Uncommon truths

Why I like Chinese equities

Chinese equities have recently outperformed other regions (while bonds have done the reverse). We ask whether this is a dead-cat bounce or the start of a new trend. There are many worries about Chinese stocks but we suspect a lot of that is already in the price, based on cyclically-adjusted valuations. We are happy to be Overweight within our Model Asset Allocation.

Having just spent a week in the Middle East, I was struck by the vibrancy of the region (and the heat and sandstorms!). There may be more Covid precautions than in Europe but life is going on as usual. One sign of a booming economy is high load factors on flights and seats are hard to come by within the region. Apart from anything else, I guess this is a sign of the benefits of being endowed with energy resources when oil and gas prices are rising.

In discussions with investors, I encountered far more interest in cryptocurrencies than I have seen in Europe. It would appear that recent turmoil has done little to dampen the appetite for such instruments, especially among the younger generation. This confirms what I have heard in recent discussions with non-investor acquaintances in the UK, who are looking for the next buying opportunity, despite recently locking in losses of up to 60%. This makes me think that the revulsion stage is yet to be reached and that a lot more downside will be needed before a true bottom is formed (Bitcoin may need to go below $10,000 for that to happen, in my opinion).

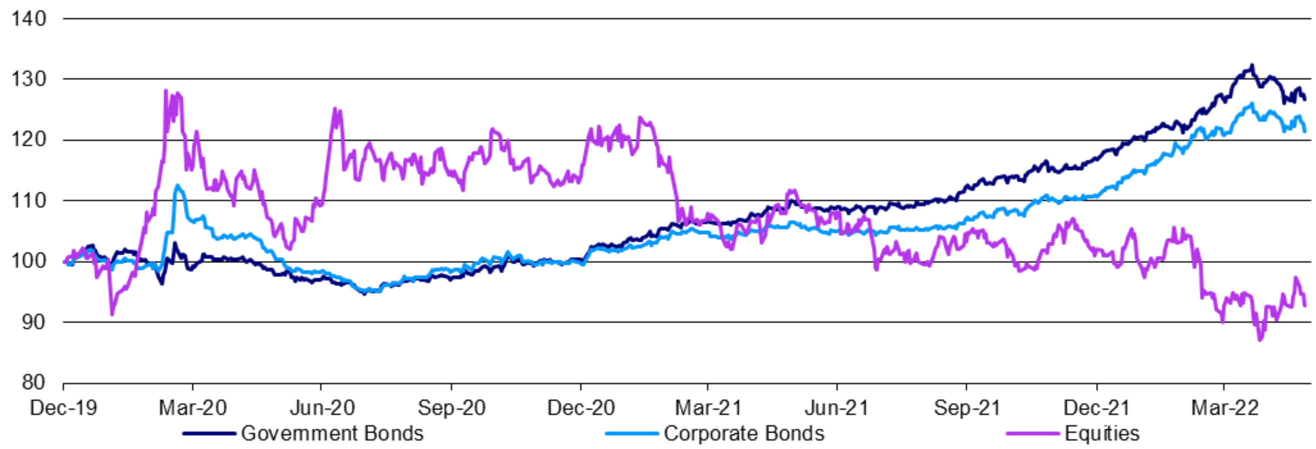
There was obviously a lot of concern about inflation, recession risk and central bank policies and I had the feeling that my views were among the most aggressive in terms of how quickly headline inflation would decline over the next 12 months (see The causes and course of inflation). There was also a lot of interest in China for several reasons including geopolitical risk, short-term economic concerns and investment opportunities.

When it comes to the performance of Chinese assets, **Figure 1** suggests that bonds and equities have gone in opposite directions since the end of 2020: bonds have outperformed global indices, while equities have underperformed. The relative strength of Chinese bonds reflects the relative weakness of the Chinese economy, in my opinion. After outperforming most other economies during 2020, China not only didn't get the post-Covid rebound enjoyed by countries that had shrunk more, but it also suffered the impact of a deliberate clampdown upon the real estate sector. Hence, 2021 was a relatively difficult year, as reflected in the slippage in equities and the decline in bond yields implicit in **Figure 1**. A series of regulatory "surprises" further hindered the equity market.

Those relative performance patterns have continued into 2022, with People's Bank of China (PBOC) loosening (while other central banks tighten) causing a decline in bond yields. At the same time, concern about the effect of Covid-related lockdowns has driven the equity market even lower and caused it to underperform major indices in the rest of the world (see the year-to-date data in **Figure 4**).

Interestingly, **Figures 1** and **4** show a recent reversal in those trends, though it is to be seen if that continues or whether it is just a dead-cat bounce.

Figure 1 – China/world total return indices (31/12/19 = 100, USD)



Note: **past performance is no guarantee of future results**. Daily data from 31 December 2019 to 26 May 2022. In each case, the respective Chinese total return index is divided by the world total return index and rebased to 100 as of 31 December 2019. "Government Bonds" is based on ICE BofA China Government Index and ICE BofA Global Government Index. "Corporate Bonds" is based on ICE BofA China Corporate Index and ICE BofA Global Corporate Index. "Equities" is based on Datastream China-A DS Market Index and Datastream World DS Market Index. Source: ICE BofA, Refinitiv Datastream and Invesco

On the fixed income side, 10-year government bond yields in China recently dipped below US levels. This may be justified by the fact that inflation is much lower in China (2.1% in April versus 8.3% in the US) but it is the first time since mid-2010 that it has been the case. Given the apparent reticence of the PBOC to ease aggressively, I wonder if Chinese bond yields are not about to bottom, just at the moment I expect the Fed to start sounding less hawkish (thus allowing US yields consolidate recent gains). Hence, I think we may already have seen the best of Chinese bonds relative to other markets.

On the equity side, there are plenty of reasons for caution, as I have been reminded during recent meetings (and not only in the Middle East). A recurrent theme is the weakness of the Chinese economy (retail sales were down 11.1% in the year to April, for example), particularly due to the zero-Covid policy that has led to lockdowns in regions reckoned to account for 30%-40% of GDP – see this from CNBC. Having seemed to handle the pandemic better than most other countries, the highly contagious Omicron variant has made China a victim of its own success. Immunity rates would appear too low, both because not enough people have had Covid and not enough are effectively vaccinated. Hence, China now finds itself where most other countries were at the start of the pandemic, leaving lockdowns as the only tool available to limit the number of deaths. Rolling out effective vaccines will be critical in opening up the economy. This being said, Shanghai now appears to be reopening, though Beijing is going in the other direction (luckily, the latter is less important to the economy).

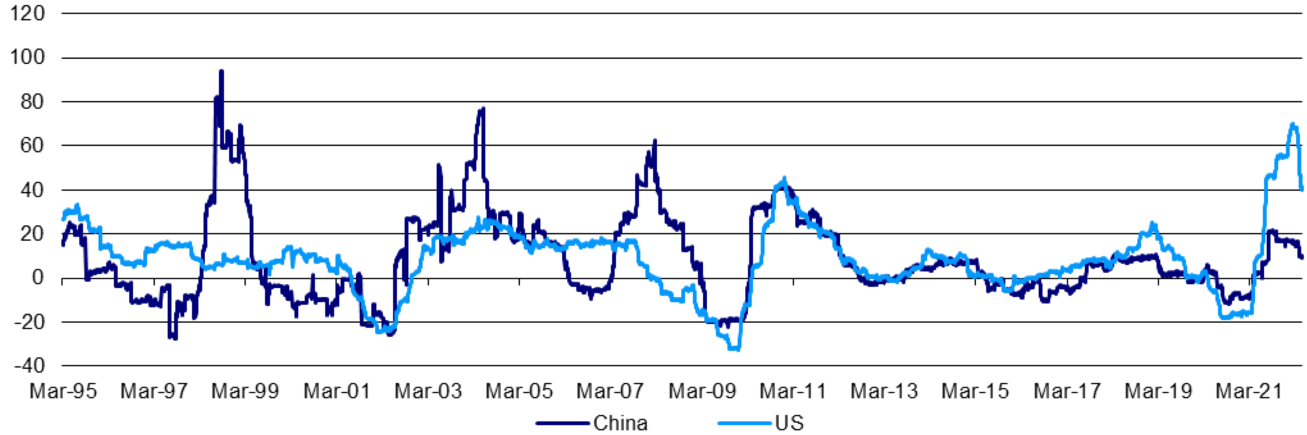
Recent economic data has been weak (industrial production was down 2.9% in the year to April). Not surprisingly, this is dampening corporate profits, which are perhaps also being squeezed by rising commodity prices (industrial profits were down 8.5% in the year to April). **Figure 2** shows that full-market profit growth peaked at around 22% in October 2021 and has since slipped to 9% year-on-year (as of 26 May 2022). US profit growth may have fallen even further but from a higher starting point.

Leaving aside concerns about the current economic cycle, many worries are being expressed about the risk of sanctions as a result of geopolitical tensions. These could damage China's economy but could also involve restrictions upon the ability of foreigners to invest in China (see, for example, the current restrictions imposed by the US on investment in certain Chinese companies). I imagine those concerns would increase if there were a return to a Trump presidency.

Of course, China has itself acted in ways that discourage investment from overseas. In particular, there were the surprise regulatory changes that were announced in 2021 in the technology and education sectors. However, recent evidence suggests a corner may have been turned, with a more flexible approach to the tech sector.

Concerning the other worries listed above, we suspect a more flexible approach may be adopted towards the management of Covid after the re-election of Xi as president in October (which, though not guaranteed, we assume will happen). This will presumably involve a large-scale rollout of vaccines, particularly to the large part of the elderly population that remains unvaccinated (by their own choice). It also appears that the generous fiscal support allowed by the centre has not yet been used by local governments. We presume this is due to a lack of confidence brought on by Covid lockdowns and assume a fiscal boost from this direction during the second half of the year.

Figure 2 – Earnings per share growth in China and the US (% year-on-year)



Note: daily data from 31 March 1995 to 26 May 2022. Based on Dastream China-A DS Market and US DS Market indices (with EPS derived from the price index and price-earnings ratios). Source: Refinitiv Datastream and Invesco

All of the above reasons for optimism are merely opinions and may sound tenuous. Where I feel on safer ground is valuations. I work on the principle that the major determinant of investment returns over the medium term is the valuation of an asset at the time of purchase. **Figure 3** shows that the cyclically-adjusted price-earnings ratio (CAPE) for Chinese equities (15.3) is currently the lowest among the markets that we cover and at the bottom end of its own historical range. On this basis, US and Indian equity valuations are at the other extreme.

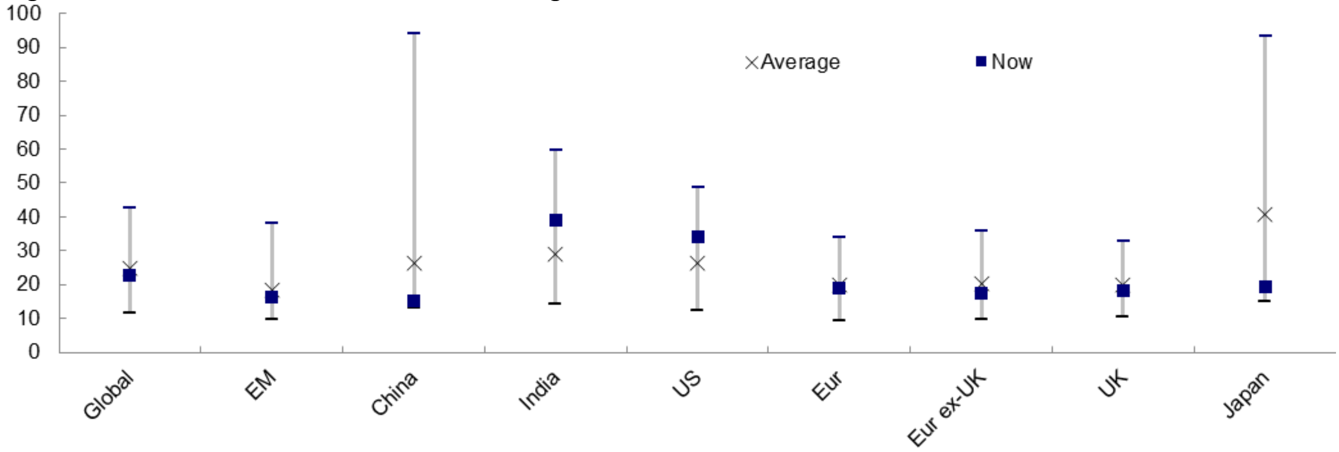
Why the use of CAPE's? Well, simple P/E ratios (today's price divided by the most recent earnings) are extremely volatile due to the cyclicality of earnings (see **Figure 2**). Indeed, P/Es often rise in times of recession due to the collapse in earnings and are at their lowest during economic booms, just when the stock market may be about to peak. A CAPE smoothes out the earnings cycle by using a 10-year moving average of earnings as the denominator. Our research suggests that the predictive power of valuation ratios is improved when they are cyclically adjusted in this way, with the P/E ratio seeing the biggest improvement (versus other ratios such as price/book-value and dividend yield, which tend to have higher predictive power in the first place).

On this basis, I feel more comfortable holding equity markets that have a lower CAPE than usual, which is certainly the case for China. Even better, its CAPE is the lowest in absolute terms and, as outlined above, there are reasons to believe that some of the factors behind China's equity market underperformance may be reversing.

I always felt that the enthusiasm for Chinese equities was overdone at the end of 2020. Likewise, I suspect that investors are now being overly cautious, which I believe has created an interesting entry point for what I think will become an important part of global equity benchmarks over the coming decades. We moved to an Overweight stance within our Model Asset Allocation in mid-March (see **Figure 7**) and, so far, we are happy with that decision.

All data as of 27 May 2022, unless stated otherwise.

Figure 3 – CAPE ratios within historical ranges



Note: CAPE = Cyclically Adjusted Price/Earnings and uses a 10-year moving average of earnings. Based on daily data from 3 January 1983 (except for China from 1 April 2004, India from 31 December 1999 and EM from 3 January 2005), using Datastream indices. As of 26 May 2022. Source: Refinitiv Datastream and Invesco

Figure 4 – Asset class total returns (%)

Data as at 27/05/2022		Current	Total Return (USD, %)					Total Return (Local Currency, %)				
	Index	Level/RY	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Equities												
World	MSCI	653	5.1	0.2	-7.8	-12.7	-6.0	4.6	-0.2	-6.6	-11.0	-2.5
Emerging Markets	MSCI	1043	0.9	0.2	-8.2	-14.6	-20.9	0.3	-0.1	-6.4	-12.1	-16.7
China	MSCI	66	-0.4	4.0	-7.3	-20.5	-38.0	-0.4	4.3	-6.3	-19.3	-37.0
US	MSCI	3954	6.6	-0.8	-8.6	-13.4	-1.5	6.6	-0.8	-8.6	-13.4	-1.5
Europe	MSCI	1810	4.7	2.8	-4.7	-11.6	-8.9	3.2	1.4	-0.7	-5.9	2.7
Europe ex-UK	MSCI	2197	5.0	2.5	-5.4	-14.7	-12.1	3.4	0.9	-1.5	-9.5	-0.9
UK	MSCI	1147	3.7	3.6	-2.3	-0.5	2.5	2.5	2.7	2.0	6.8	15.3
Japan	MSCI	3290	1.3	2.3	-7.6	-13.5	-12.5	0.6	1.4	-3.2	-4.6	1.4
Government Bonds												
World	BofA-ML	1.77	0.7	0.3	-4.9	-11.1	-13.6	0.1	-0.5	-2.6	-7.2	-6.6
Emerging Markets	BBloom	6.88	3.5	-0.7	-7.5	-19.2	-19.2	3.5	-0.7	-7.5	-19.2	-19.2
China	BofA-ML	2.60	-0.2	-1.6	-4.4	-3.3	0.1	0.3	0.7	1.1	1.8	5.4
US (10y)	Datastream	2.76	0.4	0.4	-4.4	-11.1	-8.8	0.4	0.4	-4.4	-11.1	-8.8
Europe	Bofa-ML	1.34	1.3	0.1	-8.0	-14.8	-20.5	-0.1	-1.7	-4.4	-9.5	-9.4
Europe ex-UK (EMU, 10y)	Datastream	0.96	1.3	0.5	-7.2	-14.9	-20.5	-0.2	-1.3	-3.6	-9.7	-9.4
UK (10y)	Datastream	1.90	1.1	0.2	-6.6	-14.1	-18.2	-0.1	-0.7	-2.5	-7.7	-7.9
Japan (10y)	Datastream	0.23	0.9	1.2	-4.7	-10.6	-14.6	0.1	0.2	-0.2	-1.3	-1.0
IG Corporate Bonds												
Global	BofA-ML	3.65	1.4	0.3	-4.9	-12.1	-12.9	1.0	-0.2	-3.7	-10.4	-9.2
Emerging Markets	BBloom	6.70	1.5	-1.2	-5.5	-19.3	-23.2	1.5	-1.2	-5.5	-19.3	-23.2
China	BofA-ML	3.39	-0.3	-1.6	-4.4	-3.3	-0.4	0.2	0.7	1.1	1.8	4.8
US	BofA-ML	4.19	1.5	0.2	-4.1	-11.6	-9.8	1.5	0.2	-4.1	-11.6	-9.8
Europe	BofA-ML	2.26	1.5	0.5	-7.1	-13.9	-19.8	0.0	-1.3	-3.5	-8.6	-8.7
UK	BofA-ML	3.54	1.4	-0.3	-7.7	-16.5	-19.8	0.2	-1.2	-3.7	-10.3	-9.7
Japan	BofA-ML	0.52	0.7	1.0	-4.5	-10.1	-14.0	0.0	0.1	0.0	-0.7	-0.3
HY Corporate Bonds												
Global	BofA-ML	7.26	2.7	-0.5	-4.5	-10.2	-10.9	2.4	-0.9	-3.6	-9.0	-8.2
US	BofA-ML	7.09	3.4	-0.4	-3.4	-7.7	-4.9	3.4	-0.4	-3.4	-7.7	-4.9
Europe	BofA-ML	5.65	1.9	0.0	-7.8	-14.2	-19.2	0.4	-1.8	-4.2	-8.9	-8.0
Cash (Overnight LIBOR)												
US		0.82	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.2
Euro Area		-0.65	1.6	1.6	-3.2	-5.9	-12.6	0.0	-0.1	-0.1	-0.3	-0.6
UK		0.18	1.0	0.6	-3.9	-6.7	-11.1	0.0	0.0	0.0	0.1	0.1
Japan		-0.09	0.6	1.0	-4.3	-9.5	-13.7	0.0	0.0	0.0	0.0	-0.1
Real Estate (REITs)												
Global	FTSE	1841	3.7	-5.5	-8.7	-11.8	-4.2	2.2	-7.2	-5.2	-6.4	9.2
Emerging Markets	FTSE	1524	-1.4	-3.3	-7.1	-5.0	-20.6	-2.8	-5.1	-3.5	0.8	-9.5
US	FTSE	3344	5.5	-8.3	-9.6	-13.3	4.4	5.5	-8.3	-9.6	-13.3	4.4
Europe ex-UK	FTSE	2971	2.6	-1.4	-12.6	-19.5	-21.3	1.1	-3.2	-9.2	-14.5	-10.4
UK	FTSE	1044	3.6	-5.0	-11.1	-15.7	-6.2	2.3	-5.8	-7.2	-9.5	5.5
Japan	FTSE	2414	2.6	2.2	-3.2	-6.5	-12.7	1.9	1.3	1.3	3.2	1.1
Commodities												
All	GSCI	4112	3.5	6.9	11.3	48.2	64.5	-	-	-	-	-
Energy	GSCI	751	5.5	12.3	19.8	75.0	106.6	-	-	-	-	-
Industrial Metals	GSCI	1865	-0.5	-7.1	-12.7	2.8	7.8	-	-	-	-	-
Precious Metals	GSCI	2094	0.6	-2.4	-5.9	0.4	-5.1	-	-	-	-	-
Agricultural Goods	GSCI	656	-0.1	1.4	7.9	31.6	37.2	-	-	-	-	-
Currencies (vs USD)*												
EUR		1.07	1.6	1.6	-3.1	-5.6	-12.0	-	-	-	-	-
JPY		127.13	0.6	1.0	-4.3	-9.5	-13.6	-	-	-	-	-
GBP		1.26	1.2	0.9	-4.2	-6.9	-11.1	-	-	-	-	-
CHF		1.04	1.9	1.2	-3.6	-4.7	-6.3	-	-	-	-	-
CNY		6.70	-0.1	-2.1	-5.4	-5.1	-4.7	-	-	-	-	-

Notes: *The currency section is organised so that in all cases the numbers show the movement in the mentioned currency versus USD (+ve indicates appreciation, -ve indicates depreciation). **Past performance is no guarantee of future results.** Please see appendix for definitions, methodology and disclaimers.
Source: Refinitiv Datastream and Invesco

Figure 5 – Global equity sector total returns relative to market (%)

Data as at 27/05/2022	Global				
	1w	1m	QTD	YTD	12m
Energy	**0.7**	**7.7**	**15.3**	**48.0**	**50.6**
Basic Materials	**-0.9**	**0.9**	**0.1**	**13.8**	**4.8**
Basic Resources	-0.2	-0.1	-3.1	19.3	5.8
Chemicals	-1.8	2.4	4.8	7.1	3.9
Industrials	**-0.2**	**0.3**	**0.3**	**-2.8**	**-6.1**
Construction & Materials	-1.1	-0.9	0.5	-6.6	-7.1
Industrial Goods & Services	-0.1	0.4	0.3	-2.3	-6.0
Consumer Discretionary	**1.5**	**-4.7**	**-7.4**	**-13.4**	**-16.6**
Automobiles & Parts	2.4	-3.2	-8.8	-13.2	-3.3
Media	-1.1	-2.0	-14.0	-22.7	-25.7
Retailers	3.0	-8.7	-9.4	-13.4	-18.4
Travel & Leisure	0.3	-3.3	-1.7	-2.8	-15.4
Consumer Products & Services	0.2	-1.8	-4.5	-15.7	-20.4
Consumer Staples	**-1.0**	**-1.5**	**6.7**	**8.0**	**4.4**
Food, Beverage & Tobacco	-0.9	-1.0	7.6	10.5	6.4
Personal Care, Drug & Grocery Stores	-1.2	-2.5	5.0	3.3	0.5
Healthcare	**-1.7**	**0.8**	**3.2**	**1.8**	**3.9**
Financials	**0.6**	**1.1**	**0.7**	**5.8**	**3.1**
Banks	0.6	1.6	2.2	9.2	4.4
Financial Services	0.8	0.6	-1.8	-1.6	0.1
Insurance	0.1	0.7	1.7	10.5	5.6
Real Estate	**-1.3**	**-3.9**	**0.3**	**-0.1**	**-1.0**
Technology	**0.7**	**-0.4**	**-6.7**	**-14.1**	**-5.2**
Telecommunications	**-1.4**	**0.5**	**4.2**	**7.9**	**0.7**
Utilities	**-1.8**	**1.6**	**7.9**	**14.3**	**14.9**

Notes: Returns shown are for Datastream sector indices versus the total market index. **Past performance is no guarantee of future results.** Source: Refinitiv Datastream and Invesco

Figure 6a – US factor index total returns (%)

Data as at 27/05/2022	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	7.4	1.5	-8.4	-19.6	-1.9	0.7	2.0	-0.5	-8.4	-2.3
Low volatility	4.4	0.0	-0.1	0.2	11.9	-2.1	0.5	8.6	14.2	11.4
Price momentum	7.2	1.6	-3.8	-4.5	2.7	0.6	2.1	4.5	8.8	2.3
Quality	7.8	2.7	0.4	-5.6	5.1	1.1	3.2	9.1	7.6	4.7
Size	6.4	0.4	-3.6	-2.0	-1.7	-0.2	0.9	4.7	11.6	-2.1
Value	7.0	2.5	-2.5	3.4	5.4	0.4	2.9	6.0	17.8	5.0
Market	6.6	-0.4	-8.0	-12.2	0.4					
Market - Equal-Weighted	6.5	0.6	-4.6	-7.2	1.2					

Notes: All indices are subsets of the S&P 500 index, they are rebalanced monthly, use data in US dollars and are equal-weighted. Growth includes stocks in the top third based on both their 5-year sales per share trend and their internal growth rate (the product of the 5-year average return on equity and the retention ratio); Low volatility includes stocks in the bottom quintile based on the standard deviation of their daily returns in the previous three months; Price momentum includes stocks in the top quintile based on their performance in the previous 12 months; Quality includes stocks in the top third based on both their return on invested capital and their EBIT to EV ratio (earnings before interest and taxes to enterprise value); Size includes stocks in the bottom quintile based on their market value in US dollars. Value includes stocks in the bottom quintile based on their price to book value ratios. The market represents the S&P 500 index. **Past performance is no guarantee of future results.**
Source: Refinitiv Datastream and Invesco

Figure 6b – European factor index total returns relative to market (%)

Data as at 27/05/2022	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	2.4	-2.5	-11.0	-24.8	-12.6	-0.7	-3.2	-9.9	-19.1	-14.8
Low volatility	1.3	-1.8	-0.5	-2.6	8.0	-1.8	-2.6	0.7	4.8	5.3
Price momentum	2.1	-2.1	-5.5	-18.1	-12.8	-1.0	-2.9	-4.3	-11.9	-15.0
Quality	2.8	0.3	-2.7	-10.2	-2.7	-0.3	-0.5	-1.5	-3.4	-5.2
Size	2.5	0.2	-4.0	-15.5	-10.9	-0.6	-0.6	-2.8	-9.1	-13.1
Value	4.0	4.4	0.6	-1.0	6.9	0.8	3.6	1.8	6.5	4.3
Market	3.1	0.8	-1.2	-7.0	2.6					
Market - Equal-Weighted	2.7	0.3	-3.2	-12.1	-5.4					

Notes: All indices are subsets of the STOXX 600 index, they are rebalanced monthly, use data in euros and are equal-weighted. Growth includes stocks in the top third based on both their 5-year sales per share trend and their internal growth rate (the product of the 5-year average return on equity and the retention ratio); Low volatility includes stocks in the bottom quintile based on the standard deviation of their daily returns in the previous three months; Price momentum includes stocks in the top quintile based on their performance in the previous 12 months; Quality includes stocks in the top third based on both their return on invested capital and their EBIT to EV ratio (earnings before interest and taxes to enterprise value); Size includes stocks in the bottom quintile based on their market value in euros; Value includes stocks in the bottom quintile based on their price to book value ratios. The market represents the STOXX 600 index. **Past performance is no guarantee of future results.**
Source: Refinitiv Datastream and Invesco

Figure 7 – Model asset allocation

	Neutral	Policy Range		Allocation	Position vs Neutral
Cash Equivalents	**5%**	**0-10%**		**10%**	
Cash	2.5%			10%	
Gold	2.5%			0%	
Bonds	**40%**	**10-70%**	↑	**32%**	
Government	25%	10-40%		**10%**	
US	8%			2%	
Europe ex-UK (Eurozone)	7%			2%	
UK	1%			0%	
Japan	7%		↓	2%	
Emerging Markets	2%		↑	4%	
China**	0.2%		↑	1%	
Corporate IG	10%	0-20%	↑	**20%**	
US Dollar	5%		↑	10%	
Euro	2%		↑	4%	
Sterling	1%		↑	2%	
Japanese Yen	1%		↑	2%	
Emerging Markets	1%			2%	
China**	0.1%		↑	1%	
Corporate HY	5%	0-10%	↓	**2%**	
US Dollar	4%		↓	2%	
Euro	1%		↓	0%	
Equities	**45%**	**25-65%**	↑	**50%**	
US	25%		↑	16%	
Europe ex-UK	7%			10%	
UK	4%			8%	
Japan	4%		↑	6%	
Emerging Markets	5%			10%	
China**	2%		↑	3%	
Real Estate	**8%**	**0-16%**	↓	**8%**	
US	2%		↓	0%	
Europe ex-UK	2%		↓	2%	
UK	1%		↓	0%	
Japan	2%		↓	2%	
Emerging Markets	1%			4%	
Commodities	**2%**	**0-4%**		**0%**	
Energy	1%			0%	
Industrial Metals	0.3%			0%	
Precious Metals	0.3%			0%	
Agriculture	0.3%			0%	
Total	**100%**			**100%**	

Notes: **China is included in Emerging Markets allocations. This is a theoretical portfolio and is for illustrative purposes only. See the latest The Big Picture document for more details. It does not represent an actual portfolio and is not a recommendation of any investment or trading strategy. Arrows indicate the direction of the most recent changes.
Source: Invesco

Figure 8 – Model allocations for global sectors

	Neutral	Invesco		Preferred Region
Energy	**7.1%**	**Underweight**	↓	**US**
Basic Materials	**4.7%**	**Overweight**		**Europe**
Basic Resources	2.8%	Overweight		Europe
Chemicals	1.9%	Neutral		US
Industrials	**12.4%**	**Overweight**		**US**
Construction & Materials	1.5%	Neutral		EM
Industrial Goods & Services	10.9%	Overweight		US
Consumer Discretionary	**14.9%**	**Neutral**		**US**
Automobiles & Parts	3.1%	Underweight		Japan
Media	1.1%	Neutral	↑	EM
Retailers	5.1%	Overweight		US
Travel & Leisure	1.9%	Overweight		US
Consumer Products & Services	3.7%	Neutral		Japan
Consumer Staples	**6.0%**	**Neutral**		**US**
Food, Beverage & Tobacco	4.0%	Neutral		US
Personal Care, Drug & Grocery Stores	2.0%	Neutral		US
Healthcare	**9.8%**	**Overweight**	↑	**US**
Financials	**15.2%**	**Underweight**		**Japan**
Banks	7.5%	Underweight		Japan
Financial Services	5.0%	Overweight		Japan
Insurance	2.7%	Underweight		US
Real Estate	**3.4%**	**Neutral**	↓	**EM**
Technology	**19.4%**	**Overweight**		**US**
Telecommunications	**3.6%**	**Underweight**		**Japan**
Utilities	**3.3%**	**Underweight**		**Europe**

Notes: These are theoretical allocations which are for illustrative purposes only. They do not represent an actual portfolio and are not a recommendation of any investment or trading strategy. See the latest Strategic Sector Selector for more details.
Source: Refinitiv Datastream and Invesco

Appendix

Methodology for asset allocation, expected returns and optimal portfolios

Portfolio construction process

The optimal portfolios are theoretical and not real. We use optimisation processes to guide our allocations around "neutral" and within prescribed policy ranges based on our estimations of expected returns and using historical covariance information. This guides the allocation to global asset groups (equities, government bonds etc.), which is the most important level of decision. For the purposes of this document the optimal portfolios are constructed with a one-year horizon.

Which asset classes?

We look for investibility, size and liquidity. We have chosen to include equities, bonds (government, corporate investment grade and corporate high-yield), REITs to represent real estate, commodities and cash (all across a range of geographies). We use cross-asset correlations to determine which decisions are the most important.

Neutral allocations and policy ranges

We use market capitalisation in USD for major benchmark indices to calculate neutral allocations. For commodities, we use industry estimates for total ETP market cap + assets under management in hedge funds + direct investments. We use an arbitrary 5% for the combination of cash and gold. We impose diversification by using policy ranges for each asset category (the range is usually symmetric around neutral).

Expected/projected returns

The process for estimating expected returns is based upon yield (except commodities, of course). After analysing how yields vary with the economic cycle, and where they are situated within historical ranges, we forecast the direction and amplitude of moves over the next year. Cash returns are calculated assuming a straight-line move in short term rates towards our targets (with, of course, no capital gain or loss). Bond returns assume a straight-line progression in yields, with capital gains/losses predicated upon constant maturity (effectively supposing constant turnover to achieve that). Forecasts of corporate investment-grade and high-yield spreads are based upon our view of the economic cycle (as are forecasts of credit losses). Coupon payments are added to give total returns. Equity and REIT returns are based on dividend growth assumptions. We calculate total returns by applying those growth assumptions and adding the forecast dividend yield. No such metrics exist for commodities; therefore, we base our projections on US CPI-adjusted real prices relative to their long-term averages and views on the economic cycle. All expected returns are first calculated in local currency and then, where necessary, converted into other currency bases using our exchange rate forecasts.

Optimising the portfolio

Using a covariance matrix based on monthly local currency total returns for the last 5 years and we run an optimisation process that maximises the Sharpe Ratio. Another version maximises Return subject to volatility not exceeding that of our Neutral Portfolio. The optimiser is based on the Markowitz model.

Currency hedging

We adopt a cautious approach when it comes to currency hedging as currency movements are notoriously difficult to accurately predict and sometimes hedging can be costly. Also, some of our asset allocation choices are based on currency forecasts. We use an amalgam of central bank rate forecasts, policy expectations and real exchange rates relative to their historical averages to predict the direction and amplitude of currency moves.

Definitions of data and benchmarks for Figure 4

Sources: we source data from Datastream unless otherwise indicated.

Cash: returns are based on a proprietary index calculated using the Intercontinental Exchange Benchmark Administration overnight LIBOR (London Interbank Offer Rate). The global rate is the average of the euro, British pound, US dollar and Japanese yen rates. The series started on 1st January 2001 with a value of 100.

Gold: London bullion market spot price in USD/troy ounce.

Government bonds: Current levels, yields and total returns use Datastream benchmark 10-year yields for the US, Eurozone, Japan and the UK, and the ICE BofA government bond total return index for the World and Europe. The emerging markets yields and returns are based on the Barclays Bloomberg emerging markets sovereign US dollar bond index.

Corporate investment grade (IG) bonds: ICE BofA investment grade corporate bond total return indices, except for in emerging markets where we use the Barclays Bloomberg emerging markets corporate US dollar bond index.

Corporate high yield (HY) bonds: ICE BofA high yield total return indices

Equities: We use MSCI benchmark gross total return indices for all regions.

Commodities: Goldman Sachs Commodity total return indices

Real estate: FTSE EPRA/NAREIT total return indices

Currencies: Global Trade Information Services spot rates

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