Applied philosophy
The unexpected defensive

A rapid bear market and an almost as rapid recovery did nothing to change market leadership as technology has continued to outperform in both phases proving to be a better "defensive" than traditional defensives. The pandemic-induced changes in the economy only accelerated structural trends that favour the sector and we think this is unlikely to change. Although we find its valuations high, we expect the sector to keep outperforming the market in risk-adjusted returns.

Blink and you missed it. After a swift bear market, equities have made a staggering recovery. The MSCI All-Country World Index has returned 35% since its low on 23rd March and is only 9% below the 19th February peak (as of 30th June, in local currency terms). After spending time away from the market welcoming my second child into the world, it feels like nothing much changed. Equity markets seem to be ignoring the risks that the deepest recession since World War II may cause lasting damage and they could be in for a rude awakening. As we outlined in our latest The Big Picture, we see limited upside for equities from current levels even if we assume a fast and strong economic recovery.

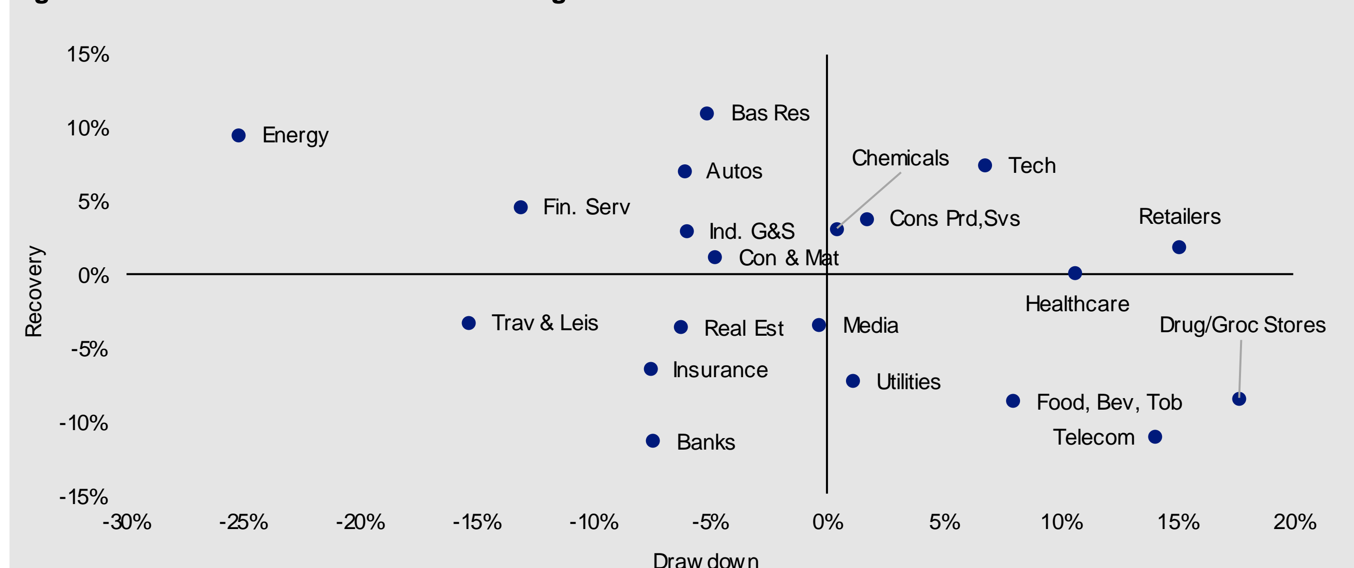
In an equity-focused portfolio, we would normally turn to defensive sectors to hedge against that risk. Broadly, defensives outperformed in the rapid drawdown phase in February-March this year (using Datastream indices), except utilities, which performed more in line with the market. Owing to the nature of the crisis, two traditionally cyclical sectors also outperformed in this phase: (online) retailers and technology (**Figure 1**).

However, in the recovery phase, the usual "dash for trash" did not fully materialise. Rotation was evident in most sectors as investors moved out of defensives into energy, basic resources, autos, industrials and financial services. However, some of the sectors that led the market down continued to underperform, such as banks, insurance and real estate. Interestingly, a group of sectors continued to outperform in this phase including chemicals, consumer products and services and, of course, technology.

We can find clear explanations for all these moves that reflect the nature of the crisis and the uncertainty surrounding the economic recovery, which has tentatively begun. Defensives normally underperform when markets move up precisely for the characteristic that makes them good hegdes in a bear market: their low beta. By contrast, cyclicals have tended to be high beta, and therefore usually outperform in markets that move higher.

In our view, there are logical reasons why certain outliers have not performed the way they may have done in a more "normal" recovery. We think travel & leisure will struggle until providers are allowed to operate at full capacity and consumers are happy to return to them. We also expected banks to struggle in a low interest rate environment but hoped that government-mandated lending programmes would boost their business. We think insurance, especially

Figure 1 – Global sector total returns during the COVID-19 crisis



Notes: We split the market moves into two phases. The drawdown phase includes total returns in USD from 19th February 2020 to 23rd March 2020. The recovery phase shows total returns in USD from 23rd March to 30th June 2020. We use Datastream World sector indices. Past performance is not a guide to future returns. Source: Datastream and Invesco

life insurance, will find it difficult to spread risk when many get ill at the same time and will be hit by claims precisely when they may have to restrict selling new policies. We would expect retailers and media to have mixed fortunes. Although traffic and usage may increase for online retailers, especially Amazon, which has accounted for most of the outperformance this year and has grown from 30% to 40% of the index. Brick-and-mortar outlets however will probably follow travel & leisure's pattern. Media companies may see a boom in content consumption, especially streaming platforms, but the cost of production will probably be higher for new content. Even consumer products & services has been diversified enough to outperform both on the way down and on the way up (they include video games studios and food delivery companies, for example).

However, the only sector that has been able to ride the structural trends amplified and accelerated by the COVID-19 crisis is technology. First, most companies in the sector are not labour-intensive. Second, remote working has boosted the demand for cloud-based infrastructure, networking, online collaboration tools and the hardware on which they run. Finally, a low interest rate environment boosts the valuations of long duration assets, such as growth sectors, a prime example of which is technology.

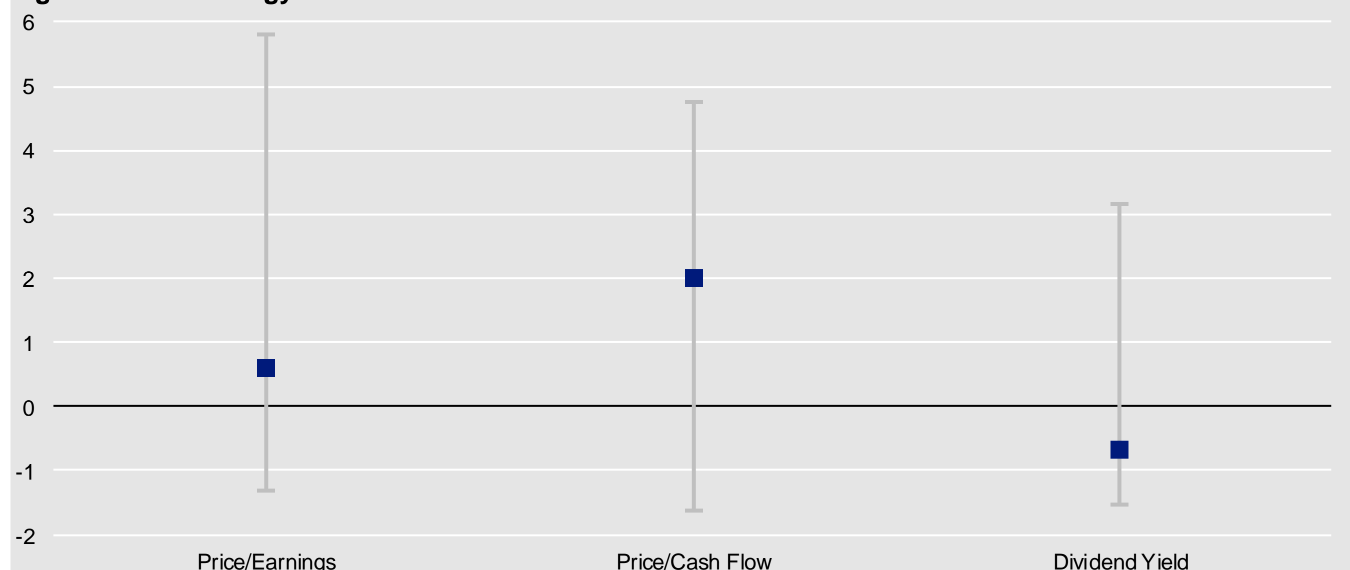
It is also one of only three sectors that have gone above their pre-pandemic peak (the other two are healthcare and retailers). For the moment, technology seems unstoppable, which is why we are worried that our Overweight stance on the sector in our model sector allocation may be unsustainable. Would we still be buyers of the sector after such a strong run?

It is clearly difficult to make the case for technology using valuations, in our view. We compare three valuation metrics in **Figure 2** using their z-scores to show how cheap or expensive they are compared to their respective historical averages. All three suggest that the sector is more expensive than its long-term average. Interestingly, while the price/earnings ratio and dividend yield imply only a slight premium (just over 0.5 standard deviation), the price/cash flow ratio suggests it is more significantly overvalued. This could be concerning if it signals inefficiency in converting accounting profits into cash. Nevertheless, none of the valuation metrics suggest the extremes reached during the dotcom bubble.

When we decompose year-to-date total returns, it is evident that returns in global equities have been mostly driven by dividend growth. However, technology sector returns have been supported by positive sentiment (multiple expansion), despite a decline in dividends, which is nonetheless more limited than for the broader market. Therefore, we are not surprised that sector valuations look rich as expectations of future growth (in both absolute terms and relative to other sectors) may have been priced in.

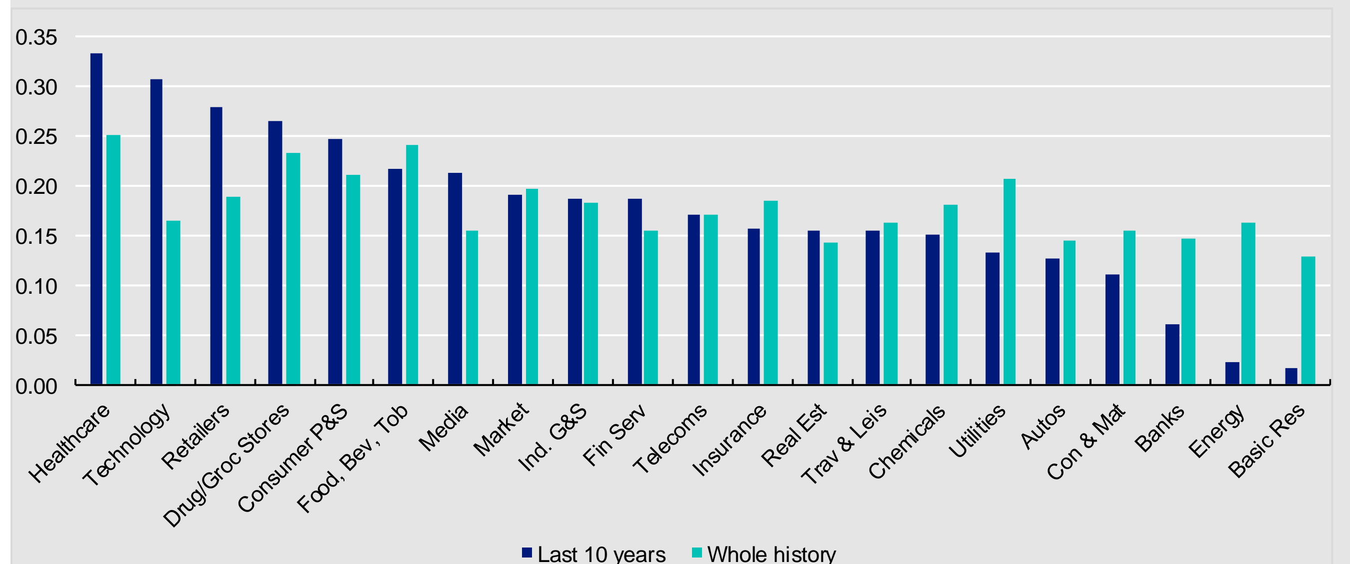
Having said that, we are struggling to find cheap defensive sectors, especially if current market trends continue. Certain structural trends have been accelerated by the pandemic and the resulting recession, for example growing migration of corporate data processing into the cloud, remote working, automated service offerings, cybersecurity, the growing need for healthcare, online retail and entertainment. The list goes on, and our view is that investors positioned for these trends will not easily rotate into

Figure 2 – Technology sector valuation z-scores



Notes: Z-scores denote the distance from averages in standard deviation. 0 = average. We use the Datastream World Technology index. Data as at 30th June 2020. Source: Refinitiv Datastream and Invesco.

Figure 3 – Risk-adjusted returns for global sectors



Notes: We show average monthly total returns divided by the standard deviation of those return for the same period using Datastream World sector indices. Whole history includes the period from 31st January 1973 to 30th June 2020. The last 10 years include 30th June 2010 to 30th June 2020. Past performance is not a guide to future returns. Source: Refinitiv Datastream and Invesco.

"old economy" sectors on the basis of a fragile-looking recovery.

Nevertheless, we cannot rule out that the technology sector will lose its leadership and continuing to have an Overweight allocation to the sector is not without risks. Longer-term risks include that growth sectors may go out of favour if fiscal stimulus introduced to combat the crisis generates inflation and central banks start raising rates. Technology may also become more embedded in the day-to-day operations of other parts of the economy, which would blur the distinction between technology and other sectors as seen in retailers or media, for example.

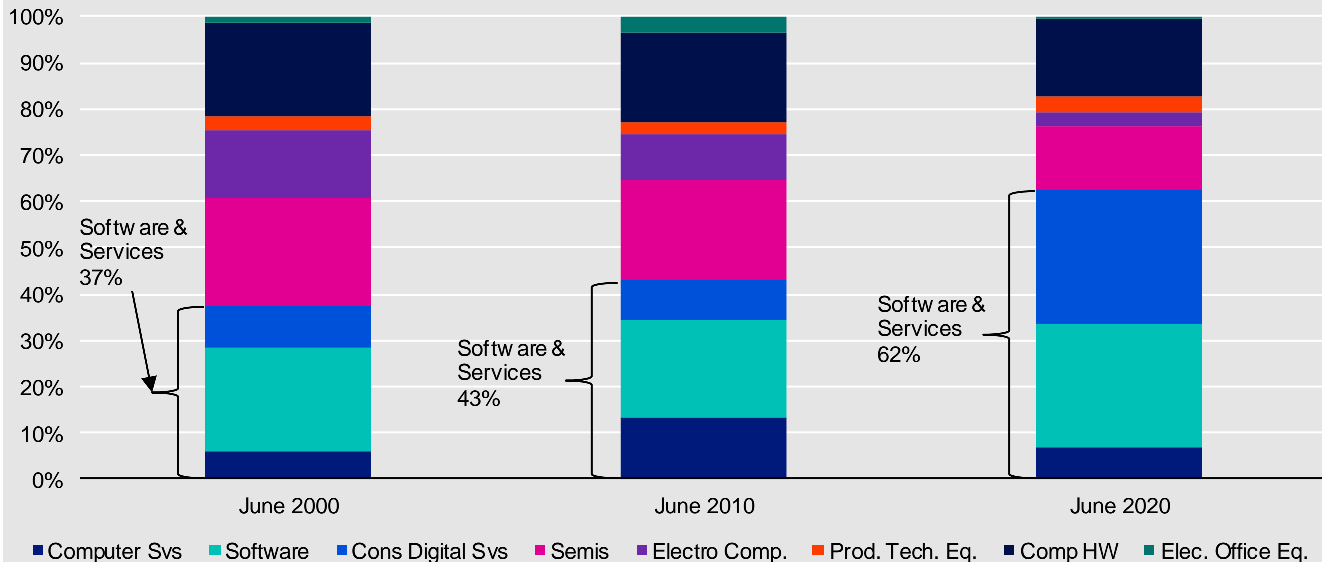
A more short-term threat may come with the intensification of campaigning in the run-up to November's presidential election in the US. Social media looks like an early target for advertisers and regulators. Also, the bigger that technology firms become, the more likely they will become the victims of their own success if calls for heavier regulations are heeded. Nor should we forget that US-China relations may have a significant impact if supply chains must be relocated or if the internet becomes more fragmented and localised.

One way to balance risk with return potential and to hedge our cyclical exposure in our model portfolio, is to use assets and sectors with high risk-adjusted returns. Among sectors, such lists are dominated by traditional defensives when considering how they have performed since 1973, (see "Whole history" in **Figure 3**). The only exception is telecommunications. In that period, technology's risk adjusted returns were lower than that of the market. However, in the last ten years, technology became second only to healthcare from this point of view. In this period, technology had both a higher average monthly return and lower volatility than during the whole history.

We think this may be related to the changing composition of the technology sector (see **Figure 4** on the next page). In 2000, the sector was dominated by what we consider hardware manufacturers, which accounted for 63% of the index. The balance within the sector completely reversed by 2020 and what we call software and services now has a 62% weight. This subsector has had higher growth rates and has been more resilient to fluctuations in the business cycle. Perhaps it has also made the sector less reliant on global trade.

It is possible that the sector could once again become more cyclical, but its exposure to structural trends and relative resilience in the face of the COVID-19 crisis (compared to the market) are compelling arguments in our view. Technology may even continue to outperform most traditional defensive sectors over the whole cycle, which tended to underperform in recoveries. Therefore, we think it is still worth paying up for owning it to give us the potential to mitigate downside risk in a changing world.

Figure 4 – Global technology sector composition



Notes: We show level 6 subsectors using Datastream World indices. Computer Svs = Computer Services. Cons Digital Svs = Consumer Digital Services. Semis = Semiconductors. Electro Comp = Electronic Components. Prod Tech Eq = Production Technology Equipment. Comp HW = Computer Hardware. Elec. Office Eq = Electronic Office Equipment. Data as at 30th June 2020.
Source: Refinitiv Datastream and Invesco

Figure 5 – Asset class total returns (%, annualised)

Data as at 03/07/2020		Current	Total Return (USD, %)					Total Return (Local Currency, %)				
	Index	Level/RY	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Equities												
World	MSCI	532	3.3	0.9	1.5	-4.6	2.6	3.1	0.8	1.3	-3.8	3.2
Emerging Markets	MSCI	1033	3.7	5.1	4.0	-6.1	0.2	3.4	5.2	3.6	-2.0	4.6
US	MSCI	3011	4.1	0.7	1.1	-1.1	7.5	4.1	0.7	1.1	-1.1	7.5
Europe	MSCI	1556	2.3	-0.5	1.5	-11.1	-5.9	1.7	-0.7	1.2	-10.2	-6.1
Europe ex-UK	MSCI	1941	2.6	0.6	1.7	-7.1	-1.6	2.2	0.1	1.6	-7.6	-2.1
UK	MSCI	904	1.2	-4.4	0.7	-22.7	-18.0	0.0	-3.4	-0.2	-17.9	-17.4
Japan	MSCI	3162	-1.3	-1.1	0.2	-6.7	2.1	-1.1	-2.3	-0.1	-7.7	1.9
Government Bonds												
World	BofA-ML	0.28	-0.1	1.0	0.1	4.2	4.2	-0.2	0.7	-0.1	4.3	4.4
Emerging Markets	BBloom	5.19	1.1	2.9	1.2	-1.5	0.5	1.1	2.9	1.2	-1.5	0.5
US (10y)	Datastream	0.67	-0.3	1.0	-0.2	14.4	16.0	-0.3	1.0	-0.2	14.4	16.0
Europe	Bofa-ML	0.07	0.2	1.7	0.0	2.1	2.3	-0.1	1.5	-0.1	1.9	2.7
Europe ex-UK (EMU, 10y)	Datastream	-0.47	-0.1	1.3	-0.2	3.0	0.7	-0.4	1.1	-0.3	2.8	1.1
UK (10y)	Datastream	0.14	1.1	-0.3	0.7	0.4	5.4	-0.1	0.8	-0.2	6.7	6.2
Japan (10y)	Datastream	0.02	-0.2	1.2	0.4	0.8	-1.3	0.0	0.0	0.1	-0.3	-1.5
IG Corporate Bonds												
Global	BofA-ML	1.89	0.5	2.0	0.4	3.1	5.9	0.3	2.0	0.3	3.5	6.2
Emerging Markets	BBloom	4.88	0.0	2.8	0.3	1.6	7.3	0.0	2.8	0.3	1.6	7.3
US	BofA-ML	2.22	0.4	2.4	0.4	5.3	9.2	0.4	2.4	0.4	5.3	9.2
Europe	BofA-ML	0.89	0.4	1.4	0.2	-1.0	-1.0	0.1	1.2	0.1	-1.1	-0.7
UK	BofA-ML	1.97	1.4	1.0	1.1	-2.7	4.6	0.2	2.0	0.2	3.4	5.4
Japan	BofA-ML	0.52	-0.2	1.3	0.4	0.7	-0.4	0.0	0.1	0.0	-0.4	-0.6
HY Corporate Bonds												
Global	BofA-ML	6.62	0.5	0.5	0.7	-3.6	-0.1	0.4	0.4	0.7	-3.5	0.0
US	BofA-ML	6.80	0.5	-0.3	0.8	-4.0	-0.5	0.5	-0.3	0.8	-4.0	-0.5
Europe	BofA-ML	4.64	0.7	1.1	0.5	-4.5	-2.5	0.4	0.9	0.4	-4.6	-2.1
Cash (Overnight LIBOR)												
US		0.08	0.0	0.0	0.0	0.3	1.3	0.0	0.0	0.0	0.3	1.3
Euro Area		-0.57	0.3	0.1	0.1	0.0	-0.8	0.0	0.0	0.0	-0.3	-0.5
UK		0.05	1.2	-0.7	0.7	-5.7	-0.2	0.0	0.0	0.0	0.2	0.5
Japan		-0.07	-0.3	1.3	0.4	1.0	0.2	0.0	0.0	0.0	-0.1	-0.1
Real Estate (REITs)												
Global	FTSE	1617	4.0	-1.1	2.9	-18.8	-15.1	3.6	-1.3	2.8	-18.9	-14.8
Emerging Markets	FTSE	2040	7.4	6.6	8.6	-15.5	-10.1	7.0	6.4	8.5	-15.6	-9.8
US	FTSE	2565	5.1	-2.4	2.1	-19.0	-16.1	5.1	-2.4	2.1	-19.0	-16.1
Europe ex-UK	FTSE	3114	3.2	-2.4	2.7	-15.6	-6.2	2.8	-2.6	2.6	-15.7	-5.8
UK	FTSE	1142	2.8	-6.4	2.6	-27.4	-10.4	1.6	-5.4	1.7	-22.9	-9.7
Japan	FTSE	2341	-1.3	-4.6	0.7	-20.9	-14.8	-1.2	-5.8	0.3	-21.7	-15.0
Commodities												
All	GSCI	1688	4.6	5.1	2.3	-34.9	-31.7	-	-	-	-	-
Energy	GSCI	238	6.3	8.0	3.6	-52.1	-48.6	-	-	-	-	-
Industrial Metals	GSCI	1126	1.3	5.5	0.5	-7.6	-4.9	-	-	-	-	-
Precious Metals	GSCI	2055	0.6	4.7	-0.7	14.9	23.6	-	-	-	-	-
Agricultural Goods	GSCI	305	4.9	1.0	1.0	-12.5	-14.2	-	-	-	-	-
Currencies (vs USD)*												
EUR		1.12	0.3	0.1	0.1	0.3	-0.3	-	-	-	-	-
JPY		107.51	-0.3	1.3	0.4	1.0	0.3	-	-	-	-	-
GBP		1.25	1.2	-1.0	0.9	-5.9	-0.8	-	-	-	-	-
CHF		1.06	0.2	1.6	0.1	2.3	4.3	-	-	-	-	-
CNY		7.07	0.2	0.7	0.0	-1.5	-2.6	-	-	-	-	-

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

Data as at 03/07/2020	Global				
	1w	1m	QTD	YTD	12m
Energy	**-0.9**	**-5.7**	**-0.4**	**-25.7**	**-28.9**
Basic Materials	**-0.5**	**-0.5**	**-0.4**	**-1.2**	**-1.3**
Basic Resources	-0.9	0.2	-0.9	-1.2	0.9
Chemicals	0.0	-1.3	0.1	-1.4	-4.1
Industrials	**-0.2**	**-2.2**	**-0.5**	**-4.6**	**-4.9**
Construction & Materials	-0.2	-1.3	-0.1	-6.0	-4.2
Industrial Goods & Services	-0.2	-2.3	-0.6	-4.4	-5.1
Consumer Discretionary	**0.7**	**1.1**	**0.5**	**4.5**	**3.3**
Automobiles & Parts	1.4	2.0	1.2	-0.5	1.3
Media	0.7	-1.1	0.3	-4.5	-5.3
Retailers	1.3	4.7	0.8	23.0	21.1
Travel & Leisure	0.0	-6.9	-0.1	-20.9	-23.1
Consumer Products & Services	-0.3	0.9	0.1	4.8	4.4
Consumer Staples	**-1.0**	**-1.2**	**-0.6**	**-0.4**	**-3.4**
Food, Beverage & Tobacco	-1.1	-1.9	-0.5	-3.7	-9.2
Personal Care, Drug & Grocery Stores	-0.9	0.1	-0.8	5.8	4.6
Healthcare	**-0.6**	**0.1**	**-0.2**	**12.0**	**16.9**
Financials	**-0.8**	**-3.0**	**-0.5**	**-16.7**	**-17.2**
Banks	-1.1	-3.5	-0.3	-22.3	-23.0
Financial Services	-0.3	-2.3	-0.5	-8.3	-7.5
Insurance	-0.8	-3.1	-0.7	-14.8	-16.1
Real Estate	**0.9**	**-0.7**	**1.5**	**-7.8**	**-8.8**
Technology	**1.2**	**6.2**	**0.4**	**23.2**	**28.7**
Telecommunications	**-1.1**	**-1.4**	**-0.3**	**1.7**	**-1.5**
Utilities	**0.8**	**-2.9**	**0.9**	**-1.5**	**-2.4**

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 7 – Model asset allocation

	Neutral	Policy Range		Allocation	Position vs Neutral	Hedged	Currency
Cash	**5%**	**0-10%**	↑	**10%**			
Cash	2.5%			10%			
Gold	2.5%		↓	0%			
Bonds	**45%**	**10-80%**	↑	**51%**			
Government	30%	10-50%	↑	25%			
US	10%		↑	12%			
Europe ex-UK (Eurozone)	8%			0%			
UK	2%		↑	4%			
Japan	8%		↑	5%			
Emerging Markets	2%			4%			
Corporate IG	10%	0-20%		20%			
US Dollar	5%			10%			
Euro	2%			2%			
Sterling	1%			4%			
Japanese Yen	1%			1%			
Emerging Markets	1%			3%			
Corporate HY	5%	0-10%	↑	6%			
US Dollar	4%		↑	6%			
Euro	1%			0%			
Equities	**40%**	**20-60%**	↓	**25%**			
US	24%			14%			
Europe ex-UK	6%		↓	0%			
UK	3%		↓	3%			
Japan	3%		↓	5%			
Emerging Markets	4%		↑	4%			
Real Estate	**8%**	**0-16%**	↓	**12%**			
US	2%		↓	2%			
Europe ex-UK	2%			2%			
UK	1%		↓	0%			
Japan	2%			5%			
Emerging Markets	1%			3%			
Commodities	**2%**	**0-4%**	↓	**2%**			
Energy	1%		↓	1%			
Industrial Metals	0.3%		↓	0%			
Precious Metals	0.3%			0%			
Agriculture	0.3%			1%			
Total	**100%**			**100%**			

Currency Exposure (including effect of hedging)				
USD	49%		↑	51%
EUR	20%		↓	4%
GBP	7%		↓	12%
JPY	15%			18%
EM	8%		↑	14%
Total	**100%**			**100%**

Notes: 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
Energy	**4.1%**	**Overweight**
Basic Materials	**4.0%**	**Neutral**
Basic Resources	2.1%	Underweight
Chemicals	1.9%	Overweight
Industrials	**12.4%**	**Underweight**
Construction & Materials	1.5%	Underweight
Industrial Goods & Services	10.9%	Underweight
Consumer Discretionary	**13.7%**	**Underweight**
Automobiles & Parts	2.0%	Neutral
Media	1.3%	Underweight
Retailers	4.9%	Neutral
Travel & Leisure	1.9%	Underweight
Consumer Products & Services	3.7%	Underweight
Consumer Staples	**8.0%**	**Overweight**
Food, Beverage & Tobacco	5.1%	Overweight
Personal Care, Drug & Grocery Stores	2.9%	Overweight
Healthcare	**11.2%**	**Neutral**
Financials	**15.6%**	**Neutral**
Banks	7.3%	Overweight
Financial Services	4.4%	Neutral
Insurance	3.9%	Underweight
Real Estate	**4.2%**	**Overweight**
Technology	**17.6%**	**Overweight**
Telecommunications	**5.2%**	**Neutral**
Utilities	**4.0%**	**Underweight**

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 7

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 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 JP Morgan emerging markets global composite government bond index.

Corporate investment grade (IG) bonds: Bank of America Merrill Lynch investment grade corporate bond total return indices.

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

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Data as of 30th June 2020 unless stated otherwise.

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