

### What cycle, exactly?

Determining at what point in the business cycle any given economic region resides is certainly more art than science, though that doesn't mean people haven't tried to quantify it!

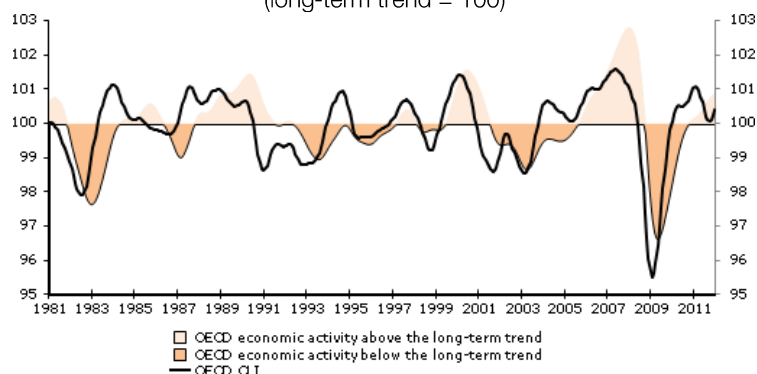
The OECD publishes a series of composite leading indicators (CLI)<sup>1</sup>, designed to provide early signals of turning points in business cycles. It shows fluctuations of economic activity around the long term potential level. CLI indices are published for a variety of countries including all 33 OECD members plus 6 non-member economies (Brazil, China, India, Indonesia, Russia & South Africa).

The component series for each country are selected based on various criteria such as economic significance, cyclical behaviour, data quality, timeliness and availability. Example components are provided for the US and UK in the table below. The full list of countries and indicators can be found in [this link](#).

| US CLI Components   | UK CLI Components   |
|---|---|
| Work started for dwellings sa (number)                      | Services – Demand evolution: future tendency (% balance)                  |
| Net new orders - durable goods sa (USD)                     | Passenger car registrations sa (number)                                   |
| Share prices: NYSE composite (2010=100)                     | Consumer Confidence indicator sa (% balance)                              |
| Consumer Confidence Indicator sa (normal = 100)             | Sterling certificates of deposit interest rate 3 months (% p.a.) inverted |
| Weekly hours worked: manufacturing sa (hours)               | Manufacturing - Finished goods: tendency sa (% balance)                   |
| Manufacturing - Industrial confidence indicator (% balance) | Share prices: FTSE LOCAL UK (£) index (2010=100)                          |
| Spread of interest rates (10y vs Fed Funds) (% p.a.)        |   |

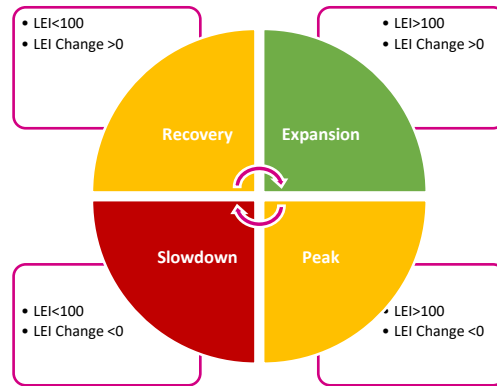
The phases and patterns in CLIs are likely to be followed by the business cycle. The chart below presents the CLI and the estimated business cycle for the whole OECD area. The two series show strong co-movements, with the turning points of the CLI consistently preceding those of the business cycle. Lead times vary but the OECD aims for roughly 6 - 9 months.

OECD area Composite Leading Indicator (CLI) and economic activity  
(long-term trend = 100)



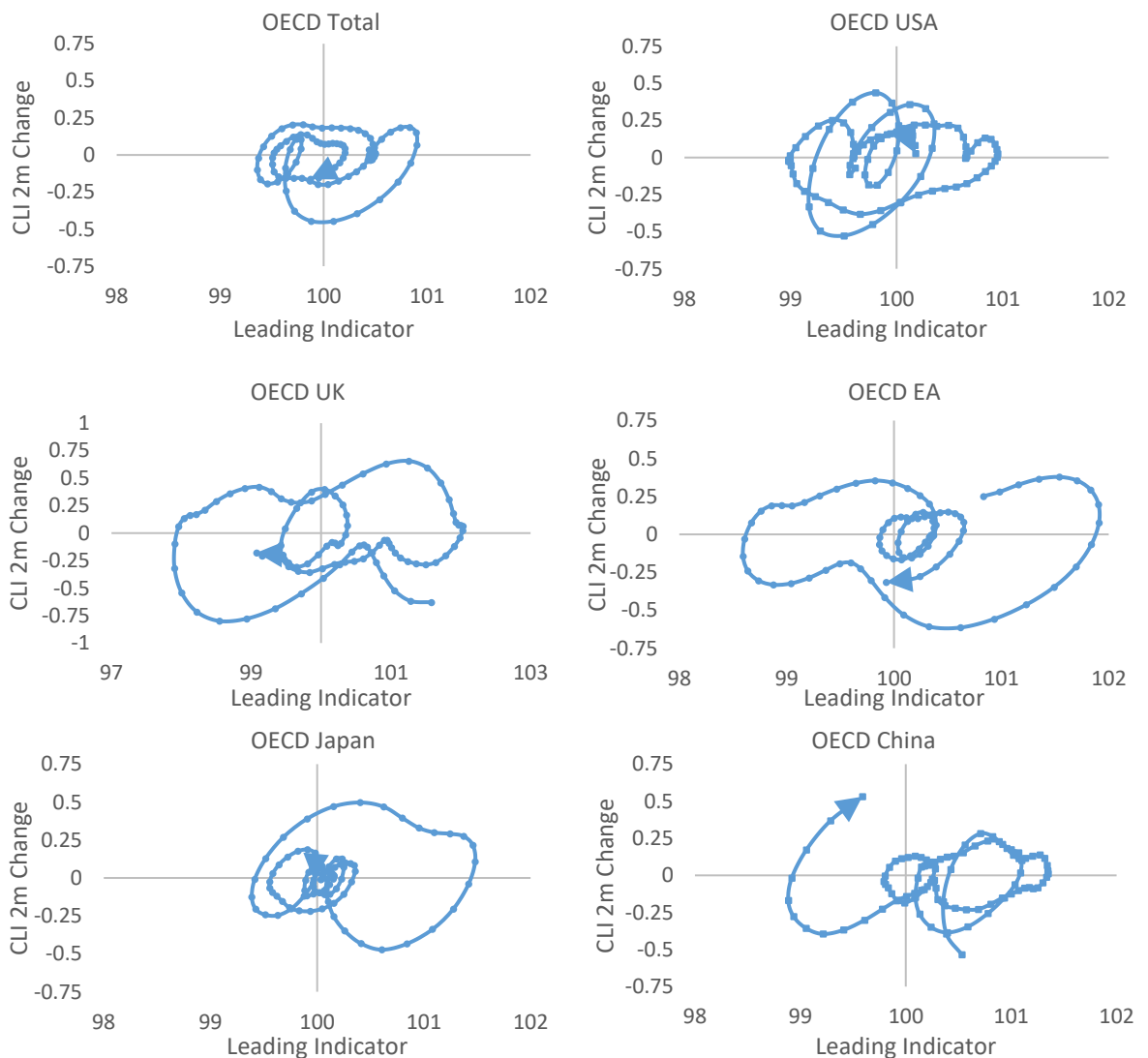
<sup>1</sup> Composite Leading Indicators (CLI) Frequently Asked Questions (FAQs): <http://www.oecd.org/sdd/leading-indicators/compositeleadingindicatorscli Frequently Asked Questions FAQs.htm>

We can chart the Leading Indicator versus its own rate of change. This gives us a framework for the four stages of the business cycle.



### Selected cycles

The charts below show the OECD indicator for the world in aggregate together with selected countries on a monthly basis over the last 100 months where the triangular marker indicates the latest data point.



The following observations can be made:

1. The world economy actually entered a slowdown phase, albeit very marginally.
2. The US is still just about in expansion phase but is bordering on peak.
3. The UK has been in a slowing down since Q2'17. Looking through the components, it is driven by a combination of factors, notably weak consumer confidence and a slight increase in borrowing costs versus BOE policy rates.
4. The overall weak global CLI is driven by Europe that seems to almost be entering a slowdown phase.
5. Japan has circled tightly around the axis origin, neither growing nor shrinking excessively.
6. China had been slowing for several months and over the last quarter has begun its recovery phase.

With the exception of the trajectory of the Euro Area and China, the remainder feels broadly right. So can we use this to help with portfolio strategy?

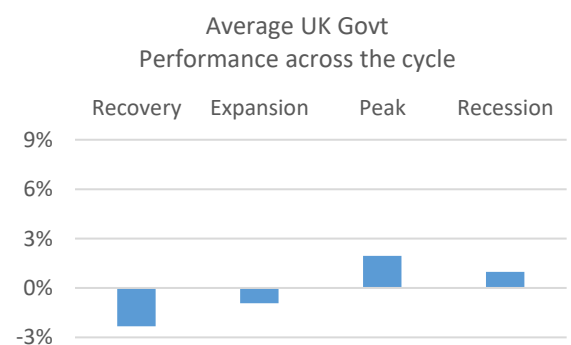
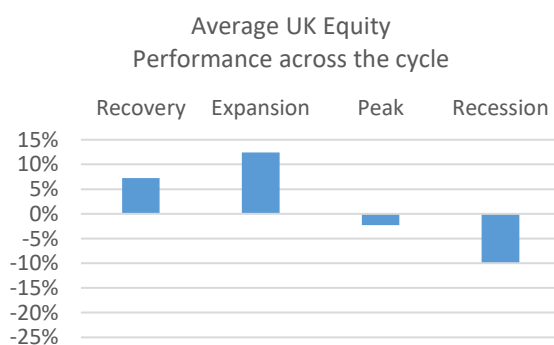
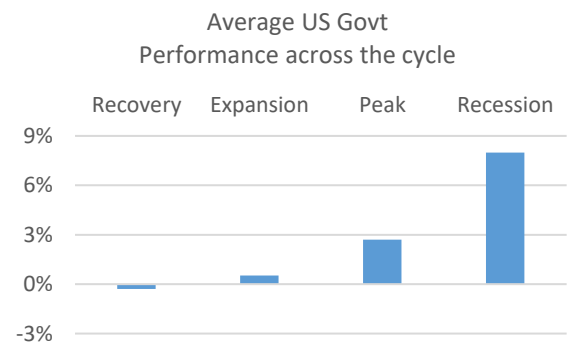
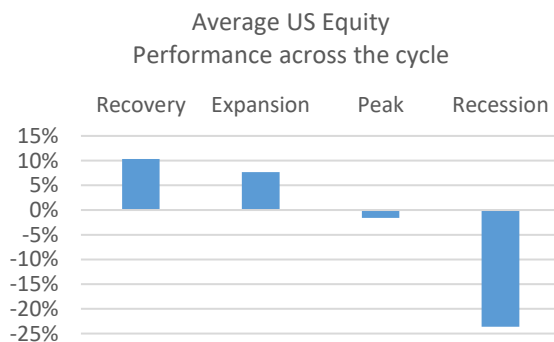
### Other indicators of the cycle

There are of course other indicators of the cycle, the usefulness of which will be investigated in the future. These include:

- M&A volumes
- Bond issuance levels
- Corporate & household leverage levels
- Corporate profits margins
- Default rates & delinquencies

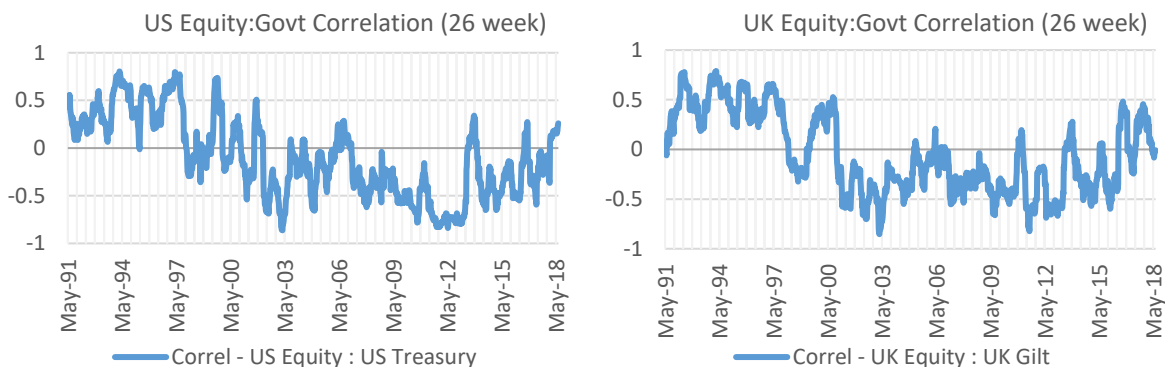
### Portfolio construction through the cycle: equities & bonds

The single biggest question to ask is probably what balance of bonds and equities makes sense. By measuring the total return of equities and bonds since 1990, conditional on cycle stage, we find the following which is thankfully pretty intuitive but also serves to demonstrate there is some value to the CLIs.



So our intuition about how these two asset classes are likely to perform at different stages of the cycle is decent enough. But what about how they are blended together in a portfolio? Bonds go down when

equities go up, right? Clearly, markets are not that simple! Certainly this relationship has been true for the best part of the last two decades but before then it was quite normal for the two asset classes to move together and indeed over the last 1.5 – 2 years it looks as though there could be a shift in correlation structure under way.



The tables below show the average, trailing 26 week (6 month) correlation between equities and government bonds in the US and UK at different times of the business cycle as measured through the CLI, using data from 1990. Knowing when you're likely to make or lose money from an asset is one thing, but the regions in shades of red are when the bond equity correlation has been opposite to intuition from recent times, i.e. they have moved up and down together. This region of the table is the "expansion" phase of the cycle (CLI > 100; CLI change > 0) through which we have just been in the US. The UK is currently in a slow-down phase (CLI < 100; CLI change < 0) when the equity:bond correlation is usually negative.

| US Equity:Bond Correl |        | CLI Change |        |        |        |       |       |       |       |
|-----------------------|--------|------------|--------|--------|--------|-------|-------|-------|-------|
|                       |        | - 1.33     | - 1.00 | - 0.67 | - 0.33 | -     | 0.33  | 0.67  | 1.00  |
| CLI                   | 96.00  | -0.26      |        | -0.26  | -0.38  |       | -0.31 | -0.35 |       |
|                       | 97.00  | -0.25      |        |        |        |       |       |       | -0.52 |
|                       | 98.00  | -0.34      |        |        | -0.41  | -0.64 | -0.77 |       | -0.57 |
|                       | 99.00  | -0.20      |        | -0.18  | -0.20  | 0.12  | 0.27  | -0.22 |       |
|                       | 100.00 |            | -0.45  | -0.14  | -0.12  | -0.31 | -0.03 | -0.36 |       |
|                       | 101.00 |            |        |        | 0.02   | -0.14 | 0.01  | 0.24  |       |
|                       | 102.00 |            |        |        |        | -0.21 | 0.00  | -0.25 |       |
|                       | 103.00 |            |        |        |        |       |       |       |       |
|                       | 104.00 |            |        |        |        |       |       |       |       |

| UK Equity:Bond Correl |        | CLI Change |       |       |       |       |       |       |       |
|-----------------------|--------|------------|-------|-------|-------|-------|-------|-------|-------|
|                       |        | -1.33      | -1.00 | -0.67 | -0.33 | 0.00  | 0.33  | 0.67  | 1.00  |
| CLI                   | 96.00  |            | -0.22 | -0.23 |       | -0.05 | -0.25 |       |       |
|                       | 97.00  | -0.22      |       |       |       |       |       |       | -0.39 |
|                       | 98.00  |            | -0.31 |       |       | -0.21 | -0.20 |       | -0.41 |
|                       | 99.00  |            | -0.35 | -0.47 | -0.26 | -0.17 | -0.32 | -0.20 | -0.52 |
|                       | 100.00 |            |       | -0.33 | -0.13 | 0.14  | 0.17  | -0.02 | -0.64 |
|                       | 101.00 |            |       | -0.30 | -0.24 | 0.01  | 0.14  | -0.05 | -0.51 |
|                       | 102.00 |            |       |       | -0.45 | -0.32 | 0.03  | 0.14  | -0.43 |
|                       | 103.00 |            |       |       | -0.49 | -0.42 | -0.31 | -0.41 | -0.33 |
|                       | 104.00 |            |       |       |       |       |       |       |       |

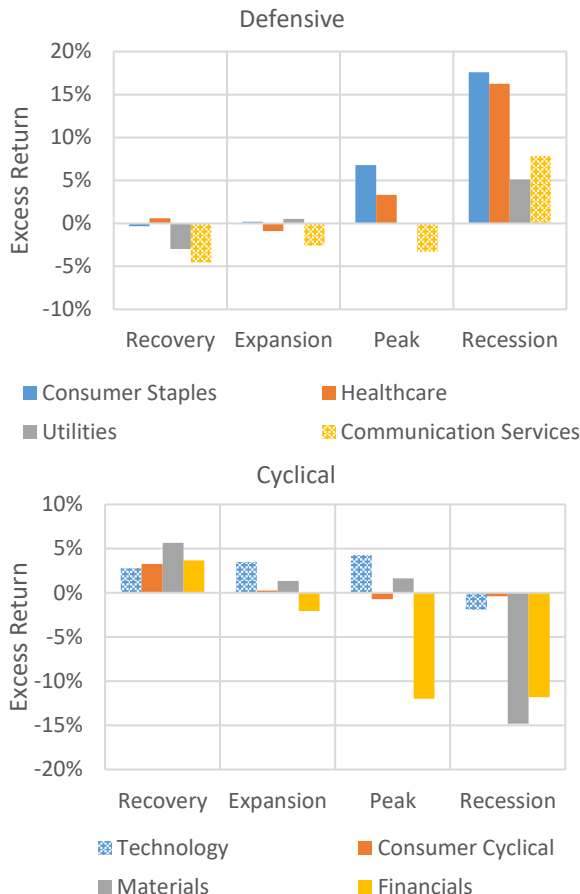
Put another way, bonds are a good hedge against a growth slowdown but at other times, they can either lose money or cause portfolios to demonstrate higher levels of risk due to higher correlations. Process improvements aside, it's no wonder we have been wrestling with our bond allocation so much!

On this basis, though without considering the absolute level of yields currently on offer, investment into US bonds may be premature but in the UK it looks reasonable.

### Portfolio construction through the cycle: equity sectors

The next area of focus is to test whether there is any excess return to be earned through sector selection in equities. The short answer is yes, lots!

Using the same method for cycle stage determination, I looked at US equities and the return to be earned by different sectors in excess of the benchmark. For the purpose of consistency, I have used the MSCI indices for regions and the associated sub-sectors. The charts on page 3 show that equities earn the highest absolute level of return during recovery and expansion phases. These charts show excess return.



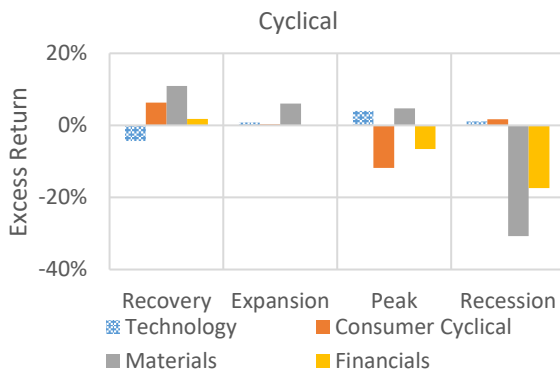
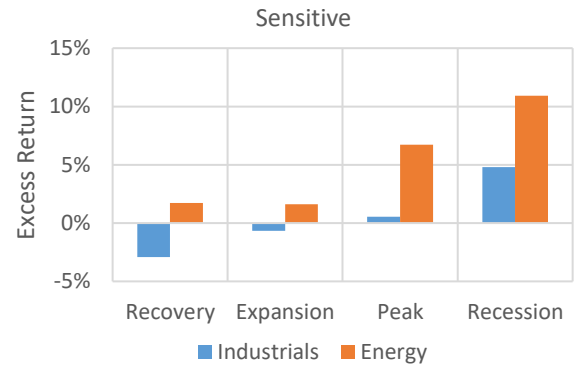
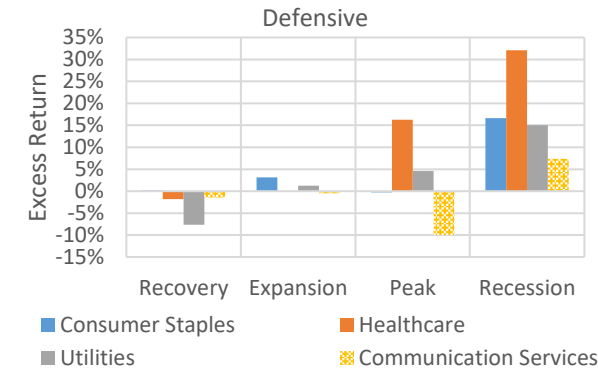
The first noteworthy point is the considerable degree of excess returns available. Sector selection matters!

The good news is there is a fair bit of intuition involved here also:

- Defensive sectors are the best place to be during recessions and you don't really lose too much through holding them through the cycle.
- Similarly, there are some cyclical sectors (consumer discretionary and tech) that deliver positive excess return in recovery and expansion stages while not losing too much in recessions.
- The sectors where the cycle stage matters most are the sensitive sectors plus materials and financials.

Communication services and tech are shaded differently to the other sectors since they are usually considered as sensitive sectors but their excess return profiles and tech's commonality with consumer cyclical companies (in today's world) meant I felt they better in defensive and cyclical, respectively.

For UK equities, I have changed the CLI index being used from a UK index to the OECD Total index, recognising the composition of the UK market is more reflective of global economic developments rather than UK centric. A similar picture emerges, although here, the recessionary benefits of being invested in energy and industrial stocks is unusual.

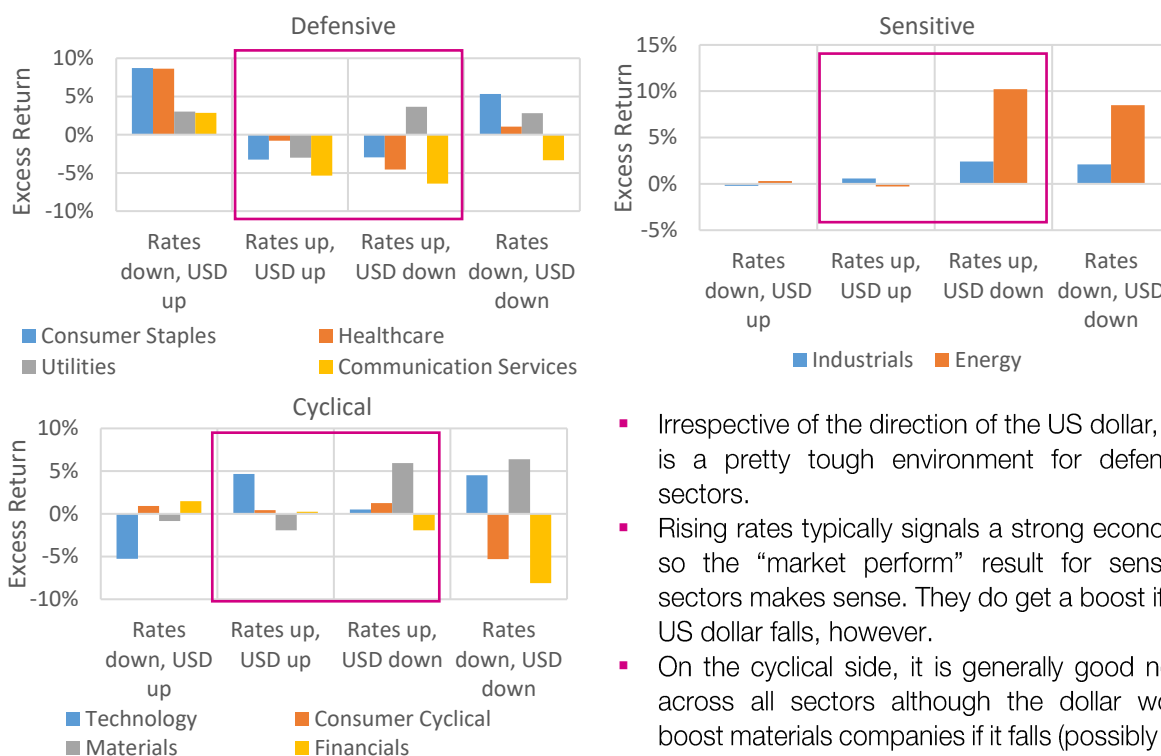


| MXGB0EN INDEX | Trade Weighted GBP |       |       |       |       |       |       |        |
|---------------|--------------------|-------|-------|-------|-------|-------|-------|--------|
|               | -4                 | -2    | 0     | 1     | 2     | 3     | 4     | 5      |
| - 2.00        | 13.3%              | 2.2%  |       |       |       |       |       |        |
| - 1.50        | 8.8%               | -5.7% | -3.6% |       | 0.1%  |       |       |        |
| - 1.00        | 6.6%               | 7.0%  | 4.4%  | 2.2%  | 0.8%  | -0.4% |       |        |
| - 0.50        | 0.7%               | 0.5%  | 0.9%  | -2.8% | -3.7% | -5.4% | -6.0% | -8.1%  |
| -             | 7.0%               | 3.8%  | 0.5%  | -0.1% | 2.4%  | 0.6%  | -2.7% | -10.0% |
| 0.50          | -3.5%              | -0.4% | 1.6%  | 0.3%  | 0.7%  | -0.1% | 1.6%  | 0.5%   |
| 1.00          | 8.5%               | 6.4%  | 6.0%  | 0.3%  | 10.8% | 7.5%  | -0.5% | -1.9%  |
| 1.50          |                    |       |       | 7.5%  | 9.2%  | 8.8%  | 8.5%  | -5.2%  |
| 2.00          |                    |       |       |       |       |       |       |        |

The answer lays in the foreign currency exposure. As the excess return table above shows, when the UK drops interest rates and the currency falls, it results in higher foreign currency earnings for these companies.

### What about US rates and the US dollar?

The charts below look at the performance of different US equity sectors under different interest rate and US dollar environments. Although the pace and eventual level of rates may be a subject of debate, we can all at least agree we are in a rising US interest rate environment.



- Irrespective of the direction of the US dollar, this is a pretty tough environment for defensive sectors.
- Rising rates typically signals a strong economy, so the “market perform” result for sensitive sectors makes sense. They do get a boost if the US dollar falls, however.
- On the cyclical side, it is generally good news across all sectors although the dollar would boost materials companies if it falls (possibly due to increasing foreign currency earnings).

### Concluding remarks

The stage of the business cycle is a useful, albeit blunt instrument when looking at equity strategy. The reason is of course that each cycle is different and so the way in which different factors move during different cycles will impact returns. There are hundreds of possible combinations of factors to consider, so I have focused on a couple that seem most relevant to today’s market.

- For the US economy, the jury is out as to whether the expansion stage is going to continue or whether the economy is now peaking. We will monitor the CLI and its components closely over the coming months to sense which way the wind is blowing.
- If the expansion stage continues, holding equities should give a positive return.
- Holding defensive sectors exposes portfolios to interest rates, so should be underweight until there is convergence between the market and the Fed on expectations for future rate increases. Within defensives, healthcare should hold up well under most scenarios.
- US energy is worth researching in more detail, especially given its excess return with high inflation.
- Given how flat the curve has become, financials may not do much more unless we get some movement at the long end (through rising inflation expectations). Otherwise, it’s a sector to revisit during the next recovery phase.
- The tech sector looks like it should outperform whether we are in expansionary or peak phase and irrespective of the direction of the US dollar.

I plan to look into the performance of other asset classes using a similar approach. Convertible bonds and ABS have popped up through other searches, so if they look good when analysed with this approach, it could be a new focus area for fund research.