis, we examine three categories of valuation measures to answer that question (i.e. are stocks cheap?).

Those three approaches are:

1. An assessment of headline index **PE ratios**, median PE ratios, and the distribution curve of the underlying market's PE ratios (all based on consensus forward earnings estimates);
2. An assessment of the equity market through the **lens of single stocks**, with a focus on the disproportionate impact of the 'Mega Cap' stocks;
3. Economy wide/**'broad-based' measures** of the market's valuation.

**Fig 9i:** Proportion of US stocks with a PE ratio over 30 less PE ratio under 10

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Source: Longview Economics, Macrobond

## The Analysis

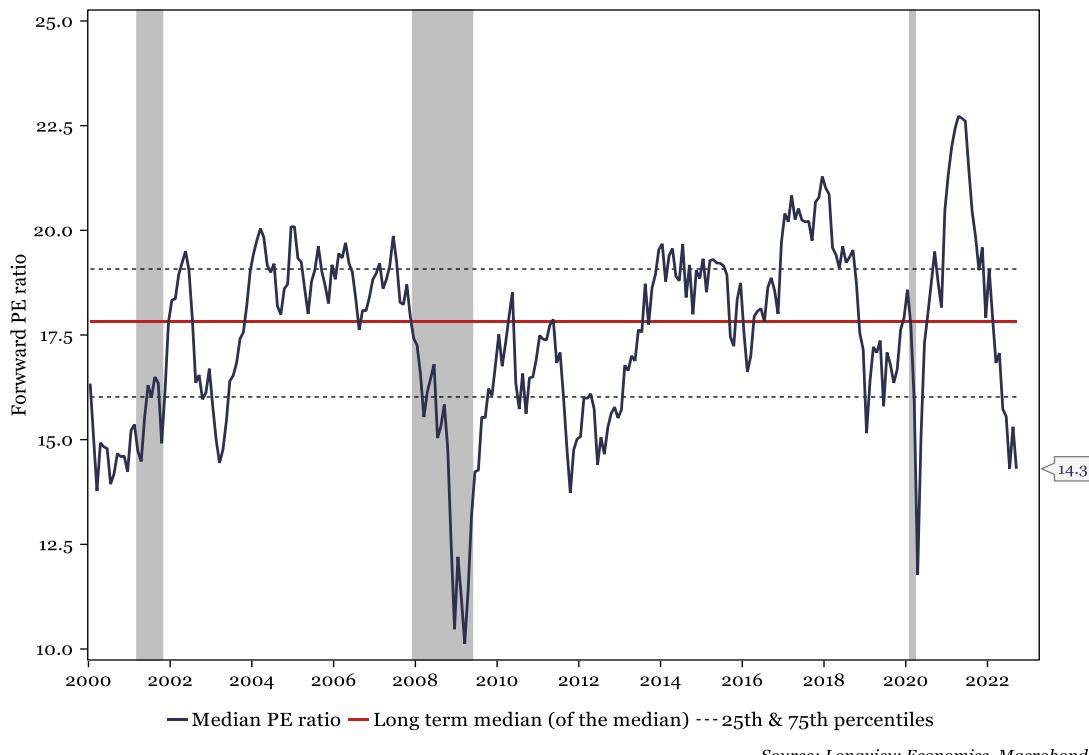
### 1. Headline Valuation Metrics

**At an aggregated index level**, US equities still appear to be reasonably expensive. The S&P500 forward PE ratio is still firmly above its long term average (i.e. at 16.9x, see fig 9viii), while the NASDAQ index remains close to +1 standard deviation above its mean.

In contrast, other PE based metrics hold a different message and suggest that equities have become more attractive. The US median P/E ratio, for example, which measures the median forward P/E of the largest 2,500 US stocks, has continued to decline and is now at 14.3x (fig 9ii). That represents one of its lowest levels since the GFC.

Similarly, the distribution of the P/E ratios (of the single stocks that make up the broad US equity market) has skewed notably to the left, relative to history since 2000 (fig 9) – albeit, in both instances, there are parallels with January 2000 in that respect.

**Fig 9ii:** US median PE ratio (with long term median)



Digging into the detail, we observe that the proportion of stocks with a PE ratio below 10 is currently at historically high levels (over 30%, fig 9iii), similar to peaks seen in the pandemic, the GFC and in 2000 (at the start of that bear market).

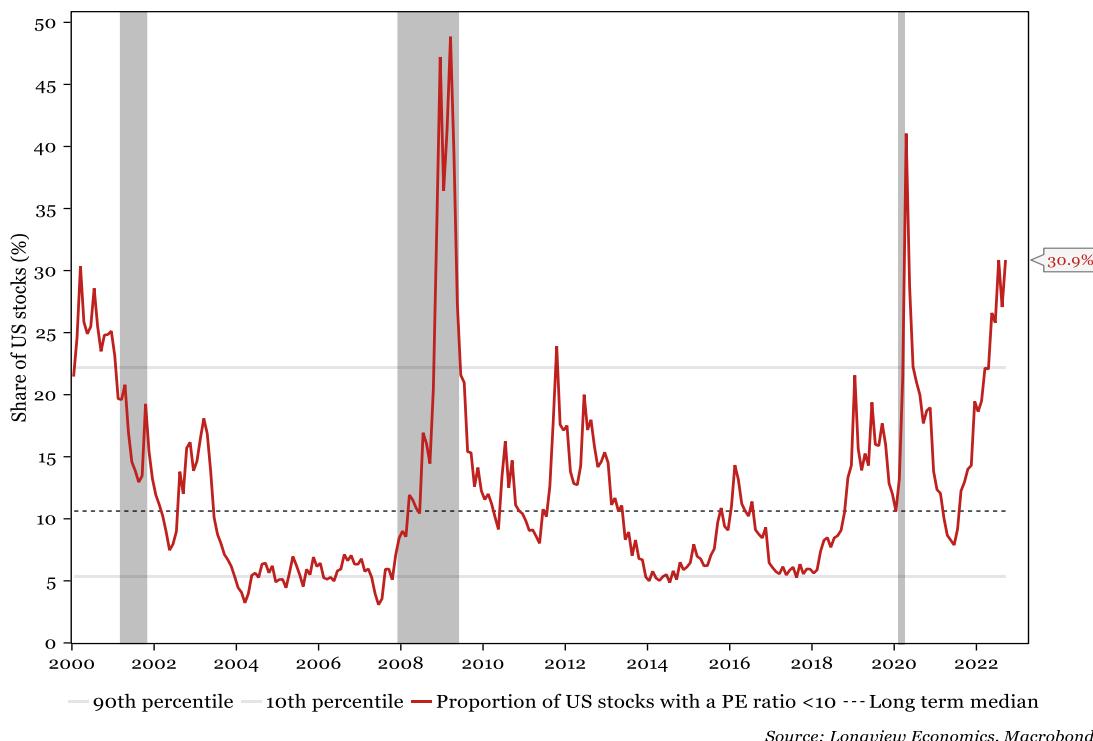
Conversely, the proportion of US stocks with a high PE ratio (i.e. above 30) has declined significantly from its April 2021 high (i.e. at 36.1%), and is now

near its long term median levels of 17.9% (September 2022 – fig 9xi). As such, our ‘overvalued less undervalued’ model (i.e. the proportion of stocks over 30 less under 10) is close to -2 std deviations (once again, at levels, usually only seen at bear market lows – fig 9i).

Understanding these divergent messages is critical for assessing the overarching message of the valuation models. How is the circle squared? Why is the median PE ratio low yet the headline PE notably above its long term average?

**The answer lies in the mega cap stocks** – which make up a significant proportion of the index market cap (see point 2).

**Fig 9iii:** Proportion of US stocks with a P/E ratio <10



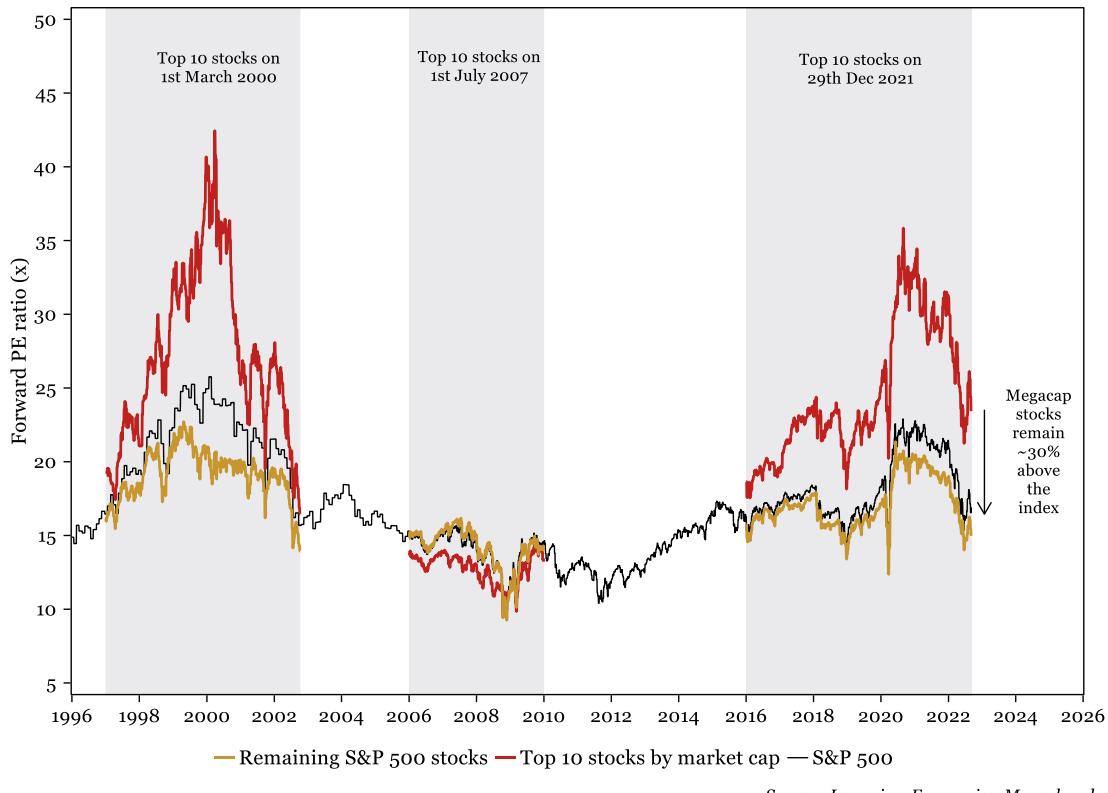
- 2. ‘Mega Caps’ are still expensive:** The availability of cheap money has (arguably) made the S&P500 more top-heavy than ever, with the top 10 stocks amounting to over 30% of the total S&P500 market capitalisation.

Just as in the dot-com bubble in 2000, these mega cap stocks have notably high valuations. Apple’s market cap, for example, is equal to that of the bottom 183 S&P500 companies combined. Despite the recent challenges that various tech stocks have faced, Apple is still trading at a forward ratio of 24.6x, while its consensus earnings remain in positive territory, with predicted growth of 8% in 2023 and 7% in 2024.

It's not just Apple that has rich valuations. Other stocks ranked in the top 10 by market cap include Microsoft (23.9x), Amazon (45.6x) and Tesla (55.9x). Hence, when thinking about the forward PE ratio of the S&P500, it's important to factor in the bias caused by these mega cap stocks. **Indeed,**

**the current playbook of how the PE ratios are evolving looks similar to that of in the late 1990s to early 2000s** (see fig 9iv). The forward PER for the top 10 stocks in March 2000 peaked at 42.5x, 78% higher than the index PER. Eventually, as the excess unwound, the forward PE ratio for the top 10 stocks converged to that of the index.

**Fig 9iv:** S&P500 forward PERs



Similarly, from 2016 onwards, the forward PE ratio of the top 10 S&P500 stocks started to move above that of the rest of the market. By December 2021, it was at a peak of 35.9x (57% higher than the market's PER).

Whilst those valuations have started to normalise in the past 12 months, they remain, extremely overvalued relative to the index (by approximately 30%). The key question, therefore, is whether that 2000s playbook is the one that the mega caps will follow?

If so, then significant mega cap/tech weakness is likely in coming months/quarters (i.e. as that overvaluation continues to unwind). In that respect, the price action and valuation of Facebook/Meta (which was also in the top 10 stocks at the market peak in Dec 2021) over the past 18 months has been interesting. Meta's forward PE ratio peaked at 27.7x in mid-2020, and remained reasonably high (at 21.8x) in Dec-2021. This year, though, the PER has fallen sharply, and is now trading at a significant discount to the tech sector (and, indeed, the index, fig 9ix).

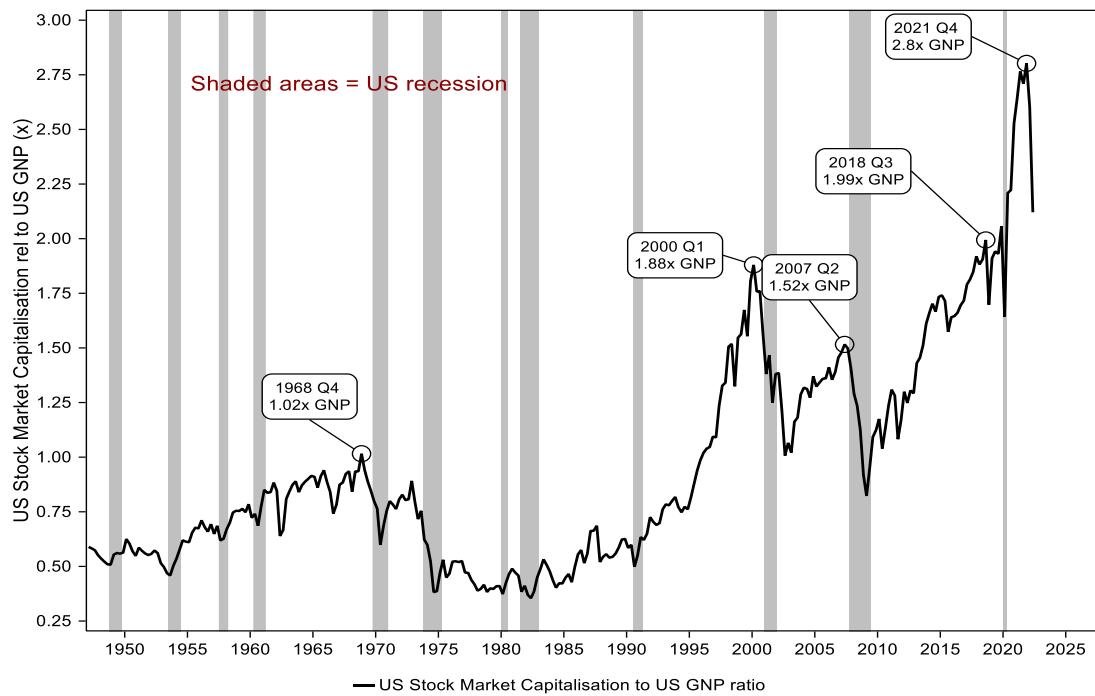
### 3. Economy-wide, broad based valuation measures suggest markets remain expensive.

While fund managers, analysts and tech enthusiasts often argue that the ‘tech mega caps’ are exceptional companies and, therefore, deserving of their high valuations, an assessment of the **whole market’s valuation relative to the size of the economy** (or against history), questions that assumption.

These (types of) charts show that stock market (and other asset classes) are overvalued relative to the size of the economy (or similar metrics).

Indeed, Buffet’s favourite valuation indicator is, reputedly, the broad stock market’s market capitalisation relative to the size of the economy. The rationale being that GDP incorporates all of the earnings of the economy as a whole (and is therefore a comprehensive denominator<sup>9i</sup>), with the market capitalisation showing the valuation of the publicly listed corporate sector. As fig 9v shows, despite some recent softening, this measure suggests that the equity market (as a whole) remains notably overvalued relative to the country’s entire output.

**Fig 9v:** US stock market capitalisation relative to GNP



Source: Longview Economics, Macrobond

<sup>9i</sup> albeit it doesn’t include the overseas portion of the global economy, from which many US companies derive some of their earnings/sales.

As Charles Kindleberger, financial historian and student of financial bubbles, described it ‘all bubbles are inflated by cheap money’, whilst those bubbles always burst when the cheap money is removed. In that respect, and given the Fed’s aggressive rate hiking cycle, the US stock market capitalisation to GNP ratio is clearly of concern (fig 9v). A revisit of the 2000

ratio highs (1.88x GNP, or the pre-pandemic peaks at 2.06x at end of 2019) seems plausible (& would be equivalent to a 22 - 27% fall from current levels).

A similar message is conveyed by the Shiller PE ratio (i.e. a ‘cyclically adjusted PE ratio’ fig 9x), which also correlates with US households’ allocation to equities as a share of their total financial assets.

Other signs of unwinding of the excess liquidity have also started to become visible, with the size of key asset classes decreasing by **\$7.2 trillion** since April 2022 (Table 9i). Of that, US equities have shed \$10.5 trillion of their market cap in the last 4 months. Unsurprisingly, another asset class which has seen a massive decrease in its market cap is ‘Cryptocurrencies’. Bitcoin, the largest crypto and which is widely regarded as another indicator of risk appetite/liquidity, is down 24% (from its highs).

**Table 9i:** Estimated size of key US<sup>9ii</sup> asset classes, and growth (2009-2021)

AUM/Market Cap (in \$bn)				
Asset/Fund Class	End-2009	Apr-22	Latest	Change since Apr-2022
US Equities	10,960	53,450	43,004	-10,446
US Real Estate	35,596	75,375	79,235	3,860
US Government Bonds	7,261	22,584	23,670	1,086
Gold	5,090	12,500	11,326	-1,174
US Corporate Bonds	5,641	10,022	10,148	126
Cryptocurrencies	~0	1,656	997	-659
US SPACs	~0	199	184	-15
Total	64,548	175,786	168,564	-7,222

*Source: Longview Economics*

<sup>9ii</sup> The above asset class estimations are US-centric, except for Gold and Crypto, which are global estimates.

To conclude, inflows into equities (and other asset classes) driven by the availability of cheap money, especially since March 2020, have pushed valuations to extremes. While equity market weakness this year has begun to normalise those extreme valuations, at a headline level, equities still have a way to go before the pandemic effect will have been completely reversed. In particular, if that reversal is going to come to fruition, a significant portion of that weakness will have to be centred around the current mega cap/tech stocks.

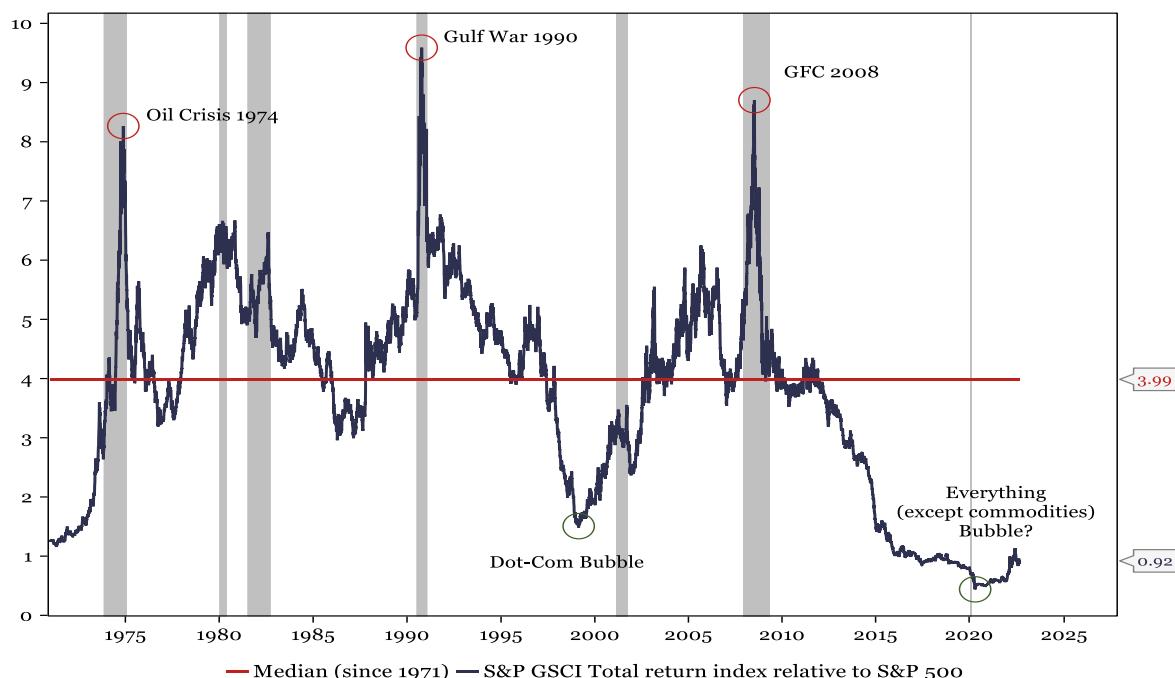
## Other Valuation Observations

Other key valuation points of note include the following:

- **US ERP models are not currently pricing in a recession.** Despite notable equity market weakness, the classic US ERP (measuring the S&P earnings yield against the US real bond yield) is still relatively unchanged this year (see fig 9di). Typically in recessions, this measure of ERP spikes sharply. Likewise, while HY corporate bond spreads have widened somewhat, they are yet to widen to extremes seen at the last three major recessions (1990, 2001 and 2008). As such, the ERP of equities measured against US high yield corporate bond yields is comfortably above its long term average (fig 9div).
- **Compared to equities, commodities remain close to record lows** (fig 9vi). That supports our view that a new ‘commodity super cycle’ is emerging. Equally that relative valuation metric will also normalise if equity valuations continue to devalue.

On a standalone basis, various commodities are expensive relative to their own price history. Fig 9oi shows the current prices (rebased relative to CPI) which have been percentiled using the commodities own price history. The table also shows those commodities (inflation adjusted) relative to all other commodities (i.e. as commodity pairs). Overall the table shows that ‘ags’ are typically the cheaper commodities, with energy and precious metals amongst some of the more expensive ones.

**Fig 9vi: Commodities vs. equities (relative price<sup>9iii</sup>)**

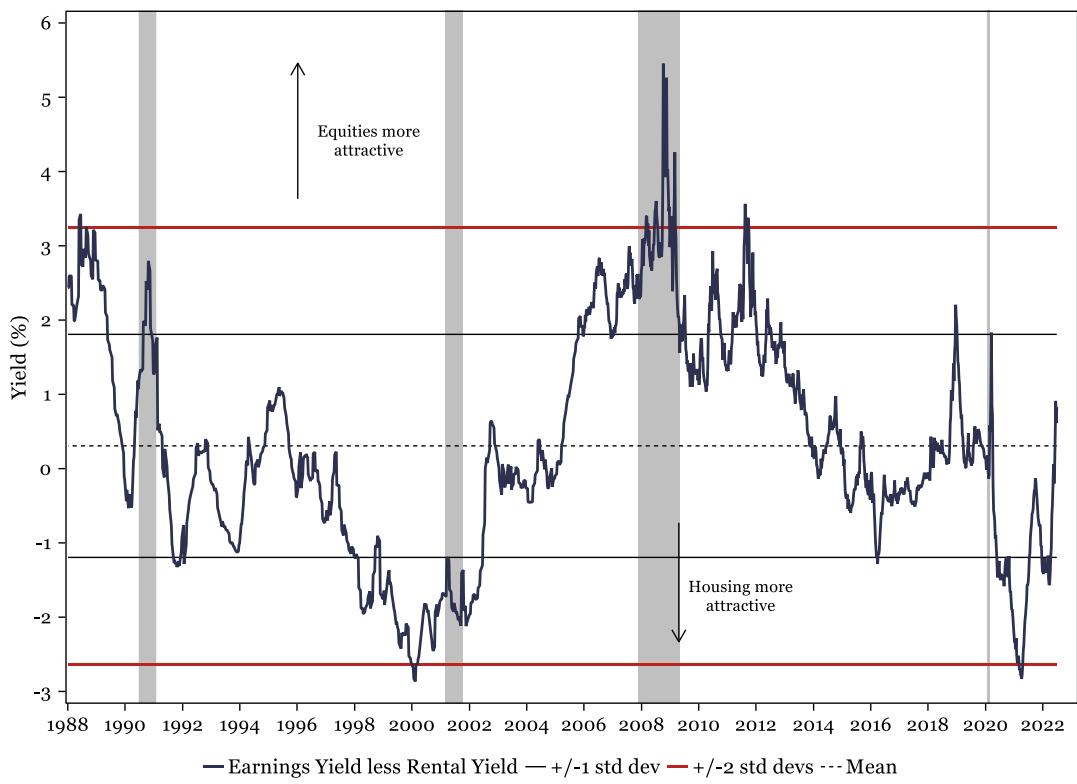


<sup>9iii</sup> The relative price chart is a proxy for relative valuation (albeit a poor one). It's calculated using the S&P500 GSCI total return commodities index vs. S&P500.

Source: Longview Economics, Macrobond

- Despite a considerably strong housing market recently, **housing has remained fairly valued relative to equities** (fig 9vii). With the fall in equities and rising house prices, the Equity-Housing Risk Premium has certainly increased. However, it is still around long term average levels, reflecting a process of normalisation as opposed to indicating any warning signals (for housing).

**Fig 9vii:** US equity risk premium over housing (earnings yield less rental yield)

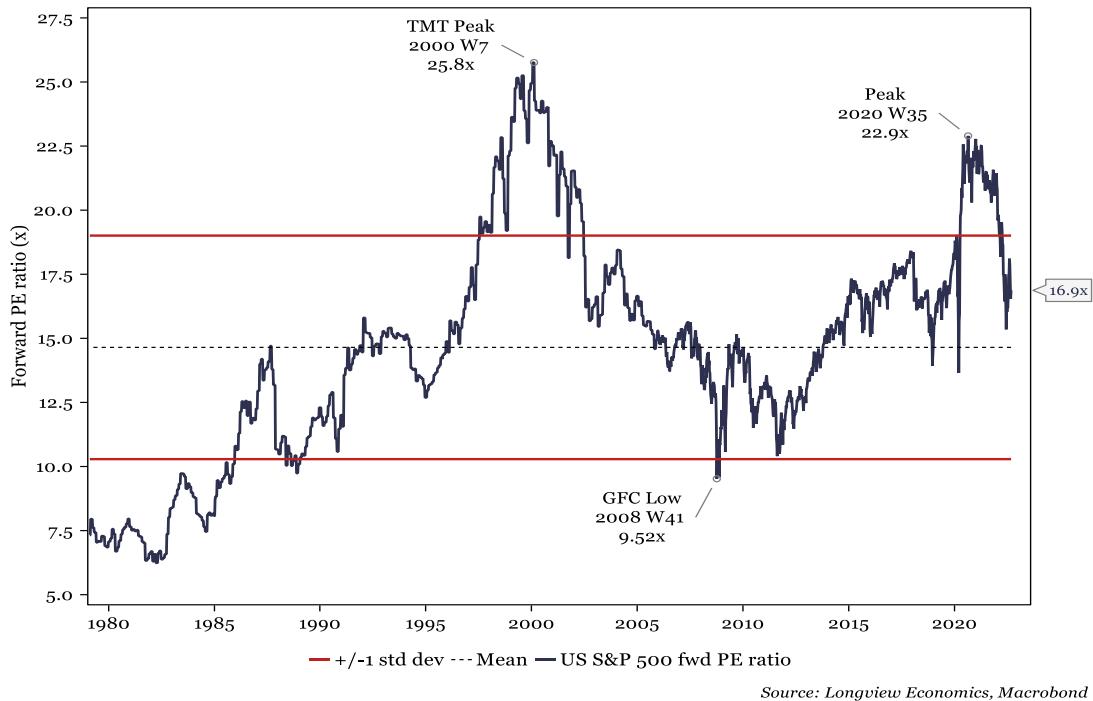


- On a sector basis, despite being one of the worst performing S&P500 sectors, **Consumer Discretionary is still markedly expensive** (both on absolute basis and in relation to other sectors, fig 9niii). Utilities (98<sup>th</sup> percentile relative to the index) and Consumer Staples (85<sup>th</sup> percentile) are also expensive. Reflecting the significant move higher in consensus earnings, Energy is the cheapest sector (in its 1<sup>st</sup> percentile relative to the index).

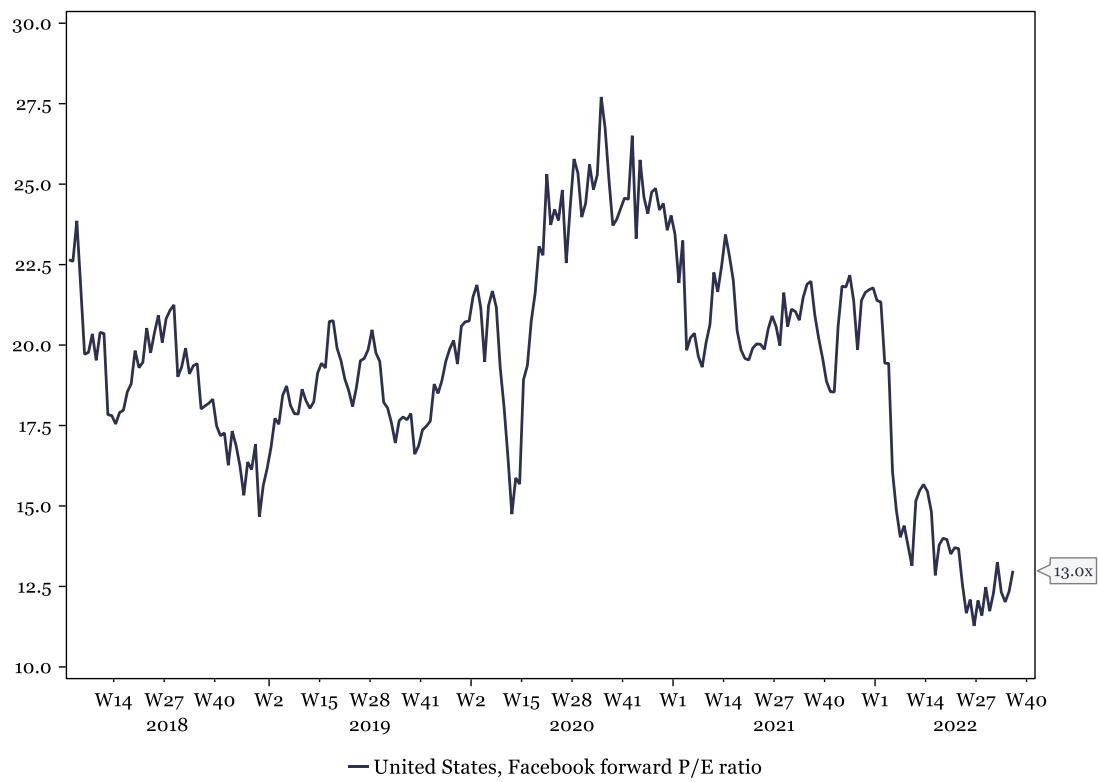
For a full update of our standard valuation models covering a range of asset classes and geographies, please see the appendix (pages 12 to 36). The ‘asset allocation’ implications of these valuation models will be assessed in the final published front section of this ‘quarterly global asset allocation’ publication (due out later this month).

## Key Charts

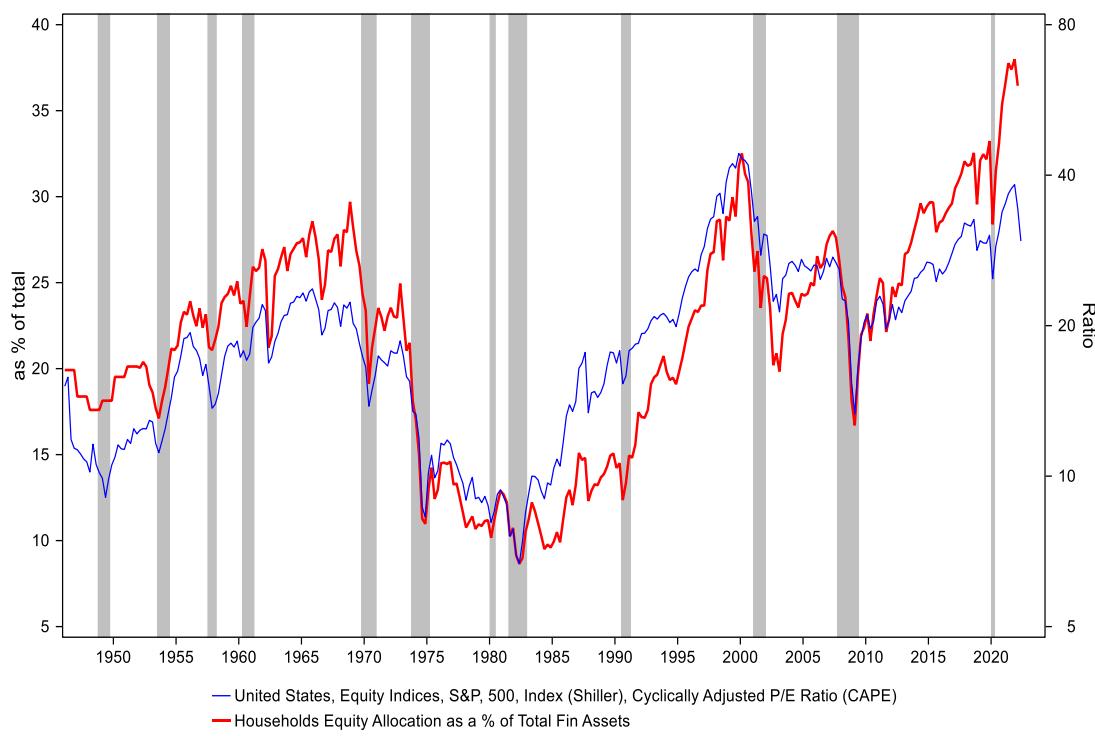
**Fig 9viii: S&P500 forward PER**



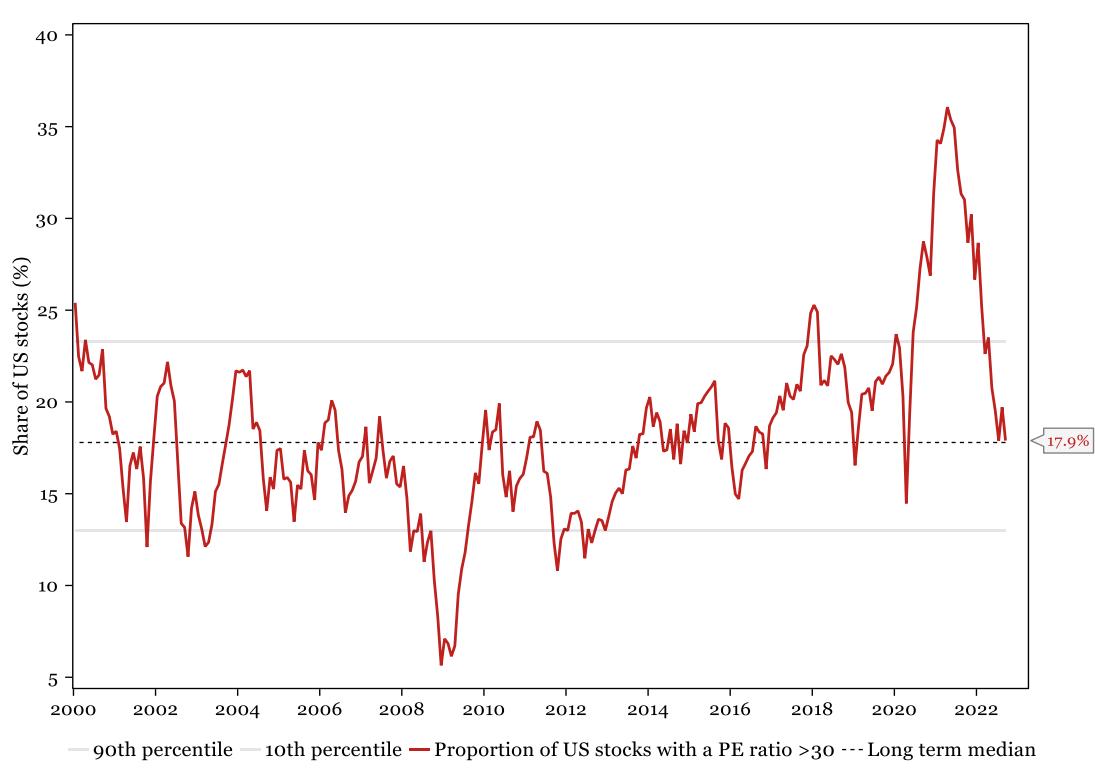
**Fig 9ix: Facebook/Meta forward P/E ratio (x)**



**Fig 9x:** US Shiller PE ratio shown against households' allocation to equities (as % of total financial assets)

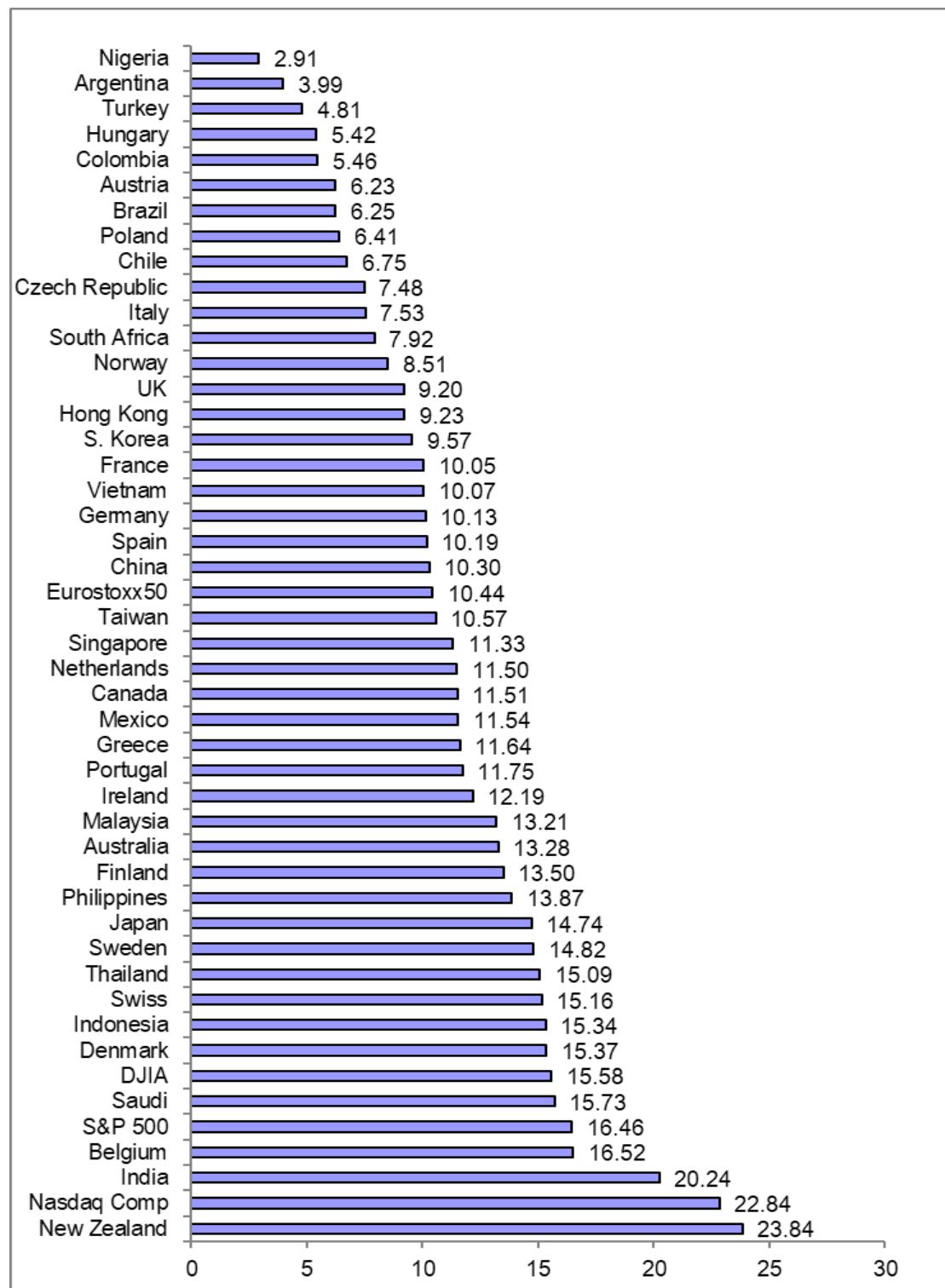


**Fig 9xi:** Proportion of US stocks with a P/E ratio >30



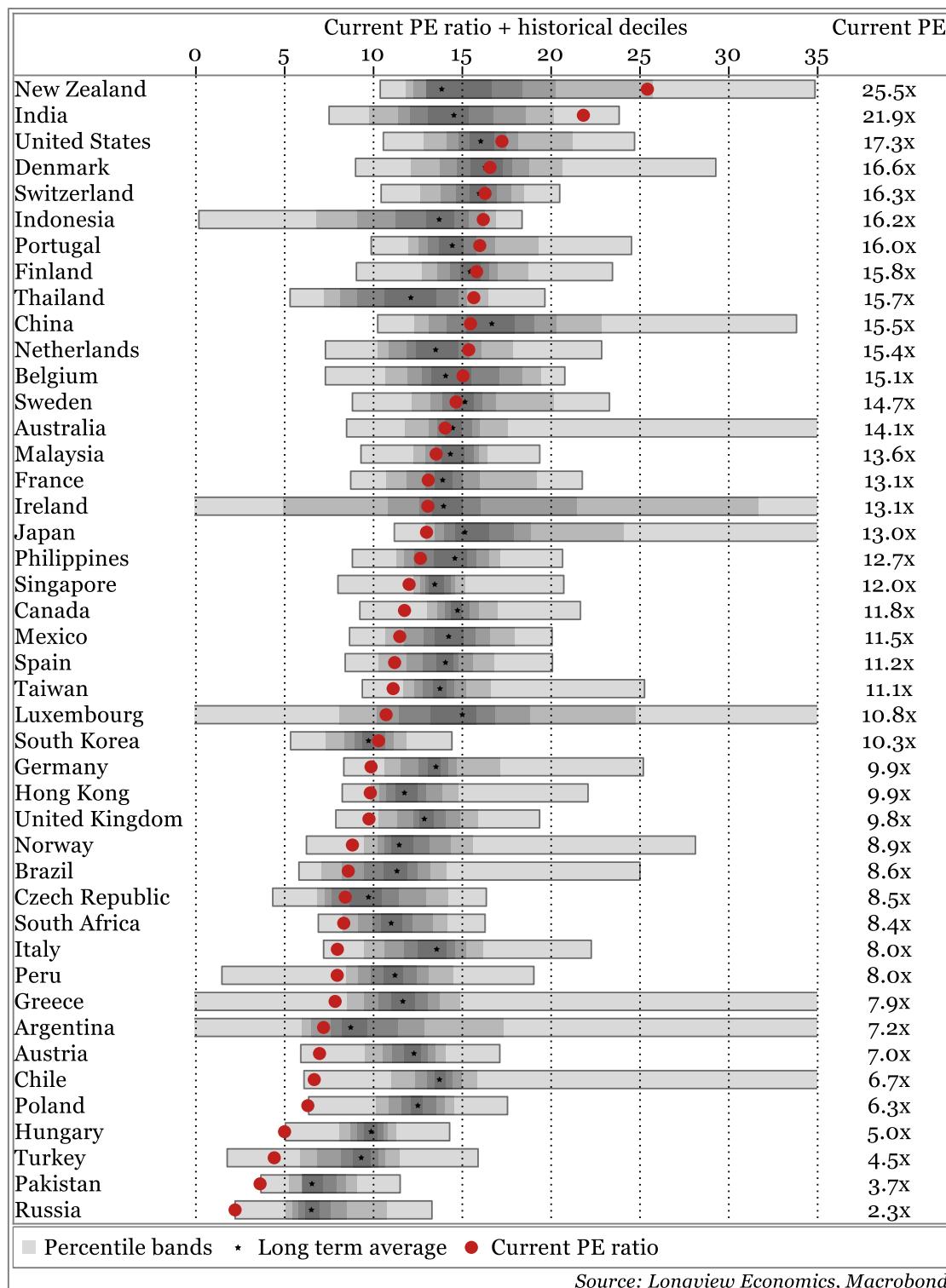
## Section 9a: Headline Country PE ratios

**Fig 9ai:** Standalone **standard** PE ratios – various country indices (based on 12m forward EPS)



Source: Longview Economics, Bloomberg

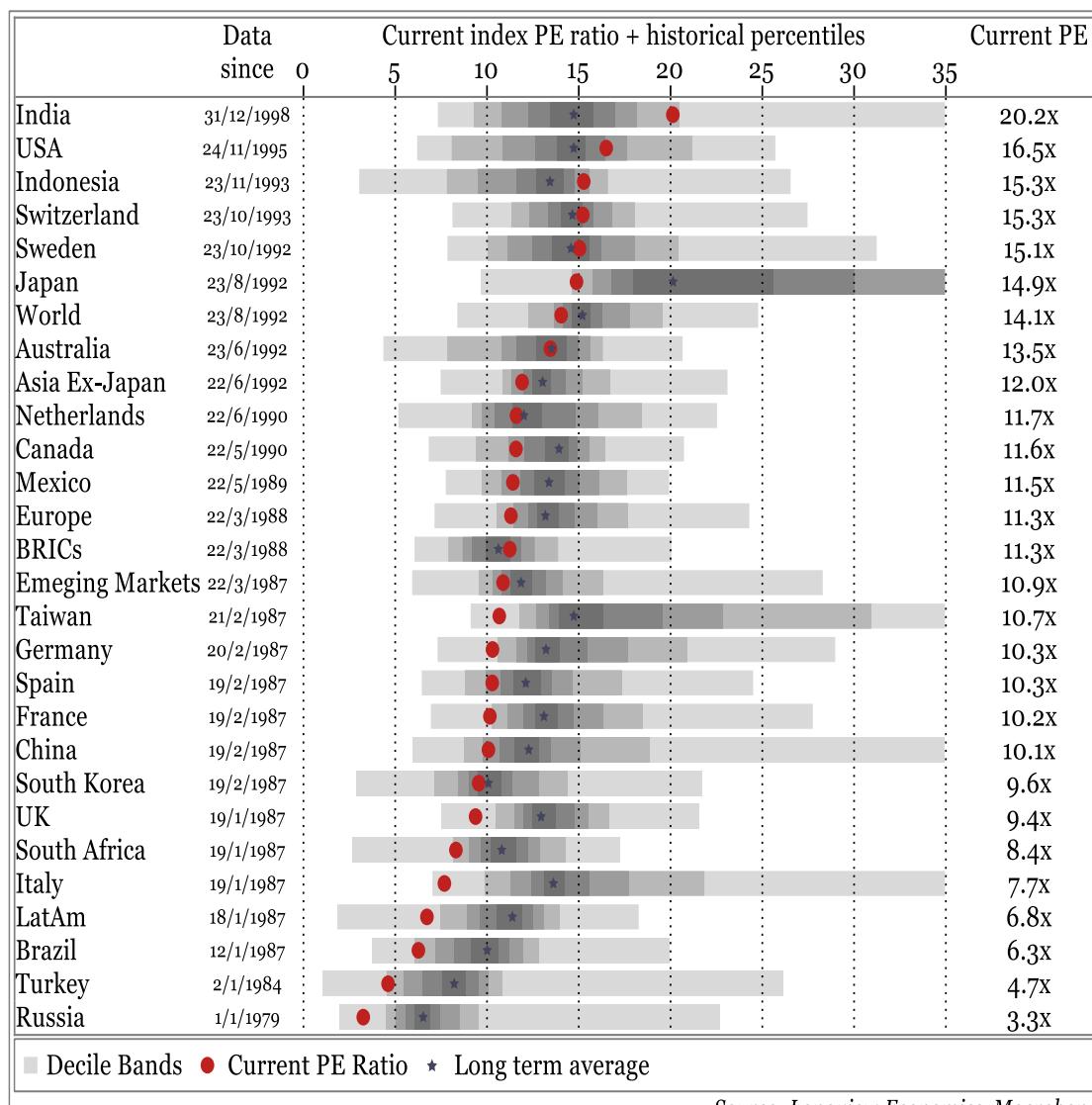
**Fig 9aii:** Standalone broad index\* PE ratios – various country indices (based on rolling 12m forward EPS)



Source: Longview Economics, Macrobond

\* NB are broad indices created by Factset aiming to capture the whole investable universe of stocks.

**Fig 9aiii:** Standalone **headline index\*** PE ratios (banded relative to their available history)



Source: Longview Economics, Macrobond

\* NB these indices are the specific main/headline indices from each country.

**Fig 9aiv** Cross-country PE heatmap

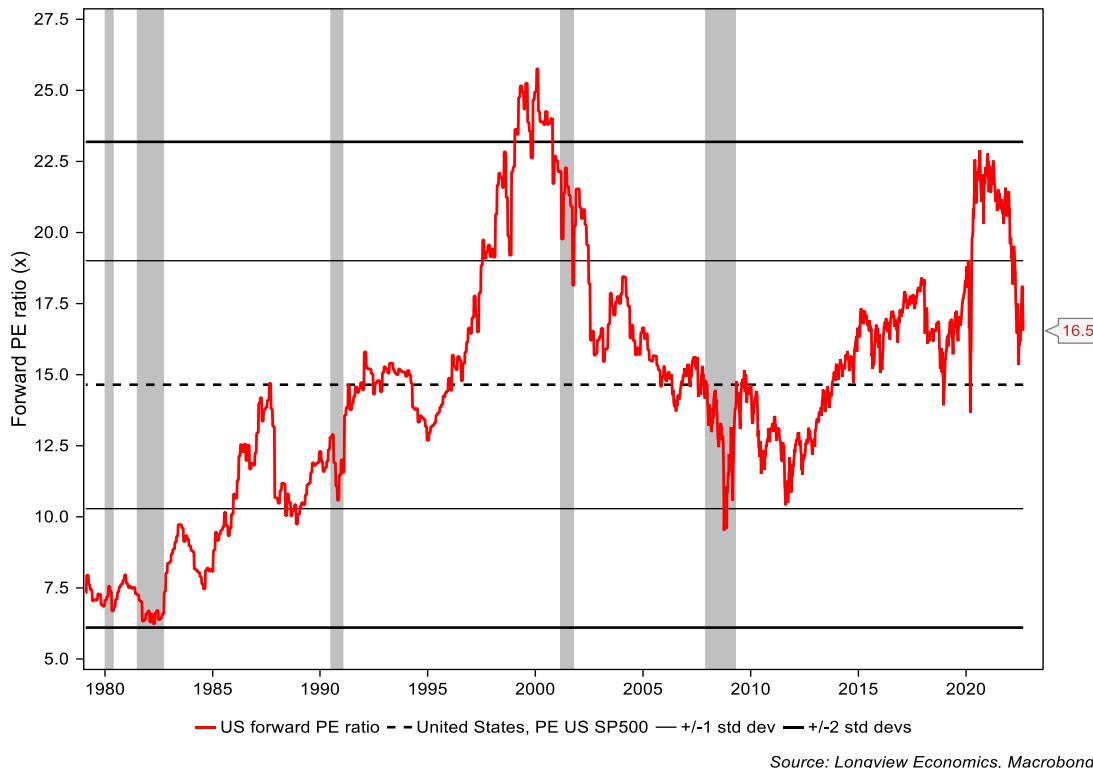
	Australia	Canada	France	Germany	Italy	Japan	Netherlands	Spain	Sweden	Switzerland	United Kingdom	United States	Brazil	China	India	Indonesia	Korea	Mexico	Russia	South Africa	Taiwan	Turkey	World	EM	BRIC	Asia Ex-Japan	LatAm	Europe	EMU	Emerging Europe	Average
Australia	8	2	4	1	27	29	23	60	61	1	63	11	29	89	75	42	22	3	7	6	13	55	38	58	40	5	8	13	27	28	
Canada	93	25	44	3	43	68	51	90	94	11	94	30	62	96	91	73	63	9	29	32	20	64	77	90	66	16	50	48	59	55	
France	99	76	55	1	49	96	83	99	100	22	100	41	68	101	98	79	66	18	44	43	34	91	80	94	80	32	39	87	65	69	
Germany	97	57	46	2	51	81	71	99	100	38	100	42	61	100	99	85	65	16	55	36	32	99	87	95	86	32	79	74	61	67	
Italy	100	98	100	39	77	99	100	100	101	96	100	59	84	101	100	98	91	39	82	75	45	100	95	100	99	58	100	100	88	89	
Japan	74	58	52	50	24	76	61	90	93	43	34	48	49	93	93	82	56	17	56	39	30	88	73	89	84	43	66	63	47	63	
Netherlands	72	33	5	20	2	25	28	84	87	6	84	27	50	95	79	64	41	11	21	22	25	55	56	76	51	20	20	21	50	42	
Spain	78	50	18	30	1	40	73	87	94	13	94	34	58	96	84	63	51	15	35	34	26	74	65	81	62	24	48	38	50	52	
Sweden	41	11	2	2	1	11	17	14	52	2	53	23	28	92	71	43	29	5	19	6	15	23	34	66	35	13	5	6	18	26	
Switzerland	40	7	1	1	1	8	14	7	49	1	54	14	22	89	71	38	26	4	12	2	13	10	29	60	26	6	3	2	16	22	
United Kingdom	100	90	79	63	5	58	95	88	99	101	100	41	73	99	99	85	78	23	54	49	36	96	89	94	88	33	98	85	71	75	
United States	38	7	1	1	1	7	17	7	42	47	1	21	29	90	65	36	35	6	19	4	13	2	29	58	34	9	1	1	17	22	
Brazil	90	71	60	53	42	53	74	67	78	87	60	80	66	94	93	86	86	51	70	59	39	74	90	96	84	25	67	63	67	70	
China	72	39	33	40	17	52	51	43	73	79	28	72	35	98	88	68	54	17	42	36	17	62	68	88	69	22	43	40	40	51	
India	12	5	1	1	1	2	6	5	9	12	2	11	7	3	28	3	5	2	4	1	8	5	4	6	2	3	3	1	8	6	
Indonesia	25	9	3	2	1	8	22	17	30	30	2	36	8	13	73	11	11	2	3	2	11	19	9	30	13	5	6	7	11	14	
Korea	59	28	22	16	3	19	37	38	58	63	16	65	15	33	98	90	37	5	25	4	21	50	44	67	48	10	31	30	32	37	
Mexico	79	38	35	36	10	45	60	50	73	75	23	66	15	47	96	90	64	19	20	38	14	61	66	79	60	4	47	43	48	48	
Russia	98	92	83	85	62	84	90	86	96	97	78	95	50	84	99	99	96	82	69	81	47	93	98	99	97	46	88	86	90	84	
South Africa	94	72	57	46	19	45	80	66	82	89	47	82	31	59	97	98	76	81	32	40	32	75	79	94	76	10	71	61	62	64	
Taiwan	95	69	58	65	26	62	79	67	95	99	52	97	42	65	100	99	97	63	20	61	37	95	95	94	96	36	72	70	65	71	
Turkey	88	81	67	63	56	71	77	75	86	88	65	88	62	84	93	90	81	87	54	69	65	80	82	92	80	56	74	71	92	77	
World	46	37	10	2	1	15	46	27	78	91	5	39	27	33	96	82	51	40	8	26	6	21	49	77	53	16	18	7	29	38	
EM	63	24	21	14	6	22	45	36	67	72	12	72	11	33	97	92	57	35	3	22	6	19	52	93	61	3	35	34	23	39	
BRIC	43	11	7	6	1	12	25	20	35	41	7	43	5	13	95	71	34	22	2	7	7	9	24	8	16	3	15	16	13	21	
Asia Ex-Japan	61	35	21	15	2	17	50	39	66	75	13	67	17	32	99	88	53	41	4	25	5	21	48	40	85	6	35	29	26	36	
LatAm	96	85	69	63	43	58	81	77	88	95	68	98	32	76	79	98	96	91	97	55	91	65	45	85	98	98	95	75	72	71	80
Europe	93	51	2	22	1	35	81	53	96	98	3	100	34	58	98	95	70	54	13	30	29	27	83	66	66	66	26	27	56	54	
EMU	88	55	14	27	1	38	80	63	95	99	16	100	38	61	100	94	71	58	15	40	31	30	94	67	65	72	29	74	56	58	
Emerging Europe	74	42	36	40	13	54	51	51	83	85	30	84	34	61	93	90	69	53	11	39	36	9	72	78	88	75	30	45	45	54	
Average	73	46	32	34	12	38	59	49	75	79	26	79	31	50	96	86	64	53	17	37	30	24	63	62	80	63	21	47	43	47	54

On a **relative** valuation basis (i.e. using forward PE ratios) compared with other indices since 1980 (data permitting) and then scored by percentile. Turkey is the world's cheapest major equity market. India is the most expensive by this metric. NB this table should be read as 'column header' relative to 'row header' - i.e. Australia is in its 90th most expensive percentile relative to Canada (compared to history).

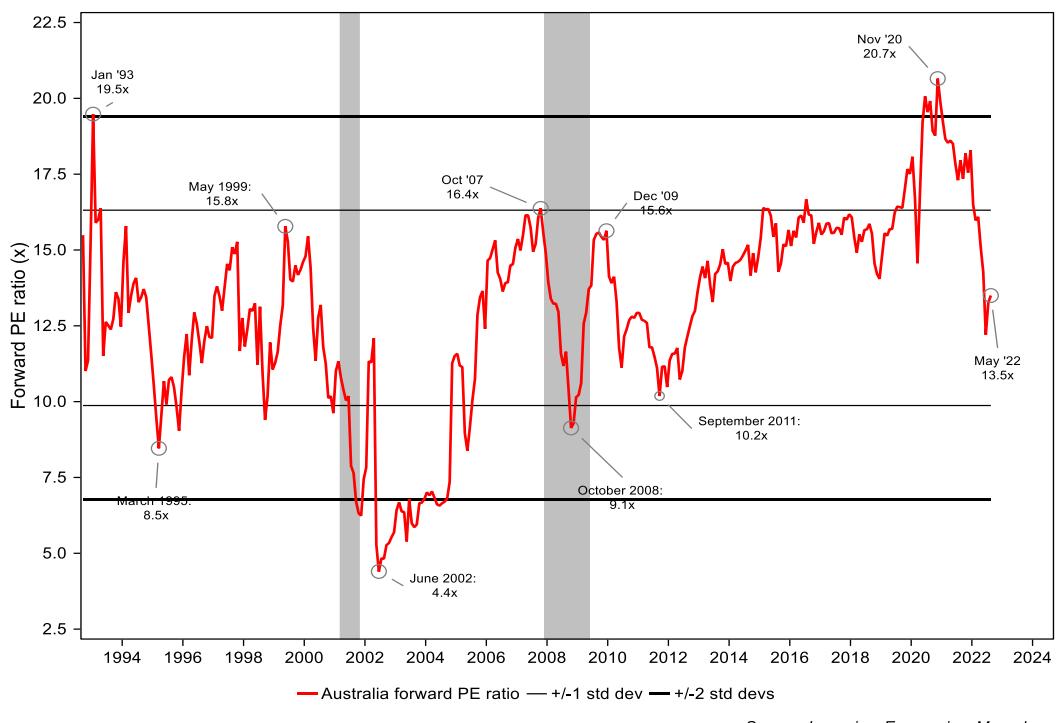
**Source:** Longview Economics, Bloomberg

**Section 9b:** Standalone PE ratios of certain expensive/cheap countries

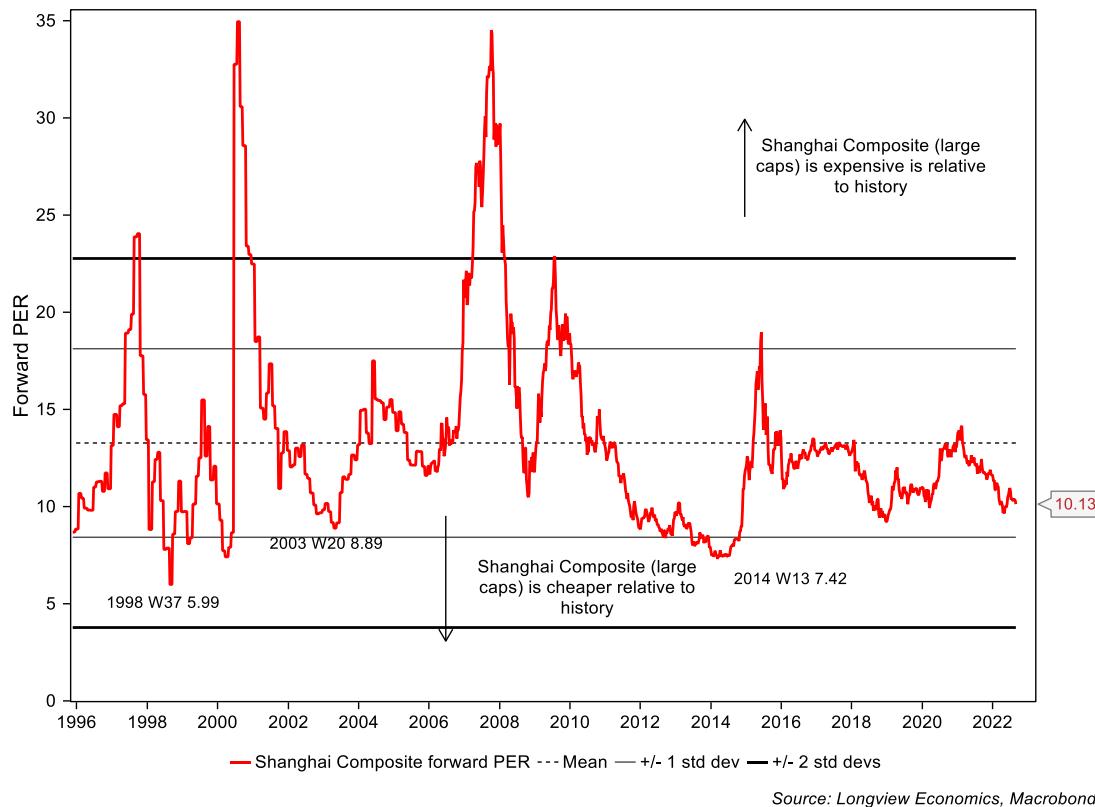
**Fig 9bi:** S&P500 12m forward PE ratios (based on rolling consensus EPS)



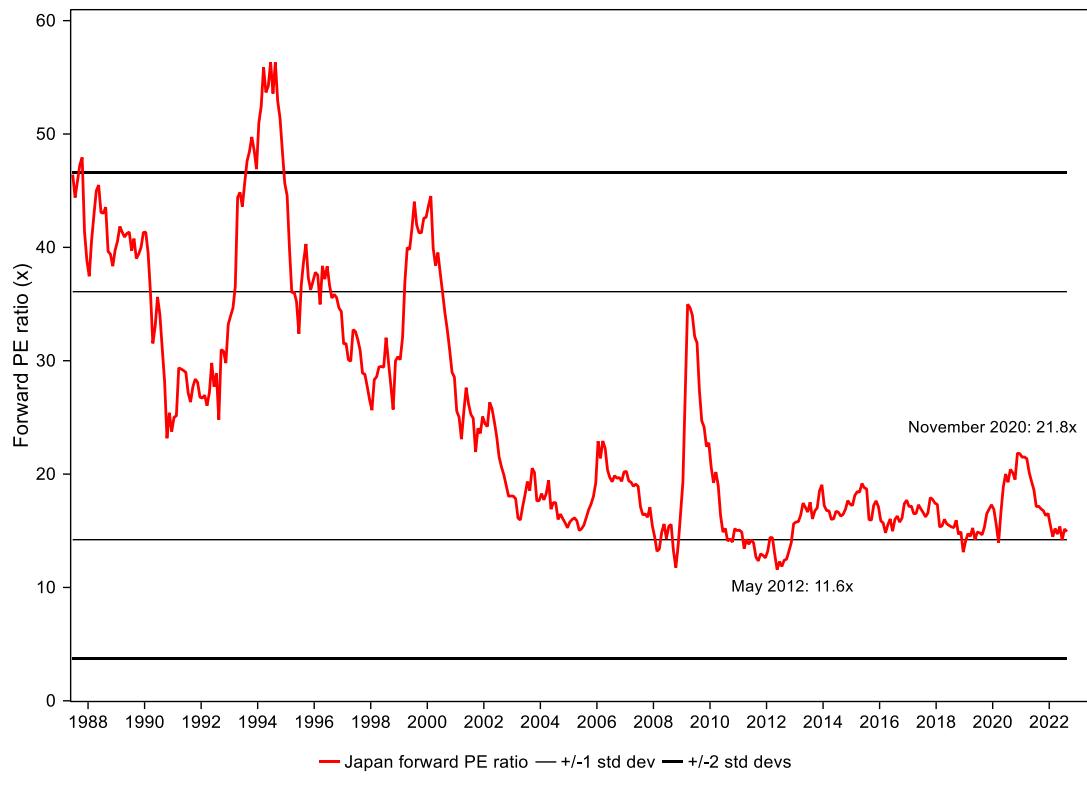
**Fig 9bii:** Australia forward PE ratio (based on rolling consensus EPS)



**Fig 9biii:** Chinese 12m forward PE ratios (based on rolling consensus EPS)

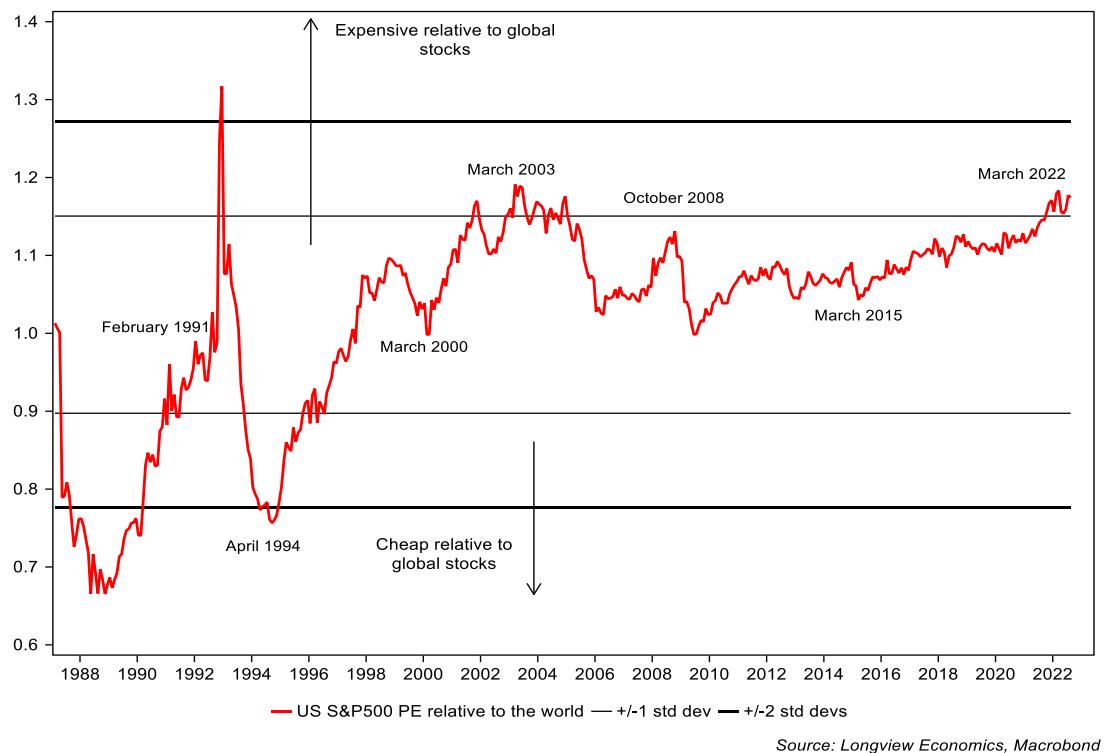


**Fig 9biv:** Japan 12m forward PE ratio (based on rolling consensus EPS)

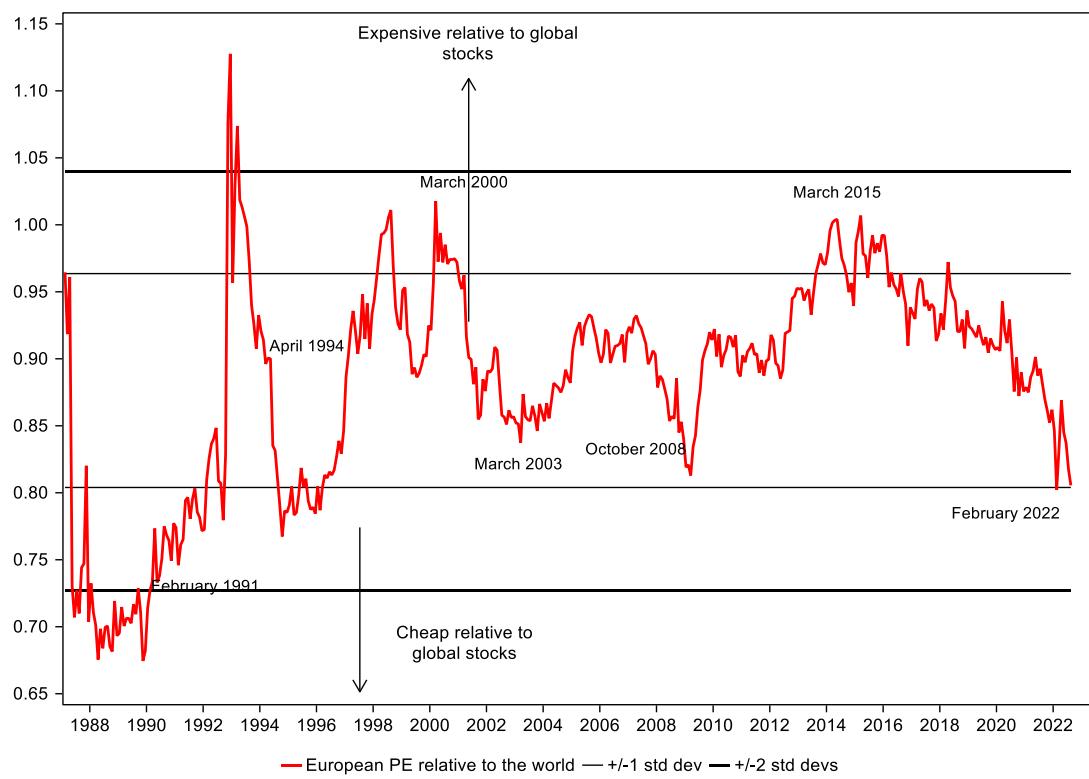


**Section 9c:** Various country PER relative to global PER (both on forward EPS)

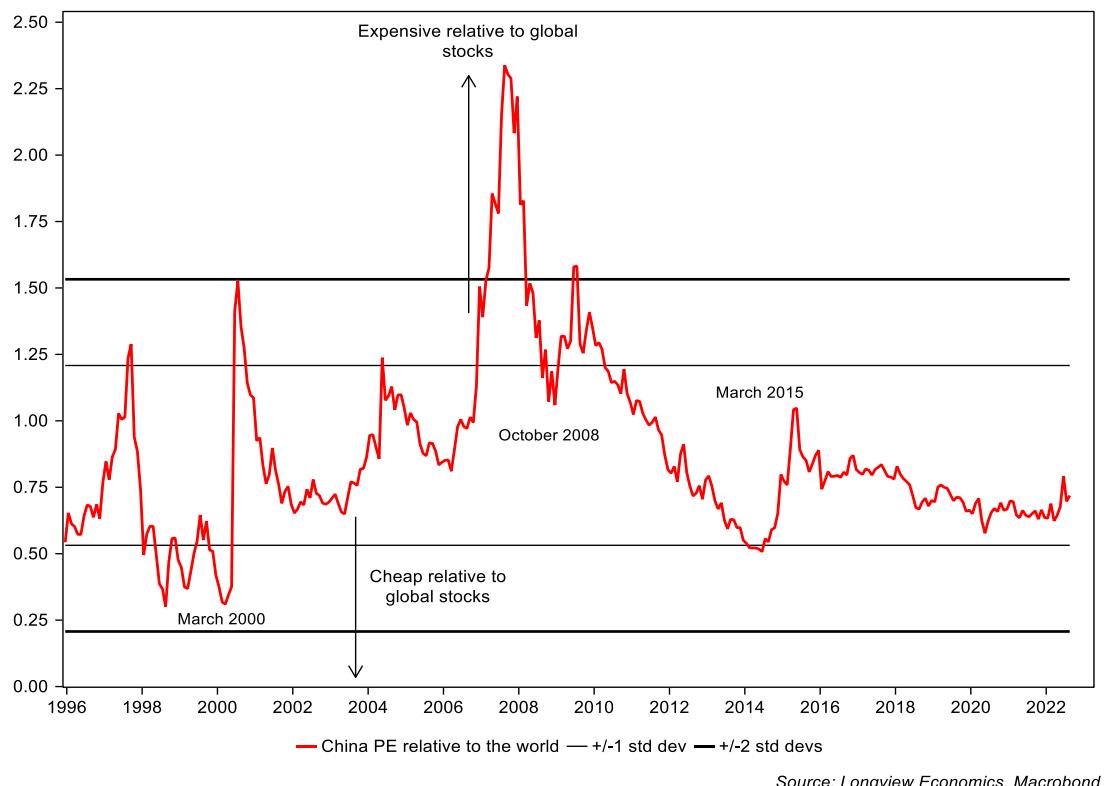
**Fig 9ci:** US 12m forward PE relative to global 12m forward PE



**Fig 9cii:** European 12m forward PE relative to global 12m forward PE

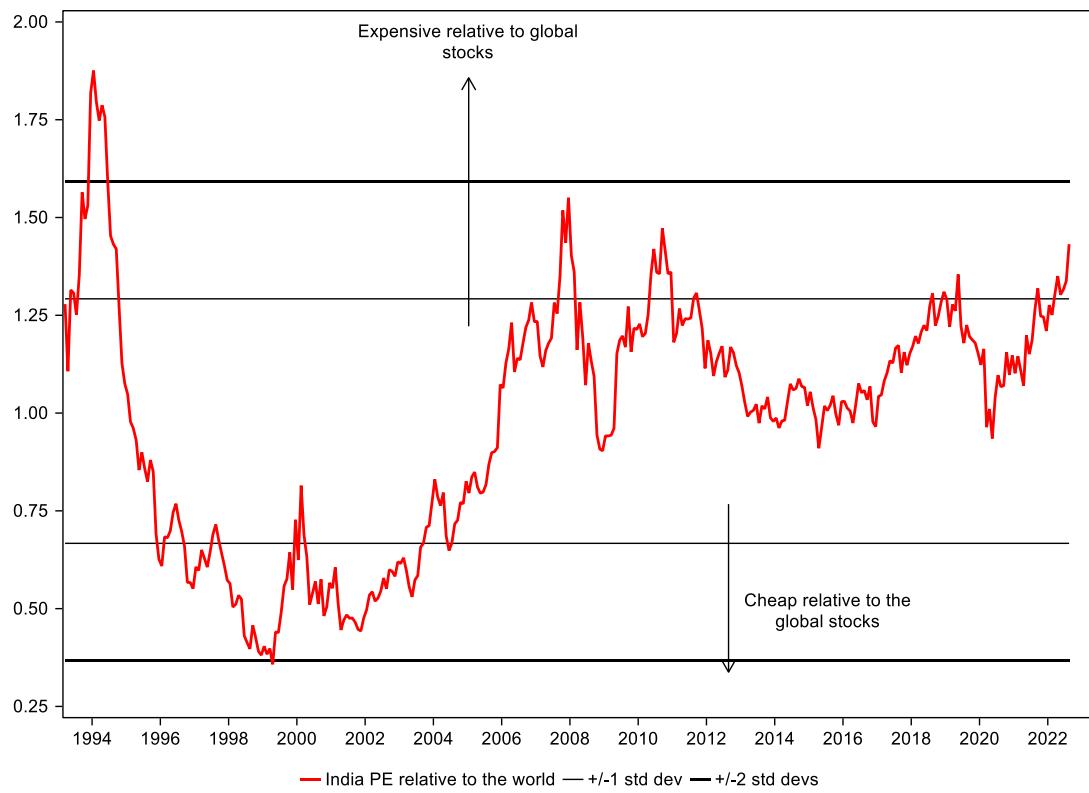


**Fig 9ciii:** Chinese 12m forward PE relative to global 12m forward PE

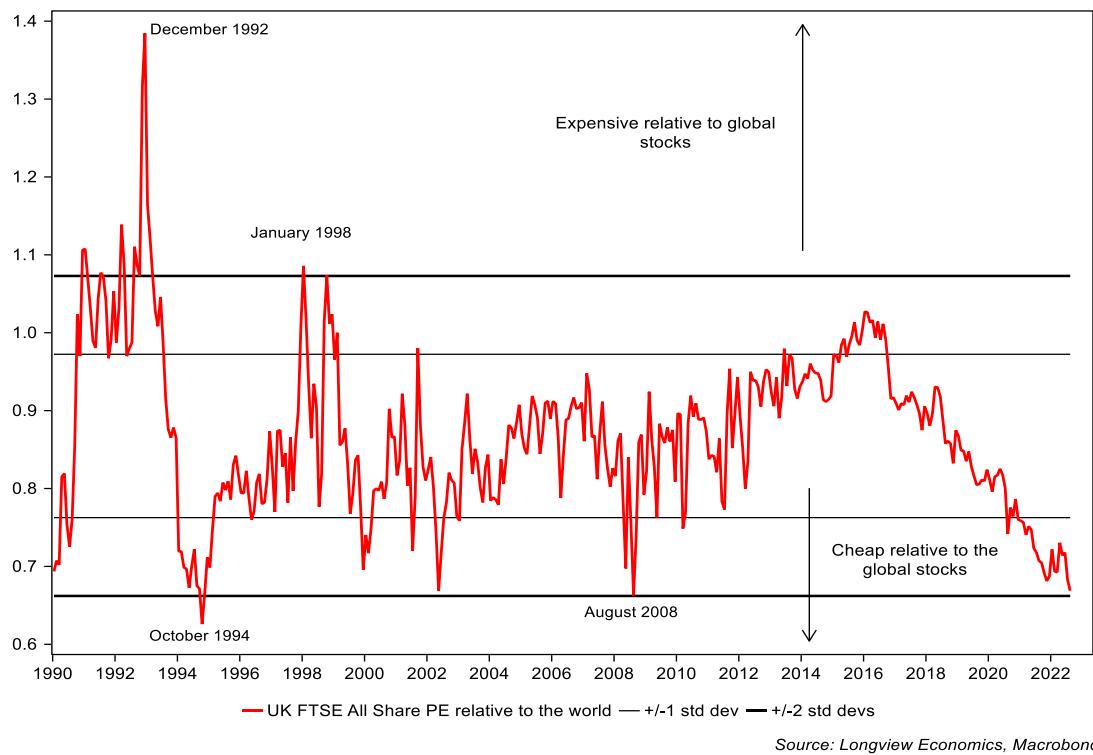
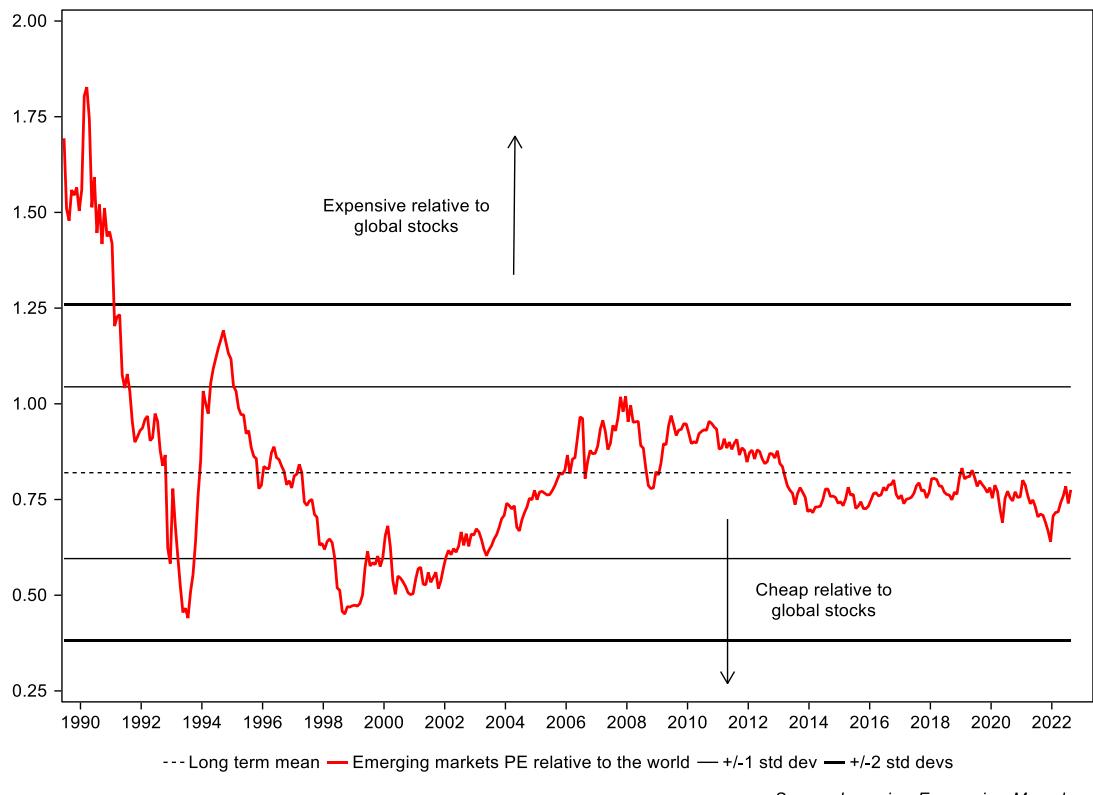


Source: Longview Economics, Macrobond

**Fig 9civ:** India 12m forward PE relative to global 12m forward PE

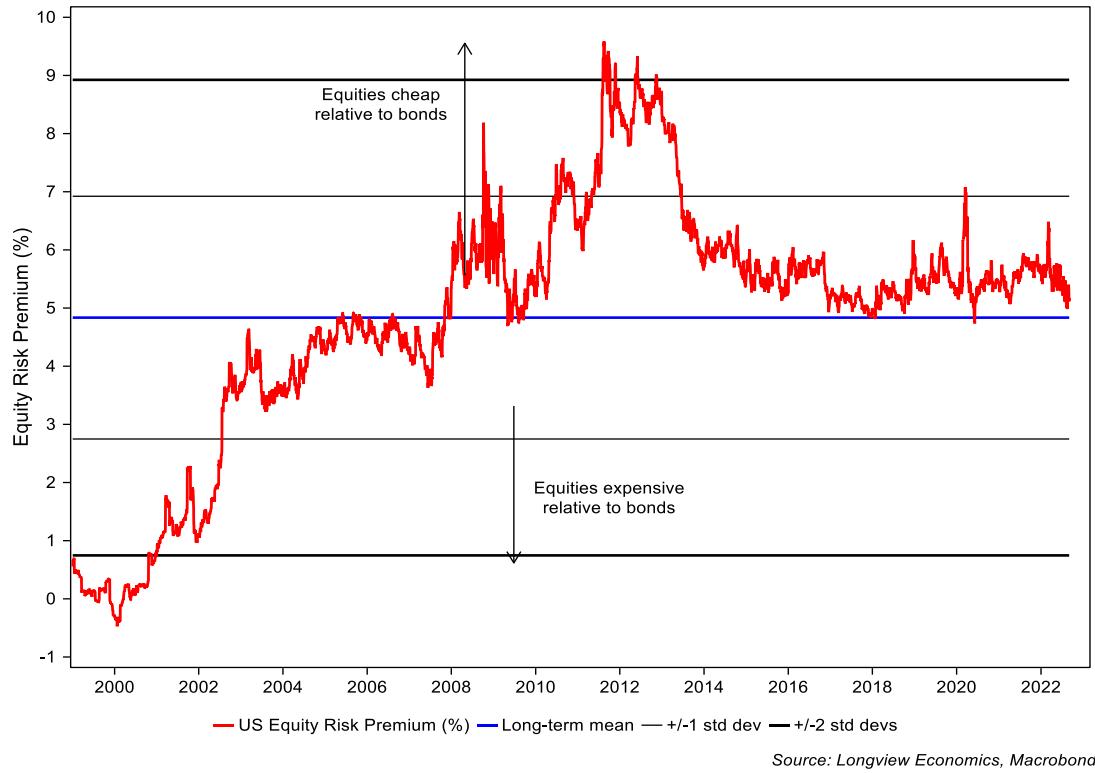


Source: Longview Economics, Macrobond

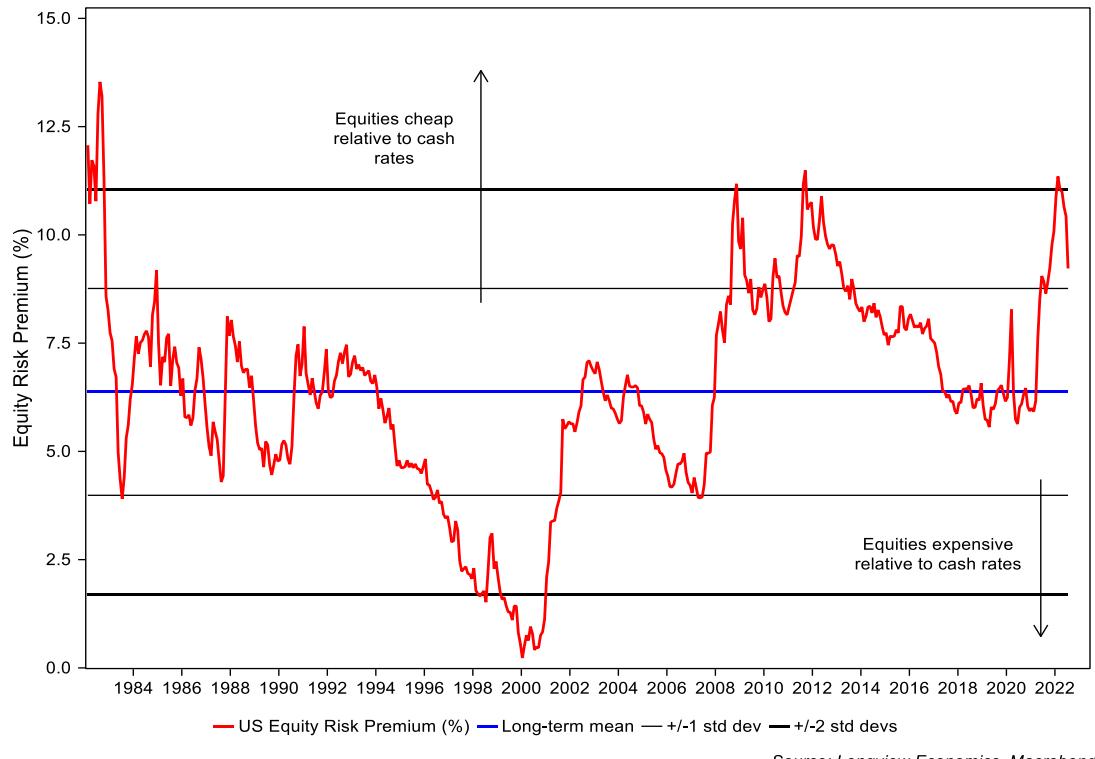
**Fig 9cv: UK 12m forward PE relative to global 12m forward PE****Fig 9cvi: EM 12m forward PE relative to global 12m forward PE**

## Section 9d: US Equity Risk Premia

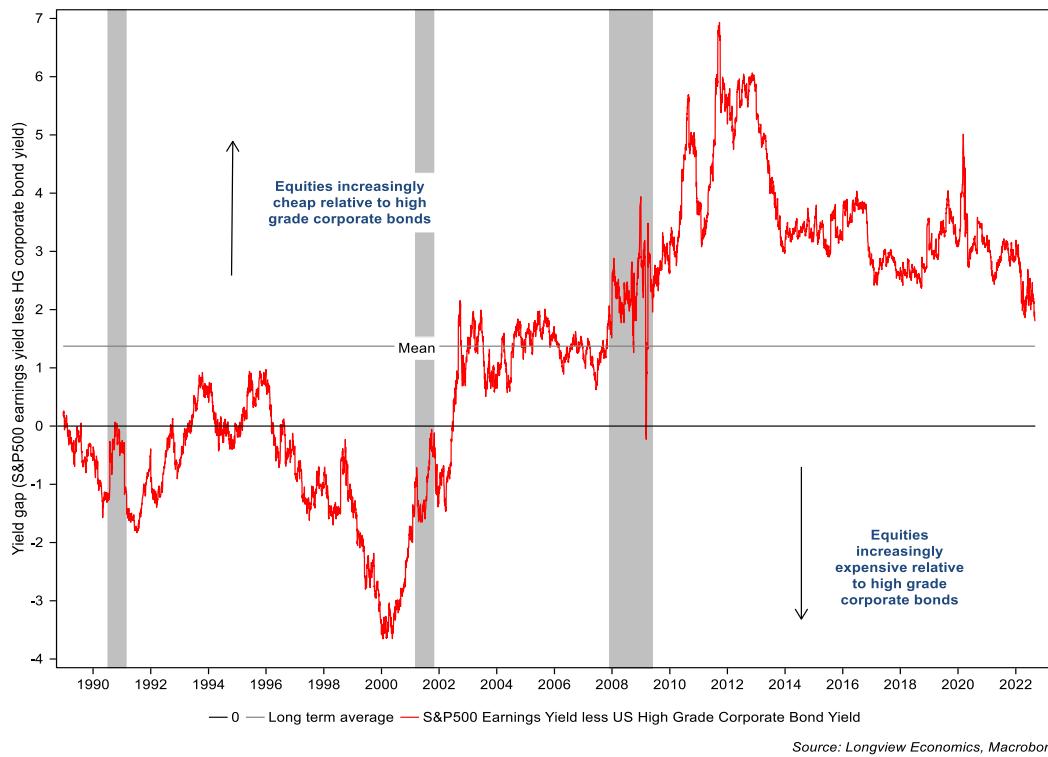
**Fig 9di:** US Equity Risk Premium (earnings yield less real bond yield)



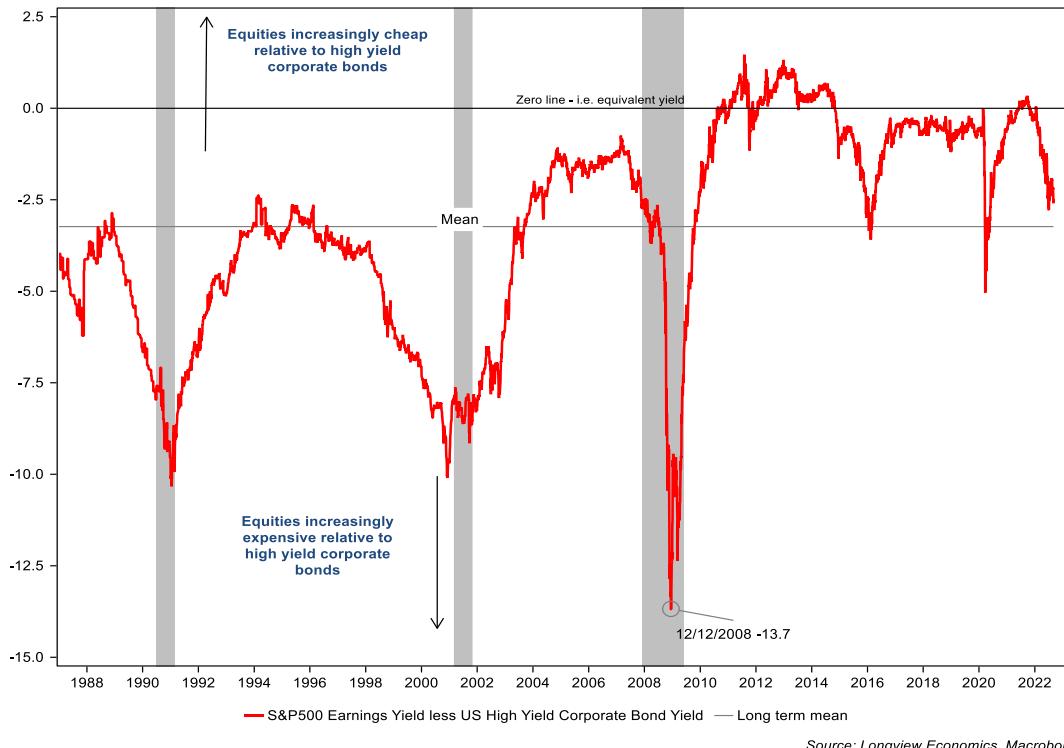
**Fig 9dii:** US Equity Risk Premium (earnings yield less real cash rates)



**Fig 9diii: US Equity Risk Premium (earnings yield less IG corp bond yield)**



**Fig 9div: US Equity Risk Premium (earnings yield less HY corp bond yield)**

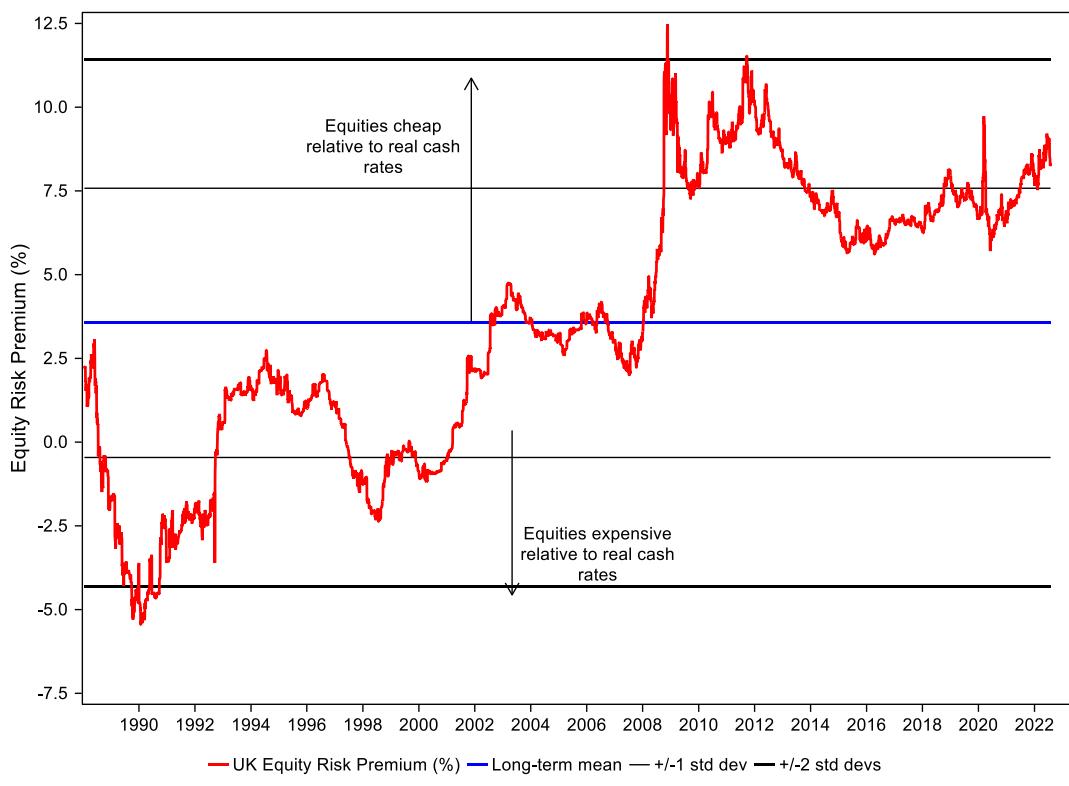


## Section 9e: UK Equity Risk Premiums

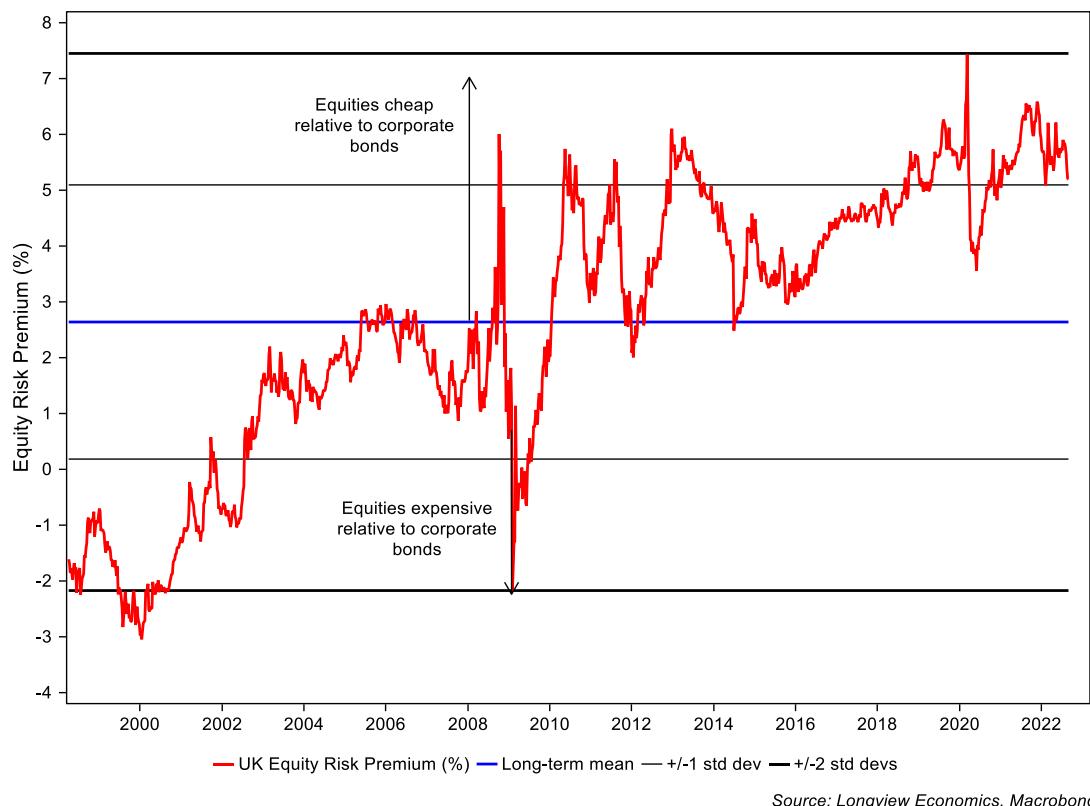
**Fig 9ei: UK Equity Risk Premium (earnings yield less real bond yield)**



**Fig 9eii: UK Equity Risk Premium (earnings yield less real cash rates)**

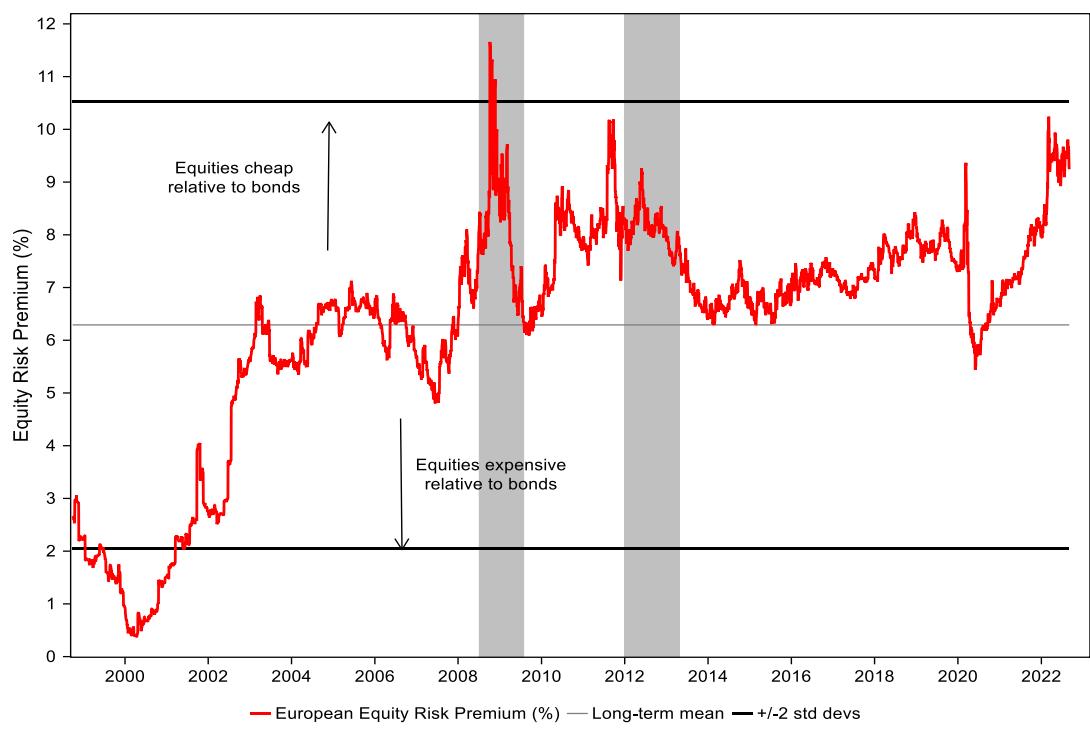


**Fig 9eiii: UK Equity Risk Premium (earnings yield less BBB corp bond yield)**

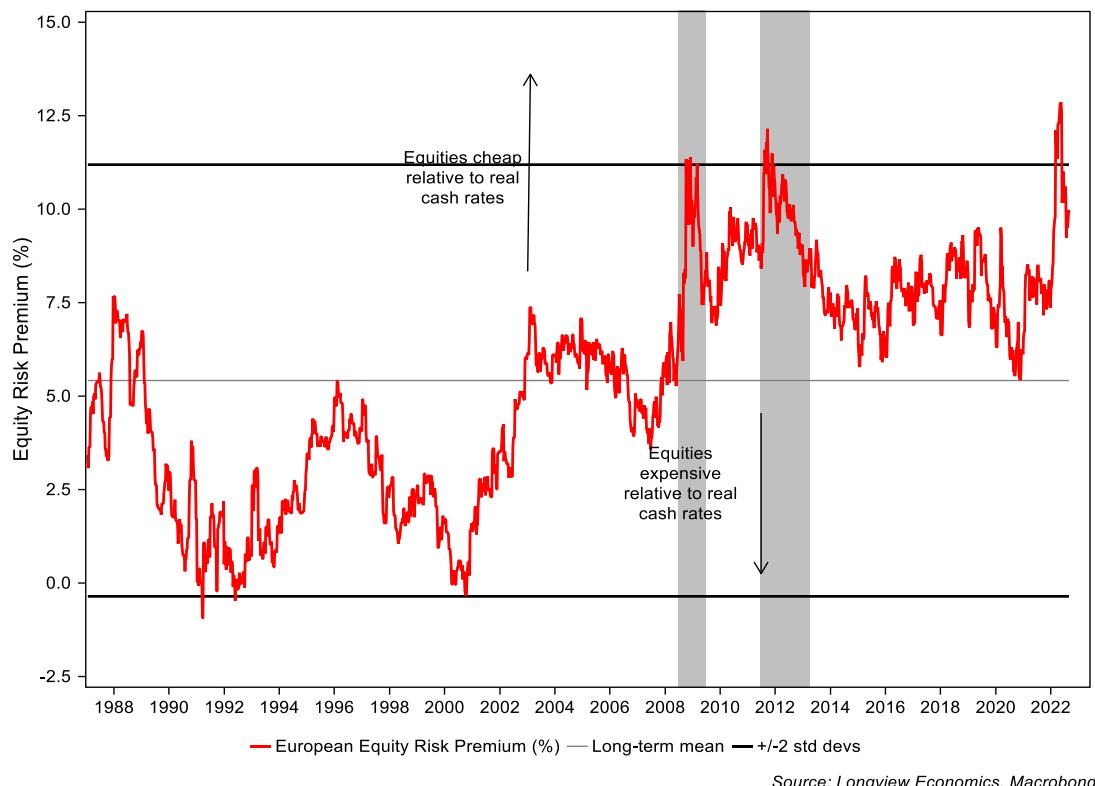


## Section 9f: European Equity Risk Premia

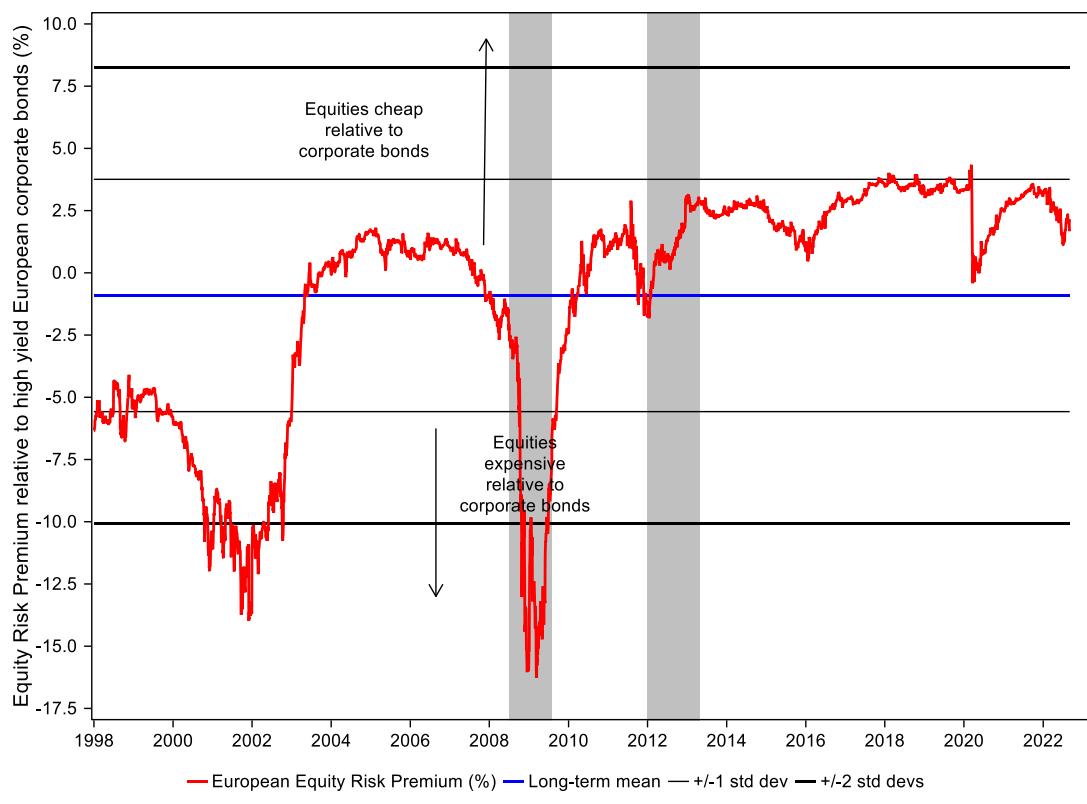
**Fig 9fi: European Equity Risk Premium (earnings yield less real bond yield)**



**Fig 9fii: European Equity Risk Premium (earnings yield less real cash rates)**



**Fig 9fiii: European Equity Risk Premium (earnings yield less HY corp yield)**

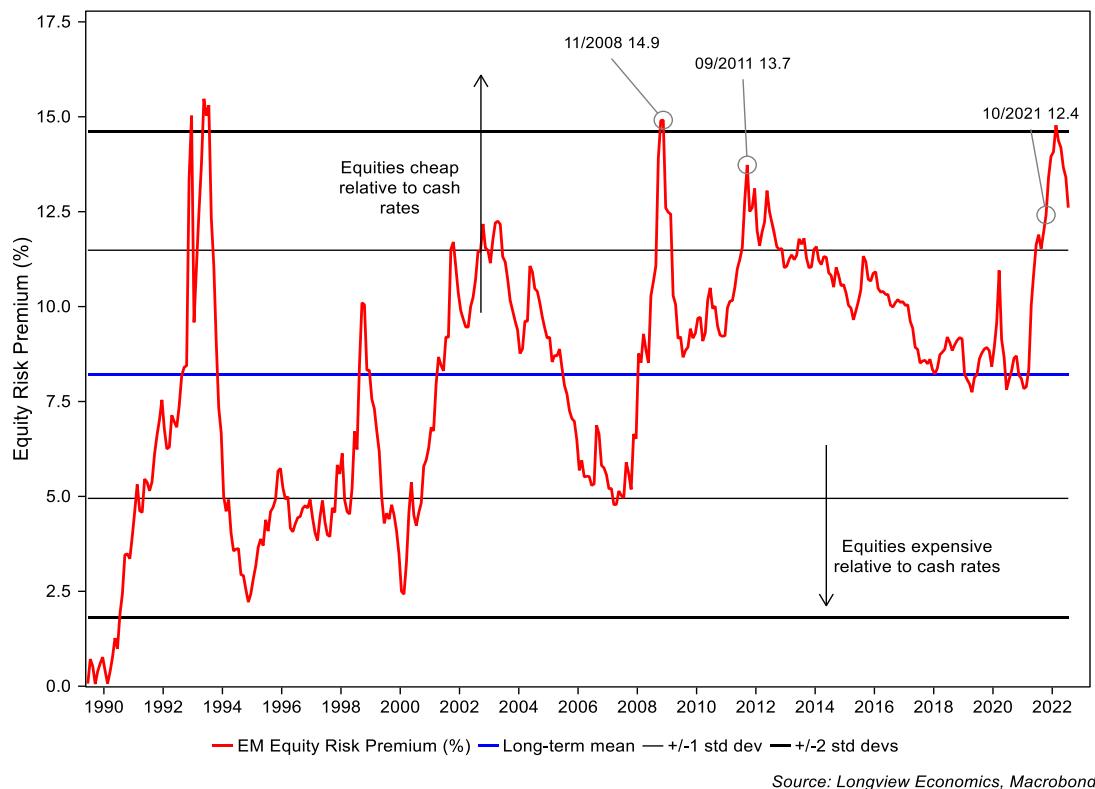


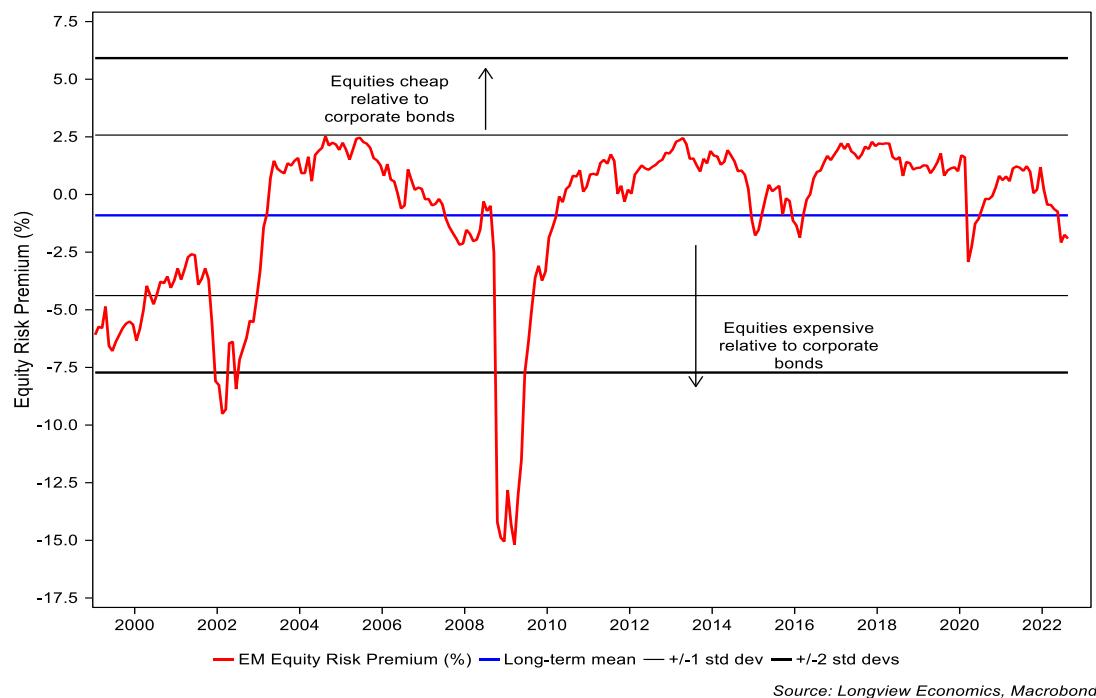
## Section 9g: EM Equity Risk Premia

**Fig 9gi:** EM Equity Risk Premium (earnings yield less real bond yield)



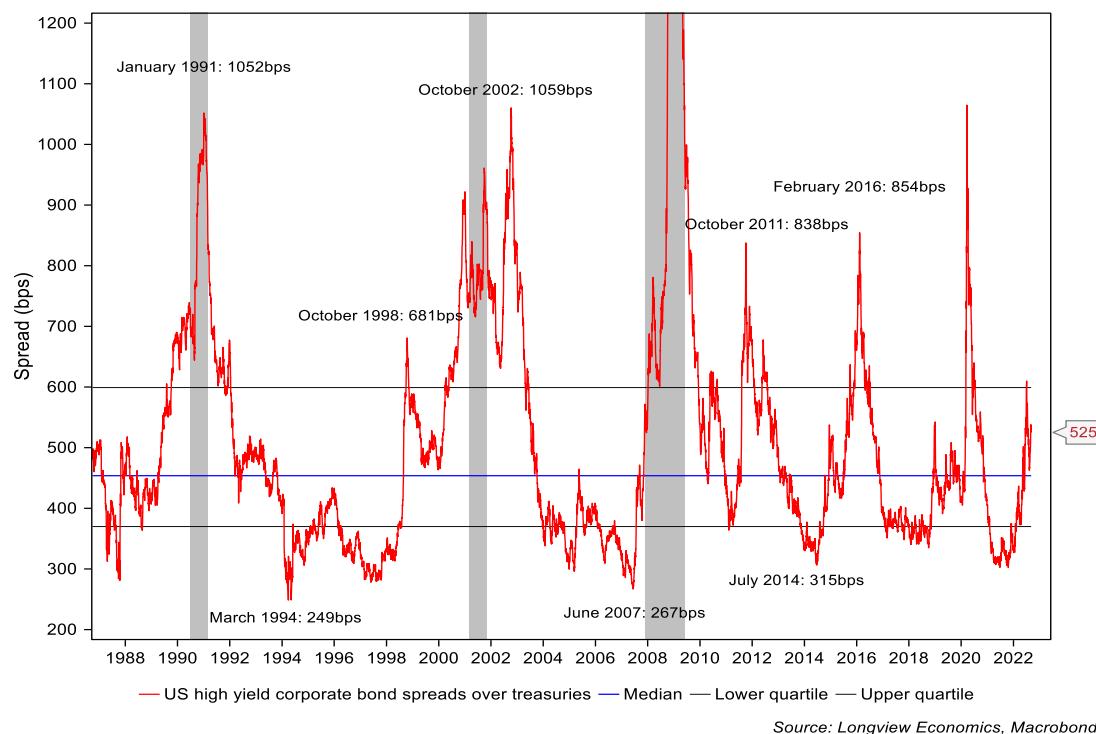
**Fig 9gii:** EM Equity Risk Premium (earnings yield less real cash rate)

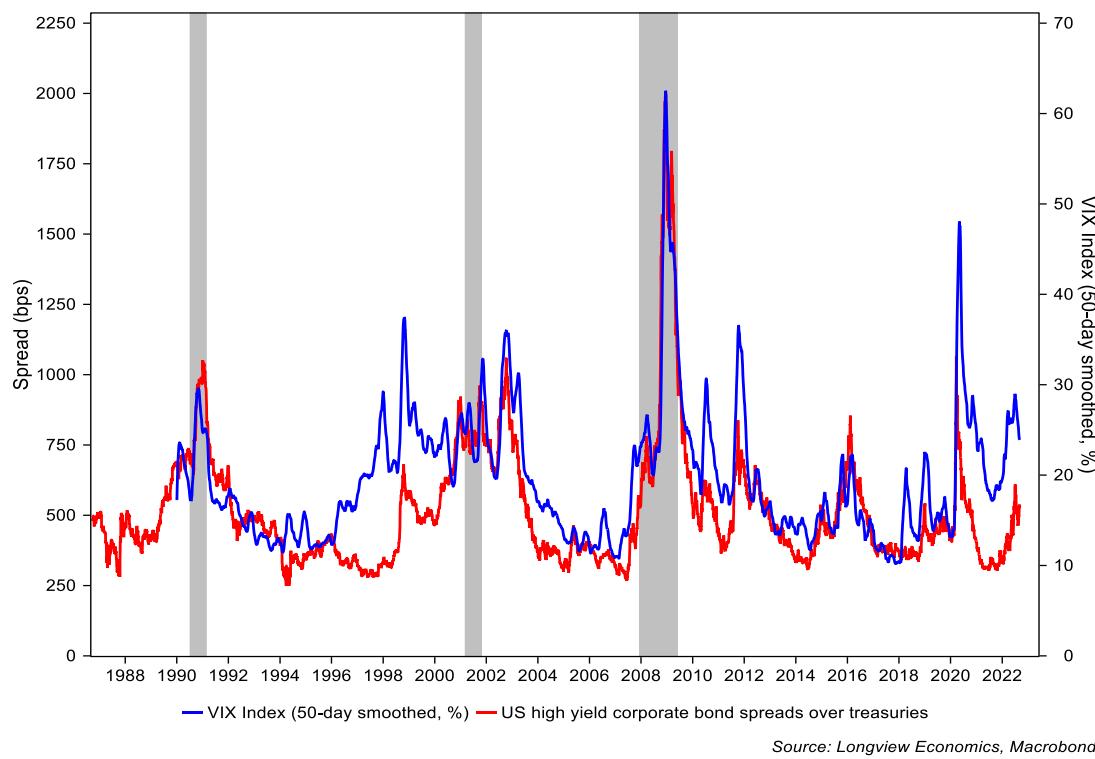
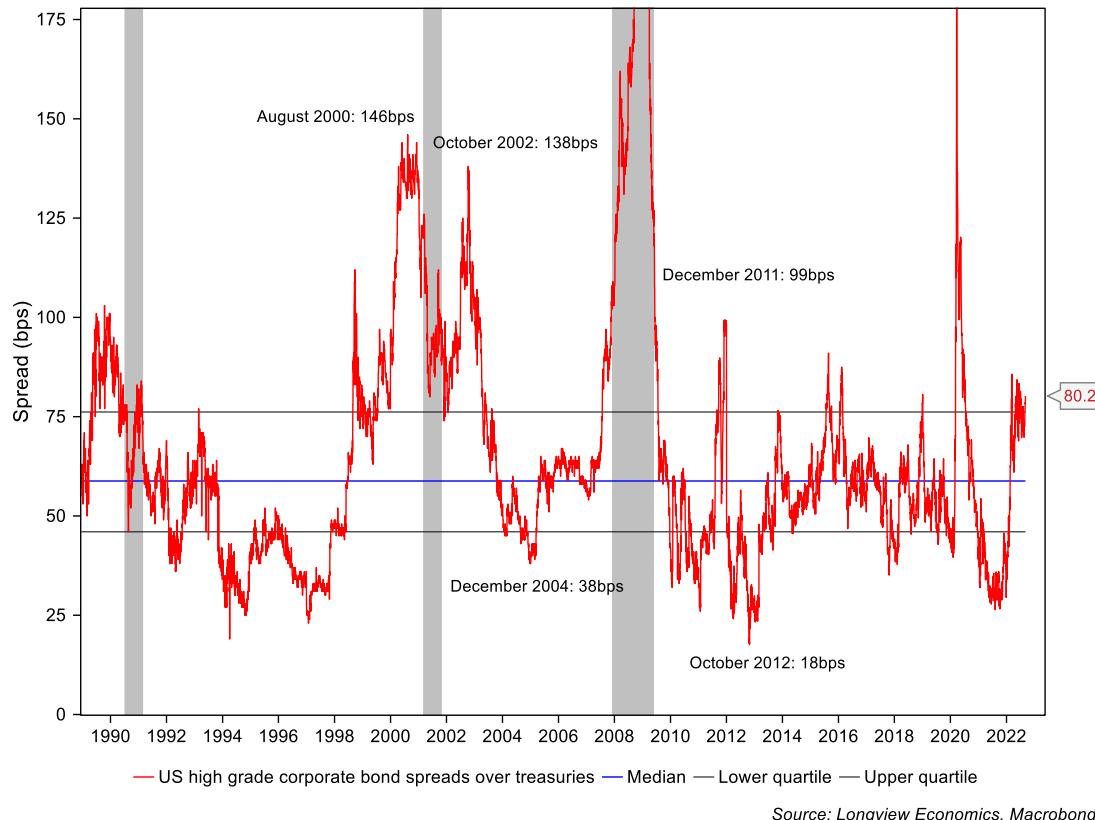


**Fig 9giii:** EM Equity Risk Premium (earnings yield less real corp bond yield)

## Section 9h: US Corporate Bond Spreads

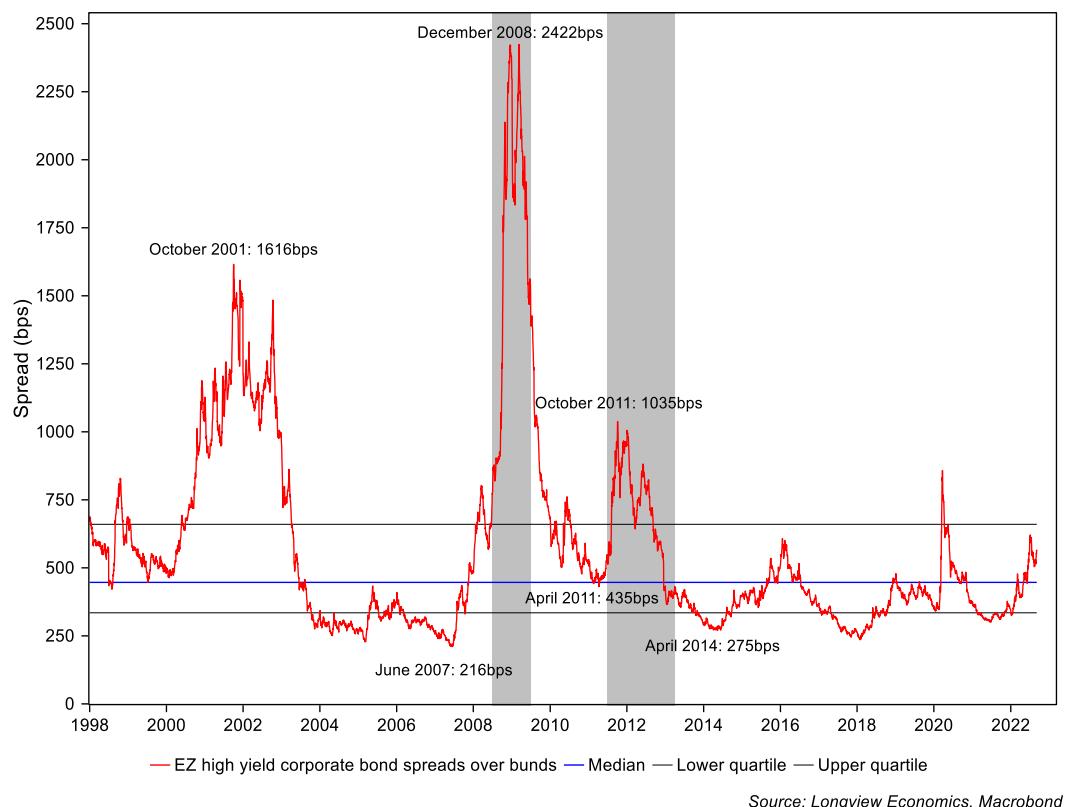
Due to the asymmetric nature of bond spread series, we have used a median & quartile analysis instead of mean & standard deviation analysis.

**Fig 9hi:** US high yield corporate bond spreads over treasuries (bps)

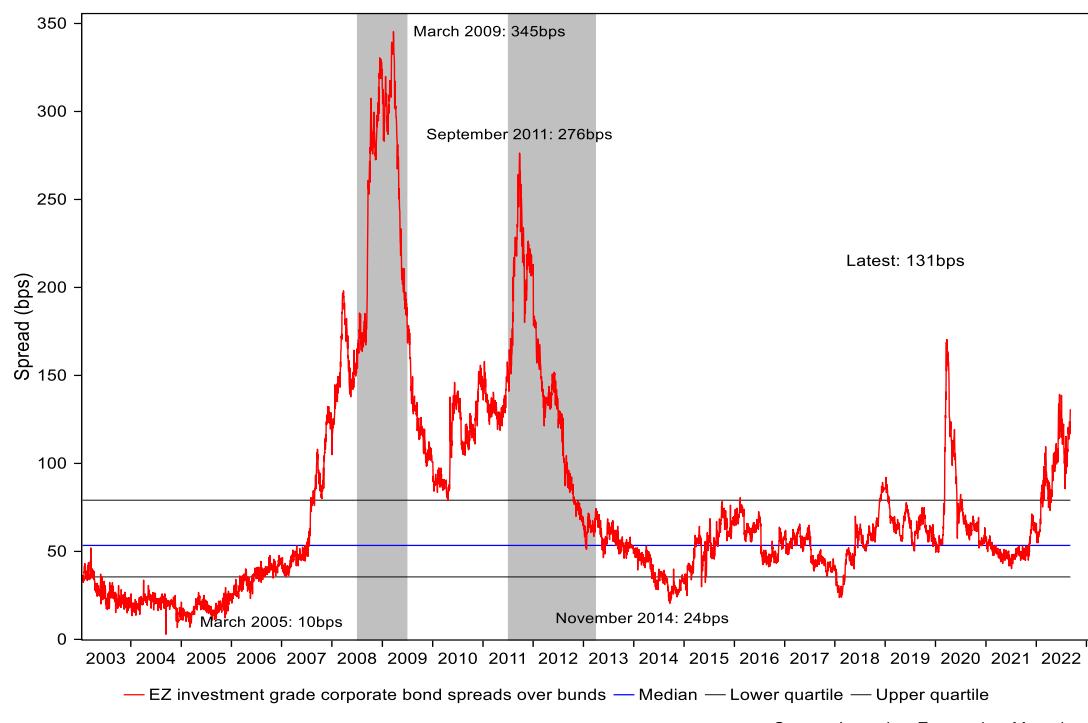
**Fig 9hii:** US high yield corporate bond spreads over treasuries (bps) vs. VIX**Fig 9hiii:** US investment grade corporate bond spreads over treasuries (bps)

## Section 9I: Euro zone Corporate Bond Spreads

**Fig 9Ii: EZ high yield corporate bond spreads over bunds (bps)**

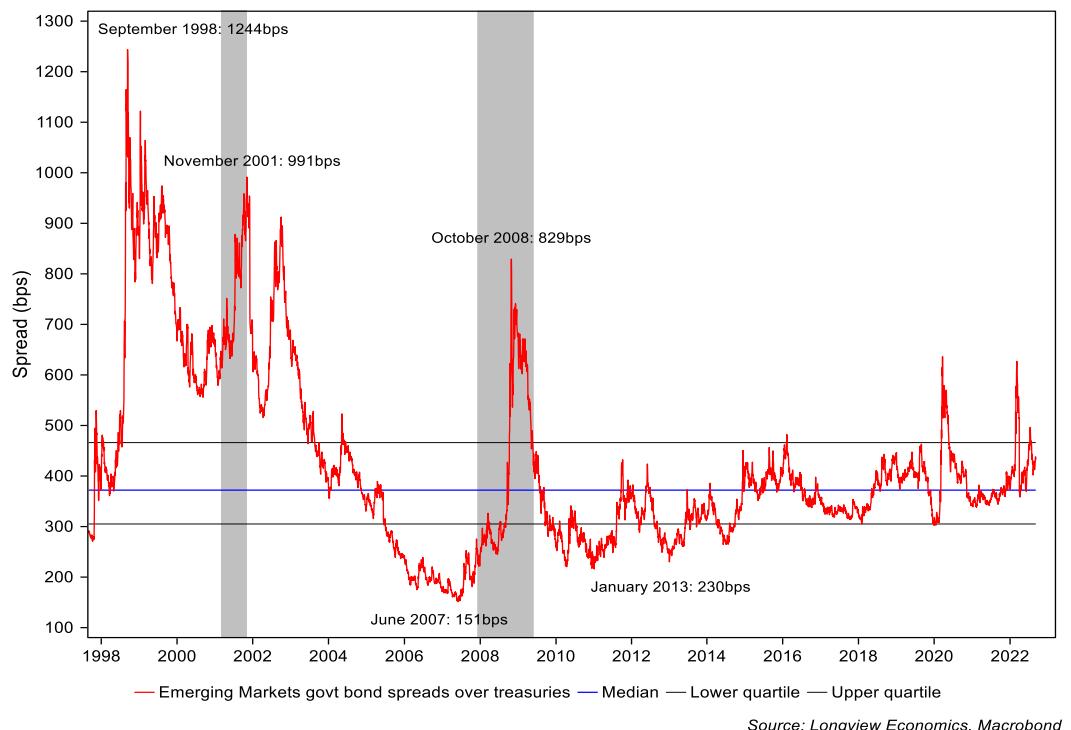


**Fig 9Iii: EZ investment grade corporate bond spreads over bunds (bps)**

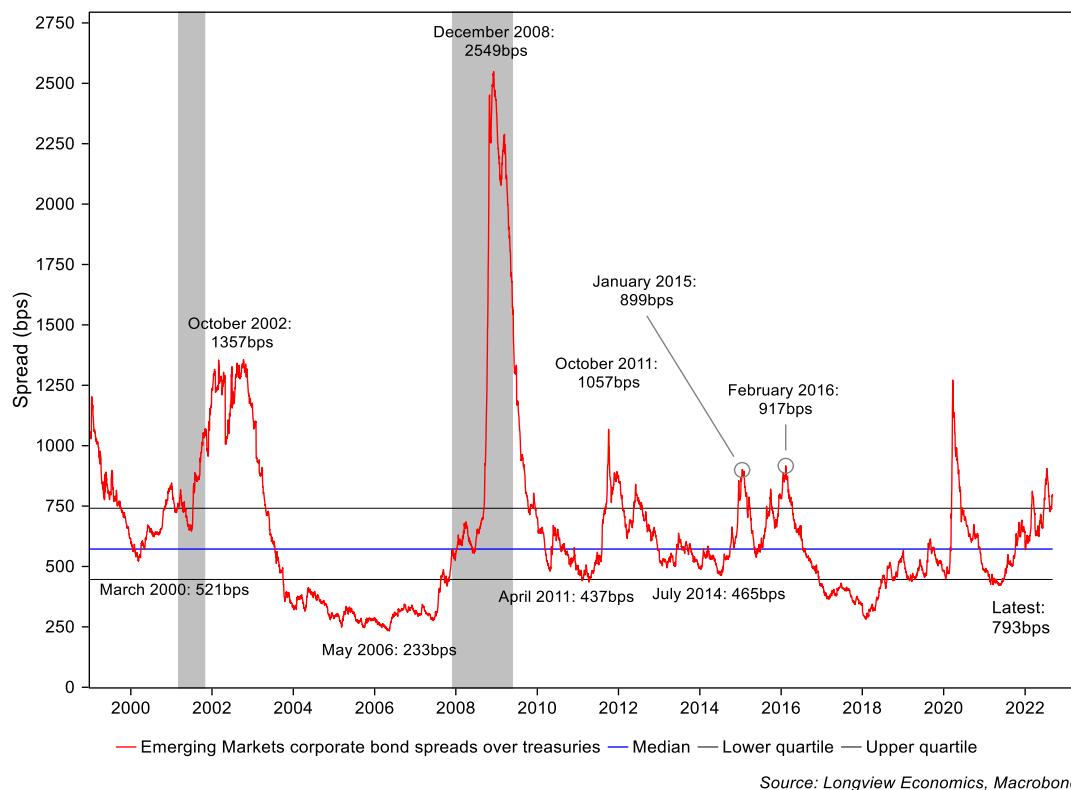


## Section 9k: Emerging Market Bond Spreads

**Fig 9ki: EM government bond spreads over treasuries (bps)**

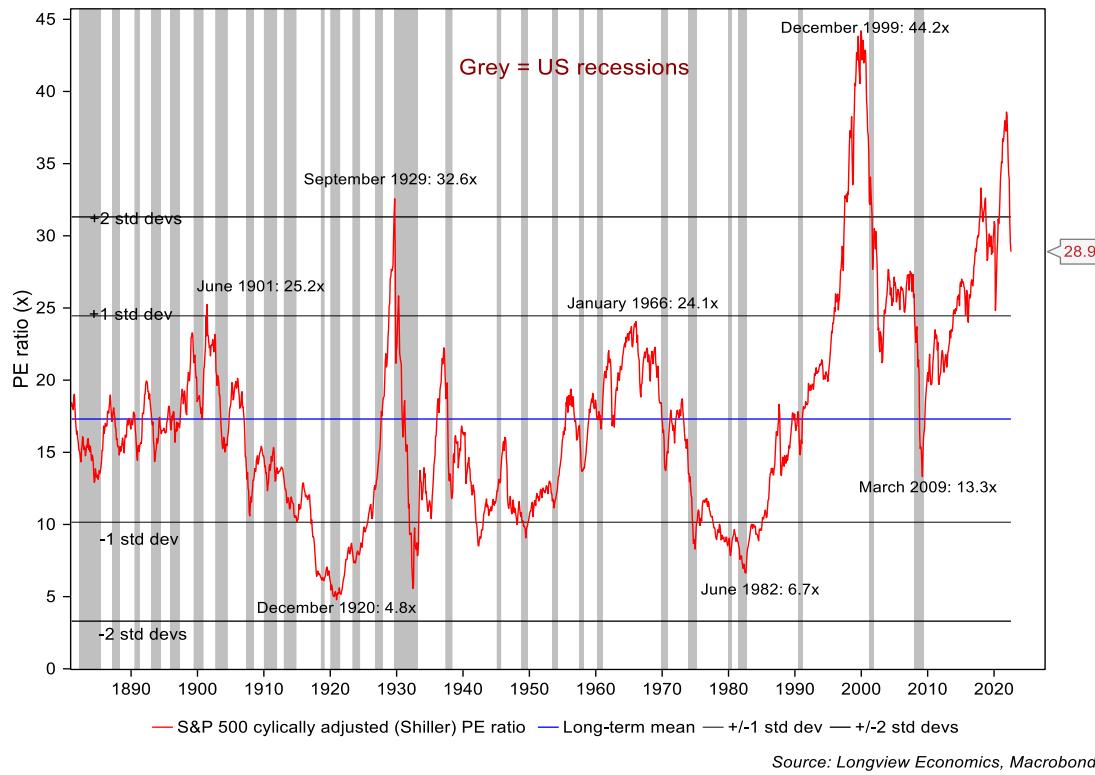


**Fig 9kii: EM corporate bond spreads over treasuries (bps)**

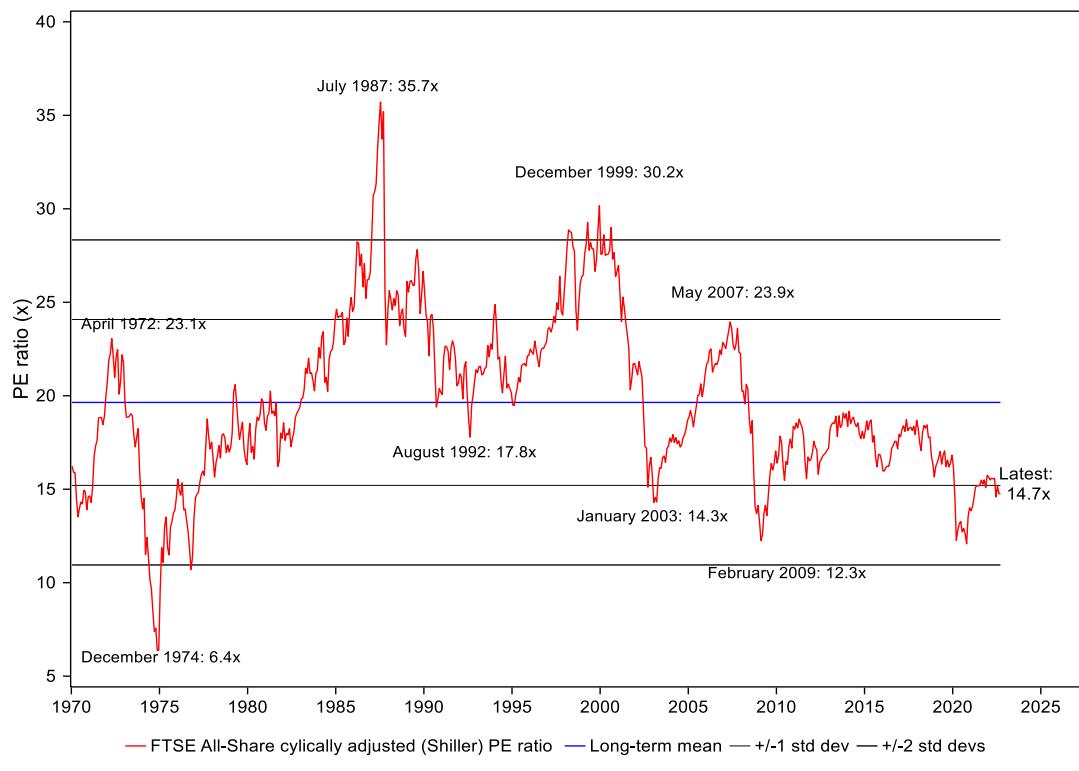


## Section 9l: Shiller PE ratios

**Fig 9li:** Long term US S&P 500 cyclically adjusted (Shiller) PE ratio

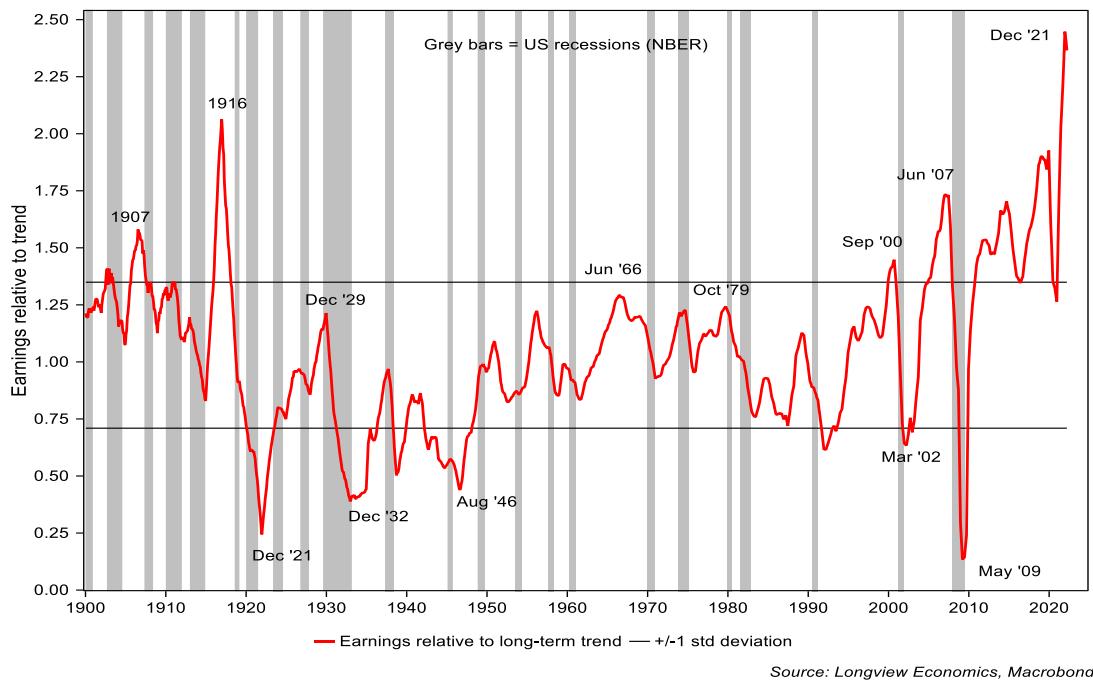


**Fig 9lii:** Long term UK FTSE All-Share cyclically adjusted (Shiller) PE ratio

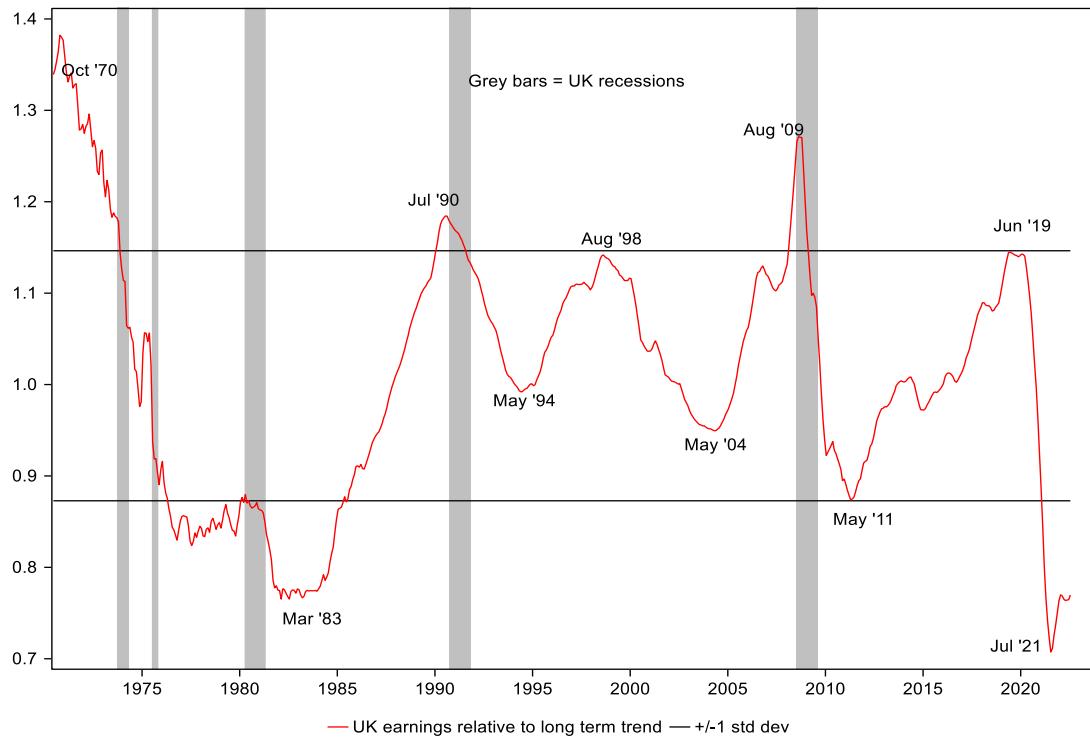


## Section 9m: Earnings

**Fig 9mi:** US earnings (EPS) relative to long-term trend



**Fig 9mii:** UK earnings (EPS) relative to long-term trend



## Section 9n: Global Sector Valuations

*NB these tables are extracts from our global sector presentation. We also have presentations centric to US and UK markets. If you would like to be added to our monthly distribution list for any of these products, please let us know.*

**Fig 9ni: Global sector valuation heatmap\***

07/09/2022 08:52	Cons disc.	Cons staples	Energy	Financials	Healthcare	Industrials	Info tech	Materials	Comm. Services	Utilities	Index
Cons disc.		14	1	7	19	4	50	3	31	86	5
Cons staples	87		2	9	31	24	68	7	56	97	25
Energy	100	99		100	100	100	100	100	99	100	100
Financials	94	92	1		85	88	81	26	77	100	89
Healthcare	82	70	1	16		52	72	13	65	100	51
Industrials	97	77	1	13	49		77	6	65	99	52
Info tech	51	33	1	20	29	24		11	40	83	24
Materials	98	94	1	75	88	95	90		86	100	93
Comm. Services	70	45	2	24	36	36	61	15		97	31
Utilities	15	4	1	1	1	2	18	1	4		1
Index	96	76	1	12	50	49	77	8	70	100	

**Source:** Bloomberg Consensus Estimates, S&P, Longview Economics

\* NB This table should be read as ‘columns versus rows’ – i.e. the sector name above, relative to the sector name to the left.

**Fig 9nii: Global sector valuation metrics\***

Name	Forward PE	Long Term Mean	Relative PE	Relative PE range	Over/Under Value*	Relative PE Percentile**	56-day RSI***	56-day RSI Percentile**
S&P GLOBAL 1200 INDEX	14.0	15.8	-	-	-	-	44.0	-
Energy	6.2	14.6	0.44	0.63-1.51	-52.5%	1	51.2	76
Materials	9.9	14.3	0.71	0.50-1.28	-22.6%	9	42.1	25
Industrials	14.8	16.5	1.06	0.77-1.42	32.3%	60	44.7	76
Consumer Discretionary	17.6	16.6	1.26	0.62-1.41	11.2%	88	46.2	67
Consumer Staples	19.0	20.8	1.36	1.09-2.43	4.3%	76	44.3	57
Healthcare	15.7	17.5	1.12	0.79-1.49	1.6%	51	44.2	61
Financials	9.8	12.5	0.70	0.51-0.98	-12.9%	12	44.2	28
Info Tech	19.0	19.8	1.36	0.90-1.99	9.8%	77	44.7	61
Telecoms	14.5	16.1	1.04	0.61-1.79	4.2%	66	41.8	21
Utilities	18.2	14.2	1.30	0.49-1.35	41.7%	100	48.5	76

\* This measures how expensive the sector is relative to the index, compared to its long term history (i.e. since 1987).

**Fig 9niii:** US sector valuation (PE) heatmap

S&P 500 Sector	fwd pe ratio (x)	vs. own history	vs. 1	vs. 2	vs. 3	vs. 4	vs. 5	vs. 6	vs. 7	vs. 8	vs. 9	vs. 10	vs. 11	vs. Index
1. Energy	8.6	3		1	1	1	1	1	3	3	7	1	5	1
2. Materials	13.1	20	99		9	2	5	16	22	12	48	0	28	8
3. Industrials	16.6	62	99	91		6	21	67	90	26	92	3	63	40
4. Consumer Discretionary	25.9	91	99	98	94		87	89	93	76	97	59	89	94
5. Consumer Staples	20.2	76	99	95	79	13		87	97	51	97	2	80	85
6. Healthcare	15.6	36	99	84	33	11	13		67	25	95	1	54	31
7. Financials	11.5	25	97	78	10	7	3	33		22	79	0	38	11
8. IT	20.5	69	97	88	74	24	49	75	78		94	34	74	67
9. Communications	15.4	26	93	52	8	3	3	5	21	6		0	25	3
10. Utilities	20.3	98	99	100	97	41	98	99	100	66	100		100	98
11. Real Estate	17.9	45	95	72	37	11	20	46	62	26	75	0		38
Index	16.7	61	99	92	60	6	15	69	89	33	97	2	62	

These table should be read as the row header relative to the column header. Cells/Rows shaded red are more expensive on a percentile basis relative to history, while those shaded green are cheap on that relative basis.

Source: Longview Economics, Macrobond

**Fig 9niv:** US sector equity risk premium heatmap

S&P 500 Sector	fwd ERP (%)	vs. own history	vs. 1	vs. 2	vs. 3	vs. 4	vs. 5	vs. 6	vs. 7	vs. 8	vs. 9	vs. 10	vs. 11	vs. Index
1. Energy	10.8	96		91	95	99	97	89	95	95	89	99	87	95
2. Materials	6.9	83	9		91	97	92	83	80	94	52	99	69	93
3. Industrials	5.3	51	5	9		96	75	39	28	80	7	98	38	61
4. Consumer Discretionary	3.1	15	1	3	4		14	11	4	24	0	43	10	3
5. Consumer Staples	4.2	35	3	8	25	86		13	14	57	4	98	20	22
6. Healthcare	5.7	51	15	21	65	93	91		42	75	6	100	46	69
7. Financials	8.0	72	5	20	72	96	86	62		83	21	100	62	87
8. IT	4.2	36	13	15	29	84	51	29	25		8	66	24	35
9. Communications	5.7	75	11	48	93	100	96	94	79	92		100	73	97
10. Utilities	4.2	5	1	1	2	57	2	4	0	43	0		0	2
11. Real Estate	4.9	43	13	31	62	90	80	54	38	78	27	100		59
Index	5.3	45	6	8	40	98	79	34	15	72	3	100	41	

ERP is the Equity Risk Premium (Earnings Yield less real bond yield)

These table should be read as the row header relative to the column header. Cells/Rows shaded red are have a lower risk premium on a percentile basis relative to history, while those shaded green have a higher ERP on that relative basis.

Source: Longview Economics, Macrobond

**Fig 9nv: US sector dividend yield heatmap**

S&P 500 Sector	fwd div yield (%)	vs. own history	vs. 1	vs. 2	vs. 3	vs. 4	vs. 5	vs. 6	vs. 7	vs. 8	vs. 9	vs. 10	vs. 11	vs. Index
1. Energy	3.2	75	64	80	89	64	70	37	70	86	86	75	85	
2. Materials	2.3	59	36		80	84	65	74	28	62	98	97	70	84
3. Industrials	1.9	24	20	20		85	22	32	19	43	98	82	26	85
4. Consumer Discretionary	0.8	14	11	16	15		9	11	13	14	69	36	27	22
5. Consumer Staples	2.6	45	36	35	78	91		71	42	43	92	100	40	87
6. Healthcare	1.8	34	30	26	68	89	29		26	40	93	91	34	77
7. Financials	2.4	74	63	72	81	87	58	74		57	98	92	73	92
8. IT	1.1	49	30	38	57	86	57	60	43		83	62	43	61
9. Communications	1.0	9	14	2	2	31	8	7	2	17		11	2	2
10. Utilities	3.0	2	14	3	18	64	0	9	8	38	89		11	29
11. Real Estate	3.3	47	25	30	74	73	60	66	27	57	98	89		81
Index	1.7	19	15	16	15	78	13	23	8	39	98	71	19	

These table should be read as the row header relative to the column header. Cells/Rows shaded red have a lower yield on a percentile basis relative to history, while those shaded green have a higher yield on that relative basis.

Source: Longview Economics, Macrobond

**Fig 9nvi: US sector price to book heatmap**

S&P 500 Sector	fwd pb ratio (x)	vs. own history	vs. 1	vs. 2	vs. 3	vs. 4	vs. 5	vs. 6	vs. 7	vs. 8	vs. 9	vs. 10	vs. 11	vs. Index
1. Energy	2.1	67	75	31	18	35	44	62	17	50	16	51	18	
2. Materials	2.4	35	25		17	15	16	22	42	14	42	7	24	10
3. Industrials	4.3	78	69	83		8	73	61	72	11	95	42	80	48
4. Consumer Discretionary	7.5	88	82	85	92		82	88	88	61	97	78	91	82
5. Consumer Staples	5.2	81	65	84	27	18		55	74	15	79	19	78	23
6. Healthcare	4.0	70	56	78	39	13	45		78	11	79	30	75	25
7. Financials	1.4	52	38	58	28	12	26	22		12	60	12	57	11
8. IT	7.2	89	83	86	89	39	85	89	88		98	81	88	84
9. Communications	2.7	55	50	58	5	3	21	21	40	2		15	27	15
10. Utilities	2.2	98	84	93	58	22	81	70	88	19	85		80	48
11. Real Estate	3.2	69	49	76	20	9	22	25	43	12	73	20		19
Index	3.5	87	82	90	52	18	77	75	89	16	85	52	81	

These table should be read as the row header relative to the column header. Cells/Rows shaded red are more expensive on a percentile basis relative to history, while those shaded green are cheap on that relative basis.

Source: Longview Economics, Macrobond

## Section 9o: Global Commodities Valuations

**Fig 9oi:** Commodities heatmap

Commodity	Data since	Price	vs. own history	vs.															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Palladium	2/1/1968	1,999.4	96		91	98	95	83	90	91	91	80	97	95	93	95	81	87	94
2. Gold	31/1/1901	1,701.5	95	9		99	95	45	58	90	89	26	99	91	82	97	62	46	83
3. Platinum	31/1/1910	853.4	36	2	1		8	0	0	64	59	1	69	77	17	73	11	2	41
4. Silver	31/1/1910	18.0	81	5	5	92		22	12	83	79	15	91	85	52	88	27	28	70
5. Brent Oil	1/10/1985	92.8	84	17	55	100	78		85	67	66	60	95	72	77	91	73	52	89
6. WTI Oil	31/12/1900	86.8	91	10	42	100	88	15		89	88	23	95	91	73	96	74	49	89
7. Wheat	31/1/1901	9.6	26	9	10	36	17	33	11		29	9	89	78	30	83	95	57	94
8. Corn	31/1/1901	7.5	28	9	11	41	21	34	12	71		11	96	84	33	88	86	64	93
9. Natural Gas	29/12/1922	9.2	94	20	74	99	85	40	77	91	89		92	91	72	92	100	77	91
10. Cocoa	1/7/1959	2,383.0	13	3	1	31	9	5	5	11	4	8		35	8	40	15	14	47
11. Cotton	29/8/1902	1.1	19	5	9	23	15	28	9	22	16	9	65		26	70	99	56	77
12. Copper	2/7/1959	3.5	67	7	18	83	48	23	27	70	67	28	92	74		81	40	23	72
13. Sugar	31/1/1901	0.2	15	5	3	27	12	9	4	17	12	8	60	30	19		36	23	50
14. Tin	9/2/2012	21,346.0	59	19	38	89	73	27	26	5	14	0	85	1	60	64		26	39
15. Zinc	2/1/2004	3,205.5	80	13	54	98	72	48	51	43	36	23	86	44	77	77	74		85
16. Aluminium	27/8/1987	2,258.0	36	6	17	59	30	11	11	6	7	9	53	23	28	50	61	15	

These table should be read as the row header relative to the column header. Cells/Rows shaded red are more expensive on a percentile basis relative to history, while those shaded green are cheap on that relative basis. NB all relative metrics are adjusted for inflation.

Source: Longview Economics, Macrobond



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