



## Weekly Market Comment

5 January 2018

Lothar Mentel

C H I E F   I N V E S T M E N T   O F F I C E R

Jim Kean

H E A D   O F   I N V E S T M E N T

Samuel Leary

F U N D   M A N A G E R

Isaac Kean

I N V E S T M E N T   W R I T E R

Chris Robinson

I N V E S T M E N T   A N A L Y S T

### DISCLAIMER

This material has been written by Tatton Investment Management and is for information purposes only and must not be considered as financial advice.

We always recommend that you seek financial advice before making any financial decisions.

[www.tattoninvestments.com](http://www.tattoninvestments.com) Twitter: [@TattonIM](https://twitter.com/TattonIM)

125 Old Broad Street, London EC2N 1AR. Tel: 0207 190 2959

## 2017 asset class return in £-Sterling

Asset Class	Index	December	2017
Equities	FTSE 100 (UK)	5.0%	11.9%
	FTSE4Good 50 (UK Ethical Index	4.7%	6.7%
	MSCI Europe ex UK (Eurozone)	0.2%	13.3%
	S&P 500 (USA)	1.2%	11.3%
	Nikkei 225 (Japan)	-0.3%	14.7%
	MSCI All Countries World	1.6%	11.2%
Bonds	FTSE Gilts All Stocks	1.4%	1.8%
	£ Corporate Bond Index	1.5%	5.0%
	Barclays Global Aggregate Bond Index	0.4%	-1.9%
Commodities	Goldman Sachs Commodity Index	4.5%	-3.4%
	Brent Crude Oil Price	5.3%	7.5%
	LBMA Spot Gold Price	1.2%	2.2%
Cash rates	Libor 3 month GBP	0.04%	0.33%

Source: Morningstar, all returns in Pounds - Sterling (£ - GBP)

## Encouraging kick-off

2018 has started on a positive note. Despite widespread fears of a capital market upset caused by MiFID II coming into force on January 3<sup>rd</sup>, all remained calm and equity markets started with a positive week. This latest round of regulatory tightening across the EU's securities markets will have some longer-term effects that may only become apparent further down the line. To create some clarity over what it might mean for private investors, we have dedicated an article to MiFID this week.

Compared to the start of 2017, many market-influencing aspects appear much less uncertain than they did a year ago. Synchronised global economic growth has become sustained and industrial growth hit a multi-year high at the end of 2017. This week's release of very encouraging business sentiment figures from around the world for December are evidence of this. The political perspective remains somewhat unnerving, but almost one year into the Trump US presidency the world is a lot less unnerved by his tweets, as we have learned that he remains more show than achievement.

The button size bragging episode between North Korea's Rocket Man Kim and US' Tweet Trump would, in the past, have seriously increased the temperature of global geopolitical tensions. Now, there is more amusement and some head shaking, and the focus quickly shifted to the more significant re-opening of the dialogue lines between North and South Korea.

The focus of commodity markets was on the widespread public protests across Iran, where the Ayatollahs for the first time appeared threatened by the same revolutionary dynamics that 40 years ago got themselves into power. The acceleration in oil and other commodity prices was supposedly a result of this new source of uncertainty. We reflect in two separate articles on the changing geopolitical environment and the seeming revival of the commodity price rally. At the moment, we cannot get overly excited about either, although the developments in Iran could lead to a constructive strengthening of moderate, secular forces.

Regarding the recent surge in commodity prices, we suspect that nervous equity investors and frustrated hedge fund managers are testing whether they can rekindle broader interest in commodity prices, at a time when equity markets in the US appear maxed out. At this stage of the economic cycle, commodities have been a good bet in the past. Alas, this time, investors have only just digested the bursting of the last commodity price bubble and a repeat so soon therefore seems unlikely.

Even the UK's Brexit uncertainty millstone has recently begun to lighten up somewhat. December's movement on the negotiation side has led some to suggest that the country may well be more likely to head towards a 'Fake Brexit' rather than a 'Hard Brexit'. More important however, is that the economic situation in the UK is gradually improving since the turning point last summer. This is despite politics and has a number of reasons, some grounded in the global improvement of demand, some solely to do with the UK domestic consumer and their affection of debt and residential property. As our head of investment Jim Kean argues in the insight article about the UK's economic prospects for 2018, we can reasonably expect the economy to brighten up even in the UK.

## Geopolitical calming despite Korea and Iran

Geopolitical tensions garnered much attention this week. The new year began with a button-measuring contest between two of the world's most vocal leaders, after North Korean leader Kim Jong-Un used his annual New Year's Day address to warn the US that his country's nuclear capability was a reality, not a threat. The "button is right there on my desk," Mr Kim told state TV. Not one to break from style, US President Trump took to twitter to retaliate against Kim's warning, proclaiming that his button is "bigger & much more powerful" (!).

The President's domestic critics – in both parties – lamented what they saw as a reckless if not childish approach to an extremely delicate political situation, with former Vice President Joe Biden calling Mr Trump's tweet dangerously cavalier. But the exchange of threats is nothing new; Trump's first year in the White House was punctuated by the high-stakes back-and-forth with the hermit state's provocative leader. In fact, while button bragging grabbed the headlines, Mr Kim's comments about his neighbours to the South are perhaps more important.

Kim suggested that his regime would be willing to engage in talks with South Korea, even saying that the North would be open to participating in next month's winter Olympic games. "We should melt the frozen North-South relations, thus adorning this meaningful year as a year to be specially recorded in the history of the nation," said the North Korean leader. Officials from the South responded in kind, with the President's office saying that South Korea has "always stated our willingness to talk with North Korea at anytime and anywhere".

The dialogue took another step forward on Friday, when North Korea agreed to meet for peace talks for the first time in years. Directly addressing their Southern neighbours marks a change in tact from North Korea, whose leaders have previously ignored the country (they are technically still at war, after all). Many analysts have put the move down to an attempt by Mr Kim to counteract the isolation his country has experienced at the hands of US and UN sanctions. Some even suggest he is trying to drive a wedge between the US and their traditional allies South Korea. Indeed, Kim seeming to predicate the North's Olympic appearance on a postponement of US-South Korean military exercises this year.

However, we might also interpret the détente as a natural consequence of the North's nuclear program. While Kim was sure to make the world aware of his button, he also emphasised that his government wouldn't use the weapons unless they felt that peace was threatened. In fact, his tone was actually calmer than for some time; throughout last year North Korean state media repeatedly warned the US of annihilation and the like, claiming they would make a first strike if necessary.

Ever since US-Korean tensions began the current escalation, it's clear that Kim has felt his position is severely threatened. And while experts doubt that North Korea's missile program is advanced as they often claim, there is no doubt that it developed substantially in 2017. It's possible that, from Kim's perspective, North Korea has stabilised itself as a nuclear power, allowing tensions to cool off somewhat.

While tensions on the Korean peninsula apparently cooled into the new year, they did the reverse in Iran, where protesters attacked police stations into the night on Monday. What started as popular dissatisfaction over falling living standards – particularly among the young – seems to have developed into a full grassroots movement against theocratic rule in the Islamic Republic. The protests are the strongest show of defiance against the Iranian leadership since the mass unrest of 2009. However, unlike now, those protests had a clear inciting incident, with previous President Mahmoud Ahmadinejad's suspected electoral fraud prompting popular uproar. This time around, the targets of dissatisfaction are more general, which will no doubt worry the regime.

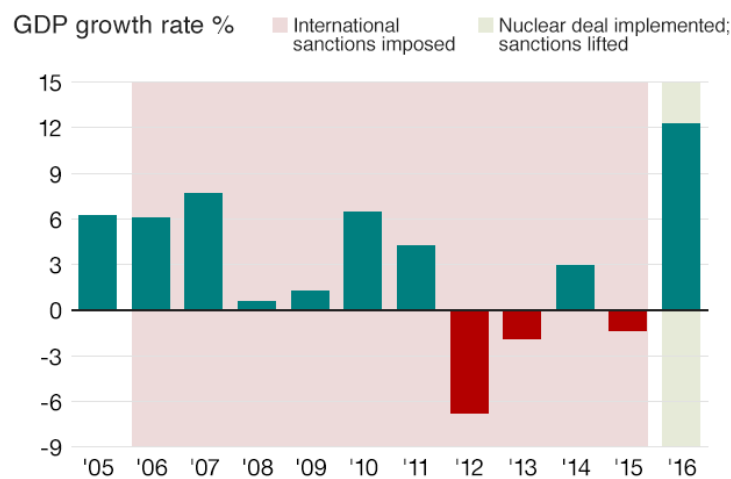
So far, the protests have resulted in 21 deaths and 450 arrests. The government's response has been more 'war of words' than force, with President Hassan Rouhani making a televised call for calm on Sunday, saying that Iranians had a right to criticise but not to cause upheaval. And, on Thursday, state TV made a show of pro-government crowds chanting in support of the Islamic Republic, and head of Iran's revolutionary guard Mohammed Ali Jafari claimed that the protests and "sedition" was over.

The protests did subside somewhat as the week went on, but 'over' seems quite a stretch. Unlike the thawing Korean relations, which seem a definite positive in terms of geopolitical risk, it's not yet clear what to make of the situation in Iran. Oil prices rose quite substantially in the aftermath, perhaps a sign of market sentiment on the potential fallout on Iranian supply, but the extent to

which the Iranian story caused this is debatable. The support shown for protestors by foreign powers such as the US, Israel and (particularly) Saudi Arabia risks making a revolution out of a mole hill. But it would be similarly unwise to understate the unrest's significance. The likelihood that Iran will develop into another Egypt or – worse – Syria is very low, but there still might be substantial change on the horizon.

Unlike his predecessor Obama, President Trump has repeatedly expressed his unwillingness for détente with the Islamic Republic, and seems intent on forcing the regime into as difficult a situation as he can. The tactic is reminiscent of Ronald Reagan's approach towards the USSR during his presidency, where he broke from the policy of pursuing relations and instead opted for an aggressive and uncompromising approach. The effects of that decision on the Soviet Union's eventual downfall were substantial, and so the potential of Trump's isolation tactics on Iran shouldn't be underestimated.

### Economic growth in Iran



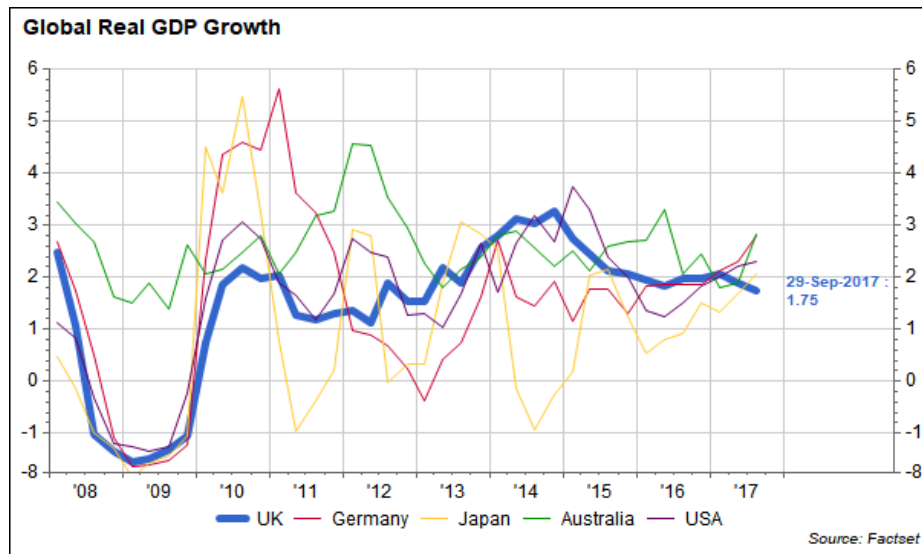
Source: Central Bank of Iran

BBC

More generally, while geopolitical issues have made headlines at the beginning of the year, this dimension of risk appears more confined to certain areas than at the start of 2017. Last January, concern about upheaval in the US and uncertainty over the UK's post-Brexit future, as well as fears about the outcome of elections in Europe, were widespread. Now, those worries seem to have subsided and – with the exception of perhaps Germany – the immediate political future of most of the world's major markets is much more stable. Even the Syrian civil war which has raged for nearly seven years looks less uncertain, with Russian intervention quashing many rebel groups.

## The UK economy – a fundamental assessment

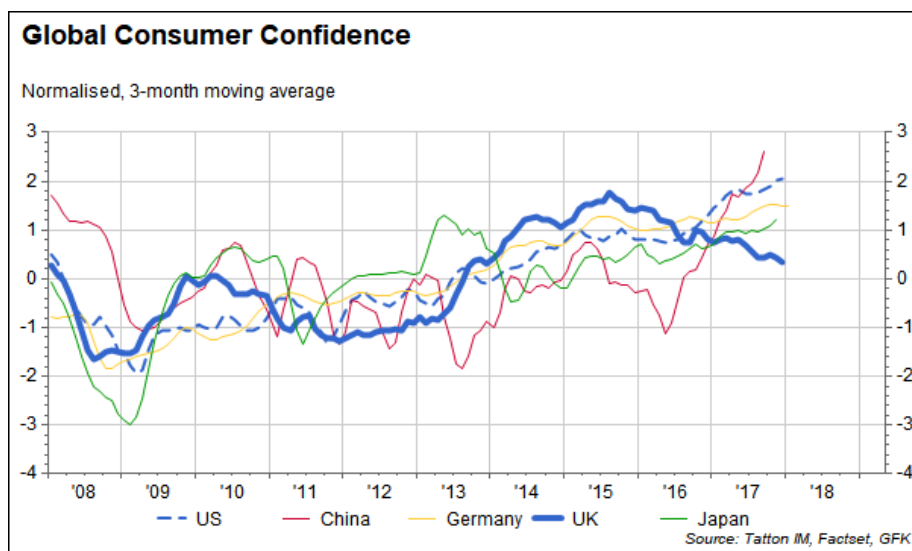
The UK economy did worse than others in 2017. As of the end of September, real growth had slowed to 1.75%, while the rest of the western world accelerated - as the chart below shows:



The 2017 full year data will be released over the next five weeks and may show a slight slowing in most places. Still, consensus estimates (according to Factset) have the UK growing 1.2%, Japan 1.5%, US 2.5%, and Germany 2.6%.

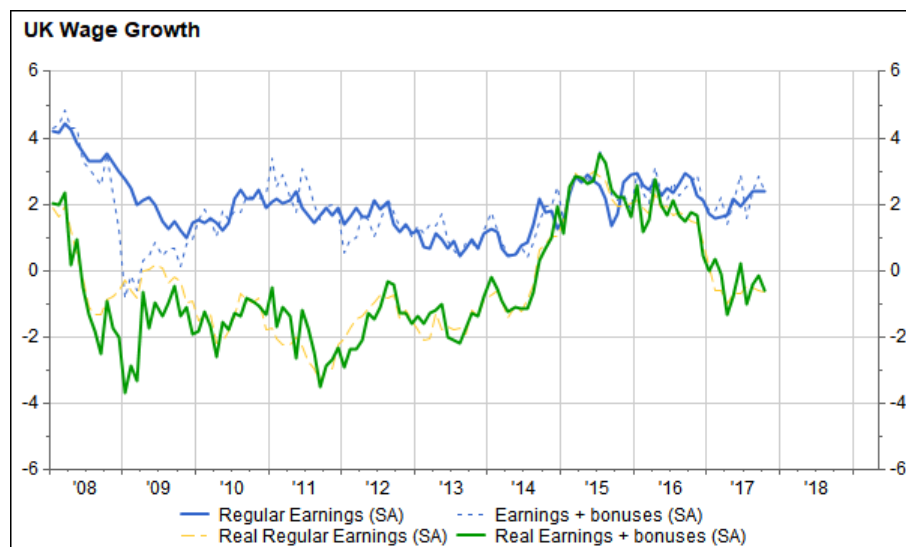
Through 2017, the world generally experienced a growth in business and consumer confidence. Much of this emanated from a significantly better outcome in China than expected. China did not have any policy mistake come to light, nor did any major nation do anything to provide upset. Indeed the lack of any shock to the global economy was a most remarkable outcome.

The exception among the confident was the British consumer.

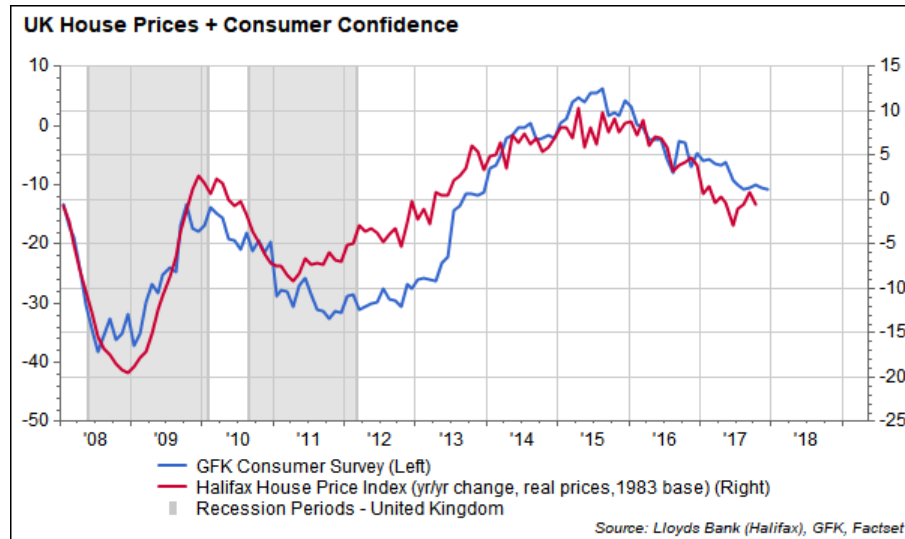


Some might point to Brexit politics as a reason. It may have had some impact but, as far as we can see, the underlying fragility of the consumer was going to be exposed whatever the referendum outcome.

As in the US, the UK's consumer has been the driver of demand for a long time. 2014 to 2016 saw a number of influences come together to help the consumer feel a lot better. Unemployment dropped sharply from 7% to 5%. Global deflationary pressures eased, especially in commodity prices, combined with a strong Sterling to bring about a sharp rise in real wages. However, nominal wages rose much less.

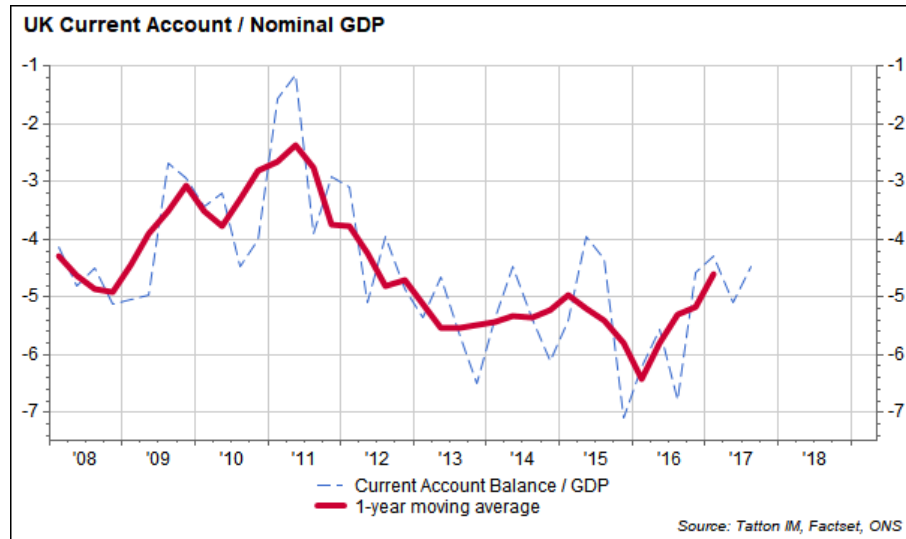


Meanwhile, access to mortgage finance eased and help-to-buy kicked in, with the Bank of England maintaining low rates. This pushed house prices higher across the country.

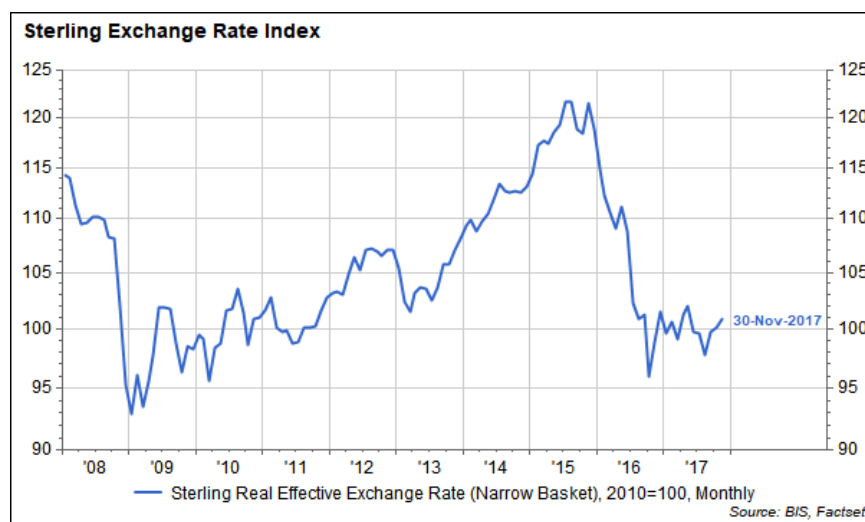


However, the improvement came mostly in household balance sheets, not in income. The better confidence led to an extension of borrowing. That's shown by the worsening of the UK's overall current account balance, which was averaging a deficit of over 6% by the start of 2016.

That deficit could only be sustainable if the UK was significantly better at producing things (and services). In other words UK workers had to be much more productive in the long-term than elsewhere.



As the chart below shows, Sterling had moved stronger, matching the relative rise in UK consumer confidence. Well before the referendum, that confidence had started to ebb.

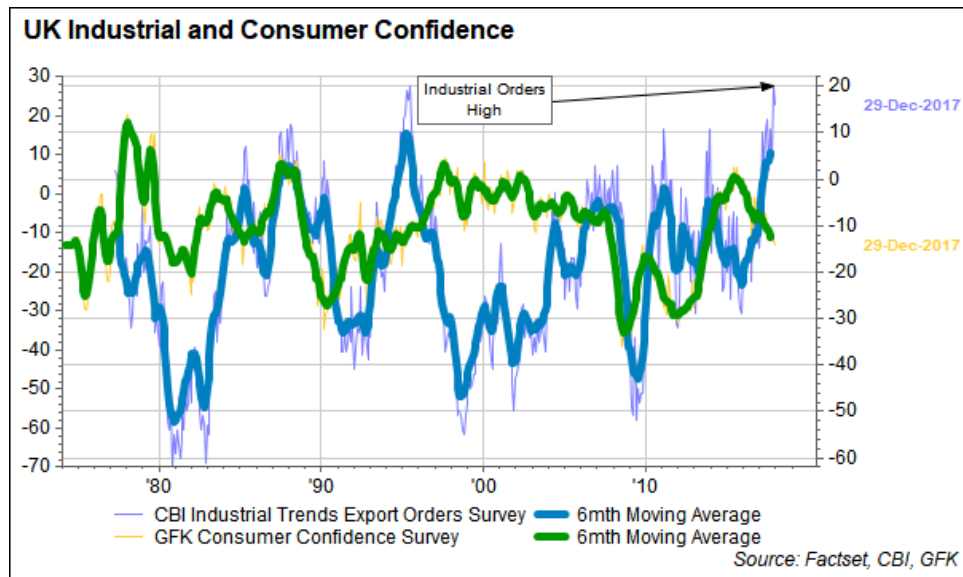


Even without the extra shove down the hill from the referendum result, Sterling would have been likely to weaken. And as we know, almost all of the factors that led to that pop up in confidence in 2014-2016 have reversed.

Yet, there is room for optimism. If expectations of outperformance were somewhat unwarranted in 2014, continued expectations of underperformance may not be warranted now, or at least not forever.

British-based production is seeing unprecedented demand, partly because of Sterling's weakness in 2016, and partly because UK workers appear to be productive. Although December's CBI Industrial Trends Export Orders Survey backed off November's high, we're still in good times for exporters.





The rebalancing between domestic demand and demand external to the UK is much needed to stem the need for borrowing, but it does appear that it is underway, as the previous graphs show.

The extension of borrowing leaves the UK more vulnerable to external shock, but the rest of the world is doing rather nicely. Meanwhile, global borrowing conditions have been, are now and are likely to be, accommodative, meaning the burden will be bearable.

For the British public, inflation pressures should dissipate fairly soon. Given the stability of Sterling over 2017, the sharp rise in inflation will unwind, probably to less than 2% by the end of 2018, although the mild upswing in global prices may keep the rate from falling too much.

Real incomes should stabilise. What then matters is the outcome for house prices. The policy decision to raise taxes on buy-to-let house owners (by reducing mortgage interest offset) came at a particularly difficult juncture, particularly in the south-east and London. While it's unlikely that the Government can unwind this, it will certainly not be inclined to worsen the situation.

The housing market has had long periods of price stasis and our best guess is that this is the most likely outcome now. A mid-to-large-size rise in unemployment is the most damaging thing for house prices. While unemployment is at low levels, there are good reasons for it to remain there if external demand holds up.

The Bank of England should be able to maintain low rates for a long time amid slow-ish domestic demand. Mindful of the 2014-2016 episode, it may feel it must step in to raise rates if personal borrowing rises, but recent events make a rise in household credit unlikely. It too will be hoping that the housing market stays in good order.

As I hope we've pointed out, the seeds of the current slowdown in domestic demand were there before the referendum, and so the political manoeuvring may be less important than is made out now. What will matter is the stability of employment and £-Sterling. We shouldn't expect outperformance from the UK as a nation, nor from our domestically-focused companies. We will have to be a taker of others' strength rather than being a driver of their production.

Still, a rebalancing is underway, one that should benefit the people and regions that missed out when the only thing that mattered was the ability to borrow.

## Commodities come-back?

Commodity linked investments have gone through a massive roller-coaster over recent years. Following the Financial Crisis, they were the darling of many investors and their ascent seemed unstoppable. When elevated commodity prices led to overinvestment and overcapacity in commodity exploration, the bubble burst. The subsequent collapse in commodity prices and cut backs in mining machinery then caused a temporary global economic slowdown.

Over the course of 2017, commodity prices have made a steady come back and are no longer trading below longer term historic averages. What has been remarkable about the start of 2018 is that commodity prices across the board have, over a short period, gained more than many would have expected against a backdrop of solid, but not elevated, demand growth. It is therefore worth having a closer look and reflecting on the various factors in play.

At first glance, the dynamics behind the most recent commodity price rises may look similar, but beneath the surface there are some interesting differences. Energy has more short-term factors at work, while industrial metals look to be benefiting from longer-term favourable trends.

Commodities should not just be thought of as just one homogenous lump, but rather three distinct mini sectors including energy, industrial and precious metals. There are overlapping themes driving commodities prices, like economic growth, which would require more energy (oil, coal and natural gas) and industrial commodities for physical infrastructure. Like equities, there are also long and short-term drivers impacting supply and demand dynamics.

Looking at where commodity prices are heading today, it would be reasonable to conclude that global growth is strong, with an improving outlook. It is true that economic fundamentals are increasingly robust, with 2018 shaping up to be a positive year for further economic growth, but is this sufficient to rationalise the recent price jumps?

We believe that the price action for energy, industrial and precious metals should be seen in context. The price increases in the energy complex over the past six months (nearly 35%) have been partly a consequence of improving global growth and partly an effect of OPEC production. The Brent crude oil price is now above \$68 a barrel, its highest level in nearly 3.5 years. WTI (West Texas – the US benchmark) currently sits at a 2.5 year high.

However, more recent upward moves appear to have once again decoupled from the actual supply and demand balance and seen to be more speculative in nature, particularly given much was attributed to the rise in geopolitical concerns around Iran, pipeline shutdowns in Libya and the UK (Forties pipeline). The current cold spell in North America is further 'fuel' for short term speculation, even though it tends to lead to only short-term demand rises for heating. Meanwhile, industrial activity falls in cold weather and thus reduces demand again.

So, let's look at the supply side. In response to higher prices, Russia quietly announced its annual oil production was now at a 30 year high (despite Russia joining OPEC in production cuts!). Our tracking of US rig counts (associated with shale oil) remained unchanged from last week, but in the past it has only been a matter of weeks before higher prices tempt firms into action. We note that repairs to the Libyan pipeline were completed Dec 30<sup>th</sup>, with supply resuming. The UK's Forties pipeline is now fully operational once more after being shut for nearly a month.

For these reasons, we believe that the more speculative activity in energy prices will moderate as these temporary effects and the short-term supply stresses ease.

In the precious metals sphere, gold prices exhibit some of the same speculative short-term tendencies as energy prices. Gold prices have hit a three-month high of \$1,316 a troy ounce (31.1g), rising almost 6% since early December.

Much of the upward move could be explained by the recent US dollar weakness. The dollar was the worst of the G10 currencies during 2017, falling nearly 10% against a basket of the other leading currencies. If the value of gold remains the same but the US\$ (as currency of denomination) falls, then the price needs to rise to display unchanged value.

Palladium, part of the PMG – Precious Metals Group, has also been rallying, hitting a record of \$1,100 a troy ounce. In 2017, Palladium jumped 55% - the best performing commodity last year. A weaker dollar has helped, but the real driver is increasing industrial use (catalytic converters and fuel cells in the future) to reduce harmful emissions in China.

Industrial metals like copper and zinc (used to rust proof steel) have also hit multi-year highs. Zinc rose 28% to a 10-year high last year and copper, the red metal, rose 30% last year to hit a 4 year high. Demand looks set to rise as countries around the world start building the charging networks for EVs and as new renewable projects become connected to existing electricity grids. Mining giants Glencore and Rio Tinto forecast a supply deficit by the end of this decade as old mines reach end of life but are not replaced with new mines.

Now that we have a clearer idea of both the supply and demand side, what are the investment implications?

Given that demand for commodities looks to be rising on the back of solid and synchronous global growth, some suggest that prices could continue to trend higher. Research from Goldman Sachs suggests that, historically, commodities outperform in the latter stages of a business cycle – i.e. where we could be today. They also suggest that commodities will typically outperform even during rate hiking cycles.

At first glance, therefore, there appears to be a good investment case to get back into commodities as an asset class. This, we believe, is indeed what is driving the most recent price dynamics – a sort of self-fulfilling prophecy. Many 2018 Outlook documents made the point that equities look to have only limited upside after the last 20 months' rally (at least in the US), despite the expectation that the global economy will continue to grow. So, it's a natural consequence that the more speculative end of the investment community – like hedge funds – may well see commodities as their last chance to recover lost ground after many missed the equity rally and even suffered losses over 2017 (See Brevan Howard and Crispin Odey).

At Tatton, we do not share the bullishness for commodities, because we see an overestimation of demand and an underestimation of the supply growth impact the 2017 price rises have had already. While industrial growth has ended 2017 on a high, we are doubtful growth rates will increase much further and there is the possibility that, after a plateauing, growth will actually slow towards the end of the year.

To be sure, there will be certain commodity types which will end up in short supply, given the underinvestment into their exploration after the commodities crash, but this does not equate to a

revival of the commodity boom. Too recent are the memories of many investors about their losses in commodities and too plentiful are investment alternatives, when the global economy is on expansion course.

## MiFID II and its impact potential on investors

As widely reported in the media, the second derivative of the Markets in Financial Instruments Directive (MiFID) came into play as of the 3<sup>rd</sup> of January 2018. The first derivative, MiFID I, was introduced in the wake of the financial crises as a framework to protect investors and allow regulators to spot bubbles earlier. The latest instalment, MiFID II, moves the financial industry closer to the vision of a transparent market with clear rights and protections for EU citizens.

In this article, we will explore the main questions private investors may have regarding MiFID II:

- Who does it affect?
- What are its key features?
- What influence will it have on Tatton Investment Management and what changes should the end client expect?
- Will it have any influence on equity, bond, derivatives and commodity markets?

Who does it affect?

Banks, fund managers, exchanges, trading venues, pension funds, financial advisors or any wealth manager in the EU dealing in shares, bonds, commodities and derivatives. These firms are expected to improve reporting by collecting data on transactions, trading and everyday business. Although this may present some challenges, it can provide a number of significant benefits. Risk reduction, greater communication and transparency are three of the benefits, along with the firm's ability to leverage 'MI' (Management information) to gain business insights, optimise their business with sales and marketing and potentially become more competitive.

What are MiFID II key features?

**Pricing transparency:** The first and potentially most significant part of the directive is to improve pricing transparency. It is extremely important that the end client is able to obtain a breakdown of all costs associated with an investment. The outcome of this is a more competitive industry with firms lowering costs and providing greater definition of the cost related to the service provided. In the UK, the 'Retail Distribution Review' already established an increased level of transparency. MiFID II is now taking this and some more to the rest of the EU.

**'Unbundling':** As part of the legislation, financial services firms will have to pay explicitly for research and brokerage services, rather than this being covered in a broker's commissions. This reduces the likelihood of conflicts of interest when using a broker for its research and then trading with the same broker. Instead, it encourages use of quality independent research, as well as best execution when buying or selling an investment.

**Performance Reporting:** From 3<sup>rd</sup> January, clients of discretionary portfolio management services must be informed if the value of their investments falls by more than 10% over the quarterly

reporting period. Up until now, there was not even a requirement to report portfolios' investment returns to end clients.

LEI's (Legal Entity Identifiers): An LEI is a unique identifier for legal entities and structures including companies, charities, trusts (not bare trusts, and pensions – excluding SIPPS) involved in relevant financial transactions. It enables these entities to be identified in any jurisdiction. An LEI must be associated with every transaction in order for a deal to take place after 3<sup>rd</sup> January 2017.

What influence will it have on Tatton Investment Management and what changes should the end client expect?

At Tatton, we believe there are significant benefits by making the industry more transparent and protecting the end client. As part of our service, we believe transparency of cost, whether it is the cost of our service, the cost of individual investments (Annual Management Charges AMC, Total Expense Ratios TER) should be disclosed and easily available and comparable for every investor. Cost competitiveness and transparency of charging has been a cornerstone of Tatton's business model from the very beginning.

With regards to research cost unbundling, at Tatton, we have always believed in the value of truly independent research and have always spent considerable amounts of company money to obtain this from research companies like MRB, ASR, Longview and Morningstar. We therefore expect much less change to our research position than other firms may experience.

Tatton will continue to provide monthly factsheets and quarterly reports for investors, as well as catering for the provision of the 10% drawdown reports either through the appointed financial adviser or directly to the client where this has been requested. We expect that clients receiving such notification will be a relatively rare occurrence, although higher risk portfolios are likely to suffer such drawdowns during equity market slumps. Indeed, during the Q1/2016 market correction, we would have had to send them out. Should it happen again, clients will receive additional contextual information from Tatton and should always contact their adviser if concerns remain.

Tatton Investment Management has obtained its own LEI and provided information to advisors on the requirements for these and how to apply for one if required.

Finally, it is worth noting that Tatton will continue to service financial advisors and clients as usual and adopt any regulation required.

Will MiFID II have any influence on equity, bond, derivative and commodity markets?

In the run-up to the launch of MiFID II, there has been a great deal of discussions across the industry and noted in the media of the influence MiFID II provisions could have in financial markets. Most obvious is a potential tightening of liquidity across asset classes as dealing may be subdued. The requirement for unique identifiers, greater transaction monitoring and further trading regulation could limit market participants and trading volumes in the short run. Only time will tell if it does so. However, our initial observations of this week are that, only on the day of the introduction (3<sup>rd</sup> January), trading volumes in bond and equity markets appeared to be below average, with no notable reductions since. The systems and technology updates appear to have taken place without particular issues and so all who can remember the excitement over Y2K disaster scenarios in the

run up to the year 2000 will have had a bit of a déjà vu moment this week over the smooth MiFID systems implementation.

### The “spectre” of Intel’s “meltdown”

The phrase “game changing” is perhaps thrown around too often. But this may end up accurately describing the impact of a fundamental design flaw present in PC, laptop and smartphone chips sold over the past decade. It could impact the entire semiconductor industry.

This is because it could be extremely serious. Currently, the flaw has no defence and can potentially expose a user’s private data to malicious attacks. Technology experts have dubbed the problem as “meltdown”. Newer issues have been termed “spectre”.

While microchips from Advanced Micro Devices (AMD) and the UK’s ARM Holdings (designs the chips in your mobile phone) are impacted to varying degrees, it is Intel that is hit the hardest.

AMD have said there was a “near zero” risk that its chips could be attacked in the same way as Intel and provided the following page ([click link](#)) for concerned users.

ARM has issued its own page, ([click link](#)), showing a list of effected chips that are found in smartphones and tablets, along with some work arounds.

What is the flaw?

In order to make its chips more efficient, Intel built in a method to speed up processing using “out of order execution”, sometimes called “speculative execution”.

In simple terms, the CPU attempts to guess what code will be run next to make things faster. It will then fetch it from memory and execute it. The issue is that this speculative code is run without performing a security check.

Where hackers and malicious websites can exploit this process is by designing software in a way that forces the CPU to speculatively run a process that would have normally been blocked – such as reading parts of the computer’s memory being used by someone to store passwords (0-level kernel data) – and complete the order all before the usual security check has been run.

Example malicious code:

```
; rcx = kernel address

; rbx = probe array

retry:

    mov al, byte [rcx]

    shl rax, 0xc

    jz retry

    mov rbx, qword [rbx + rax]
```

What can be done?

Given that chip makers themselves are unable to fix the issue with a simple microcode update, only an Operating System (OS) level update will work. Microsoft (Windows), Apple (MacOS) and Linux coders are all busily preparing patches over the next week or so.

The problem is that an OS level patch to alter how the chip was originally designed to work (i.e. forcing it to work differently or more slowly) potentially with some negative implications, especially for Intel chips. Software experts suggest that there may be a performance hit to Intel CPUs of between 5-30%, depending on the task being executed.

Other impacts?

Other than a possible hit to your own work or personal computer, Intel chips form the fundamental building block of the internet and company networks. It is possible that as these patches roll out, the 'speed' of the internet itself could take a hit.

What happens next?

Legal action by users may be one consequence once the holes have been patched, but it is also possible that the issue tempts users to upgrade their computers, laptops and smartphones in order to avoid the possibility of being hacked.

The true scale of the flaw and its implications are currently unknown.

## PERSONAL FINANCE COMPASS

### Global Equity Markets

MARKET	CLOSE	% 1 WEEK	1 W	TECHNICAL
FTSE 100	7707.9	1.1	85.1	↗
FTSE 250	20912.1	1.3	269.8	↗
FTSE AS	4238.6	1.2	48.3	↗
FTSE Small	5978.3	1.3	73.9	↗
CAC	5452.4	2.1	113.0	↗
DAX	13291.1	2.4	311.1	↗
Dow	25162.6	1.3	325.0	↗
S&P 500	2732.1	1.7	44.5	↗
Nasdaq	6636.3	3.0	194.9	↗
Nikkei	23714.5	3.6	821.8	↗

### Global Equity Market - Valuations

MARKET	DIV YLD %	LTM PE	NTM PE
FTSE 100	3.8	22.5x	14.7x
FTSE 250	2.6	18.6x	14.8x
FTSE AS	3.6	21.2x	14.7x
FTSE Small	3.0	13.5x	-
CAC	2.9	17.3x	14.8x
DAX	2.5	17.0x	13.5x
Dow	1.9	22.8x	18.3x
S&P 500	1.7	22.3x	18.5x
Nasdaq	1.0	25.8x	21.4x
Nikkei	-	-	-

### Top 5 Gainers

COMPANY	%	COMPANY	%
NEXT	6.6	ADMIRAL GROUP	-4.7
CENTRICA	5.9	MEDICLINIC INTERNA	-2.8
EASYJET	5.2	LAND SECURITIES	-2.4
CAPITA	4.7	BARCLAYS	-2.0
ANGLO AMERICAN	4.3	DIRECT LINE INSURA	-1.9

### Top 5 Losers

### Currencies

PRICE	LAST	%1W	CMDTY	LAST	%1W
USD/GBP	1.36	0.39	OIL	67.4	1.1
USD/EUR	1.20	0.28	GOLD	1319.3	1.3
JPY/USD	113.18	-0.43	SILVER	17.2	1.7
GBP/EUR	0.89	0.07	COPPER	322.7	-2.5
CNY/USD	6.49	0.28	ALUMIN	2250.0	-0.1

### Commodities

### Fixed Income

GOVT BOND	%YIELD	% 1W	1 W YIELD
UK 10-Yr	1.243	4.5	0.05
US 10-Yr	2.475	2.9	0.07
French 10-Yr	0.797	1.5	0.01
German 10-Yr	0.441	3.3	0.01
Japanese 10-Yr	0.063	31.3	0.02

### UK Mortgage Rates

MORTGAGE BENCHMARK RATES	RATE %
Base Rate Tracker	2.3
2-yr Fixed Rate	1.6
3-yr Fixed Rate	1.7
5-yr Fixed Rate	2.0
Standard Variable	4.35
Nationwide Base Rate	2.50
Halifax Standard Variable	3.99

\* LTM = last 12 months' (trailing) earnings; \*\*NTM = Next 12 months' estimated (forward) earnings

For any questions, as always, please ask!

If anybody wants to be added or removed from the distribution list, just send me an email.

**Please note:** Data used within the Personal Finance Compass is sourced from Bloomberg and is only valid for the publication date of this document.

**The value of your investments can go down as well as up and you may get back less than you originally invested.**

Lothar Mentel

