Invesco

Strategic Sector Selector

Feeling our way towards recovery

In the final quarter of 2022, global equities recovered some of the ground lost earlier in the year. Inflationary pressures eased somewhat, and the pace of monetary tightening slowed. The outlook for equity markets remains uncertain in the near term, but we think the regime will shift to recovery in the first half of 2023. Nevertheless, we only reduce our defensive allocation slightly by downgrading telecommunications to Underweight, while we keep our Overweights in consumer staples and healthcare. We upgrade basic resources that we think will be boosted by an acceleration in economic growth in Asia after a full reopening after COVID-19 restrictions in the region. We also reshuffle our positioning in consumer discretionary by upgrading automobiles & parts to Neutral and retailers to Overweight, while downgrading media to Neutral. Finally, we reduce our allocation to real estate as we expect higher interest rates to hurt their prospects, while we upgrade insurance as a hedge against an inflation overshoot (both sectors move to Neutral).

Changes in allocations:

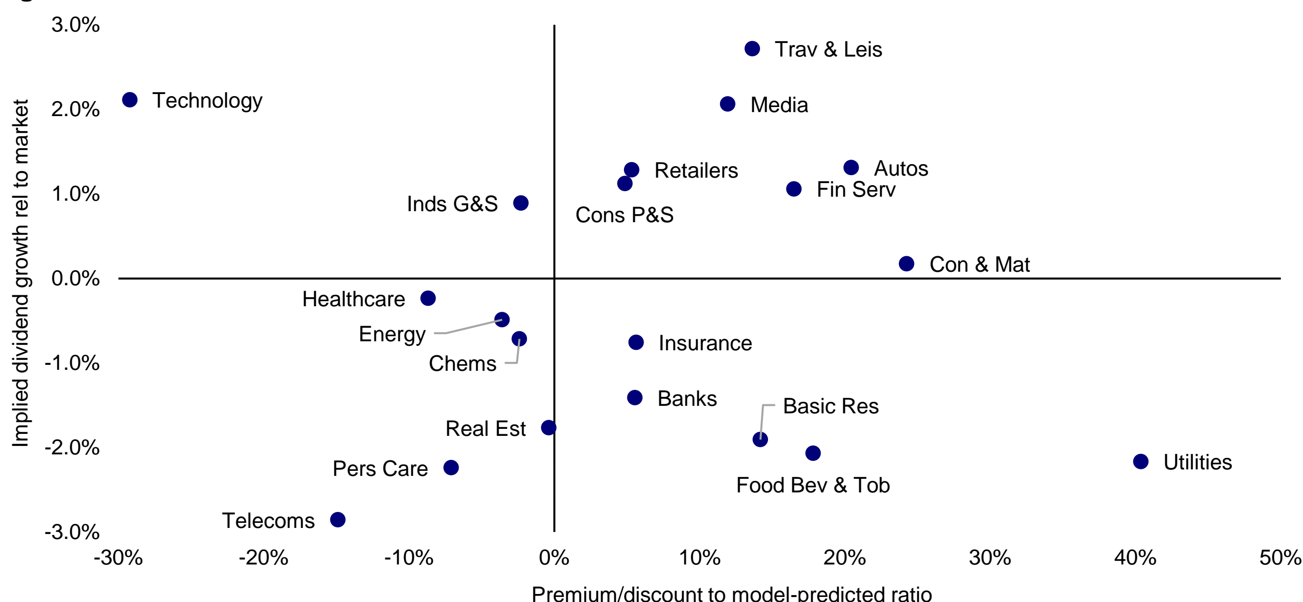
- Upgrades: basic resources, retailers (N to OW), automobiles & parts, insurance (UW to N)
- Downgrades: media, real estate (OW to N), telecommunications (N to UW)

	Most favoured	Least favoured
Sector	European basic resources US technology	US banks European utilities

Sectors where we expect the best returns:

- Healthcare: exposure to moderating rate expectations, defensive sector, strong pricing power
- Basic resources: high yield, exposure to cyclical upswing, undemanding valuations
- Technology: resilient demand for products and services, high margins, exposure to growth factor

Figure 1 – Global sectors valuation matrix



Notes: On the horizontal axis, we show how far a sector's valuation is above/below that implied by our multiple regression model (dividend yield relative to market). The vertical axis shows the perpetual real growth in dividends required to justify current prices relative to that implied for the market. We consider the sectors in the top right quadrant expensive on both measures, and those in the bottom left are considered cheap. See appendices for methodology and disclaimers. Source: Refinitiv Datastream and Invesco

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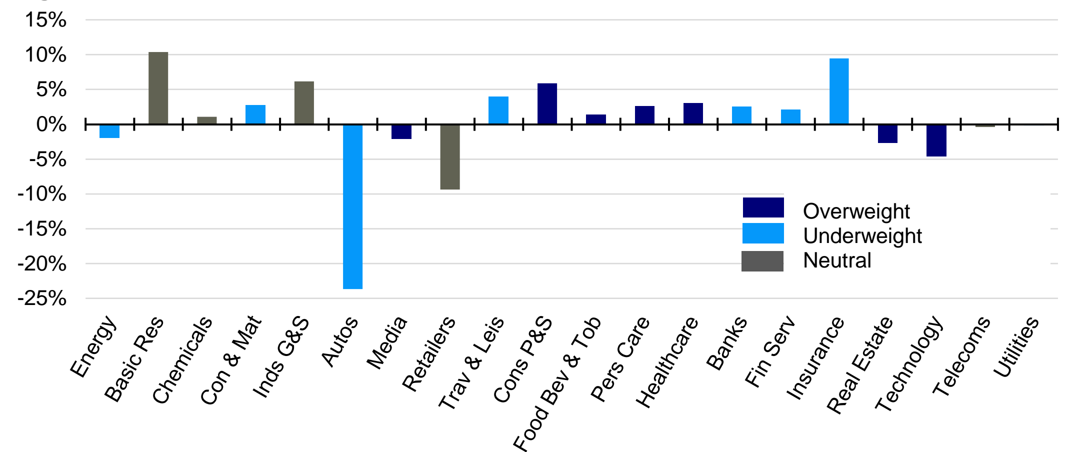
Summary and conclusions

Since the last time

There was a tentative recovery in global equities in the fourth quarter of 2022 and the MSCI All Country World index ended Q4 up 7.5% on a total return basis (in local currency terms). Whether this recovery will endure or ends up as another bear market rally remains to be seen and will depend on how the economy continues to react to monetary policy tightening. Inflation moderated in Q4 2022, which reignited the hope that a peak in central bank target rates is within sight. However, concerns lingered over high rates causing more damage than is necessary and both consumer and industry surveys pointed to weakness in the economy that is yet to manifest in lagging indicators, such as unemployment rates.

Figure 2 – 3m Global sector returns relative to market in USD



Notes: See appendices for methodology and disclaimers. Returns shown between 30th September 2022 and 31st December 2022. Colours indicate allocations in period considered. **Past performance is not a guarantee of future results.** Source: Refinitiv Datastream and Invesco

Figure 2 suggests that there was a broad-based market recovery in the last quarter of 2022. Most late-cyclicals and defensives outperformed highlighting both the relative resilience of the global economy and concerns over the medium-term outlook. Financials also outperformed despite an inverted yield curve, especially in the US, while higher sovereign yields continued to drive a rally in insurance, in our view. Reopening in China after strict COVID-19 restrictions boosted the basic resources sector, while energy underperformed despite oil prices moving higher in Q4. We avoided the brutal readjustment in automobiles & parts by having an Underweight allocation to the sector in our model portfolio, but we also missed out on the strength in financials, construction & materials and travel & leisure by being Underweight.

Asset allocation backdrop

The economic slowdown during 2022 was more severe than we expected, with recession now possible. However, we believe markets were most impacted by high inflation, aggressive central bank tightening and rising bond yields. The latter has been more important than any profit slowdown in depressing equity markets, in our opinion. Hence, we believe the path of inflation will be critical for financial markets in 2023. Our base case assumes a rapid decline in headline inflation to below core inflation (assumed to remain above target over the coming years). We expect sufficient disinflation in early 2023 to allow central banks to first scale back and then end rate hikes. We believe markets will anticipate this and expect a market regime switch from contraction to recovery by the end of 2023 Q1 (see The Big Picture for the full details and **Figure 3** for our market forecasts).

Our optimisation process favours investment grade credit (IG), high yield credit (HY) and gold, while cash, commodities and equities are out of favour. The problem is that we expect a transition from a contraction regime (defensive assets preferred) to a recovery

regime (riskier assets preferred) during the early part of 2023. So, we have a foot in both camps. We also think there is a risk that we are wrong about inflation falling rapidly and our alternative "Persistent inflation" scenario envisages that we remain in a contraction regime during 2023. Though we reduced the defensiveness of our Model Asset Allocation, we did not want to go too far until the transition to recovery is confirmed.

Hence, within our Model Asset Allocation, we chose to reduce the government bond allocation to a Neutral 25%, versus the previous Overweight 30% and reduced cash to zero. Within government bonds we reduced the Eurozone and Japan allocations, while boosting the UK (where yields are now higher). These reductions allowed us to boost the allocations to HY to an Overweight 8% (with a preference for the US) and gold (to an Overweight 5% from zero). Though we expect HY spreads to widen further and defaults to rise, the projected returns are relatively attractive and HY tends to perform well in the early stages of recovery. Gold would not normally be a recovery choice but if yields and the dollar fall during 2023 (as we expect), we think it could do well.

Real estate remains our favourite cyclical asset, aided by generous yields. We remained at an Overweight 10% but boosted the allocation to Japan at the expense of the Eurozone. We maintained the equity allocation at an Underweight 37% but boosted the US (still Underweight) and Japan while reducing the UK, Eurozone and EM. We expect a slight decline in bond yields to help US indices on a relative basis (due to the prevalence of growth stocks). Commodities remained at zero, as we think cyclical pressures will stay negative in the short term.

Our preferred regions across all assets are EM and the US, while the Eurozone is the biggest Underweight.

Figure 3 – Market forecasts

	Current (31/12/22)	Forecast 12-month
Central Bank Rates		
US	4.50	4.50
Eurozone	2.00	2.50
China	3.65	3.75
Japan	-0.10	0.00
UK	3.50	4.00
10y Bond Yields		
US	3.83	3.40
Eurozone	2.56	1.90
China	2.88	3.00
Japan	0.41	0.20
UK	3.67	3.00
Exchange Rates/US$		
EUR/USD	1.07	1.10
USD/CNY	6.90	6.70
USD/JPY	131.13	130.00
GBP/USD	1.21	1.25
USD/CHF	0.92	0.90
Equity Indices		
S&P 500	3840	4350
Euro Stoxx 50	3794	4000
FTSE A50	13004	14000
Nikkei 225	26095	32000
FTSE 100	7452	7800
Commodities (US$)		
Brent/barrel	83	90
Gold/ounce	1816	1900
Copper/tonne	8365	9000

Notes: There is no guarantee that these views will come to pass. See Appendices for definitions, methodology and disclaimers. See The Big Picture for a full explanation.
Source: Refinitiv Datastream and Invesco Global Market Strategy Office

Changes to model sector allocations

We noticed a slight shift in mood in global equity markets in the fourth quarter of 2022, perhaps more on hope than evidence of cyclical pressures easing. Although inflation rates decreased in the US and Europe, they stayed uncomfortably high (we cheered a return to single-digit inflation in the Eurozone as a major milestone). Nevertheless, central banks in both regions remained steadfast in their determination to raise rates until they can be certain that inflation is on the path of returning to 2%. We expect inflation to decline from current levels but agree with most central bank officials that it will still be too high to allow rate cuts in the near term. We think there is also an outside chance of it reaccelerating or staying high, which would imply falling asset prices and higher rates than our current forecasts (see **Figure 3**). However, inflation falling faster than we expect would boost risk assets even more than what is implied in our forecasts, but the direction would be the same as in our base case.

Either way, we think this year will be trickier to navigate for policymakers. With the benefit of hindsight, we should not have been surprised by rapid rate rises and falling financial markets. What will be different this year, if our base case scenario plays out, is that the benefit of falling inflation will be offset by slowing economic growth in the US and Europe. In the meantime, Asian economies could face the opposite after the post-reopening “exit wave” passes through China and its economic momentum shifts to growth. Nevertheless, we expect that even if a number of large developed markets fall into recession, it will be mild and its impact on financial markets will be limited. In our view, after a volatile start to the year, risk assets will shift into the recovery stage. We think global equities will also follow this pattern as pressures on valuations ease while interest rates reach their cyclical peak, which could offset a decline in earnings. However, timing this change in market regime could be difficult, in our view, and therefore we prefer to keep a balance between defensives and cyclicals in our model sector allocation while we nudge our positioning further towards early-cyclicals.

Chinese demand has been one of the most important forces driving the returns of **basic resources** for the last 20 years and we believe that the great reopening will boost demand for raw materials. In addition to this potential cyclical boost, we think there is a possible structural tailwind for the sector if investment in the “green transition” is realised. In our view, this will support prices of core metals (**Figure 3** shows our forecast for copper), which in turn will boost earnings and dividend growth. Of course, some of that may have already been priced in after a 20.8% outperformance in 2022, which may be why the sector has a premium over what our multiple regression implies. However, the 0.6% dividend growth implied by its dividend yield is well below that of the market, although that may partly reflect the cyclical peak in dividends in the last 12 months. Nevertheless, we think that the return to earnings growth will boost the sector enough to overcome concerns over valuations, and therefore we upgrade to **Overweight** from Neutral.

The **automobiles & parts** sector is another key early-cyclical, in our opinion, hence we upgrade it to **Neutral** from Underweight. After a bruising readjustment in Q4 mostly driven by its largest constituent, the sector was the worst performer in 2022. Although its valuations remain elevated on our models, they look more attractive than a year ago, especially based on cyclically-adjusted measures (**Figure 24**). Supply chain disruptions have eased significantly allowing manufacturers to ship more vehicles, but a slowdown in demand in developed markets means there may be surplus inventory leading to discounting. However, some of the demand may shift from used to new vehicles, while developing economies could also provide some support.

Despite a rebound in the second half of 2022, **media** was the second worst performer for the whole year. We close our tactical Overweight and downgrade the sector to **Neutral** in our model sector allocation. Its valuations look rich on both of our models and we think that the sector may struggle in the near term if a decelerating economy increases a churn in subscribers, while high interest rates and lower profitability reduce production budgets. Historical patterns also show that the sector struggled to consistently outperform in any market environment (see Sector through market cycles).

As the market approaches the point when its focus shifts from slowdown to recovery, we think the time has come to upgrade **retailers** to **Overweight** from Neutral. We consider the sector one of the least sensitive to the economic cycle within consumer discretionary (it includes food retail and discount stores), though it is cyclical enough to potentially outperform in an eventual recovery. It was also one of the worst performers in 2022 as it de-rated driven by its exposure to the growth factor at the same time as earnings disappointed when consumers shifted from spending on goods to services. We think that some of those headwinds will dissipate in 2023, especially if inflation moderates leaving more disposable income in consumers' budgets.

Insurance was the second best performer in 2022 as the inflation surge pushed up interest rates and sovereign bond yields. We think that the sector's profitability has improved with higher bond yields and view it as a hedge in case inflation proves stickier than we expect. The sector's valuations look a touch more expensive than what our multiple regression model would suggest, but its implied dividend growth rate is lower than that of market. The sector tended to outperform in the early stages of a recovery in the past, but we think its returns could be closer to the benchmark in the short term after a strong run, therefore we only upgrade to **Neutral**.

We downgrade **real estate** to **Neutral** from Overweight after disappointing returns in 2022, when it proved to be less resilient than we expected. However, based on historical patterns, it will struggle if the bear market continues, and it is not best placed to outperform in the early parts of the market cycle. It seems close to "fair value" on our multiple regression model, although its implied perpetual dividend growth of 0.8% looks attractive compared to the market. Nevertheless, we think that its exposure to the value factor will be a disadvantage in 2023, while its relatively high dividends may provide some stability.

Finally, we slightly reduce our exposure to defensive sectors by downgrading **telecommunications** to **Underweight** from Neutral. Disappointing subscriber growth kept earnings growth muted and contributed to it being the worst performing defensive sector in 2022 with a 3.2% outperformance (about the same as its dividend yield at the beginning of last year). Although it remains one of the cheapest sectors on our models, we feel that this may be for a reason. If the sector struggled to outperform significantly in a bear market, we have serious doubts about its prospects in a potential market recovery.

The best and worst of the rest

We think that the economic slowdown driven by high inflation and rising rates will drive oil prices lower in the short term, although that may reverse as economic growth reaccelerates in the next 12 months. That implies rockier times ahead for **energy**, the best performing sector in 2022, despite underperformance in Q4 last year. We are concerned about its valuation being close to "fair value" on our multiple regression model considering the potentially lower demand if global economic growth slows significantly. We think energy security concerns will also accelerate plans to phase out hydrocarbons and we therefore stay **Underweight**.

Chemicals should be boosted by higher prices for its products, but we think it may struggle to outperform in the current economic environment, because its input costs have been surging, too. We maintain our **Neutral** allocation, considering that it looks close to "fair value" on our multiple regression model. Its implied dividend growth may now be lower than that of the market, but that may not fully reflect concerns of an impending economic slowdown. One of its main input costs has risen with oil prices trading above $80 per barrel, while there is a chance that gas prices remain elevated in the next 12 months in Europe, which may force some producers to shut down or reduce operations.

Falling house prices, the squeeze on real incomes and higher mortgage rates seem to us like the ingredients of a perfect storm for the **construction & materials** sector. We are also concerned that higher costs of labour and materials will put pressure on their profit margins. The sector looks overvalued on our multiple regression model and its

implied dividend growth rate is above that of the market. We think that those valuations are far from reflecting the risk of a potential recession and therefore we stay **Underweight**.

We keep **industrial goods & services** at **Neutral**, a sector we still feel can provide a diversified exposure including aerospace & defence, payment systems, vehicle manufacturers and logistics providers. However, we are concerned that margins will remain under pressure, which could dent profitability despite mooted increases in defence spending, for example. Although the sector will provide the tools for infrastructure and green projects, in our view, we think that economic concerns may delay those projects. We also expect softer demand and falling transportation rates for logistics providers in the near term as supply chain bottlenecks ease. Our preferred valuation measures also give us mixed messages: the sector seems close to “fair value” on our multiple regression model but overvalued on implied perpetual dividend growth.

The “great reopening” following COVID-19 restrictions may have finally enabled **travel & leisure** to outperform in 2022 after strong returns in Q4, but we think it is appropriate to keep our **Underweight** allocation. Any boost from pent-up demand may prove short-lived and we believe the future also presents too many headwinds at the moment: labour shortages may persist for longer and labour costs could rise at the same time, high fuel costs will remain an issue, and demand may soften as consumers retreat if the economy slows further or higher costs start eating into their disposable income. Nevertheless, there may be regional differences in returns if Asian tourists restart travelling in greater numbers, offset by weakness in the US and Europe.

We keep **consumer products & services Overweight** to maintain our exposure to cyclical sectors in case a market recovery starts in 2023 as interest rates peak. We may be too early in our tentative shift towards early cyclicals, but the sector is relatively well diversified, and it could receive a boost from a full reopening of Asian economies. The sector is also the least expensive within consumer discretionary on our models and that may provide some risk-mitigation, in our view.

At this stage of the cycle, assuming our interest rate expectations are proven correct, we believe that defensive growth offers an attractive way to hedge against further equity market volatility and an inflation undershoot. Therefore, we stay **Overweight** both **food, beverage & tobacco** and **personal care, drug & grocery stores**. Despite their outperformance in 2022, their valuations do not look too stretched. While food, beverage & tobacco trades at a premium to the relative dividend yield implied by our multiple regression model, personal care, drug & grocery stores is at a discount and both sectors have an implied perpetual dividend growth rate close to 0%.

We find **healthcare** attractive for similar reasons and we believe it makes sense to keep our **Overweight** allocation. As a growth sector, it suffered in the early parts of 2022 as the Fed became increasingly hawkish. Although the sector’s valuations look close to that of the market on implied dividend growth, it has a discount to the relative dividend yield implied by our multiple regression model. We are also positive on its relative outlook if expectations of monetary policy move closer to our forecasts as the year progresses.

We remain concerned about the profitability of **banks** and therefore stick to our **Underweight** allocation. Loan growth has remained sluggish, as consumers reduced savings rates to increase spending, rather than taking on more debt. We also believe that yield curves will remain flat or inverted for most of the next 12 months reducing margins. Profits may suffer if loan loss reserves need to be increased, while the M&A and capital raising cycle will stay depressed until financial market volatility decreases. The sector looks overvalued on our multiple regression model, although its implied perpetual dividend growth is still below that of the market.

A slowing economy transitioning from late-cycle to end-of-cycle and inflation eating into disposable incomes signals more difficult times ahead for the **financial services** sector, in our view. It also trades at a premium compared to the dividend yield implied by our

multiple regression model. Assuming financial market volatility remains high and there will be less demand for their products, we would prefer to wait for those valuations to come down. We stay **Underweight**.

We maintain our **Overweight** allocation to **technology**, which we think will continue to benefit from the structural trends accelerated and amplified by the COVID-19 crisis. Valuations look rich on implied perpetual dividend growth, but it is the most undervalued sector on our multiple regression model. We value its high margins and solid cash generation in a time of increasing cost pressures, and they have been one of the first sectors to trim their expenses. Rising interest rates will present less of a headwind to valuations in 2023 than in 2022, while the sector's price/earnings ratio has decreased substantially since its peak in early 2021.

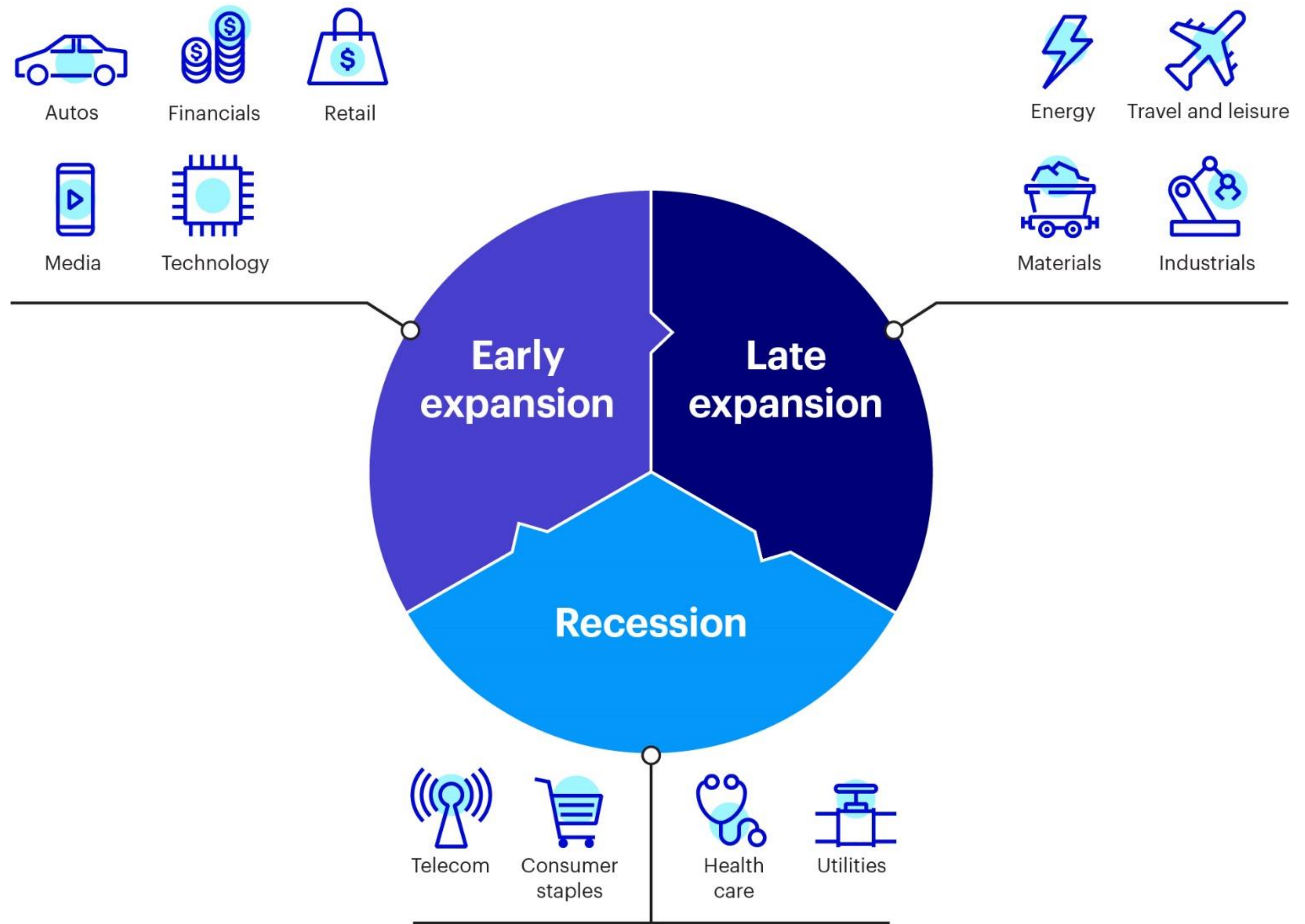
We also keep **utilities Underweight**, because we think they will struggle to outperform even if equity market volatility remains high. We are especially worried about utilities if margins are squeezed further by high input prices and investment costs, while regulators keep consumer charges under control.

Figure 4 – Model allocations for Global sectors

	Neutral	Invesco		Preferred Region
Energy	**8.1%**	**Underweight**		**EM**
Basic Materials	**4.5%**	**Overweight**	↑	**Europe**
Basic Resources	2.6%	Overweight	↑	Europe
Chemicals	1.9%	Neutral		Japan
Industrials	**13.1%**	**Neutral**		**Japan**
Construction & Materials	1.5%	Underweight		US
Industrial Goods & Services	11.6%	Neutral		Japan
Consumer Discretionary	**13.6%**	**Overweight**	↑	**Europe**
Automobiles & Parts	2.3%	Neutral	↑	Europe
Media	1.0%	Neutral	↓	Japan
Retailers	4.6%	Overweight	↑	Europe
Travel & Leisure	2.0%	Underweight		EM
Consumer Products & Services	3.7%	Overweight		Europe
Consumer Staples	**6.7%**	**Overweight**		**US**
Food, Beverage & Tobacco	4.4%	Overweight		US
Personal Care, Drug & Grocery Stores	2.3%	Overweight		Europe
Healthcare	**10.7%**	**Overweight**		**US**
Financials	**16.2%**	**Underweight**		**Japan**
Banks	7.9%	Underweight		Japan
Financial Services	5.2%	Underweight		EM
Insurance	3.1%	Neutral	↑	Europe
Real Estate	**3.2%**	**Neutral**	↓	**EM**
Technology	**16.5%**	**Overweight**		**US**
Telecommunications	**3.5%**	**Underweight**	↓	**Japan**
Utilities	**3.8%**	**Underweight**		**Europe**

Notes: Arrows indicate latest changes in allocations versus the previous edition. See appendices for methodology and disclaimers.
Source: Refinitiv Datastream and Invesco

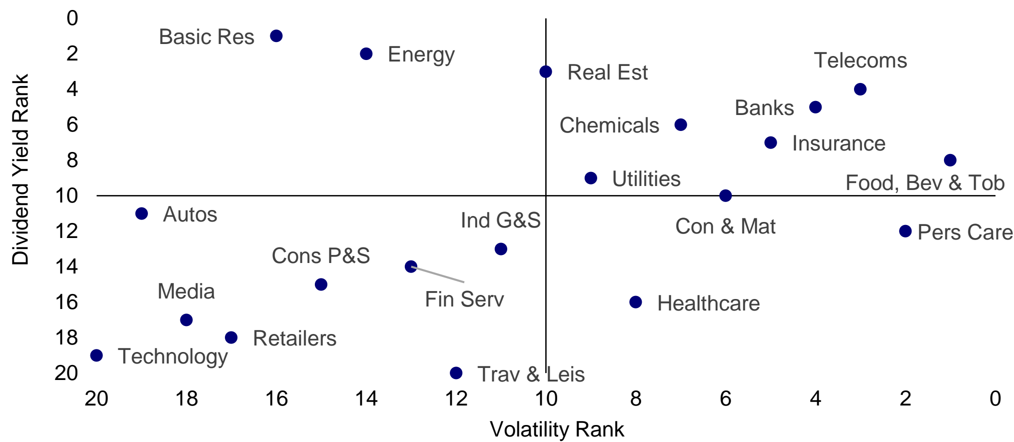
Figure 5 – Economic cycle and main sector allocation decisions



Note: The chart shows our opinion about which sectors tend to perform best at which stage of the economic cycle, based on our analysis of previous cycles.
Source: Invesco

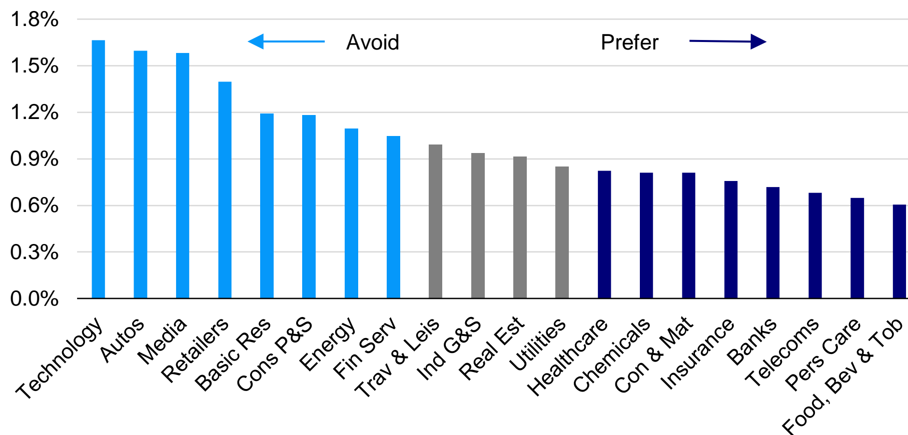
Systematic strategy – Global

Figure 6 – Global sectors ranked by volatility and dividend yield



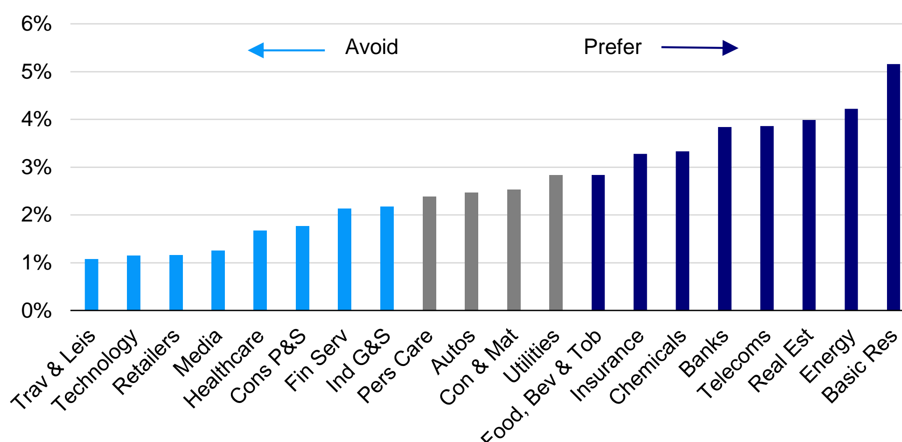
- A purely systematic approach would favour sectors in the top right corner: telecoms, food, beverage & tobacco and banks
- The approach would avoid sectors in the bottom left, such as technology, media or retailers

Figure 7 – Global sector volatility of daily returns (using standard deviation in the past 3 months)



- The daily returns of technology, autos and media were the most volatile in the past 3 months
- Food, beverage & tobacco, personal care, drug & grocery stores and telecoms were the least volatile

Figure 8 – Global sector dividend yield (12-month trailing)

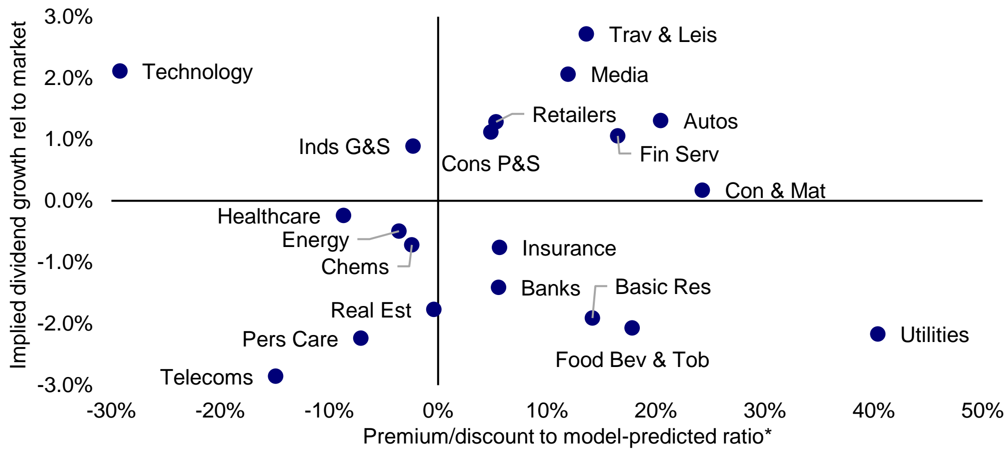


- Basic resources, energy and real estate look the cheapest based on their dividend yield
- The lowest yielding sectors include travel & leisure, technology and retailers

Notes: In Figure 6, we rank sectors on the vertical axis by their current 12-month trailing dividend yields. On the horizontal axis, the sectors are ranked by the 3-month standard deviation of their daily returns. See appendices for methodology and disclaimers. Any reference to a ranking, a rating or an award provides no guarantee for future performance results and is not constant over time.
Source: Refinitiv Datastream and Invesco

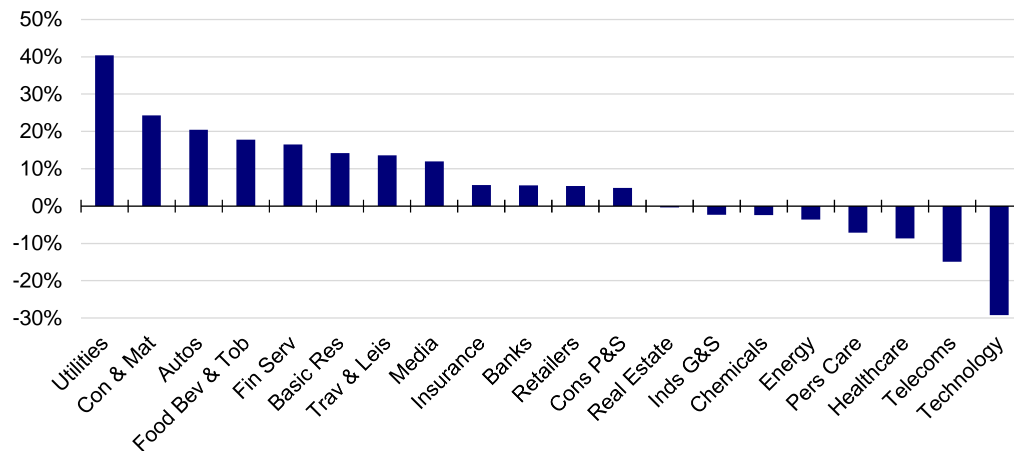
Valuations – Global

Figure 9 – Global sectors valuation matrix



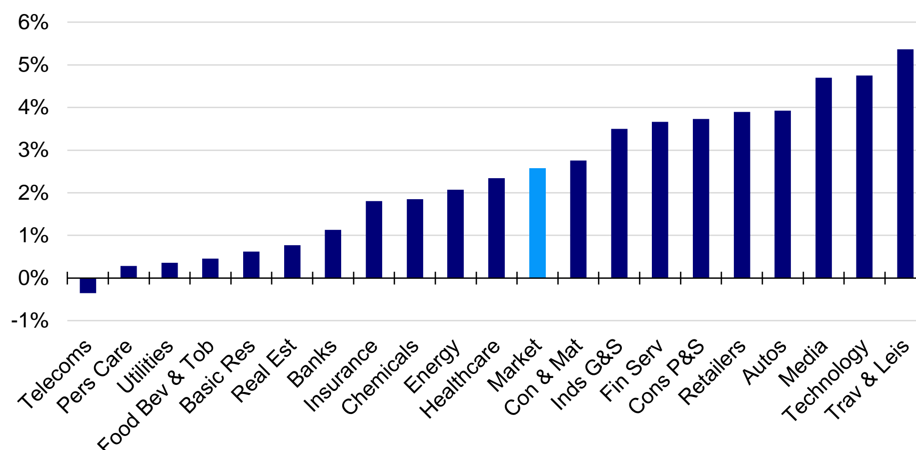
- Sectors in the top right corner look overvalued on both measures, while those in the bottom left appear undervalued
- This approach would avoid, for example, autos, financial services and construction
- Telecoms, personal care and healthcare look better value

Figure 10 – Premium/discount to model-predicted ratio*



- Utilities, construction & materials and autos look the most overvalued versus our model
- Technology, telecoms and healthcare seem the most undervalued versus our model-predicted ratios

Figure 11 – Global implied perpetual real dividend growth

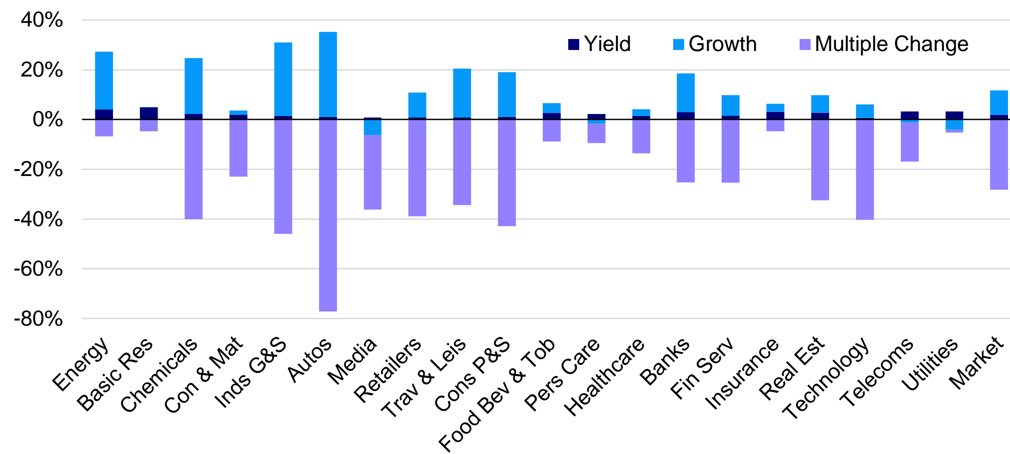


- Shows the future real growth required to justify current prices
- Travel & leisure appears priced for over 5% real growth in dividends (expensive)
- Only telecoms appears priced for negative growth (cheap)

Notes: *% above/below using dividend yield. See appendices for methodology and disclaimers. Source: Refinitiv Datastream and Invesco

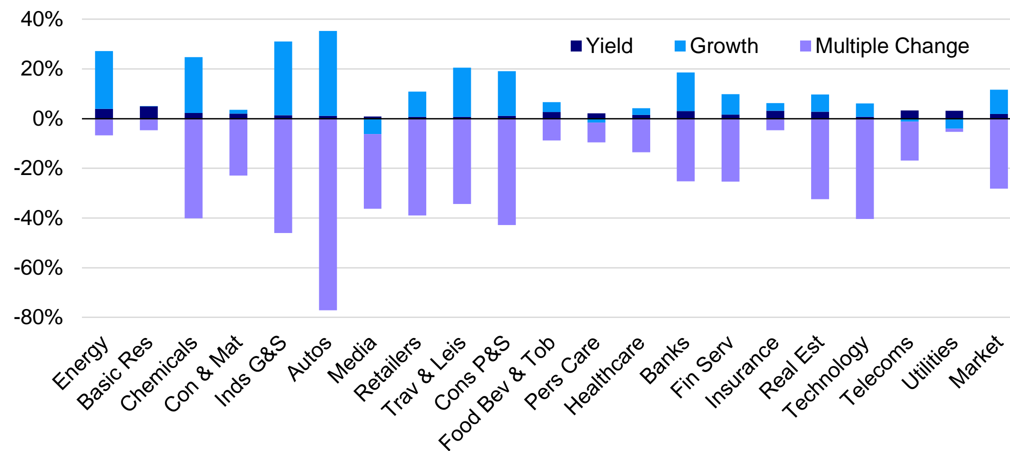
Decomposed returns – Global

Figure 12 – Global year-to-date total returns decomposed (annualised)



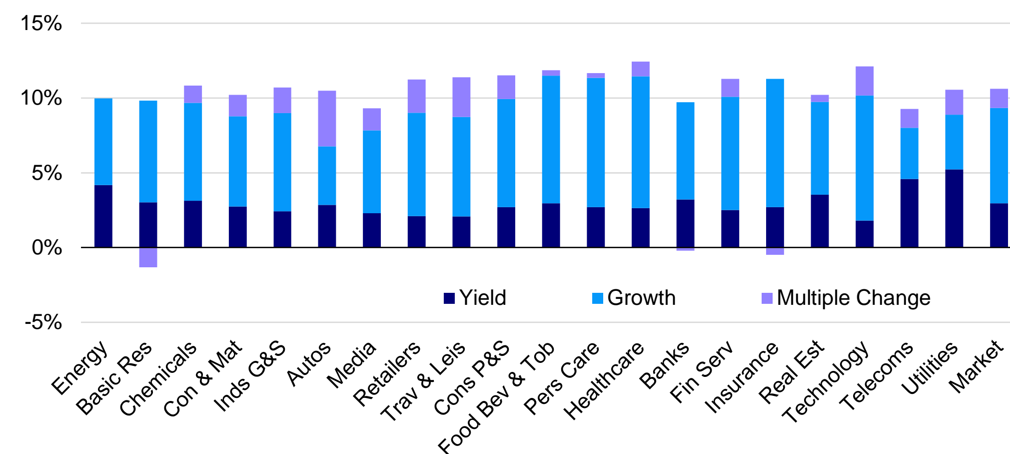
- Autos, industrial goods & services and energy had the highest dividend growth in 2022
- All sectors had a fall in sentiment (multiple contraction)

Figure 13 – Global rolling 12-month total returns decomposed



- Only three sectors had positive total returns: energy, insurance and basic resources
- Six sectors had a yield above 3%: energy, basic resources, banks, insurance, telecoms and utilities

Figure 14 – Global overall total returns decomposed (annualised, since 1973)



- Growth and yield drive long-term returns
- Growth is the most important, except for telecoms and utilities
- Four sectors suffered from a multiple-related performance drag: energy, basic resources, banks and insurance

Notes: See appendices for methodology and disclaimers. Past performance is not a guarantee of future results. Source: Refinitiv Datastream and Invesco

Appendices

Appendix 1: Coefficients for variables used in multiple regression model

Figure 15 – Regression coefficients of Global defensive sectors

	Food, Bev & Tobacco	Personal Care	Health Care	Telecoms	Utilities	Market
Real Oil		-0.18			0.42	
Real Copper		0.00	0.00	0.02	-0.01	
Consumer Confidence	0.00	0.00	0.00	0.00	0.00	-0.01
Manufacturing Confidence		0.01	0.01	0.01		0.01
IP		0.56	0.88		2.83	-5.03
10y Yield	-2.57	-2.19		-6.03	12.31	-11.72
CPI	4.28	1.52	-2.70	-1.75	-8.07	
Net Debt/EBITDA			-0.08		0.10	
ROE	-1.53	-0.82	1.27	0.64	-4.02	

Notes: IP = industrial production. CPI = consumer price index. EBITDA = earnings before interest, taxes, depreciation and amortization. ROE = return on equity. Bev = beverage. Only showing coefficients that have a statistically significant relationship with valuations at the 0.05 level. We use the dividend yield relative to market as our dependent variable. See the Methodology in Appendix 6 for more details. Source: Refinitiv Datastream and Invesco

Figure 16 – Regression coefficients of Global resource-related and industrial sectors

	Energy	Basic Resources	Chemicals	Construction & Materials	Industrial G&S	Market
Real Oil	-1.68	-1.15				
Real Copper	0.01			-0.01	0.00	
Consumer Confidence	0.01	0.01	0.01	0.00	0.00	-0.01
Manufacturing Confidence		-0.03	-0.01	-0.01	0.00	0.01
IP	-1.49		-0.85	0.84	0.25	-5.03
10y Yield	-2.16	-6.95				-11.72
CPI	11.50	31.98	7.60	7.27	0.53	
Net Debt/EBITDA	-0.13	-0.16	0.06	0.19	0.03	
ROE	-3.09	-3.25	-1.64		0.69	

Notes: IP = industrial production. CPI = consumer price index. EBITDA = earnings before interest, taxes, depreciation and amortization. ROE = return on equity. G&S = goods & services. Only showing coefficients that have a statistically significant relationship with valuations at the 0.05 level. We use the dividend yield relative to market as our dependent variable. See the Methodology in Appendix 6 for more details. Source: Refinitiv Datastream and Invesco

Figure 17 – Regression coefficients of Global consumer discretionary and technology sectors

	Autos & Parts	Media	Retail	Travel & Leisure	Cons P&S	Tech	Market
Real Oil	1.04		0.21	0.40	1.04	0.38	
Real Copper	-0.01	0.00	0.00		-0.01		
Consumer Confidence	0.01	0.00	0.00	0.00	0.00	0.00	-0.01
Manufacturing Confidence			0.00		-0.01	0.02	0.01
IP	-3.37	-0.66	0.81	-0.55	1.10	-1.96	-5.03
10y Yield	3.86	6.86	3.23	-0.99	6.40	-1.66	-11.72
CPI		-4.90	-4.78	-2.51	-4.65	-2.82	
Net Debt/EBITDA	-0.08	0.00	0.23		-0.11	0.09	
ROE		0.83		0.65	-1.48	0.67	

Notes: IP = industrial production. CPI = consumer price index. EBITDA = earnings before interest, taxes, depreciation and amortization. ROE = return on equity. Cons = consumer. P&S = products & services. Only showing coefficients that have a statistically significant relationship with valuations at the 0.05 level. We use the dividend yield relative to market as our dependent variable. See the Methodology in Appendix 6 for more details. Source: Refinitiv Datastream and Invesco

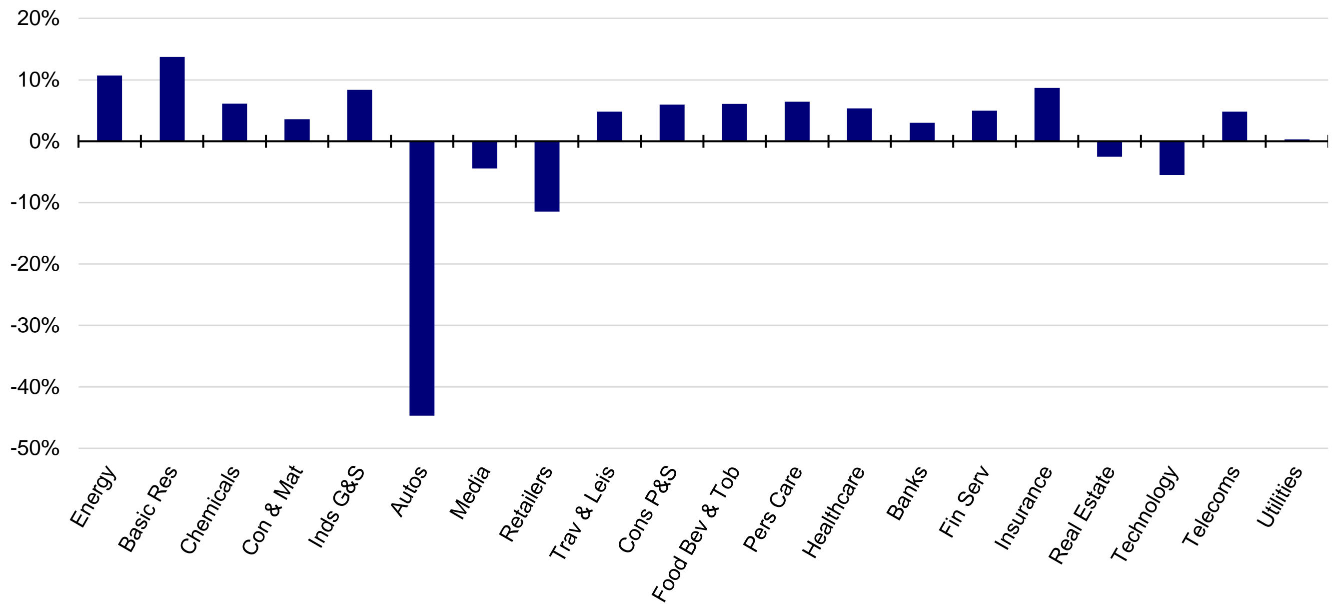
Figure 18 – Regression coefficients of Global financial sectors

	Banks	Financial Services	Insurance	Real Estate	Market
Real Oil	0.39	-0.30	-0.44	0.51	
Real Copper	-0.01	0.00	0.01	-0.02	
Consumer Confidence	0.01	0.00	0.00	0.01	-0.01
Manufacturing Confidence	-0.01	-0.02		-0.03	0.01
IP	-2.19	1.61		3.54	-5.03
10y Yield	-10.29	1.15	-6.86	3.39	-11.72
CPI	5.99		9.74		
ROE	4.37	0.63	-1.10	-3.90	

Notes: IP = industrial production. CPI = consumer price index. EBITDA = earnings before interest, taxes, depreciation and amortization. ROE = return on equity. Only showing coefficients that have a statistically significant relationship with valuations at the 0.05 level. We use the dividend yield relative to market as our dependent variable. See the Methodology in Appendix 6 for more details. Source: Refinitiv Datastream and Invesco

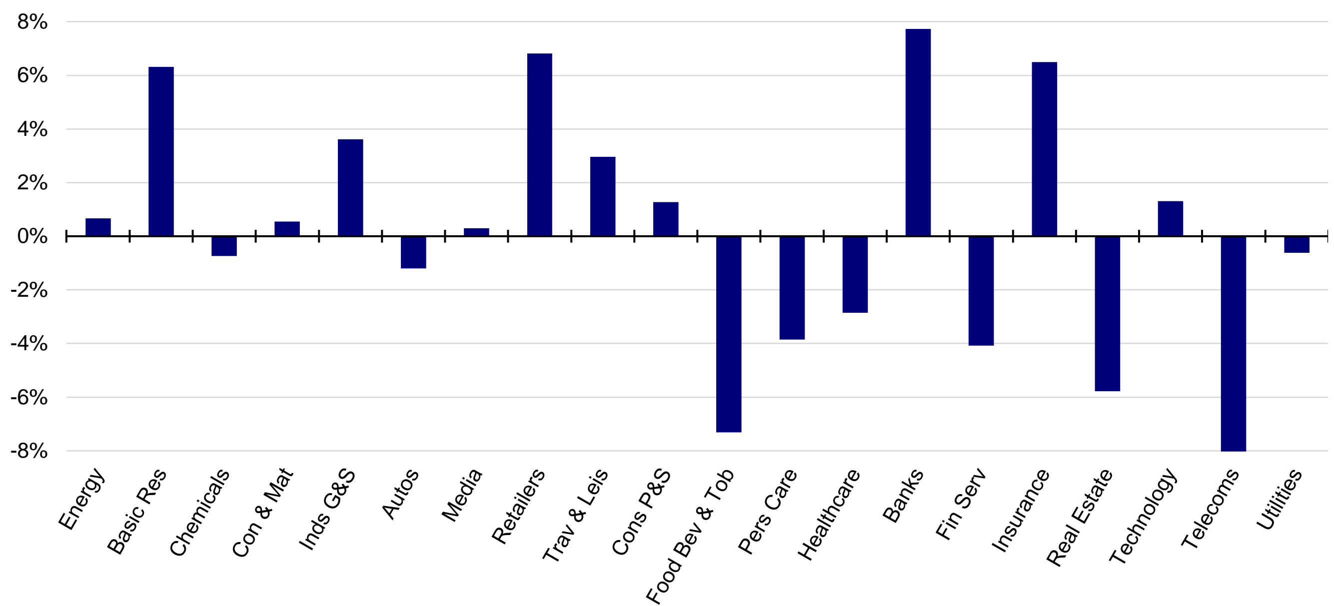
Appendix 2: Sector returns by region

Figure 19 – 3m US sector returns relative to market



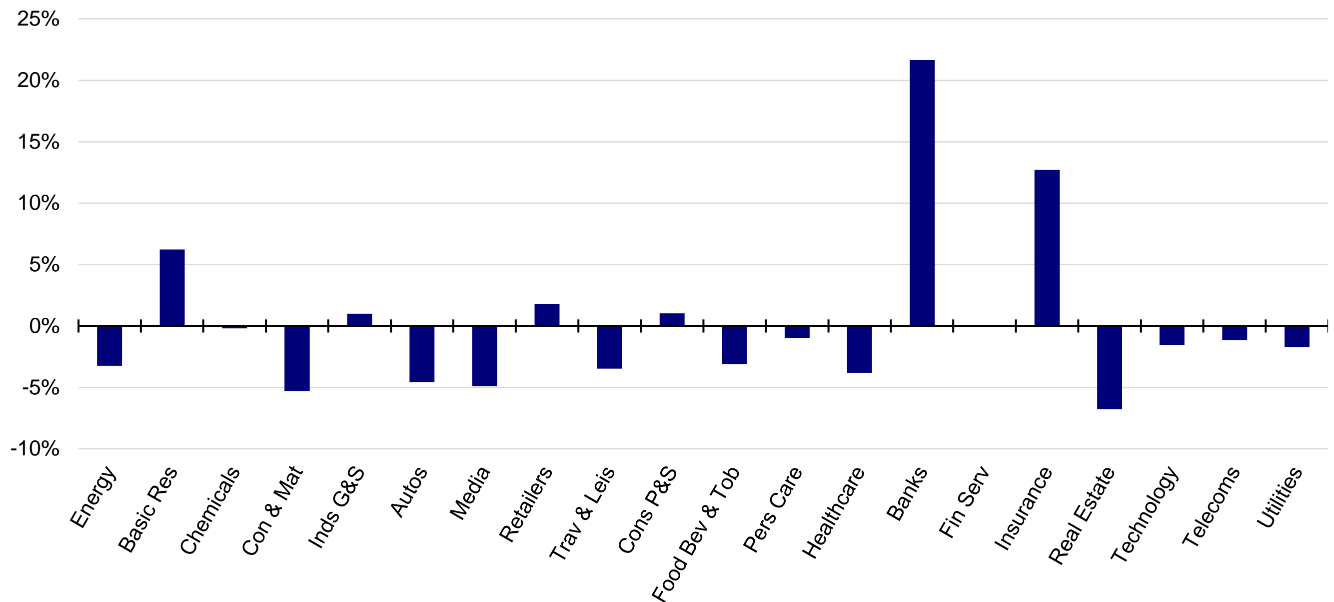
Notes: See appendices for methodology and disclaimers. Returns shown between 30th September 2022 and 31st December 2022. **Past performance is not a guarantee of future results.** Source: Refinitiv Datastream and Invesco

Figure 20 – 3m European sector returns relative to market



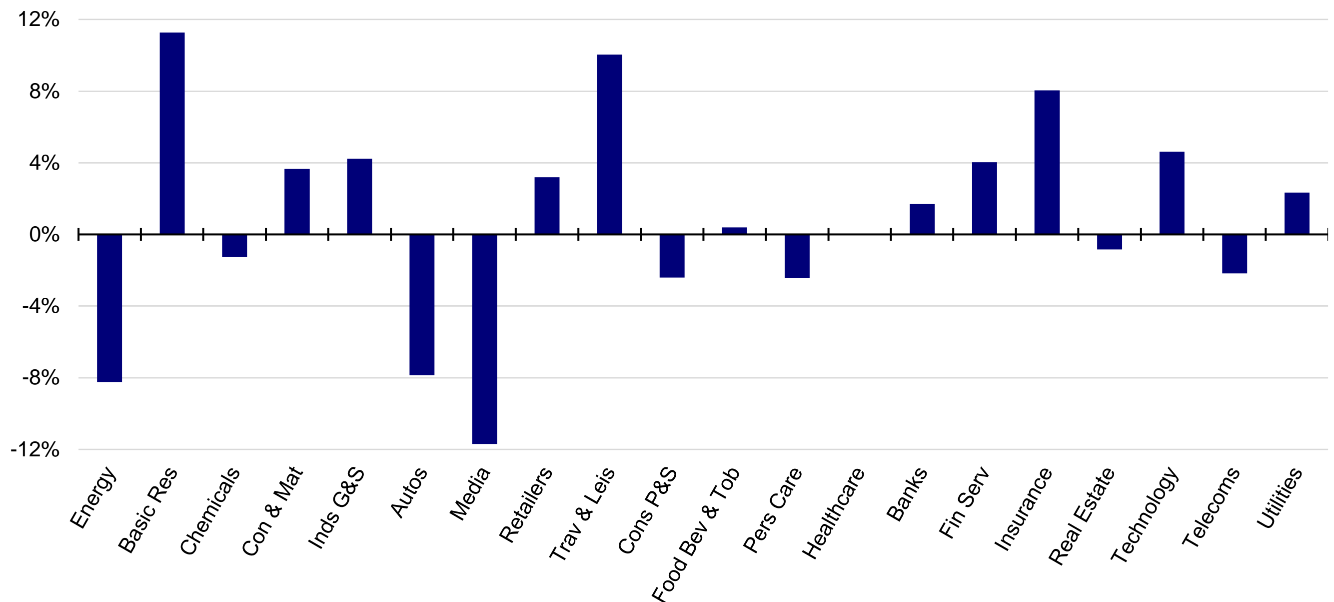
Notes: See appendices for methodology and disclaimers. Returns shown between 30th September 2022 and 31st December 2022. **Past performance is not a guarantee of future results.** Source: Refinitiv Datastream and Invesco

Figure 21 – 3m Japanese sector returns relative to market



Notes: See appendices for methodology and disclaimers. Returns shown between 30th September 2022 and 31st December 2022. **Past performance is not a guarantee of future results.** Source: Refinitiv Datastream and Invesco

Figure 22 – 3m Emerging Market sector returns relative to market



Notes: See appendices for methodology and disclaimers. Returns shown between 30th September 2022 and 31st December 2022. **Past performance is not a guarantee of future results.** Source: Refinitiv Datastream and Invesco

Appendix 3: Valuations tables

Figure 23 – Global absolute valuations

	Price/Earnings			Dividend Yield			Price/Book Value			Price/Cash Flow		
	Now	Avg	Now vs Avg*	Now	Avg	Now vs Avg*	Now	Avg	Now vs Avg*	Now	Avg	Now vs Avg*
Energy	**9.1**	**14.6**	**-0.8**	**4.2**	**3.8**	**0.3**	**2.4**	**1.9**	**1.0**	**7.7**	**6.3**	**0.8**
Basic Materials	**9.5**	**16.7**	**-1.5**	**4.4**	**2.7**	**2.1**	**1.8**	**1.8**	**0.0**	**5.8**	**7.1**	**-0.7**
Basic Resources	8.4	16.9	-1.4	5.2	2.9	2.4	1.7	1.7	0.0	4.8	7.0	-1.0
Chemicals	11.4	17.1	-1.1	3.3	2.9	0.5	2.0	2.0	0.1	7.8	7.6	0.1
Industrials	**14.9**	**18.2**	**-0.7**	**2.2**	**2.3**	**-0.1**	**2.7**	**2.2**	**1.1**	**10.7**	**9.2**	**0.8**
Construction & Mat.	14.7	16.7	-0.5	2.5	2.5	0.0	1.8	1.8	0.0	9.1	9.1	0.0
Industrial G&S	15.0	18.7	-0.7	2.2	2.2	-0.1	2.8	2.2	1.3	10.9	9.3	0.9
Consumer Disc.	**18.9**	**18.8**	**0.0**	**1.5**	**2.2**	**-0.8**	**2.9**	**2.2**	**1.4**	**10.7**	**8.6**	**1.2**
Automobiles & Parts	10.4	15.1	-0.6	2.5	2.6	-0.1	1.2	1.5	-0.8	5.8	5.4	0.3
Media	12.1	21.6	-1.2	1.3	2.1	-1.0	2.1	2.5	-0.6	12.0	10.1	0.5
Retailers	28.8	21.3	1.2	1.2	1.9	-0.9	4.7	3.3	1.6	12.3	13.3	-0.3
Travel & Leisure	25.9	23.4	0.2	1.1	1.8	-1.0	6.9	2.5	4.3	17.2	9.3	2.6
Consumer Prod & Serv	20.8	19.3	0.3	1.8	2.4	-1.0	3.5	2.3	1.8	12.7	10.8	0.8
Consumer Staples	**20.2**	**16.8**	**0.7**	**2.7**	**2.5**	**0.2**	**3.1**	**2.8**	**0.4**	**12.8**	**10.8**	**0.7**
Food, Bev & Tobacco	19.6	18.4	0.3	2.8	2.7	0.2	2.9	2.7	0.3	13.2	11.0	0.8
Personal Care	21.6	20.4	0.2	2.4	2.4	0.0	3.8	3.2	0.6	12.2	10.5	0.6
Healthcare	**24.1**	**20.1**	**0.7**	**1.7**	**2.3**	**-0.8**	**4.2**	**3.3**	**0.8**	**15.6**	**12.7**	**0.8**
Financials	**12.3**	**15.6**	**-0.7**	**3.2**	**2.7**	**0.6**	**1.0**	**1.5**	**-1.0**	**6.4**	**5.7**	**0.5**
Banks	9.5	14.3	-1.0	3.8	3.0	1.0	0.9	1.4	-1.0	5.7	6.3	-0.3
Financial Services	18.9	18.3	0.1	2.1	2.3	-0.2	1.0	1.5	-1.0	11.7	8.4	1.4
Insurance	14.3	15.9	-0.3	3.3	2.5	1.1	1.5	1.7	-0.4	4.3	3.8	0.5
Real Estate	13.0	19.1	-1.0	4.0	3.2	0.9	1.2	1.4	-0.8	14.5	13.7	0.3
Technology	**20.9**	**24.2**	**-0.3**	**1.2**	**1.6**	**-0.5**	**4.7**	**3.1**	**1.3**	**13.4**	**11.5**	**0.5**
Telecommunications	**14.1**	**17.4**	**-0.4**	**3.9**	**4.3**	**-0.2**	**1.7**	**2.6**	**-0.8**	**4.7**	**6.1**	**-0.6**
Utilities	**19.4**	**14.5**	**1.2**	**3.2**	**4.8**	**-0.9**	**1.7**	**1.6**	**0.3**	**7.3**	**5.6**	**1.2**
Market	**15.3**	**17.2**	**-0.4**	**2.5**	**2.7**	**-0.2**	**2.2**	**2.0**	**0.3**	**9.3**	**7.8**	**0.9**

Notes: *in standard deviations from historical average. Mat. = materials. G&S = goods & services. Disc. = discretionary. Prod & Serv = products & services. Bev = beverage. Data starts on 1st January 1973 for price/earnings and dividend yield and 1st January 1980 for price/book and price/cash flow. See appendices for methodology and disclaimers. Source: Refinitiv Datastream and Invesco

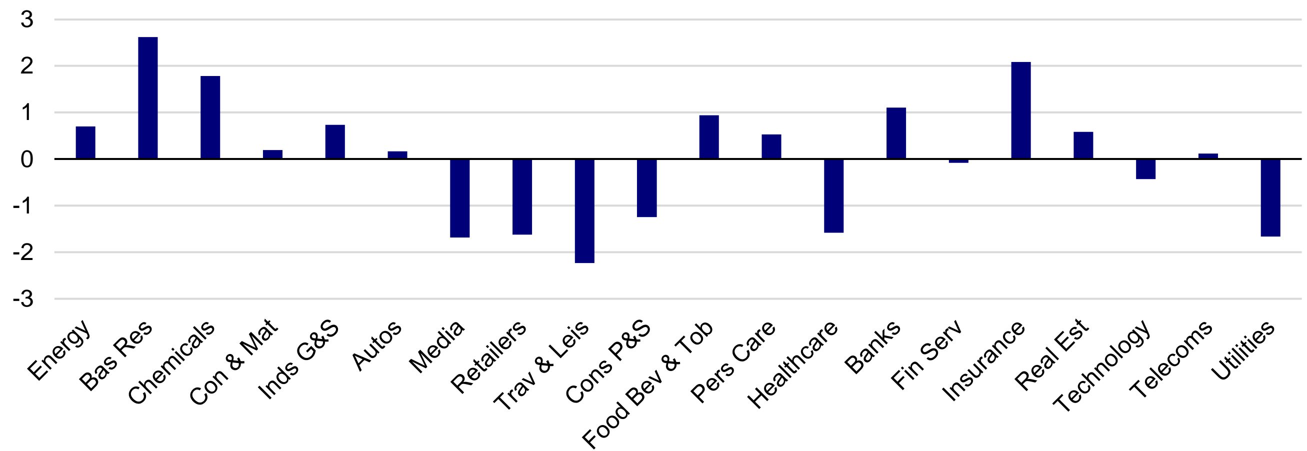
Figure 24 – Global cyclically-adjusted valuations

	Price/Earnings			Dividend Yield			Price/Book Value			Price/Cash Flow		
	Now	Avg	Now vs Avg*	Now	Avg	Now vs Avg*	Now	Avg	Now vs Avg*	Now	Avg	Now vs Avg*
Energy	**15.2**	**18.7**	**-0.5**	**3.9**	**2.8**	**1.0**	**1.6**	**2.7**	**-0.9**	**7.0**	**8.7**	**-0.6**
Basic Materials	**19.0**	**23.2**	**-0.6**	**2.5**	**1.9**	**1.1**	**1.9**	**2.4**	**-0.7**	**6.4**	**9.5**	**-1.2**
Basic Resources	18.3	21.4	-0.4	2.6	2.1	0.6	1.7	2.2	-0.5	5.0	9.0	-1.1
Chemicals	19.7	24.4	-0.9	2.3	1.9	1.0	2.1	2.7	-1.1	9.7	10.6	-0.5
Industrials	**23.9**	**26.6**	**-0.5**	**1.6**	**1.5**	**0.4**	**2.9**	**3.0**	**-0.1**	**13.1**	**12.9**	**0.1**
Construction & Mat.	19.8	23.9	-0.4	2.0	1.9	0.3	1.9	2.3	-0.5	10.3	11.6	-0.3
Industrial G&S	24.6	27.3	-0.5	1.5	1.4	0.4	3.2	3.1	0.2	13.6	12.8	0.4
Consumer Disc.	**22.3**	**27.1**	**-0.9**	**1.6**	**1.4**	**0.4**	**2.8**	**3.0**	**-0.4**	**11.3**	**11.8**	**-0.3**
Automobiles & Parts	12.4	19.0	-1.5	2.2	1.7	0.9	1.2	2.0	-2.1	5.8	6.7	-0.6
Media	19.6	30.1	-1.2	1.7	1.4	0.8	2.5	3.4	-0.7	10.9	13.5	-0.7
Retailers	30.1	32.2	-0.3	1.2	1.1	0.2	4.9	4.8	0.1	16.6	19.7	-0.7
Travel & Leisure	22.7	34.1	-1.1	1.6	1.1	1.1	3.4	3.5	-0.1	11.2	13.0	-0.7
Consumer Prod & Serv	25.9	28.6	-0.6	1.6	1.6	0.0	3.8	3.1	1.2	15.4	15.4	0.0
Consumer Staples	**21.3**	**22.6**	**-0.3**	**2.2**	**1.6**	**1.4**	**3.5**	**3.8**	**-0.5**	**14.8**	**14.6**	**0.1**
Food, Bev & Tobacco	25.1	28.2	-0.7	2.2	1.6	1.5	3.4	4.0	-1.4	15.3	16.3	-0.6
Personal Care	26.1	31.6	-0.8	2.0	1.4	1.4	4.0	4.9	-1.0	13.9	16.2	-1.0
Healthcare	**34.4**	**31.6**	**0.5**	**1.3**	**1.4**	**-0.3**	**5.1**	**5.1**	**-0.1**	**19.9**	**19.6**	**0.1**
Financials	**14.7**	**23.4**	**-0.8**	**2.7**	**2.0**	**0.8**	**1.2**	**1.9**	**-1.2**	**7.1**	**7.3**	**-0.1**
Banks	11.6	20.8	-1.0	3.4	2.3	1.0	1.0	1.8	-1.3	6.1	7.9	-0.8
Financial Services	20.3	29.4	-0.6	1.6	1.5	0.2	1.4	2.0	-1.1	12.8	10.8	0.9
Insurance	17.2	23.9	-0.7	2.2	1.6	0.9	1.7	2.4	-0.9	4.8	4.9	-0.1
Real Estate	13.4	26.4	-1.0	3.7	2.5	1.4	1.2	1.7	-1.2	13.7	17.0	-0.9
Technology	**34.8**	**38.9**	**-0.2**	**0.8**	**0.9**	**-0.2**	**6.1**	**4.8**	**0.6**	**20.0**	**18.6**	**0.2**
Telecommunications	**14.4**	**22.9**	**-0.8**	**4.3**	**3.0**	**1.1**	**1.9**	**3.4**	**-1.1**	**4.7**	**7.7**	**-1.0**
Utilities	**19.9**	**18.6**	**0.3**	**3.2**	**3.5**	**-0.4**	**1.8**	**2.0**	**-0.5**	**7.3**	**6.9**	**0.3**
Market	**21.0**	**24.8**	**-0.6**	**2.0**	**1.8**	**0.6**	**2.3**	**2.8**	**-0.9**	**10.4**	**10.7**	**-0.2**

Notes: *in standard deviations from historical average. Mat. = materials. G&S = goods & services. Disc. = discretionary. Prod & Serv = products & services. Bev = beverage. Data starts on 1st January 1983 for price/earnings and dividend yield and 1st January 1990 for price/book and price/cash flow. See appendices for methodology and disclaimers. Source: Refinitiv Datastream and Invesco

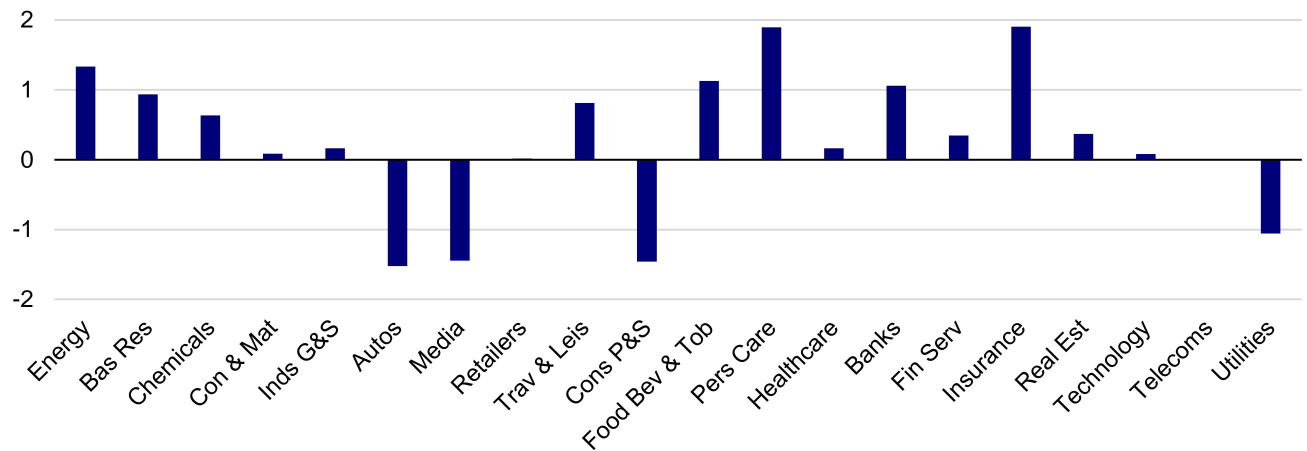
Appendix 4: Sector valuations by region

Figure 25 – Global dividend yields relative to market (z-score)



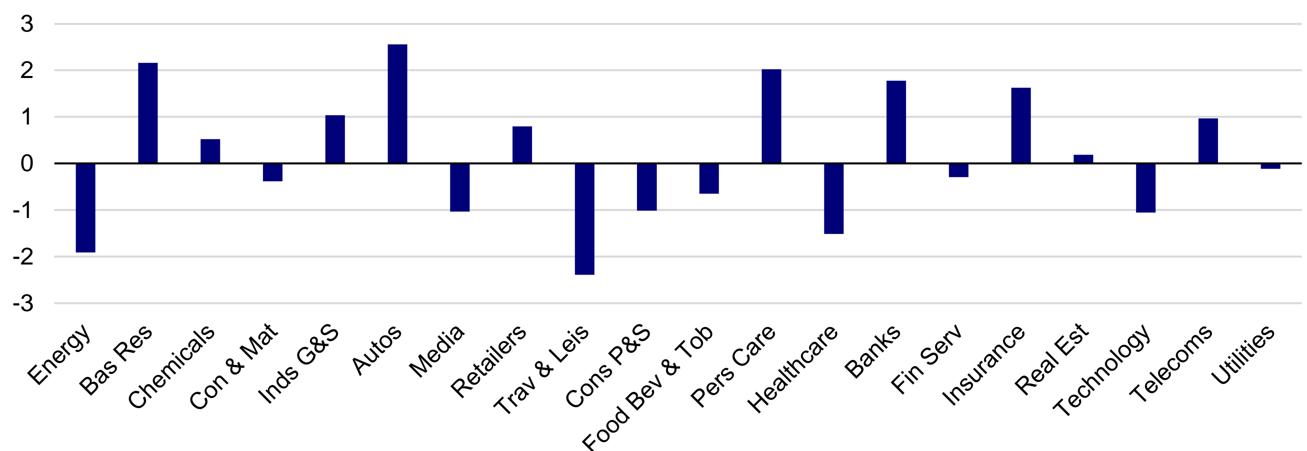
Notes: See appendices for methodology and disclaimers. Source: Refinitiv Datastream and Invesco

Figure 26 – US dividend yields relative to local benchmark (z-score)



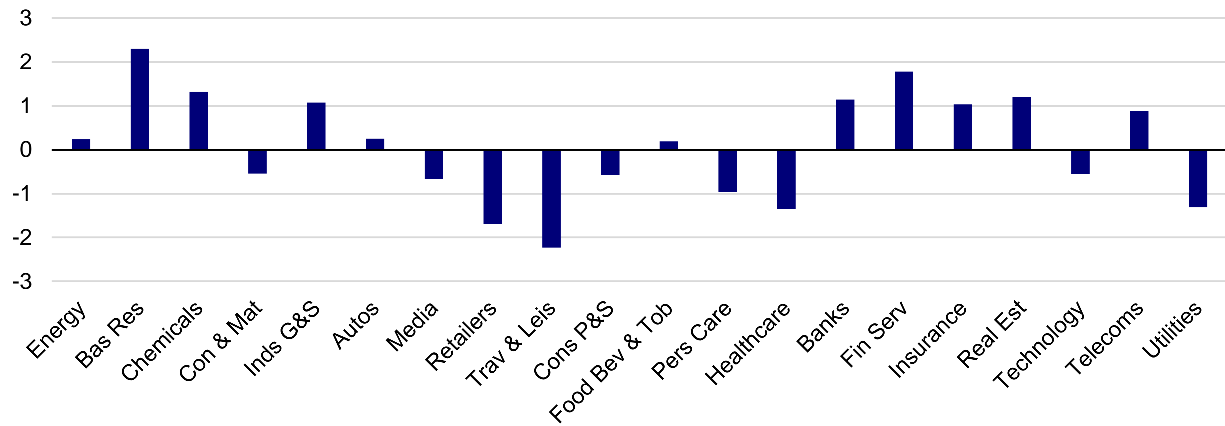
Notes: See appendices for methodology and disclaimers. The local benchmark is the Datastream US Total Market Index. Source: Refinitiv Datastream and Invesco

Figure 27 – Europe dividend yields relative to local benchmark (z-score)



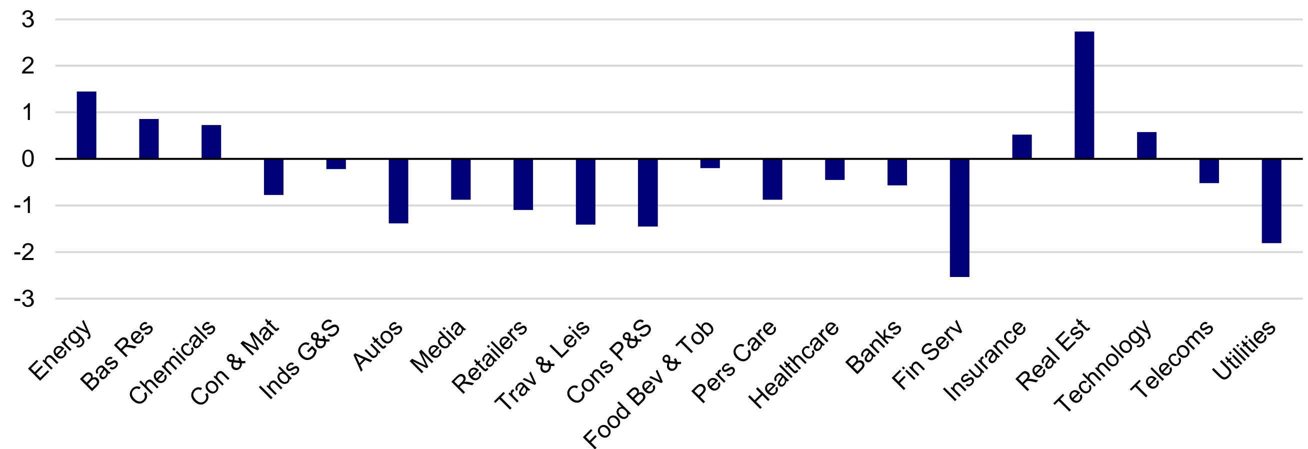
Notes: See appendices for methodology and disclaimers. The local benchmark is the Datastream Europe Ex-Emerging Total Market Index. Source: Refinitiv Datastream and Invesco

Figure 28 – Japan dividend yields relative to local benchmark (z-score)



Notes: See appendices for methodology and disclaimers. The local benchmark is the Datastream Japan Total Market Index. Source: Refinitiv Datastream and Invesco

Figure 29 – Emerging markets dividend yields relative to local benchmark (z-score)



Notes: See appendices for methodology and disclaimers. The local benchmark is the Datastream Emerging Markets Total Market Index. Source: Refinitiv Datastream and Invesco

Appendix 4: Performance tables

Figure 30 – Global equity sector total returns relative to market

Data as at 31/12/2022	Global				
	3m	**YTD**	**12m**	**5y***	**10y***
Energy	**-2.0**	**45.0**	**45.0**	**-1.6**	**-5.3**
Basic Materials	**6.3**	**12.0**	**12.0**	**0.5**	**-1.7**
Basic Resources	10.4	20.8	20.8	2.5	-3.0
Chemicals	1.1	1.5	1.5	-2.2	-1.4
Industrials	**5.7**	**1.5**	**1.5**	**-0.6**	**0.6**
Construction & Materials	2.8	-3.4	-3.4	-2.8	-2.2
Industrial Goods & Services	6.1	2.2	2.2	-0.2	1.1
Consumer Discretionary	**-6.4**	**-14.6**	**-14.6**	**-2.9**	**-0.7**
Automobiles & Parts	-23.6	-30.5	-30.5	-4.1	-1.9
Media	-2.1	-22.7	-22.7	-5.4	-2.0
Retailers	-9.4	-13.9	-13.9	-0.9	0.0
Travel & Leisure	4.0	3.2	3.2	-6.0	-1.8
Consumer Products & Services	5.9	-8.6	-8.6	-1.1	0.5
Consumer Staples	**1.8**	**15.0**	**15.0**	**-2.3**	**-1.0**
Food, Beverage & Tobacco	1.4	17.2	17.2	-1.2	-1.6
Personal Care, Drug & Grocery Stores	2.6	11.0	11.0	-0.9	-0.6
Healthcare	**3.0**	**8.6**	**8.6**	**3.9**	**3.8**
Financials	**3.7**	**10.1**	**10.1**	**-0.9**	**-0.8**
Banks	2.6	12.1	12.1	-3.6	-2.9
Financial Services	2.1	1.2	1.2	2.3	2.6
Insurance	9.5	21.9	21.9	0.6	1.7
Real Estate	**-2.7**	**-7.6**	**-7.6**	**-4.7**	**-3.8**
Technology	**-4.5**	**-21.3**	**-21.3**	**6.0**	**6.9**
Telecommunications	**-0.4**	**3.2**	**3.2**	**-3.6**	**-3.7**
Utilities	**-0.1**	**17.2**	**17.2**	**2.0**	**-0.6**

Notes: *showing annualised returns. 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

Appendix 5: Methodology

Multiple regression analysis

We have run a multiple regression analysis to examine how macroeconomic factors influence sector valuations. We have used the dividend yield relative to market as the dependent variable and have run the regressions with the following independent variables:

Monthly series since 31/01/1991:

- **1-year change in:** industrial production, consumer price index
- **The level of:** real oil price (US CPI adjusted), real copper price (US CPI adjusted), consumer confidence index, manufacturing confidence index, 10-year benchmark government bond yield, net debt/EBITDA (only for non-financial sectors), return on equity

We calculate a global measure of industrial production growth, consumer price index growth, consumer confidence, manufacturing confidence and government bond yields using data from four regions or countries representing 65% of global Gross Domestic Product: United States, Europe, Japan and China. The global measures are weighted averages using Datastream global index market capitalisations as weights.

This analysis shows us which independent variables have a statistically significant relationship with sector valuation ratios. In addition, the regression coefficients tell us how much each independent variable influences those ratios. Finally, we use those coefficients to calculate what the valuation ratios should be, based on the model, and compare them to currently observed valuations. In theory, this allows us to determine whether a sector is undervalued or overvalued based on the macroeconomic factors we have used.

Sector classification

We use the Industry Classification Benchmark (ICB).

Leverage and profitability ratios

We calculate Net Debt/EBITDA from sector and market level aggregates supplied by Refinitiv Datastream. They define Net Debt as Total Debt minus Cash, where Cash represents Cash & Due from Banks for Banks, Cash for Insurance companies and Cash & Short Term Investments for all other industries. We tend to exclude Financials from Net Debt/EBITDA comparisons for it is difficult to distinguish debt they sell as a product and debt they incur during the operation of the business. In addition, Refinitiv Datastream define EBITDA – Earnings before Interest, Taxes and Depreciation – as the earnings of a company before interest expense, income taxes and depreciation. It is calculated by taking the pre-tax income and adding back interest expense on debt and depreciation, depletion and amortisation and subtracting interest capitalised.

Decomposed returns

We break down total returns into 3 components to examine what has driven sector performance year-to-date, in the last 12 months and for the whole history of the index. “Yield” shows the income investors received from dividends paid during the period concerned. “Growth” shows the rate of dividend growth, calculated using the percentage change in dividend per share (DPS) values for the sector indices. DPS is calculated as dividend yield times the price index. “Multiple Change” refers to the change in dividend yield between the two periods indicated, plus the change in dividend yield times dividend growth. We use it to measure investor expectations and sentiment regarding the sectors.

Implied perpetual growth models
A valuation cross-check is sought by calculating the perpetual real growth in dividends required to justify current prices. This then allows an evaluation of whether those implied growth rates are realistic.

We use a simple perpetual growth model to calculate implied growth. If Price = Dividend/(Discount Factor - Growth), then Growth = Discount Factor – Dividend Yield. The Discount Factor is equal to Risk Free Rate + (Beta x Market Risk Premium). Everything is expressed in real terms to eliminate the distorting influence of inflation, the output being growth in real terms. The important ingredients are derived as follows:

- The risk-free rate is an equity market capitalisation weighted average of US, UK, Eurozone, Japanese and Chinese 10-year real yields.
- Sector betas are calculated using five years of weekly price movements relative to the global market index.
- The risk premium is derived from US equity and treasury market returns since 1871.
- The dividend yield for each sector is the 12-month trailing yield calculated by Datastream.

Sector allocations
We start by considering where the equity markets are in their respective economic cycles, which determines whether cyclical or defensive sectors are more likely to outperform. Our preferred measure of cyclical sensitivity is beta. Sector betas are calculated using five years of weekly price movements relative to the local market index.

Next, we refine our decisions by looking at how sector yields relative to the market relate to the ratio calculated by our multiple regression model and how much dividend growth is implied in current trailing 12-month dividend yields relative to market.

Finally, we rank sectors by their recent volatility, using the standard deviation of daily returns for the three months before our cut-off date. After that we rank sectors by their 12-month trailing dividend yield. Based on our thematic report about sector strategies, Sector strategies: Control your volatility, combining these approaches provided the best cost-adjusted and risk-adjusted returns in the US, and was among the best in cost-adjusted returns in Europe.

An investment decision is the result of balancing a range of factors and the weightings applied to those factors can vary across time and sectors. “Overweight” suggests that we prefer to hold more of the given sector than suggested by the market capitalisation-weighted “neutral” position. “Underweight” suggests we prefer to hold less of the given sector than suggested by the market capitalisation-weighted “neutral” position. “Neutral” suggests a holding in line with the market capitalisation-weighted benchmark.

Preferred regions
We measure sector valuations relative to their respective local benchmarks in the United States, Europe, Japan and Emerging Markets. We calculate a z-score comparing the latest relative dividend yield to its historical average, which gives us a standardised way to measure how far valuations are from those averages in each region. Our normal preference would be for the cheapest region based on this measure, but we also take into account thematic and other fundamental considerations.

Appendix 6: Abbreviations

Changes in allocations on the front page: OW = Overweight, N = Neutral, UW = Underweight

Sector name abbreviations:

Autos = Automobiles & parts
Basic Res = Basic Resources
Chem = Chemicals
Con & Mat = Construction & Materials
Cons P&S = Consumer Products & Services
Fin Serv = Financial Services
Food, Bev & Tob = Food, Beverage & Tobacco
Ind G&S = Industrial Goods & Services
Pers Care = Personal Care, Drug & Grocery Stores
Pers & Hh Gds = Personal & Household Goods
Real Est = Real Estate
Tech = Technology
Telecoms = Telecommunications
Trav & Leis = Travel & Leisure

Appendix 7: Definitions of data and benchmarks

Sources: we source data from Refinitiv Datastream unless otherwise indicated.

Government bonds (figure 3): Current values use Refinitiv Datastream benchmark 10-year yields for the US, Eurozone, Japan and the UK and the Thomson Reuters China benchmark 10-year yield for China.

Value sectors: stocks or sectors that have low price/book value or price/earnings multiples or high dividend yields. Some of these stocks or sectors may generally trade at a discount compared to the market if investors expect their earnings or dividends to grow at a slower pace than the market. Examples of such sectors are utilities, telecommunications, banks and oil & gas.

Growth sectors: stocks or sectors that have high price/book or price/earnings multiples or low dividend yields, because investors expect them to have high earnings or dividend growth. Examples of these sectors are technology, healthcare and food & beverage.

Defensive sectors: stocks or sectors that have business models that investors consider to be relatively stable throughout the business cycle. We refer to the following sectors as defensive: food & beverage, personal & household goods, healthcare, telecommunications and utilities.

Cyclical sectors: stocks or sectors that have business models that investors consider to be sensitive to the economic cycle. We refer to the following sectors as cyclical: oil & gas, basic resources, chemicals, construction & materials, industrial goods & services, automobiles & parts, media, retail, travel & leisure, banks, financial services, insurance, real estate and technology.

Growth factor: a subset of the S&P 500 in the US and the Stoxx 600 index in Europe and 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 factor: a subset of the S&P 500 in the US and the Stoxx 600 index in Europe and includes stocks in the bottom quintile based on the standard deviation of their daily returns in the previous three months.

Price momentum factor: a subset of the S&P 500 in the US and the Stoxx 600 index in Europe and includes stocks in the top quintile based on their performance in the previous 12 months.

Quality factor: a subset of the S&P 500 in the US and the Stoxx 600 index in Europe and 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 factor: a subset of the S&P 500 in the US and the Stoxx 600 index in Europe and includes stocks in the bottom quintile based on their market value in US dollars for the US and euros for Europe.

Value factor: a subset of the S&P 500 in the US and the Stoxx 600 index in Europe and includes stocks in the bottom quintile based on their price to book value ratios.

Data as of 31st December 2022 unless stated otherwise. This publication is updated quarterly.

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