Applied philosophy

Sectors through market cycles

Volatility in equity markets is likely to persist, in our view, especially if the global economy slides into recession in the next year. However, our base case for economic growth and inflation implies that a market recovery will start in 2023. In this report, we analyse how global sectors behaved in previous market cycles. We also examine what that implies for our model sector allocations as we transition from a market downturn to the early-cycle phase.

The current equity bear market is shaping up to be a drawn-out affair, a crash in slow motion that may still go on for a while longer. This is not unusual around economic turning points, when it takes time for weakness to feed through from the real economy to stocks keeping uncertainty elevated. As of 25th November, assuming it is yet to reach the cyclical trough, this bear market has been going on for 325 days from the peak on 4th January 2022, which is already longer than that of 1990, and looks like it may exceed that of 1981-82.

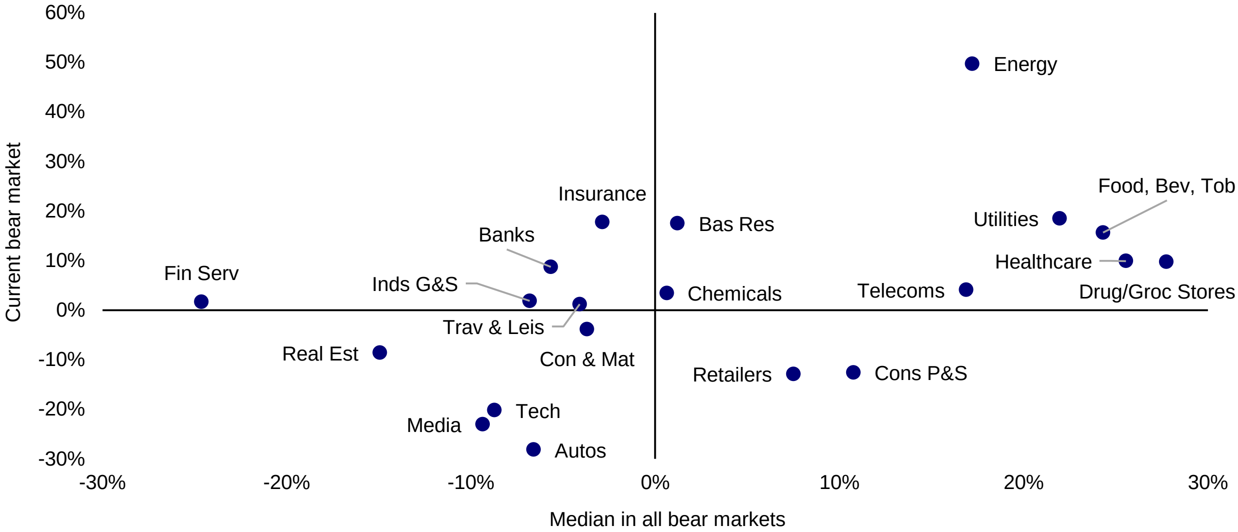
It can feel like there is no end to uncertainty in the eye of the storm, but this market contraction will eventually end. How long it lasts will depend on how quickly inflation moderates, in our view. Global bear markets around economic turning points (of which we count five since October 1974, including the current one – see **Figure 9** in the appendix for more details), tend to feature a significant decline in both valuations and earnings.

While we have yet to see a decline in earnings at the market level, valuations have been put under pressure by rising interest rates. How long that continues depends on when central banks perceive they have regained control over inflation (in our opinion), which we expect to happen around the middle of next year. If that is indeed the case, then some of the earnings declines may be offset by rising valuations. However, it is possible that inflation remains more persistent, which would make a global recession deeper and longer, while interest rates remain high keeping valuations low (see The Big Picture for more detail on our economic and market outlook for 2023).

In the current bear market that started on 4th January 2022, global equity sector returns have been quite typical of market downturns with outperformance by defensive sectors: consumer staples, healthcare, telecommunications and utilities. Interestingly, energy has been quite a consistent outperformer in previous bear markets. This may imply that energy is a more staple commodity than commonly assumed, making the sector's earnings resilient in downturns and/or that the relatively low starting valuations make the sector less vulnerable to rising interest rates (or perhaps super-cycles in energy commodities coincided with bear markets in the past).

We hold our judgment on the more cyclical outperformers of this bear market, such as basic resources, banks and insurance, which we think outperformed for sector-specific reasons rather than their general resilience in this kind of environment. All three are among the highest dividend payers and they

Figure 1 – Global equity sectors annualised total returns relative to market during market downturns



Note: Data as of 25th November 2022. **Past performance is no guarantee of future results.** We calculate relative total returns using Datastream World sector indices versus the total market index. We define market downturns as 20%+ peak-to-trough drawdowns in the MSCI World price index. Our period of analysis is between October 1974 and November 2022. See the appendix for abbreviations and dates of market cycles.
Source: Refinitiv Datastream and Invesco

have exposure to the value factor, while the profitability of banks and insurance companies improved as interest rates and sovereign bond yields rose. However, their earnings may come under pressure if the global economy slides into a recession. On the other hand, more consistent outperformers in previous bear markets, (retailers and consumer products & services, for example) suffered so far, perhaps due to their higher starting valuations and exposure to the growth factor.

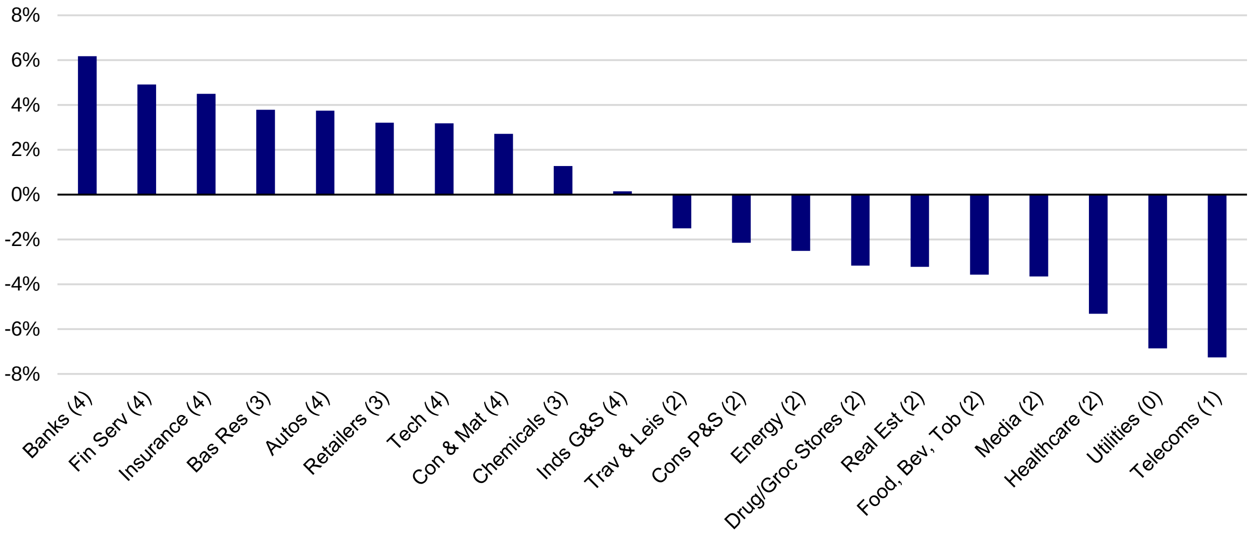
Although we are still in a fragile market environment and may have more downside ahead of us, we think markets will start looking ahead to recovery (by the end of the first quarter). To prepare for that, we have analysed sector returns in different parts of the market cycle. We identified five bull markets since 1974 that started after an economic downturn and ended before the next one using the MSCI World price index in local currency: 1) 4th October 1974 to 13th August 1981, 2) 12th August 1982 to 3rd January 1990, 3) 28th September 1990 to 24th March 2000, 4) 12th March 2003 to 13th July 2007, 5) 9th March 2009 to 4th January 2022.

The last one may look odd, but we consider the lockdown-related recessions and the extraordinary fiscal and monetary support to have created a late-cycle surge in markets that maintained the prevailing market environment, rather than the start of a new market cycle. There was a more significant shift in market trends at the start of 2022 as monetary tightening accelerated globally. We expect this to lead to less economic growth with the risk of recession.

It may be more art than science, but we have also defined four distinct phases in the equity market cycle that could allow us to refine how we position within our model sector allocation. First of all, although we have had five inter-expansion bear markets (including the current one), there were three others that fit the widely accepted definition of a 20%+ peak-to-trough fall. By our definition, intra-expansion bear markets happened three times in our sample: 1) the 1987 event connected to “Black Monday”; 2) the 1998 bear market triggered by the collapse of LTCM and the Russian default; 3) the 2020 pandemic-related drawdown. Sectors have largely behaved in similar ways in both. The best performers across these downturns (based on median annualised total returns relative to the market) were the traditional defensive sectors (drug & grocery stores; healthcare; food, beverage & tobacco; utilities and telecommunications) and cyclicals that have a lower sensitivity to the economic cycle, such as energy, consumer products & services and retailers.

We have also defined three phases within market expansions. Within this framework, in the early cycle phase, equities exit the bear market with an initial rebound after the trough and this period ends with a significant drawdown (often 10%+), as investors rotate out of the early-cycle outperformers. This period typically lasts about 12 months and is often led by stocks with exposure to the value and size factors. It can start during an economic recession, when central banks start to cut their target rates. Based on our analysis, the best performers based on median annualised total returns relative to the market were financials (banks, financial services, insurance), basic

Figure 2 – Global equity sector median annualised total returns relative to market in early-cycle phases



Notes: Data as of 25th November 2022. **Past performance is no guarantee of future results.** Showing median annualised total returns for Datastream World Level 3 sector indices relative to the Datastream World Total Market index during early-cycle periods. Numbers in brackets show the number of periods in which the sector outperformed (out of 5). We define the early-cycle phase as the initial rebound after a cyclical market trough. Our period of analysis is between 1974 and November 2022. See the appendix for abbreviations and dates of market cycles.
Source: Refinitiv Datastream and Invesco

Figure 3 – Preferred factors and sectors through market cycles

	Bear market	Early cycle	Mid cycle	Late cycle
Description	20%+ peak-to-trough market drawdown, valuations and earnings fall	Initial rebound after market trough, valuations expand	Equity market grinds higher with low volatility, rising earnings growth	Markets often surge, valuations may reach extreme levels
Preferred factors	Low volatility	Size, value	Price momentum	Price momentum, quality
Preferred sectors	Healthcare; drug & grocery stores; food, beverage & tobacco; telecommunications; utilities; energy; consumer products & services; retailers	Banks; financial services; insurance; basic resources; automobiles & parts; retailers; technology	Real estate; financial services; insurance; industrial goods & services; healthcare	Basic resources; travel & leisure; technology; construction & materials; industrial goods & services; consumer products & services

Notes: The table shows our preferences based on historical performance at various stages of market cycles – see Figures 11 & 12.
Source: Invesco

materials (basic resources and chemicals), automobiles & parts, retailers and technology. Construction & materials also tended to outperform (although its median returns were higher in late-cycle, it was a more consistent outperformer in the early-cycle period).

The next phase consists of the bulk of a market expansion (both returns and length of time), which we call the mid-cycle phase. This is often characterised by equity prices grinding higher and sector returns that are led by the structural winners of the cycle. The dominant factor tends to be price momentum. This period can last multiple years with stability in economic growth and central bank rates. By our definition, it ends with another major drawdown that may even be considered a technical bear market. In this phase of the cycle the best performer was real estate, followed by financial services and insurance. Industrial goods & services and travel & leisure were also among the outperformers, although their median returns were higher in the late-cycle period. Healthcare was a quite consistent outperformer and would have provided a good hedge against market volatility in this period.

Finally, in the late-cycle phase markets often surge and valuations may reach extreme levels, for example during the “tech bubble” of the late-1990s. This period lasts 1-2 years and ends with the cyclical peak in equity markets. The factors that have tended to dominate in this period include price momentum and quality. GDP growth usually moderates during this time as central bank tightening brings the economic cycle to a close. Basic resources and travel & leisure had the highest median annualised total returns relative to the market in this phase, followed by technology (skewed by its returns in the “tech bubble” and the post-pandemic surge), industrials (construction & materials and industrial goods & services), consumer products & services, financial services and automobiles & parts. Energy also outperformed using its median returns, but its returns were quite volatile, and its mean return was negative.

Assuming that past relationships hold and that the market environment will be close to our base case in 2023, with equities reaching a trough in the first half of the year, what do the results of this analysis imply for our model sector allocations? First, in the short term, we think it is worth remaining cautious and keeping our Overweights to consumer staples, healthcare and consumer products & services, which in the past outperformed in bear markets (see **Figure 8**). However, it may be too late to upgrade utilities, telecommunications and energy, if the turnaround in the market cycle is near. Our Overweight to technology looks appropriate in preparation for the early-cycle phase, but we should probably reduce our allocation to real estate that would be more likely to outperform in a more mature phase of the market cycle. Nevertheless, it may be too early to make a wholesale rotation into cyclical sectors, such as financials, basic resources, automobiles & parts and retailers, as long as uncertainty remains high, especially as we cannot rule out a deep recession with persistently high inflation.

Figure 4 – Asset class total returns (%, annualised)

Data as at 25/11/2022	Index	Current Level/RY	Total Return (USD, %) 1w	1m	QTD	YTD	12m	Total Return (Local Currency, %) 1w	1m	QTD	YTD	12m
Equities												
World	MSCI	625	1.5	7.2	13.3	-15.4	-14.8	1.3	5.6	11.5	-12.4	-12.0
Emerging Markets	MSCI	941	-0.1	11.6	7.7	-21.3	-22.4	-0.4	8.8	5.6	-16.0	-17.4
China	MSCI	56	-3.1	16.1	0.2	-31.0	-35.9	-3.0	15.3	0.1	-29.4	-34.4
US	MSCI	3821	1.5	4.3	12.2	-15.6	-14.8	1.5	4.3	12.2	-15.6	-14.8
Europe	MSCI	1751	2.2	12.9	20.6	-13.7	-11.2	1.4	7.6	13.4	-5.5	-4.4
Europe ex-UK	MSCI	2140	1.9	12.8	21.5	-16.4	-14.1	1.4	7.7	14.8	-9.3	-8.2
UK	MSCI	1085	2.9	13.2	18.0	-4.0	-1.2	1.5	7.2	8.9	7.5	8.9
Japan	MSCI	3190	2.9	12.5	14.9	-15.1	-16.3	2.4	6.0	10.6	2.7	1.1
Government Bonds												
World	BofA-ML	2.86	0.8	5.2	4.2	-18.0	-17.4	0.5	2.3	1.3	-11.6	-11.5
Emerging Markets	BBloom	7.99	2.7	12.5	10.4	-24.2	-22.9	2.7	12.5	10.4	-24.2	-22.9
China	BofA-ML	2.64	-0.1	1.6	-1.0	-8.1	-7.2	0.3	-0.4	0.0	3.3	4.1
US (10y)	Datastream	3.71	0.7	3.4	1.0	-16.4	-15.0	0.7	3.4	1.0	-16.4	-15.0
Europe	Bofa-ML	2.57	0.9	7.0	8.7	-22.1	-21.5	0.4	2.4	2.4	-14.8	-15.4
Europe ex-UK (EMU, 10y)	Datastream	1.97	0.9	6.5	7.8	-23.7	-23.2	0.5	1.9	1.5	-16.7	-17.2
UK (10y)	Datastream	3.12	2.4	10.2	17.6	-24.3	-23.0	1.0	4.4	8.5	-15.3	-15.2
Japan (10y)	Datastream	0.25	0.5	6.3	4.1	-18.0	-17.7	0.0	0.1	0.1	-0.8	-0.7
IG Corporate Bonds												
Global	BofA-ML	5.02	1.3	6.0	5.3	-16.8	-16.0	1.1	4.5	3.3	-14.3	-13.8
Emerging Markets	BBloom	8.59	2.3	10.1	4.9	-25.8	-26.0	2.3	10.1	4.9	-25.8	-26.0
China	BofA-ML	3.34	-0.4	1.4	-1.3	-8.5	-7.8	0.1	-0.7	-0.3	2.8	3.4
US	BofA-ML	5.46	1.4	5.3	3.6	-15.4	-14.7	1.4	5.3	3.6	-15.4	-14.7
Europe	BofA-ML	3.86	1.0	7.6	9.1	-20.2	-19.1	0.6	3.0	2.7	-12.8	-12.9
UK	BofA-ML	5.34	2.5	11.3	18.9	-26.5	-25.6	1.0	5.5	9.7	-17.7	-18.0
Japan	BofA-ML	0.75	0.3	6.3	3.8	-18.6	-18.5	-0.1	0.2	-0.1	-1.6	-1.6
HY Corporate Bonds												
Global	BofA-ML	8.89	1.2	5.2	6.3	-13.8	-12.7	1.1	4.1	4.9	-12.0	-11.2
US	BofA-ML	8.71	0.9	3.0	4.7	-10.6	-9.2	0.9	3.0	4.7	-10.6	-9.2
Europe	BofA-ML	7.17	1.7	10.2	12.1	-18.3	-16.9	1.2	5.4	5.5	-10.8	-10.5
Cash (Overnight LIBOR)												
US		3.82	0.1	0.3	0.5	1.3	1.3	0.1	0.3	0.5	1.3	1.3
Euro Area		1.47	0.7	4.4	6.2	-8.7	-7.4	0.0	0.1	0.2	-0.1	-0.2
UK		3.00	1.8	5.7	8.8	-9.6	-8.2	0.1	0.2	0.4	1.2	1.2
Japan		-0.08	0.9	6.3	4.1	-17.3	-17.1	0.0	0.0	0.0	-0.1	-0.1
Real Estate (REITs)												
Global	FTSE	1598	1.7	8.9	9.8	-22.0	-20.6	1.3	4.2	3.3	-14.7	-14.5
Emerging Markets	FTSE	1328	4.0	15.2	9.6	-14.5	-17.6	3.6	10.3	3.1	-6.6	-11.2
US	FTSE	2963	1.7	6.4	9.4	-21.8	-18.5	1.7	6.4	9.4	-21.8	-18.5
Europe ex-UK	FTSE	2204	1.3	13.2	16.9	-39.6	-41.5	0.9	8.4	10.0	-34.0	-36.9
UK	FTSE	773	0.7	11.0	17.8	-36.7	-34.8	-0.7	5.2	8.7	-29.2	-28.2
Japan	FTSE	2211	2.1	11.4	6.6	-13.0	-14.5	1.6	5.0	2.5	5.2	3.3
Commodities												
All	GSCI	3450	-2.2	-3.4	2.1	24.3	20.3	-	-	-	-	-
Energy	GSCI	610	-3.0	-6.4	2.1	42.1	34.8	-	-	-	-	-
Industrial Metals	GSCI	1596	-1.7	6.8	8.2	-12.0	-10.8	-	-	-	-	-
Precious Metals	GSCI	1989	0.3	6.7	6.3	-4.7	-2.7	-	-	-	-	-
Agricultural Goods	GSCI	547	-0.7	-1.1	-3.6	9.6	7.0	-	-	-	-	-
Currencies (vs USD)*												
EUR		1.04	0.7	4.3	6.1	-8.6	-7.2	-	-	-	-	-
JPY		139.11	0.9	6.4	4.1	-17.3	-17.1	-	-	-	-	-
GBP		1.21	1.4	5.5	8.3	-10.7	-9.2	-	-	-	-	-
CHF		1.06	1.0	5.2	4.4	-3.5	-1.0	-	-	-	-	-
CNY		7.17	-0.6	1.5	-0.7	-11.3	-10.9	-	-	-	-	-

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 25/11/2022	Global				
	1w	1m	QTD	YTD	12m
Energy	**-0.8**	**-4.3**	**-1.4**	**45.8**	**44.9**
Basic Materials	**0.6**	**4.2**	**4.6**	**10.2**	**12.7**
Basic Resources	0.4	6.2	5.9	15.9	19.5
Chemicals	0.8	1.7	2.9	3.4	4.6
Industrials	**0.6**	**3.7**	**5.9**	**1.6**	**3.8**
Construction & Materials	0.6	4.1	2.7	-3.5	-1.0
Industrial Goods & Services	0.6	3.7	6.3	2.3	4.5
Consumer Discretionary	**-0.6**	**-3.2**	**-4.6**	**-13.1**	**-15.4**
Automobiles & Parts	-0.5	-6.9	-13.8	-21.5	-25.2
Media	2.0	-5.9	-0.5	-21.4	-23.6
Retailers	-0.8	-7.0	-7.7	-12.3	-16.3
Travel & Leisure	-0.6	1.6	2.3	1.5	4.5
Consumer Products & Services	-1.3	3.5	2.7	-11.4	-12.4
Consumer Staples	**0.5**	**1.3**	**-0.8**	**12.2**	**15.8**
Food, Beverage & Tobacco	0.3	0.6	-1.2	14.3	18.2
Personal Care, Drug & Grocery Stores	0.9	2.7	0.0	8.2	11.3
Healthcare	**0.3**	**-0.5**	**0.4**	**5.9**	**8.0**
Financials	**0.6**	**2.2**	**2.6**	**9.0**	**9.0**
Banks	0.7	0.5	1.3	10.7	10.8
Financial Services	0.4	3.3	3.3	2.4	1.4
Insurance	0.7	4.9	4.8	16.7	18.7
Real Estate	**0.3**	**2.1**	**-3.6**	**-8.5**	**-7.1**
Technology	**-0.9**	**-2.2**	**-1.8**	**-19.0**	**-20.6**
Telecommunications	**0.2**	**1.0**	**-0.5**	**3.1**	**3.3**
Utilities	**0.7**	**2.1**	**-1.8**	**15.2**	**17.6**

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 25/11/2022	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	1.5	6.5	13.3	-19.7	-18.1	-0.1	1.9	0.6	-6.3	-5.9
Low volatility	2.3	7.0	13.6	0.3	5.4	0.7	2.3	0.9	17.0	21.1
Price momentum	1.7	6.1	16.6	-2.6	-4.4	0.1	1.5	3.5	13.7	9.8
Quality	2.2	9.0	19.5	-7.4	-4.0	0.7	4.3	6.2	8.0	10.3
Size	2.3	7.6	15.9	-5.9	-4.6	0.8	3.0	3.0	9.7	9.6
Value	2.5	7.7	17.0	-1.1	-1.6	0.9	3.0	3.9	15.4	13.1
Market	1.6	4.5	12.6	-14.3	-13.0					
Market - Equal-Weighted	2.0	7.6	15.9	-8.0	-6.6					

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 25/11/2022	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	1.7	10.7	17.3	-27.9	-27.1	-0.1	2.2	3.0	-22.6	-22.8
Low volatility	1.9	6.5	9.7	-5.0	-3.2	0.2	-1.7	-3.7	2.0	2.6
Price momentum	2.8	6.2	10.8	-20.8	-21.1	1.0	-2.0	-2.7	-15.0	-16.4
Quality	2.0	11.3	18.0	-14.0	-12.5	0.2	2.8	3.6	-7.7	-7.3
Size	2.3	12.0	20.3	-19.2	-19.0	0.5	3.4	5.6	-13.3	-14.2
Value	1.8	12.2	20.6	-6.9	-7.0	0.1	3.6	5.9	0.0	-1.5
Market	1.8	8.3	13.9	-6.9	-5.6					
Market - Equal-Weighted	2.0	9.5	15.8	-15.3	-14.7					

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%**	↓	**5%**	
Cash	2.5%		↓	0%	
Gold	2.5%		↑	5%	
Bonds	**40%**	**10-70%**	↑	**48%**	
Government	25%	10-40%	↓	**25%**	
US	8%			11%	
Europe ex-UK (Eurozone)	7%		↓	5%	
UK	1%		↑	2%	
Japan	7%		↓	3%	
Emerging Markets	2%			4%	
China**	0.2%			0%	
Corporate IG	10%	0-20%		**15%**	
US Dollar	5%		↑	9%	
Euro	2%		↓	2%	
Sterling	1%			2%	
Japanese Yen	1%			0%	
Emerging Markets	1%			2%	
China**	0.1%			0%	
Corporate HY	5%	0-10%	↑	**8%**	
US Dollar	4%		↑	7%	
Euro	1%		↑	1%	
Equities	**45%**	**25-65%**		**37%**	
US	25%		↑	19%	
Europe ex-UK	7%		↓	2%	
UK	4%		↓	2%	
Japan	4%		↑	6%	
Emerging Markets	5%		↓	8%	
China**	2%			4%	
Real Estate	**8%**	**0-16%**		**10%**	
US	2%			3%	
Europe ex-UK	2%		↓	1%	
UK	1%			2%	
Japan	2%		↑	2%	
Emerging Markets	1%			2%	
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%**	

Currency Exposure (including effect of hedging)					
USD	48%		↑	54%	
EUR	20%		↓	11%	
GBP	7%		↓	8%	
JPY	15%			11%	
EM	9%		↓	16%	
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	**8.3%**	**Underweight**	**US**
Basic Materials	**4.3%**	**Neutral**	**Europe**
Basic Resources	2.4%	Neutral	Europe
Chemicals	1.9%	Neutral	Japan
Industrials	**12.4%**	**Neutral**	**US**
Construction & Materials	1.5%	Underweight	US
Industrial Goods & Services	10.9%	Neutral	US
Consumer Discretionary	**14.5%**	**Neutral**	**US**
Automobiles & Parts	3.0%	Underweight	Europe
Media	1.0%	Overweight	US
Retailers	5.0%	Neutral	US
Travel & Leisure	1.9%	Underweight	US
Consumer Products & Services	3.5%	Overweight	Europe
Consumer Staples	**6.7%**	**Overweight**	**US**
Food, Beverage & Tobacco	4.4%	Overweight	US
Personal Care, Drug & Grocery Stores	2.2%	Overweight	US
Healthcare	**10.4%**	**Overweight**	**US**
Financials	**15.5%**	**Underweight**	**Japan**
Banks	7.6%	Underweight	Japan
Financial Services	5.0%	Underweight	EM
Insurance	2.9%	Underweight	US
Real Estate	**3.3%**	**Overweight**	**EM**
Technology	**17.4%**	**Overweight**	**US**
Telecommunications	**3.5%**	**Neutral**	**Japan**
Utilities	**3.8%**	**Underweight**	**US**

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

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). From 1st January 2022, we use the Refinitiv overnight deposit rate for the euro, the British pound and the Japanese yen. 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 Bank of America Merrill Lynch government bond total return index for the World and Europe. The emerging markets yields and returns are based on the Bloomberg Barclays emerging markets aggregate government bond index.

Corporate investment grade (IG) bonds: Bank of America Merrill Lynch investment grade corporate bond total return indices. The emerging markets yields and returns are based on the Bloomberg Barclays emerging markets aggregate corporate bond index.

Corporate high yield (HY) bonds: Bank of America Merrill Lynch 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

Factor index definitions

We focus on relatively large-cap stocks, as we suspect that most investors will be conscious of liquidity constraints when implementing such strategies. We have chosen six factors, that we think cover the classic definitions used by most investors. We aim to capture roughly a fifth of the market in each of our factor indices using the historical constituents of the STOXX 600 since August 1999 and the S&P 500 since September 1989, with monthly rebalancing. All our rankings are based on data in euros for Europe and in US dollars for the US. All factor indices are equal-weighted. We use the following definitions:

Growth: stocks in both the top third based on their 5-year sales per share trend and the top-third based on their internal growth rate (the product of the 5-year average return on equity and the retention ratio).

Low volatility: stocks in the bottom quintile based on the standard deviation of their daily returns in the previous three months.

Price momentum: stocks in the top quintile based on their performance in the previous 12 months.

Quality: stocks in both the top third based on their return on invested capital and the top third based on their EBIT to EV ratio (earnings before interest and taxes to enterprise value). This follows Joel Greenblatt's "magic formula" from his 2005 book: The little book that beats the market.

Size: stocks in the bottom quintile based on their market value.

Value: stocks in the bottom quintile based on their price to book value ratios.

Abbreviations in Figures 1 and 2

Tech = Technology
Telecoms = Telecommunications
Fin Serv = Financial Services
Real Est = Real Estate
Autos = Automobiles & Parts
Cons P&S = Consumer Products & Services
Trav & Leis = Travel & Leisure
Food, Bev, Tob = Food, Beverage & Tobacco
Drug/Groc Stores = Drug & Grocery Stores
Con & Mat = Construction & Materials
Inds G&S = Industrial Goods & Services
Bas Res = Basic Resources

Figure 9 – List of bear markets (peak-to-trough market drawdowns of more than 20%) since October 1974 using MSCI World local currency price index:

13/08/1981 to 12/08/1982 (connected to end of economic cycle)
26/08/1987 to 04/12/1987 (intra market expansion drawdown before a late-cycle period)
03/01/1990 to 28/09/1990 (connected to end of economic cycle)
20/07/1998 to 08/10/1998 (intra market expansion drawdown before a late-cycle period)
24/03/2000 to 12/03/2003 (connected to end of economic cycle)
13/07/2007 to 09/03/2009 (connected to end of economic cycle)
12/02/2020 to 23/03/2020 (intra market expansion drawdown before a late-cycle period)
04/01/2022 to now (assuming cyclical trough is ahead of us)

Figure 10 – Phases of market expansion

Early cycle		Mid cycle		Late cycle	
Start	**End**	**Start**	**End**	**Start**	**End**
04/10/1974	15/07/1975	01/10/1975	13/02/1980	27/03/1980	13/08/1981
12/08/1982	02/05/1984	24/07/1984	26/08/1987	04/12/1987	03/01/1990
28/09/1990	17/04/1991	19/08/1992	20/07/1998	08/10/1998	24/03/2000
12/03/2003	05/03/2004	13/08/2004	09/05/2006	13/06/2006	13/07/2007
09/03/2009	18/02/2011	03/10/2011	12/02/2020	23/03/2020	04/01/2022

Notes: Data as of 25th November 2022. Using MSCI World local currency price index. We exclude the major drawdowns separating these cycles.
Source: Refinitiv Datastream and Invesco

Figure 11 – Global equity sector outperformance (by number of periods) in market cycles since 1974

	Downturns Total	Downturns between expansions	Expansion Overall	Expansions Early	Expansions Mid	Expansions Late
Technology	4	3	2	4	2	3
Telecommunications	6	3	1	1	2	3
Healthcare	7	5	1	2	3	2
Banks	4	3	2	4	3	0
Financial Services	2	2	4	4	4	3
Insurance	3	3	3	4	4	2
Real Estate	2	1	3	2	3	3
Automobiles & Parts	2	1	3	4	0	3
Consumer Products & Services	6	4	1	2	1	3
Media	2	2	2	2	2	2
Retailers	5	4	3	3	1	2
Travel & Leisure	3	3	3	2	3	3
Food, Beverage, Tobacco	7	5	1	2	1	1
Drug/Grocery Stores	7	5	0	2	1	2
Construction & Materials	3	1	3	4	2	3
Industrial Goods & Services	2	2	3	4	3	5
Basic Resources	4	2	2	3	2	3
Chemicals	4	3	2	3	2	2
Energy	5	4	2	2	2	3
Utilities	8	5	1	0	2	1
Total number of periods	**8**	**5**	**5**	**5**	**5**	**5**

Notes: Data as of 25th November 2022. **Past performance is no guarantee of future results.** We calculate relative total returns using Datastream World sector indices versus the total market index. Table shows the number of cycles during which each sector outperformed the World index at each phase of the cycle. Dates for downturns and expansions are shown in Figures 9 and 10.
Source: Refinitiv Datastream and Invesco

Figure 12 – Global equity sector median annualised relative total returns in market cycles since 1974

	Downturns Total	Downturns between expansions	Expansion Overall	Expansions Early	Expansions Mid	Expansions Late
Technology	-8.7%	0.1%	-1.7%	3.2%	-1.5%	5.1%
Telecommunications	16.9%	4.1%	-2.2%	-7.3%	-4.4%	1.4%
Healthcare	25.6%	25.2%	-0.7%	-5.3%	1.0%	-7.5%
Banks	-5.7%	8.8%	-0.6%	6.2%	0.2%	-3.2%
Financial Services	-24.6%	-12.4%	2.7%	4.9%	2.8%	2.6%
Insurance	-2.9%	3.1%	0.1%	4.5%	2.2%	-3.1%
Real Estate	-14.9%	-12.0%	0.7%	-3.2%	5.8%	0.5%
Automobiles & Parts	-6.6%	-2.9%	0.3%	3.8%	-0.7%	2.4%
Consumer Products & Services	10.8%	11.9%	-1.8%	-2.1%	-2.2%	3.9%
Media	-9.4%	-8.4%	-2.4%	-3.6%	-2.0%	-2.5%
Retailers	7.5%	8.9%	0.8%	3.2%	-1.2%	-4.7%
Travel & Leisure	-4.1%	0.1%	2.1%	-1.5%	0.7%	7.4%
Food, Beverage, Tobacco	24.3%	23.5%	-1.5%	-3.6%	-2.1%	-2.5%
Drug/Grocery Stores	27.7%	23.8%	-1.8%	-3.2%	-5.4%	-3.6%
Construction & Materials	-3.7%	-3.8%	1.0%	2.7%	-0.1%	4.7%
Industrial Goods & Services	-6.8%	-6.4%	1.7%	0.1%	1.7%	3.0%
Basic Resources	1.2%	-3.6%	-0.5%	3.8%	-3.7%	8.0%
Chemicals	0.6%	3.4%	0.0%	1.3%	-2.2%	-2.9%
Energy	17.2%	24.7%	-3.5%	-2.5%	-2.9%	1.7%
Utilities	22.0%	17.1%	-0.6%	-6.9%	-1.7%	-2.3%

Notes: Data as of 25th November 2022. **Past performance is no guarantee of future results.** We calculate relative total returns using Datastream World sector indices versus the total market index. Dates for downturns and expansions are shown in Figures 9 and 10.
Source: Refinitiv Datastream and Invesco

Authors

András Vig
Multi-Asset Strategist
T. +44 (0)20 3370 1152
E. andras.vig@invesco.com

Paul Jackson
Global Head of Asset Allocation Research
T. +44 (0)20 3370 1172
E. paul.jackson@invesco.com

Telephone calls may be recorded

Data as of 25th November 2022 unless stated otherwise.

Important information

Your capital is at risk. You may not get back the amount you invested.

By accepting this document, you consent to communicating with us in English, unless you inform us otherwise.

This document is intended only for investors in Hong Kong, for Institutional Investors and/or Accredited Investors in Singapore, for certain specific sovereign wealth funds and/or Qualified Domestic Institutional Investors approved by local regulators only in the People's Republic of China, for certain specific Qualified Institutions and/or Sophisticated Investors only in Taiwan, for Qualified Professional Investors in Korea, for certain specific institutional investors in Brunei, for Qualified Institutional Investors and/or certain specific institutional investors in Thailand, for certain specific institutional investors in Malaysia upon request, for certain specific institutional investors in Indonesia and for qualified buyers in Philippines for informational purposes only. This document is not an offering of a financial product and should not be distributed to retail clients who are resident in jurisdiction where its distribution is not authorized or is unlawful. Circulation, disclosure, or dissemination of all or any part of this document to any unauthorized person is prohibited.

This document may contain statements that are not purely historical in nature but are "forward-looking statements," which are based on certain assumptions of future events. Forward-looking statements are based on information available on the date hereof, and Invesco does not assume any duty to update any forward-looking statement. Actual events may differ from those assumed. There can be no assurance that forward-looking statements, including any projected returns, will materialize or that actual market conditions and/or performance results will not be materially different or worse than those presented.

All material presented is compiled from sources believed to be reliable and current, but accuracy cannot be guaranteed. Investment involves risk. Please review all financial material carefully before investing. The opinions expressed are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

The distribution and offering of this document in certain jurisdictions may be restricted by law. Persons into whose possession this marketing material may come are required to inform themselves about and to comply with any relevant restrictions. This does not constitute an offer or solicitation by anyone in any jurisdiction in which such an offer is not authorised or to any person to whom it is unlawful to make such an offer or solicitation.

This document is issued in the following countries:

- in Hong Kong by Invesco Hong Kong Limited景順投資管理有限公司, 41/F, Champion Tower, Three Garden Road, Central, Hong Kong. This document has not been reviewed by the Securities and Futures Commission.
- in Singapore by Invesco Asset Management Singapore Ltd, 9 Raffles Place, #18-01 Republic Plaza, Singapore 048619.
- in Taiwan by Invesco Taiwan Limited, 22F, No.1, Songzhi Road, Taipei 11047, Taiwan (0800-045-066). Invesco Taiwan Limited is operated and managed independently.

Authors

Paul Jackson
Global Head of Asset Allocation Research
Telephone +44(0)20 3370 1172
paul.jackson@invesco.com
London, EMEA

András Vig
Multi-Asset Strategist
Telephone +44(0)20 3370 1152
andras.vig@invesco.com
London, EMEA

Global Market Strategy Office

Kristina Hooper
Chief Global Market Strategist
kristina.hooper@invesco.com
New York, Americas

Tomo Kinoshita
Global Market Strategist, Japan
tomo.kinoshita@invesco.com
Tokyo, Asia Pacific

Brian Levitt
Global Market Strategist, Americas
brian.levitt@invesco.com
New York, Americas

Talley Léger
Investment Strategist, Equities
talley.leger@invesco.com
New York, Americas

Arnab Das
Global Market Strategist
arnab.das@invesco.com
London, EMEA

Adam Burton
Senior Economist
adam.burton@invesco.com
London, EMEA

Paul Jackson
Global Head of Asset Allocation Research
paul.jackson@invesco.com
London, EMEA

András Vig
Multi-Asset Strategist
andras.vig@invesco.com
London, EMEA

David Chao
Global Market Strategist, Asia Pacific
david.chao@invesco.com
Hong Kong, Asia Pacific

Thomas Wu
Market Strategies Analyst, Asia Pacific
thomas.wu@invesco.com
Hong Kong, Asia Pacific

Ashley Oerth
Senior Investment Strategy Analyst
ashley.oerth@invesco.com
London, EMEA

Cyril Birks
Global Thought Leadership Intern
cyril.birks@invesco.com
London, EMEA

*Affiliated member

Telephone calls may be recorded.

20221129-2611201-AP