Uncommon truths
A car crash unfolds

The global auto cycle appears to have peaked and not just in China. This was in fact preceded by weakness in global auto share prices and could do more than trade tensions to explain the end-2018 economic deceleration. We suspect that further weakness in sales could raise market volatility.

Something is amiss in the global auto sector. After rising rapidly since the financial crisis, passenger car sales started to flatten in 2016 and then declined towards the end of 2018. Should we be concerned?

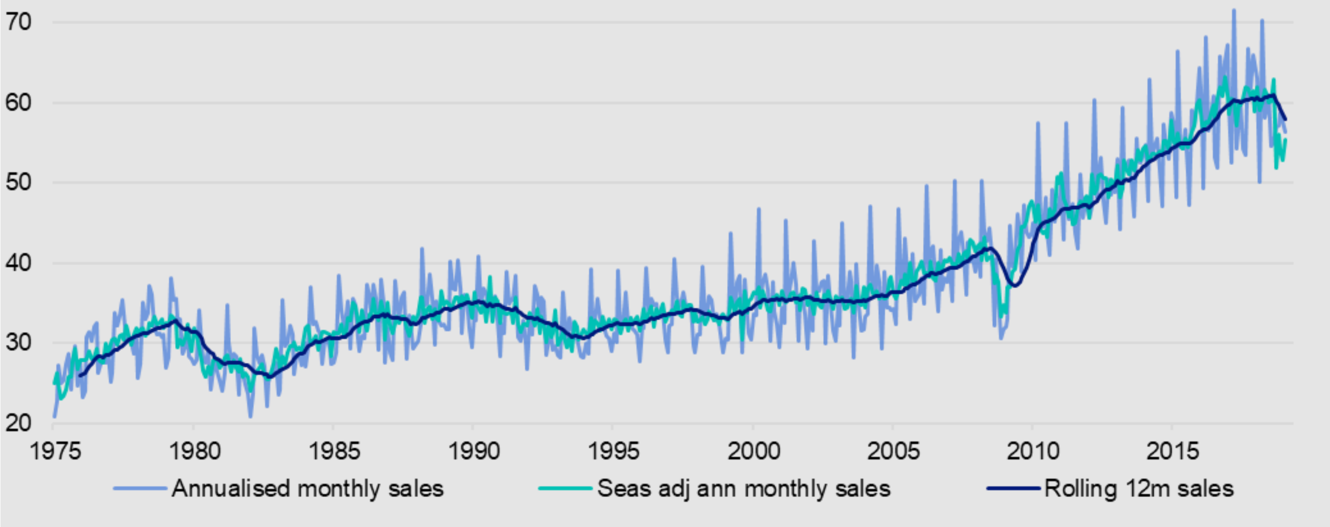
Figure 1 shows our calculation of total passenger car sales, based on a sample of 50 countries. The actual data ("Annualised monthly sales") is extremely volatile and displays clear seasonal patterns. Hence, we have undertaken our own seasonal adjustment process (based on the global aggregate), which gives a smoother time series. Finally, for the sake of completeness, we show a rolling 12-month total of sales, which is the smoothest of the three measures shown but is also the slowest to reflect turning points.

If this cycle of passenger car sales is over, then it peaked in the 12 months to August 2018, just over 10 years since the peak of the previous cycle in the 12 months to July 2008. Over that peak-to-peak period, global sales went from 41.75m to 60.97m (based on our calculations), a gain of 46% or around 3.8% annualised.

Unfortunately, that 12-month running total was down to 58.0m in January 2019 (a decline of 5% since the peak) and seasonally adjusted sales for January 2019 were 12% below those of August 2018. Given the enormous number of sales there, the sharp drop in seasonally adjusted sales in September could be blamed on China, where sales did not enjoy the usual September bounce (they were down 12% versus the previous September). However, there was a year-on-year decline in September in all but six of the fifty countries covered (for example, -16% in the US and -30% in Germany). Something seemed to happen to global auto sales during last summer.

How much of a problem is this for the global economy? Reliable data about the economic contribution of the auto sector are hard to come by and those that exist differ in what they include (auto manufacturers, parts suppliers, broader suppliers such as accountancy firms or the full range of firms that provide goods and services to any of the above). For instance, in 2015 McKinsey estimated that the auto sector accounted for 1.6% of global GDP but those taking a broader view put the contribution in the 3%-4% range (AT Kearney suggested 3% in 2013, for instance).

Figure 1 – Global passenger car sales (millions)



Note: Monthly data from January 1975 to January 2019. Based on an aggregation of country data from Australia, Austria, Belgium, Brazil, Bulgaria, China, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, India, Indonesia, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Norway, Panama, Philippines, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Thailand, Turkey, UK, US, Vietnam. Data exists for all countries since January 2011 and prior to that date the partial global totals are adjusted to compensate for the countries that are missing (and to avoid discontinuities in the data). The last month for which data exists for all countries is October 2018. The global total for subsequent months is calculated by assuming that the year-on-year change in the global total is the same as that for the aggregate of those countries for which data exists "Seas adj" indicates the series is seasonally adjusted to smooth the data. Source: National data sources, OECD, European Automobile Manufacturers' Association, Datastream and Invesco.

The Center for Automotive Research estimates that the sector accounts for 1%-2% of US employment and income (we estimate that US motor vehicle industry gross value added amounted to 2.8% of US GDP in the year to 2018 Q3). The European Automobile Manufacturers' Association reckons that 6% of EU jobs are in or related to the automotive sector (we calculate that 1.8% of German workers are employed directly by auto manufacturers and parts suppliers). Meanwhile, National Bureau of Statistics data suggests that 5.5% of total Chinese jobs were in the auto sector in 2017. Even better, India's Minister of Heavy Industries and Public Enterprises (Anant Geete) stated in May 2018 that 7% of India's GDP can be attributed to the auto industry and that this is expected to rise to 12% over the coming decade.

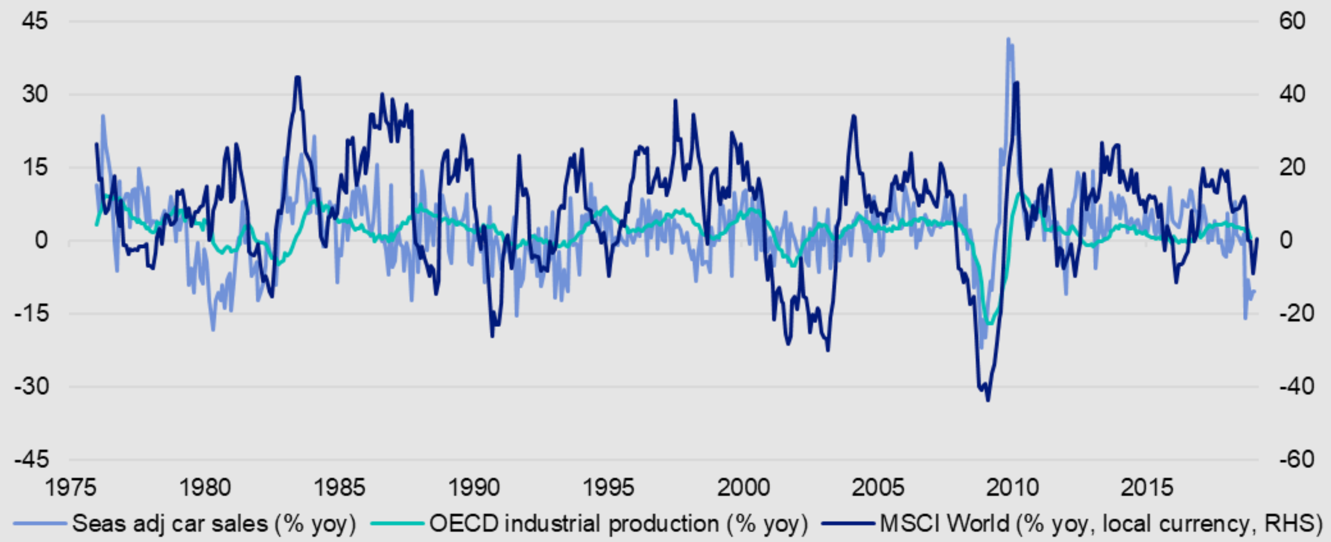
So, the auto sector is not a big part of the global economy but nor is it insignificant. If it accounts for 3% of global GDP, we reckon that a 10% decline in sales could reduce global GDP by 0.5%, after multiplier effects. We guess that exceeds the damage done by the US-China trade dispute and that, if it persists, could be enough to bring global GDP growth below 3%, which could sour financial market psychology.

Figure 2 suggests some (but not perfect) correlation between the growth of world auto sales and OECD industrial production (we calculate it to be 0.31 over the period shown). This is hardly surprising as the auto sector accounts for a sizeable part of industrial output in many countries. Indeed, OECD industrial production already looks to have decelerated and, judging by passenger car sales, more could be on the way (the production data is only up to November 2018).

From an investment perspective, this could be problematic, as we find that in many countries the movement in industrial production is often followed (after a short lag) by a similar trend in total profits. It should then come as little surprise that **Figure 2** also suggests a relationship between auto sales and world stock market performance (the correlation in the period since January 2005 is 0.51, though it was lower in earlier periods). Causality (if there is any) could flow in both directions, as witnessed by the chart, but it seems to have predominantly gone from car sales to equities in recent years. The question is whether the ending of the auto cycle is already in equity markets?

Then the critical issue is whether the auto cycle has already bottomed or whether there is further weakness to come? To answer that, it would be useful to understand why the sudden weakness in sales. Among common explanations are: credit tightening in China, the ending of inventory clear-out sales in Europe before new emissions standards are introduced and the variable timing of annual holidays in India (Navrati festival) and South Korea (Chuseok). However, these are likely to be only temporary factors (China is loosening credit again) and they don't explain the worldwide nature of the slump in sales.

Figure 2 – Global passenger car sales, OECD industrial production and global equities



Monthly data from January 1975 to January 2019 (MSCI World as of 28 February 2019). Based on an aggregation of country sales data from Australia, Austria, Belgium, Brazil, Bulgaria, China, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, India, Indonesia, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Norway, Panama, Philippines, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Thailand, Turkey, UK, US, Vietnam. Data exists for all countries since January 2011, prior to which partial global totals are adjusted to compensate for countries that are missing (and to avoid discontinuities in the data). The last month for which data exists for all countries is October 2018. The global total for subsequent months is calculated assuming that year-on-year growth in the global total is the same as for those countries for which data exists "Seas adj" indicates the series is seasonally. Past performance is not a guide to future returns. Source: National data sources, OECD, European Automobile Manufacturers' Association, Datastream, MSCI and Invesco.

Figure 2 shows that the 16% year-on-year decline in passenger car sales in September is comparable to most of the lows seen over recent decades but we think a better measure of distress in the auto industry is the top-to-bottom decline in the 12-month running total of sales. As mentioned above, the decline so far on that measure has been only 5%, much less than three largest declines since the mid-1970s: 21% (May 1979-October 1982), 13% (March 1990 to December 1993) and 11% (July 2008 to May 2009). If sales stabilised at the January 2019 level, the top-to-bottom decline in the 12-month running total would be only 8%. History suggests that if the global auto cycle is over, sales could go much lower.

So, is it possible that the 10-year upswing in car sales really is at an end, perhaps aided by the reticence of car owners to replace their hydrocarbon fuelled cars until electric versions are more advanced and cheaper (thus lengthening the replacement cycle)? **Figure 3** suggests that financial markets think so, based on the performance of automobile stocks (there was a 0.94 correlation between car sales and the performance of auto stocks over the period shown in the chart).

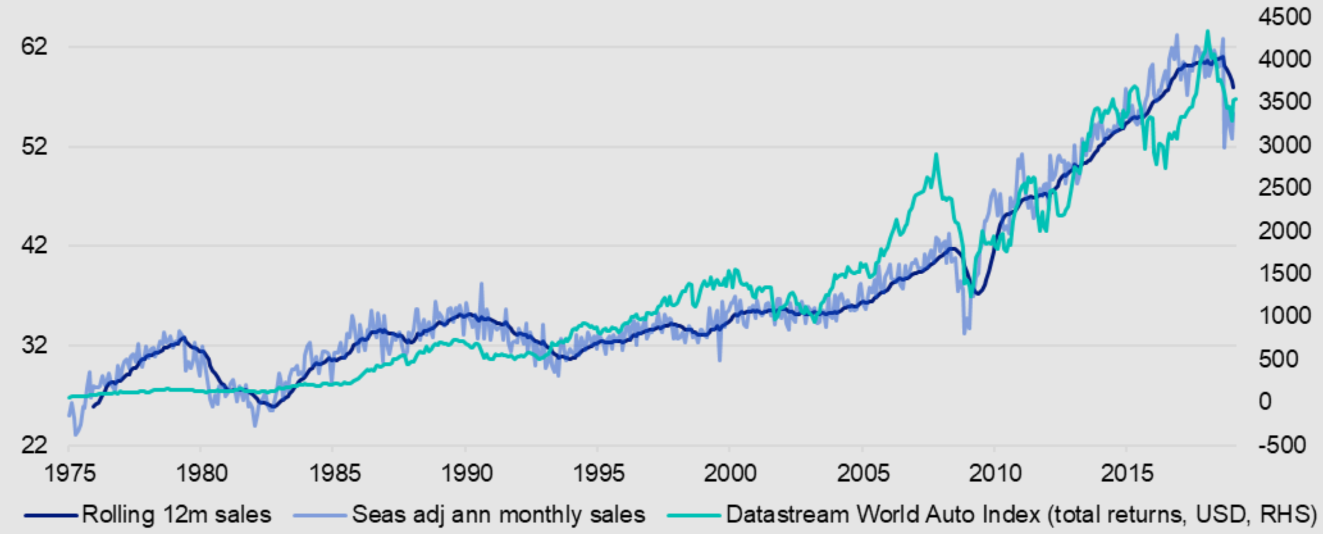
Interestingly, auto stocks peaked in January 2018, well before the peak in car sales in August (based on our seasonally adjusted series) and before broad global equity indices peaked in September (equity peaks are based on month-end data). A similar pattern was observed prior to the global financial crisis, with the share prices of auto companies peaking in June 2007, four months prior to the October 2007 peak in both passenger car sales and global equity indices. However, the 24% loss on global auto shares between end-January and end-December 2018 was less than half the 53% June 2007-February 2009 top-to-bottom loss (and the 40% March 2000-March 2003 loss).

Those historical examples may suggest that auto stocks (and by implication car sales) have further to fall but they could both be viewed as outlier stock market examples (the ending of the dot.com bubble and the global financial crisis). Further, **Figure 3** also suggests that auto stocks are an imperfect guide to the future path of car sales and that both have stabilised in 2019.

Our conclusion is that there is good reason to suspect the global auto cycle has peaked, which could point to a deceleration of global GDP to a growth rate of 3% or below if sales continue to fall (consensus estimates suggest GDP growth of around 3.5%). If that proves to be the case, we believe it could add to financial market volatility and could limit the returns on risk assets. We need to bear that in mind as we begin our quarterly asset allocation process but our central scenario for 2019 was always predicated upon 3% global GDP growth, so we may not have to change a great deal.

Unless stated otherwise, all data as of 7 March 2019.

Figure 3 – Global passenger car sales (millions) and the performance of automobile stocks



Note: Monthly data from January 1975 to January 2019 (stock market data as of 28 February 2019). Based on an aggregation of country sales data from Australia, Austria, Belgium, Brazil, Bulgaria, China, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, India, Indonesia, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Norway, Panama, Philippines, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Thailand, Turkey, UK, US, Vietnam. Data exists for all countries since January 2011 and prior to that date the partial global totals are adjusted to compensate for the countries that are missing (and to avoid discontinuities in the data). The last month for which data exists for all countries is October 2018. The global total for subsequent months is calculated by assuming that the year-on-year change in the global total is the same as that for the aggregate of those countries for which data exists "Seas adj" indicates the series is seasonally adjusted to smooth the data. Past performance is not a guide to future returns.
Source: National data sources, OECD, European Automobile Manufacturers' Association, Datastream and Invesco.

Figure 4 – Asset class total returns

Data as at 07/03/2019	Index	Current Level/RY	Total Return (USD, %) 1w	1m	QTD	YTD	12m	Total Return (Local Currency, %) 1w	1m	QTD	YTD	12m
Equities												
World	MSCI	498	-1.0	1.8	9.7	9.7	-1.2	-0.6	2.2	9.9	9.9	1.9
Emerging Markets	MSCI	1044	-0.7	0.3	8.3	8.3	-9.7	-0.1	1.1	8.2	8.2	-4.2
US	MSCI	2621	-1.3	1.8	10.4	10.4	2.8	-1.3	1.8	10.4	10.4	2.8
Europe	MSCI	1615	-0.8	3.1	9.3	9.3	-5.5	0.6	3.6	10.1	10.1	2.9
Europe ex-UK	MSCI	1894	-1.1	3.1	8.8	8.8	-7.1	0.2	4.2	11.1	11.1	2.2
UK	MSCI	1129	0.0	3.0	10.7	10.7	-1.3	1.4	1.9	7.5	7.5	4.6
Japan	MSCI	3094	-0.6	0.3	5.5	5.5	-7.6	-0.4	2.0	7.2	7.2	-2.8
Government Bonds												
World	BofA-ML	1.23	0.0	-0.3	0.3	0.3	-1.9	0.5	0.4	1.0	1.0	2.9
Emerging Markets	JPM	6.53	-1.5	-1.9	2.8	2.8	-7.2	0.1	0.3	2.2	2.2	4.6
US (10y)	Datastream	2.64	0.8	0.4	1.2	1.2	5.0	0.8	0.4	1.2	1.2	5.0
Europe	Bofa-ML	0.72	-0.3	0.2	0.8	0.8	-5.9	1.1	1.3	2.6	2.6	3.9
Europe ex-UK (EMU, 10y)	Datastream	0.07	-0.2	-0.6	0.5	0.5	-2.8	1.2	0.5	2.3	2.3	7.4
UK (10y)	Datastream	1.17	-0.1	1.3	4.2	4.2	-0.2	1.3	0.2	1.2	1.2	5.7
Japan (10y)	Datastream	-0.01	-0.4	-1.6	-1.4	-1.4	-4.1	-0.2	0.0	0.2	0.2	0.9
IG Corporate Bonds												
Global	BofA-ML	3.11	0.1	0.3	2.5	2.5	-0.1	0.5	0.6	2.8	2.8	3.0
US	BofA-ML	3.93	0.5	0.6	3.0	3.0	3.4	0.5	0.6	3.0	3.0	3.4
Europe	BofA-ML	1.06	-1.0	-0.5	0.4	0.4	-8.1	0.4	0.6	2.2	2.2	1.4
UK	BofA-ML	2.78	-0.1	2.0	6.4	6.4	-2.5	1.3	0.9	3.3	3.3	3.2
Japan	BofA-ML	0.39	-0.2	-1.5	-1.5	-1.5	-4.6	0.0	0.1	0.1	0.1	0.4
HY Corporate Bonds												
Global	BofA-ML	6.54	-0.4	1.0	5.3	5.3	1.6	-0.1	1.2	5.6	5.6	3.4
US	BofA-ML	6.91	-0.3	1.1	6.1	6.1	4.3	-0.3	1.1	6.1	6.1	4.3
Europe	BofA-ML	4.10	-1.3	0.5	2.4	2.4	-8.8	0.1	1.6	4.2	4.2	0.7
Cash (Overnight LIBOR)												
US		2.39	0.0	0.2	0.4	0.4	2.0	0.0	0.2	0.4	0.4	2.0
Euro Area		-0.47	-1.6	-1.3	-2.5	-2.5	-10.2	0.0	0.0	-0.1	-0.1	-0.4
UK		0.68	-1.3	1.1	2.7	2.7	-5.3	0.0	0.1	0.1	0.1	0.6
Japan		-0.08	-0.2	-1.6	-1.8	-1.8	-5.0	0.0	0.0	0.0	0.0	-0.1
Real Estate (REITs)												
Global	FTSE	1887	0.0	-0.5	10.5	10.5	9.3	1.4	0.6	12.5	12.5	20.7
Emerging Markets	FTSE	2225	1.7	-0.5	9.5	9.5	-5.6	3.1	0.6	11.5	11.5	4.3
US	FTSE	3009	-0.5	-1.2	11.6	11.6	17.9	-0.5	-1.2	11.6	11.6	17.9
Europe ex-UK	FTSE	3350	-0.3	-2.8	5.6	5.6	-2.5	1.1	-1.7	7.5	7.5	7.7
UK	FTSE	1391	-1.7	2.2	14.1	14.1	-2.7	-0.3	1.1	10.8	10.8	3.1
Japan	FTSE	2652	0.5	-0.3	5.2	5.2	6.5	0.7	1.3	6.9	6.9	12.1
Commodities												
All	GSCI	2475	-0.7	3.6	12.3	12.3	-2.8	-	-	-	-	-
Energy	GSCI	467	-0.2	7.9	21.8	21.8	2.4	-	-	-	-	-
Industrial Metals	GSCI	1267	-1.7	0.9	6.7	6.7	-8.5	-	-	-	-	-
Precious Metals	GSCI	1520	-2.4	-2.2	-0.1	-0.1	-4.4	-	-	-	-	-
Agricultural Goods	GSCI	331	-2.3	-6.8	-5.1	-5.1	-18.4	-	-	-	-	-
Currencies (vs USD)*												
EUR		1.12	-1.6	-1.3	-2.4	-2.4	-9.8	-	-	-	-	-
JPY		111.60	-0.2	-1.6	-1.8	-1.8	-4.9	-	-	-	-	-
GBP		1.31	-1.4	1.1	3.0	3.0	-5.6	-	-	-	-	-
CHF		0.99	-1.3	-0.9	-2.9	-2.9	-6.7	-	-	-	-	-
CNY		6.71	-0.3	0.4	2.4	2.4	-5.8	-	-	-	-	-

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: Datastream and Invesco

Figure 5 – Equity sector total returns relative to local market (%)

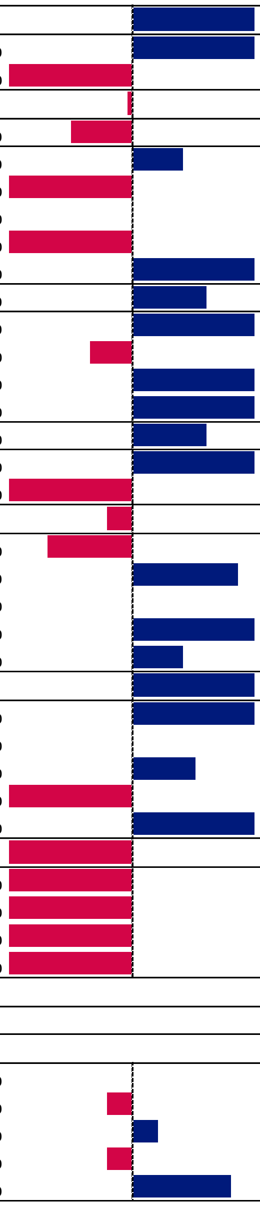
Data as at 07/03/2019	US					Europe				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Oil & Gas	**1.1**	**1.4**	**3.4**	**3.4**	**-2.6**	**0.7**	**-0.5**	**0.8**	**0.8**	**12.5**
Materials	**0.5**	**1.7**	**-1.8**	**-1.8**	**-9.9**	**-0.4**	**1.0**	**1.9**	**1.9**	**-1.9**
Basic Resources	-1.9	-1.1	-0.9	-0.9	-21.3	0.1	-0.1	5.2	5.2	1.7
Chemicals	0.3	2.0	-3.3	-3.3	-8.0	-0.8	1.8	-0.2	-0.2	-4.2
Industrials	**-1.3**	**0.2**	**5.0**	**5.0**	**-3.3**	**-0.8**	**0.3**	**1.4**	**1.4**	**-3.0**
Construction & Materials	2.0	4.3	8.4	8.4	-8.3	-0.5	1.2	2.7	2.7	-3.6
Industrial Goods & Services	-1.1	0.5	5.4	5.4	-3.0	-0.9	0.1	1.0	1.0	-2.9
Consumer Discretionary	**0.3**	**-0.4**	**0.0**	**0.0**	**2.1**	**-1.2**	**0.2**	**1.5**	**1.5**	**-4.4**
Automobiles & Parts	-1.3	-0.3	5.1	5.1	-9.7	-2.7	-0.3	-0.3	-0.3	-21.2
Media	2.8	0.7	4.0	4.0	3.2	-1.3	-0.5	-2.5	-2.5	7.1
Retail	-0.2	-1.3	-2.4	-2.4	4.3	0.1	0.3	5.3	5.3	7.9
Travel & Leisure	-0.7	-1.0	-1.7	-1.7	3.6	-1.0	-4.6	-3.5	-3.5	-7.4
Consumer Staples	**0.3**	**-0.8**	**-3.2**	**-3.2**	**0.7**	**2.4**	**1.9**	**2.6**	**2.6**	**7.1**
Food & Beverages	0.8	-3.7	-6.0	-6.0	-3.7	2.7	2.1	3.2	3.2	11.9
Personal & Household Goods	1.3	2.8	3.4	3.4	1.5	2.3	1.8	2.2	2.2	3.9
Healthcare	**-1.0**	**-2.0**	**-5.8**	**-5.8**	**4.6**	**1.3**	**0.8**	**-0.5**	**-0.5**	**12.8**
Financials	**-0.9**	**-1.2**	**-0.9**	**-0.9**	**-10.9**	**-1.9**	**-1.1**	**-1.9**	**-1.9**	**-12.0**
Banks	-0.8	-1.2	1.7	1.7	-14.8	-2.9	-1.1	-3.6	-3.6	-21.3
Financial Services	-1.2	-0.5	-0.3	-0.3	-12.3	-0.8	-2.4	-1.4	-1.4	-6.1
Insurance	-0.9	-0.3	0.6	0.6	-3.7	-1.0	0.4	0.8	0.8	2.8
Real Estate	1.5	-1.1	2.0	2.0	15.0	0.4	-4.6	-1.3	-1.3	1.8
Technology	**-0.2**	**1.5**	**2.4**	**2.4**	**0.4**	**-0.5**	**-0.2**	**1.4**	**1.4**	**-3.3**
Telecommunications	**2.0**	**0.7**	**1.8**	**1.8**	**-0.1**	**0.9**	**-1.9**	**-11.1**	**-11.1**	**-6.5**
Utilities	**1.9**	**1.7**	**-1.5**	**-1.5**	**18.1**	**1.4**	**-1.9**	**-0.5**	**-0.5**	**17.0**

Notes: showing annualised returns. We use a sector classification created by merging the two main systems used by Standard & Poor's (S&P) for the US and STOXX for Europe. We have decided to classify our 10 top level industries using categories that most closely resemble the Global Industry Classification Standard (GICS) and at the level below that (super sectors) we are using the Industry Classification Benchmark (ICB). The former is used for the S&P 500 index and the latter for the STOXX 600, our benchmark indices. The two systems overlap in most cases and the only material difference seems to be in the consumer sectors. Therefore, we define consumer staples as the aggregate of personal & household goods and food & beverage, while consumer discretionary includes automobiles & parts, media, retail and travel & leisure. For the rest, we assume 100% overlap for the corresponding top-level sectors. Past performance is no guarantee of future results.
Source: Datastream and Invesco

Figure 6 – 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%**	**44%**			
Government	30%	10-50%	20%			
US	10%		14%			
Europe ex-UK (Eurozone)	8%		0%			
UK	2%		2%			
Japan	8%		0%			
Emerging Markets	2%		4%			
Corporate IG	10%	0-20%	16%			
US Dollar	5%		10%			
Euro	3%		2%			
Sterling	1%		2%			
Japanese Yen	1%		2%			
Corporate HY	5%	0-10%	8%			
US Dollar	4%		8%			
Euro	1%		0%			
Equities	**45%**	**20-70%**	**40%**			
US	25%		8%			
Europe ex-UK	7%		13%			
UK	4%		4%			
Japan	4%		8%			
Emerging Markets	5%		7%			
Real Estate	**3%**	**0-6%**	**6%**			
US	1%		2%			
Europe ex-UK	1%		1%			
UK	0.5%		1%			
Japan	0.5%		0%			
Emerging Markets	0%		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				
USD	49%		47%	
EUR	21%		18%	
GBP	8%		10%	
JPY	14%		11%	
EM	7%		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.
Source: Invesco

Figure 7 – Model sector allocations

	US		Europe		Preferred
	Neutral	Invesco	Neutral	Invesco	Region
Oil & Gas	**5.1%**	**Overweight**	**6.8%**	**Neutral**	**US**
Materials	**2.3%**	**Neutral**	**6.7%**	**Underweight**	**US**
Basic Resources	0.3%	Underweight	3.0%	Neutral	Europe
Chemicals	2.0%	Neutral	3.7%	Underweight	US
Industrials	**11.8%**	**Underweight**	**13.3%**	**Underweight**	**US**
Construction & Materials	0.4%	Neutral	2.7%	Underweight	US
Industrial Goods & Services	11.4%	Underweight	10.7%	Underweight	US
Consumer Discretionary	**15.6%**	**Underweight**	**9.9%**	**Overweight**	**Europe**
Automobiles & Parts	0.6%	Underweight	3.0%	Overweight	Europe
Media	2.5%	Overweight	2.0%	Underweight	US
Retail	9.7%	Underweight	3.3%	Overweight	Europe
Travel & Leisure	2.8%	Overweight	1.7%	Overweight	US
Consumer Staples	**7.5%**	**Overweight**	**16.6%**	**Overweight**	**Europe**
Food & Beverage	3.4%	Neutral	7.3%	Overweight	Europe
Personal & Household Goods	4.2%	Overweight	9.4%	Overweight	Europe
Healthcare	**14.1%**	**Neutral**	**13.2%**	**Underweight**	**US**
Financials	**17.8%**	**Neutral**	**20.0%**	**Overweight**	**Europe**
Banks	5.6%	Neutral	10.6%	Overweight	Europe
Financial Services	5.8%	Underweight	2.0%	Overweight	Europe
Insurance	3.5%	Neutral	5.6%	Overweight	Europe
Real Estate	2.9%	Overweight	1.8%	Underweight	US
Technology	**20.5%**	**Underweight**	**4.6%**	**Underweight**	**US**
Telecommunications	**2.1%**	**Overweight**	**3.9%**	**Overweight**	**Europe**
Utilities	**3.2%**	**Underweight**	**5.0%**	**Underweight**	**Europe**

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

Definitions of data and benchmarks (for Figure 4)

Sources: we source data from Datastream unless otherwise indicated.

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

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

Government bonds: Current levels, yields and total returns use Datastream benchmark 10-year yields for the US, Eurozone, Japan and the UK, and the 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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