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WELCOME

Dear Reader,

These are testing times for UK investors as the Brexit saga continues to cast a very long shadow over the UK stock market. As I write, it appears ever more likely that the can will get kicked further down the road – even after more than two-and-a-half years of uncertainty.

But, as ever, there are always options for the savvy investor. The obvious one is to cast your sights overseas – and with this in mind, Andrew Latto unearths some of the best-quality stocks in Europe in a new column – the Quality Investor – on page 74. Of course, Europe isn't in the best of shape either, but Andrew has focused his attention on companies that are market leaders in their respective fields with global reach.

In the same vein, we have two articles on two UK multinationals that could very well carry on growing regardless of the Brexit situation. On page 82, Robert Stephens uncovers why investors are still raising their glasses to Diageo; and on page 60, John Kingham looks under the bonnet of that perennial favourite with dividend investors – Unilever.

But if you're still minded to hunt for Brexit bargains, turn to page 24 for Richard Gill's 3 small-cap picks that he believes will continue to perform no matter what the outcome for the negotiations. You might also want to see how the experts are preparing their portfolios for Brexit – turn to Nick Sudbury's article on page 54.

I'm told that the UK market looks the cheapest in a long time now on a number of metrics, so the UK is surely worth a look on that basis. Although it seems never to be out of the news, the Brexit process won't last forever, and given the huge ouflows from UK equity funds of late, there is a clear opportunity here for contrarian investors who believe that any kind of deal would lead to a re-rating of UK assets.

I wish you all the best of luck in the month ahead.

Best regards,

James Faulkner
Editor

P.S. If you've not yet registered to attend the Master Investor Show in London on 6th April, please do so soon as time is running out fast. You can still secure a complimentary ticket using the discount code M319 – just use the code when checking out here.

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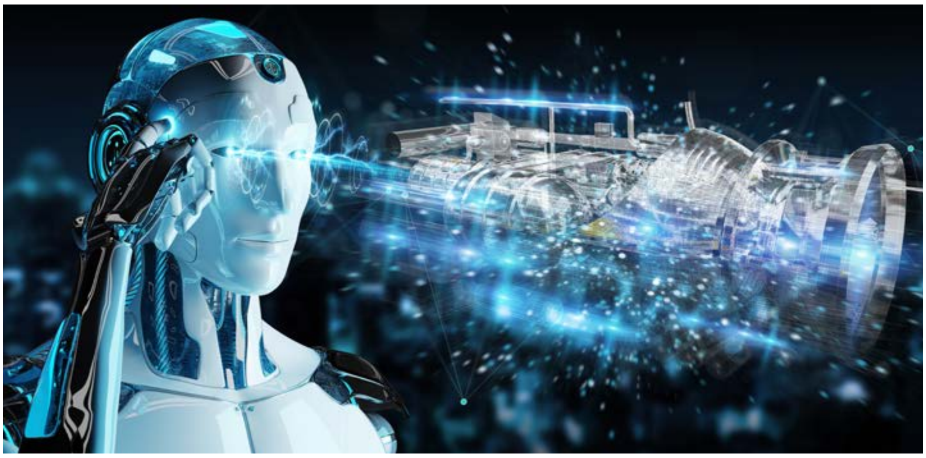

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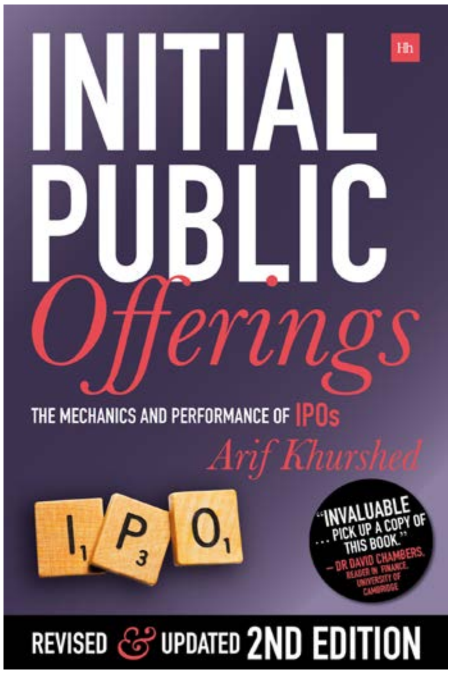

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BY JIM MELLON

MELLON ON THE MARKETS

There has been quite a recovery in markets since the December lows. This has probably been induced by the substantial easing that is happening in monetary policy by five of the six key central banks globally. I saw some scary stats that in the last three months broad money supply growth worldwide has been running at +27%.

This is clearly aberrant and unsustainable – if it carried on for any meaningful period of time, most of the world would look like Venezuela or Zimbabwe. But it's instructive – central banks have been spooked (and particularly the ECB and the Chinese Central Bank) by indicators of slowing economic performance in their respective countries/blocs. So, where there was tightening, there is now hesitancy, or renewed pump-priming.

This has immediately fed through to stock markets (see the Chinese market, up sharply, for evidence) and a general collective sigh of optimism after the dire falls in late 2018. Bond yields, on a steady downward path, have now backed up a bit, reflecting the loosened conditions. Gavekal, a really good forecasting outfit, is now recommending selling bonds aggressively and I can see why.

Until literally the end of February, gold and silver were on a rampage (and they will resume that upward trajectory soon). Commodities have broadly risen, and real wages have been on a tear, almost everywhere. That's a sign of capacity constraints running into excess demand, and that, in turn, means inflation.

This inflation (not yet reflected in the headline figures but lurking menacingly under the surface) is occurring at a time when economies are softening – with the eurozone in outright recession in some pockets, China sputtering, and the UK slowing (although doing better than the eurozone, despite the daily press gloom about Brexit). Japan remains Japan – always printing money, always accumulating government debt, and every desperate measure in the playbook being employed to try to kickstart a low-growth economy exhibiting seemingly perennial deflationary tendencies.

The Japanese are going to get what they wished for one day – in spades – and that is a lot of inflation. But they are not alone in this – inflation should be the top theme of the strategists who write eloquently but without conviction (pace Victor Hill of this parish, and Steen Jacobsen of Saxo Bank), because the inflation genie has been let out – and it's coming home to roost. That's why I am bullish on gold and silver, and it's also why I'm bearish on bonds.

Arabian nights

But, speaking of genies, I spent the last week in the Gulf and I'm going back in a couple of weeks, after a quick trip to New York next week. I may be accumulating DNA damage in spades, but just think of the airmiles. I did some business in Dubai and Abu Dhabi and then we went to Oman for a few days' holiday. I was gob-smacked by the progress of the region since I last spent serious time there. Most of the time I am transiting in Dubai airport (and please, roll on the new terminal!). It is incredible to observe what has happened over the last couple of decades. Yes, there is clearly an oversupply of real estate in Dubai, but that will sort itself out in due course.

Literally everyone I met is forward-looking, optimistic and smart as well as being well educated. Dubai

"GAVEKAL, A REALLY GOOD FORECASTING OUTFIT, IS NOW RECOMMENDING SELLING BONDS AGGRESSIVELY AND I CAN SEE WHY."

Ticket Offer

Meet me and the rest of the team behind Master Investor Magazine on 6th April – just use the discount code MELLON to claim your complimentary ticket here.

"BREXIT IS GONG TO EITHER BE HALF-BAKED OR NOT EVEN GO IN THE OVEN."

has moved on from being a tourist destination for Russians and London cab drivers to being a sophisticated enclave on a par with Hong Kong or Singapore, with better roads, better buildings, and a rapidly improving cultural life. Abu Dhabi has the economic heft, and it too is showing signs of sophisticated prosperity blossoming all around. Oman is uniquely beautiful and again – amazing roads, a great port, a wonderful opera house and a spanking new airport in the capital Muscat.

Are we asleep in the West, with our crumbling infrastructure, petty rules and regulations based on oversensitive political correctness? Or are we just rolling over and letting the countries of the Near, Middle and Far East surpass us in every way, in just a couple of generations? Wake up Europe – you are sleepwalking to self-destruction! An example: I was lucky to meet the Minister of Artificial Intelligence of the UAE – where is Britain's? Where is Germany's? Enough said. Rise up, put on your gilets jaunes, but protest not at the unfairness of life, but at the lamentable turgidness of our political institutions. Look at a photograph of Dubai 40 years ago, as I did – and weep.

The next big themes?

In the meantime, as we contemplate our relegation to the lower divisions of economic activity, readers of Master Investor can console themselves that we intend for our own readers to have a competitive edge over all other investors. So, that means we have to focus on what will make us money in a low-return world. Obviously, I think Juvenescence-type investments fit the bill, and I am always looking for other such broad themes – please come and listen at the Master Investor conference on April 6th in London for my take on these.

Until then, I am bullish on sterling against the euro and the dollar. Brexit is gong to either be half-baked or not even go in the oven. If we stay in, we run some danger with Italy, whose situation is literally dire. I hear from friends all the usual arguments – that Italy's debt is largely held domestically (no longer as true by the way), that there is a huge black economy etc. But that won't make any difference when the chickens come home – and they are. Signore Salvini is, in my opinion, determined to lead Italy out of the eurozone, and hang the consequences. And as the lyrics of the old song go, the revolution won't be broadcast. There will be no warning, other than missives such as this.

I think it prudent to keep some powder dry for this forthcoming spectacle. it will represent the biggest single financial turmoil since the second world war, and the single biggest opportunity for us since the economic crisis. Bank stocks in Europe – long ago the safe havens for widows and orphans – are down more than 90 per cent in 12 years. Yes. That's the signal.

All the rest is noise.

Happy Hunting – and I hope to see many of you soon.

Jim Mellon

About Jim

Jim is an entrepreneur with a flair for identifying emerging global trends enabling him to build a worldwide business empire. He is amongst the top 10% in the "Sunday Times Rich List" (Britain's equivalent to the Forbes list). He is often described as the British Warren Buffett and he predicted the Credit Crunch of 2007-08 in a book entitled *Wake Up! Survive and Prosper in the Coming Economic Turmoil*. Jim followed this with *The Top 10 Investments for the Next 10 Years* (2008) and subsequently *Cracking the Code* (2012), *Fast Forward* (2014) and, most recently, *Juvenescence* (2017). His monthly "Mellon on the Markets" column in Master Investor Magazine has gained him cult status among investors. He holds a master's degree in Politics, Philosophy and Economics from Oxford University. He is on the Board of Trustees of the Buck Institute in California, a trustee of the Biogerontology Institute, and a Fellow of Oriel College, Oxford.

BY VICTOR HILL

OPPORTUNITIES IN FOCUS

CYBORGS: YOU TOO WILL BE SUPERHUMAN...

It was inevitable that at some point the development of Artificial Intelligence (AI), robotics and new materials science would one day cohere to enhance the human body in ways that were unimaginable just a decade ago. With advances in genetics, it is imaginable that humans and machines might one day be – well – joined at the hip.

We thought that this would be some way off in the future when cyborg astronauts (assisted by trusty old-fashioned robots, of course) might cope with intergalactic space travel. But it's happening already, down here on Earth. Yes, some early basic cyborgs have already arrived – and will soon be knocking on investors' doors.

Soon, you'll be able to upgrade your eyes to attain bionic vision. You'll be able to embed computer chips in your brain to enhance cognition. You'll gad around in an exoskeleton that could give you Olympic athlete levels of performance in any sport in which you choose to participate...

In practice, however, this technology will first be exploited by the military before it becomes generally available to the likes of you and me. But it is just possible that you might live long enough to become superhuman.

Robotics meets AI

Elon Musk – of SpaceX and **Tesla (NASDAQ:TSLA)** fame – has had another brain baby. And this one really is going to change the world. It's a company called Neuralink and its mission is to blend man and machine by means of *brain-machine interfaces*. (Tediously, the inevitable three-letter acronym is BMI.) Make no mistake, the cyborgs are coming.

Mr Musk's motivation, as ever, is boundlessly ambitious. He wants nothing less than to save mankind. He is not alone in thinking that relatively soon artificial intelligence (AI) will overtake human intelligence and that that could be a problem. Will the intelligent machines be nice to us? If there is any possibility that the answer to this question is "No" then there is only one solution. We (the human race) must stay one step ahead of the machines by integrating their superior intelligence into our own. *If you can't beat them – join them!*

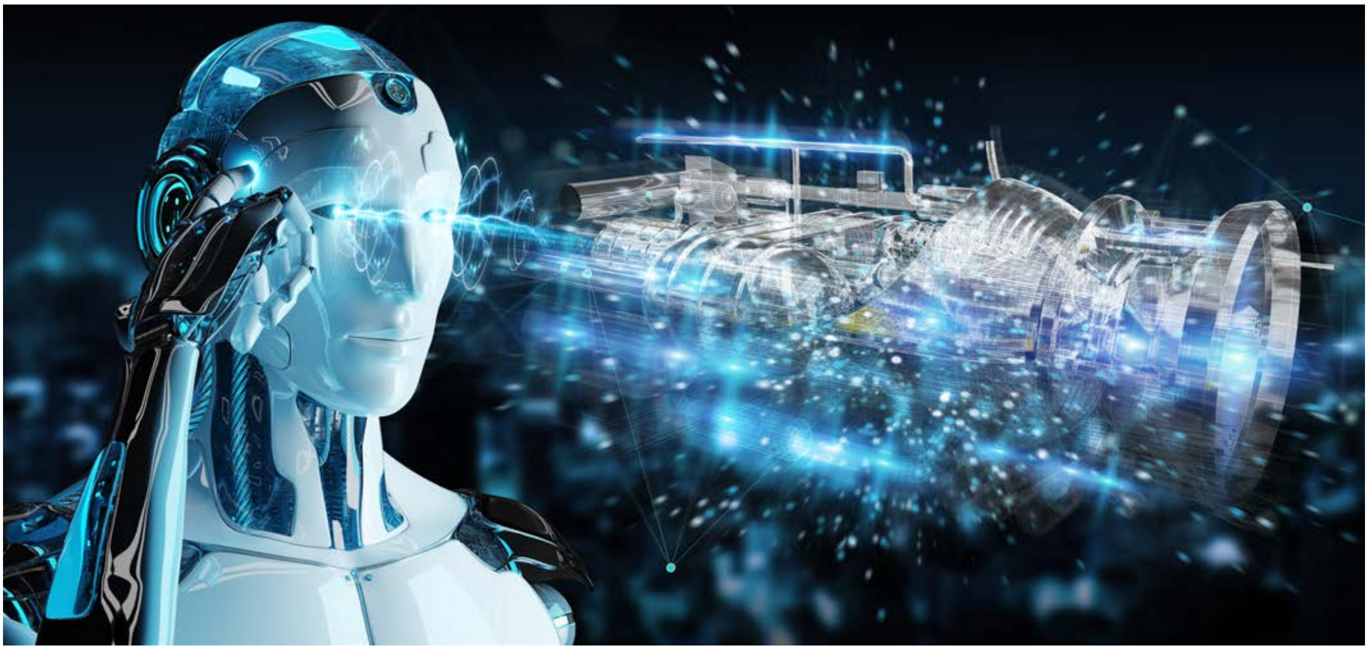
The idea that BMIs can help humans accomplish basic tasks has been around for some time. The Swiss Federal Institute of Technology at Lausanne University has been working on a technology that enables tetraplegics to control their wheelchairs by the power of thought alone. Automotive manufacturers such as **Nissan (TYO:7201)** have been working on technology which will allow drivers to communicate with their smart cars (self-driving or not) by the power of thought.

Robots can already pick strawberries twice as fast as the most energetic human pickers. They are seen as essential to boosting productivity. Many people fear that robots will take jobs away from humans, though there are differences of opinion as to how many jobs are at risk. A recent report from the OECD estimates that only about 14 percent of jobs in developed countries could easily be automated. It envisages that robots will free up time for skilled employees by undertaking repetitive tasks and leaving more time for more creative activities. Another report by McKinsey estimated that 45 percent of all jobs could be completely automated using currently available technology and 60 percent could be partially automated. It estimated that the total number of jobs at risk globally from robotisation was 375 million.

A case in point is self-driving cars which will presumably put cab drivers and delivery drivers out of work in large numbers. But one can imagine that there will be an equal number of new jobs arising from maintaining and managing these vehicles as they zoom around our cities.

But – I know a lot of people won't like this idea – if robots can do human things, what if humans could do robot things? Welcome to the weird world of cyborgs – and to the coming trend of *cyborgation*...

“45 PERCENT OF ALL JOBS COULD BE COMPLETELY AUTOMATED USING CURRENTLY AVAILABLE TECHNOLOGY AND 60 PERCENT COULD BE PARTIALLY AUTOMATED.”



"ROBOTIC EXOSKELETONS AND EXOSUITS CAN ALREADY TRANSFORM ORDINARY MORTALS INTO AUGMENTED BEINGS WITH EXTRAORDINARY POWERS."

Exoskeletons and exosuits

Just as suits of armour enabled medieval knights to go into battle with enormous confidence and panache, robotic exoskeletons and exosuits can already transform ordinary mortals into augmented beings with extraordinary powers. Exosuits enable people to move faster, lift heavier weights and work longer hours than would ordinarily be possible. Check out a BBC video of a little boy with disabilities in Brazil using an exosuit to get around[i].

Cyborg technologies were much in evidence at the 2019 Las Vegas Consumer Electronics Show (CES) in January this year. One exhibitor was a San Francisco start-up called Roam which has developed an exoskeleton called *Elevate* for use by skiers. Basically, the attachments make your legs stronger. The company has secured $12 million in funding. Other exhibitors with equivalent products included Ekso and SuitX. Ekso's devices have enabled paraplegics to walk again. But they also enable ordinary people to undertake tasks that they would not otherwise be able to do.

Prosthetic limbs have been around for a long time but there are also variants of these for people who are able-bodied. *Mechanical trousers* can help people with impaired movement to walk more easily. *Mechanical vests* can be worn to give, for example, warehouse staff or construction workers extra strength and endurance enabling them to carry out strenuous tasks for longer.

South Korea's **Lucky Goldstar (LG Corp. KRX:003550)** is also active in this space with a home assistant called Cloi. Another Korean technology champion, **Samsung Electronics (KRX:005930)** also demonstrated its GEMS-H exoskeleton at the CES. These electric braces are worn over the hips and thighs and allow people to walk about 20 percent faster than otherwise. They also make climbing stairs almost effortless.

It's not clear to me that these home assistants could yet be inserted into people's heads – though I am quite sure that there is a laboratory, somewhere, working on that. Analysts at the Consumer Electronics Show estimated that the global market for human augmentation is currently quite small at about $600 million – but will grow to $3 billion by 2022.

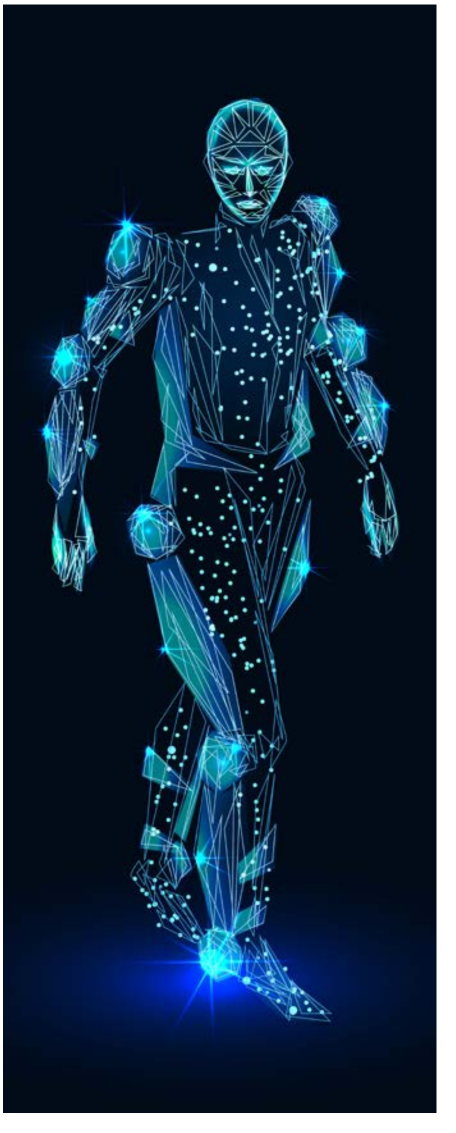
Augmented Hearing

This is one better than noise-cancelling headphones by means of devices placed within the ear called (you've guessed it) *hearables*. All the big tech players are onto this. Amazon, Apple, Google and Microsoft are all working on devices which will enable the user to cancel out extraneous ambient noise and to concentrate on the desired sound – whether it be bird song, or a philosophy lecture.

When you walk around San Francisco these days every other person you see seems to be wearing Apple's wireless headphone earbuds. These enable users to listen to music discreetly – and much more. Such in-ear devices can now be linked up to virtual assistants such as Apple's *Siri*. Cynics might say that the tech giants could then sneak surreptitious ads into our ears, even while we sleep. But surely they wouldn't do that...Would they?

Augmented Sight

One of Googles few product failures was their so-called *smart* spectacles. This product might have been innovative technology but the ergonomics were dire – and it just wasn't cool. Nonetheless, the concept has been taken up by other players. North is now



producing smart specs called *Focals* which actually look like a pair of reading glasses – now available for $999 in the USA. Using these, you could summon up the weather forecast or read an email while having a conversation with your boss – or even do something less innocuous. (As I write this I have just learnt that North is laying off employees.)

There are very few companies which are currently licensed to insert retinal implants in the USA but one of them is California's Second Sight. In January it secured $40 million in a rights issue, the proceeds of which will be used to continue development of a bionic eye. Prototypes have already restored sight to blind people. Advanced bionic eyes might be able to widen the spectrum of light discernible to the human brain. If we could become dogs in our hearing range, we might yet become owls in our night vision.

Then there are augmented reality (AR) headsets. Proponents of AR claim that it is going to revolutionise the way we use media. The technology aims to make TV screens redundant by projecting images directly into our field of vision. So, for example, you could watch a heavyweight international boxing match in your own sitting room just as if you were at the ringside.

The Microsoft Hololens (a snitch at just $3,500) is one such headset – but there are competing products such as the Vuzix Blade smart glasses (a mere $1,099) and the Nreal Light mixed reality glasses. Magic Leap, a Florida start-up which makes headsets that can help (about which I have written before in the context of medical technology), amongst others, surgeons to carry out operations from remote locations, is already valued at an estimated $6 billion.

Augmented limbs

Currently, prosthetic limbs are a poor substitute for what nature endows us with – but that could be about to change. We can design bionic limbs but the real challenge is to replicate the operation of the nervous system and to facilitate communication between the prosthetic limb and the brain. As usual, it is a matter of both hardware and software.

A British prosthetics company called Open Bionics has already produced the Hero Arm. This is a 3-D printed arm which endows the recipient with huge strength. In January it raised £4.6 million in a funding round. The finance raised will fund its entry into the US market. In James Cameron's new epic movie *Alita: Battle Angel* (a story about a bionic girl with robotic arms and super-human martial arts skills), the 13-year old actress who plays the heroine, Tilly Lockey, is actually wearing Hero arms. Tilley lost her hands and forearms to meningitis when she was a baby but is now – quite spectacularly – fighting back, thanks to this extraordinary new technology.

A new branch of surgery called *osseo-integration* can attach titanium studs to nerves located within muscles. This opens an entirely new field which has been called *neuro-embodied design*. Proponents of this technology think that it could be used, not just to heal the injured and the lame, but to further human potential in a future age of incredible athletic achievement.

Chip races

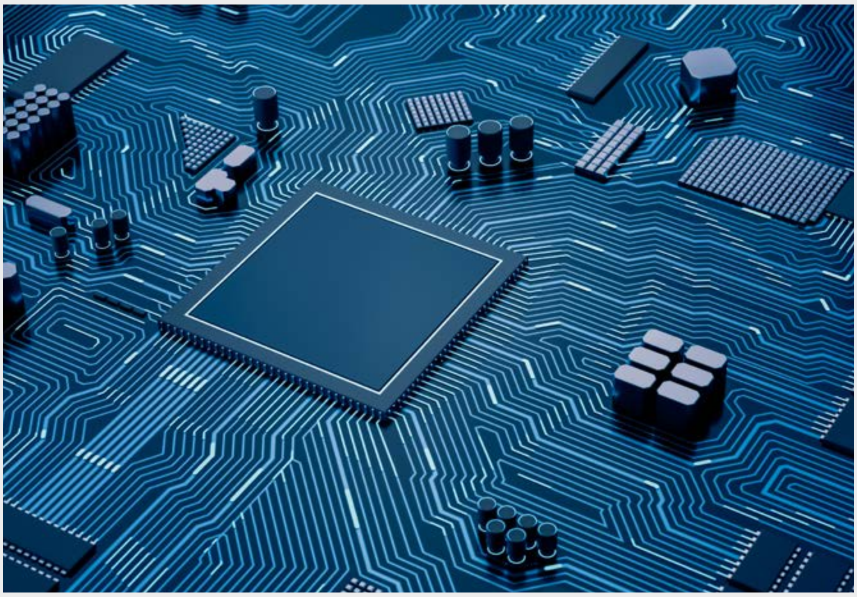
Amazon and Google are now vying to initiate a quantum improvement in microprocessor technology – computer *chips* to most of us. In so doing they are muscling in on a space previously dominated by such incumbent players as **Intel (NASDAQ:INTC)**, **Qualcomm (NASDAQ:QCOM)** and **Nvidia (NASDAQ:NVDA)**. And they are being eagerly followed by the likes of **Facebook (NASDAQ:FB)**, **Apple (NASDAQ:AAPL)** and China's **Alibaba (NYSE:BABA)**. Clearly, Amazon wants to advance the prospects of its *Alexa* voice-activated technology (which uses its proprietary *Echo* speakers). Similarly, **Alphabet-Google (NASDAQ:GOOG)** wants to develop further its *Assistant* device.

Hitherto, software companies have relied on hardware companies to develop systems that will run their software optimally. Now, in the early phase of robotisation and AI, software companies are backwardly integrating into hardware. Rather than coming up with a set of algorithms and asking, say, Intel, to implant them into a chip, Amazon is now designing its own chips and taking them directly to chip manufacturers like **Taiwan's TSMC (SHA:600751)**.

Amazon, of course, is no longer a purely retail business. Amazon Web Services (AWS) now has global clout in cloud computing and cybersecurity. AWS runs data centres which process data for hundreds of thousands of corporate clients. It is reported to control about 62 percent of the global cloud computer services market against Google's 12 percent.

Equally, Apple has been building its own chips to power its smartphones since 2017. One such is the A12 Bionic chip which powers the iPhone XS. It has been reported that Apple plans to phase Intel out of making chips for its MacBook computers by 2020.

Google has been making its own Tensor Processing Units (TPU) since 2016 which are designed for machine learning tasks. These chips were used by Google subsidiary **DeepMind**'s machine that beat a champion Korean player in the notoriously mind-teasing game of GO!



Enhancing the human brain

While man's capacity to develop new technology has produced remarkable results in the last 200 years or more – and even more spectacular results since the advent of digital technology only 40 years ago – the human brain itself, which uses that technology, has not really changed much in the last 300,000 years.

Our limb of the primate family tree – the *hominins* – split for that of chimpanzees and bonobos between six and seven million years ago in the Miocene geological era. Over several million years we hominins developed an upright, striding bipedal gait in order to explore the landscape more efficiently. By two million years ago we were using tools. The genus *Homo sapiens* (as we flatteringly call ourselves) first emerged about 300,000 years ago, the oldest fossil of which has been found at Jebel Irhoud in Morocco[ii].

So the brains that we use to contemplate the baffling abstractions of string theory or that we apply to build more efficient turbines are essentially the same apparatus that our ancestors used to stalk prey on the savannah or to build huts out of leaves in ancient rain forests. There is no suggestion that there is anything inherently wrong with such a brain – indeed the human brain has been described as *the most complex structure in the known universe* with an estimated 85 billion nerve cells with some 150 trillion connections. (Though even our amazing knowledge of physics and chemistry still does not explain how all this electro-chemical activity generates consciousness.)

But could the human brain be improved? In neurology at least, size is not everything. Dolphins and elephants have larger brains than we have but are not as intelligent (at least on our definition of intelligence: dolphins and elephants are much *nicer* than humans – but that is another conversation). In terms of pure computational power, human brains are quite limited – even the best arithmeticians cannot beat a humble calculator. And in terms of collating and sifting huge volumes of data, computers already win hands down. Human brains are particularly feeble in estimating probabilities (which is why – as I have often written in these pages – investors' expectations are usually misplaced!).

"AI COULD ONE DAY BE HARNESSED TO UPGRADE OUR BRAINS – EITHER THROUGH IMPLANTS OR BY CONNECTING OUR BRAINS TO REMOTE SUPERCOMPUTERS."

That is why the idea is now current that the best way to enhance the human brain might be to develop effective ways in which it can interact with AI. We now understand that in the pursuit of AI we are not setting out to replicate the human brain – because, as brain surgeon and neurologist Henry Marsh has explained[iii], brains are nothing like computers. Computers stand alone as isolated entities but brains are attached to bodies without which they cannot function. Humans not only think, but also feel – we're guided, for good or ill, more by emotion than calculation; and emotion, even if it arises in the brain, is always manifested in the body.

In fact it took a surprisingly long time for humans to identify the brain as the seat of intelligence at all. Aristotle thought the brain was a kind of radiator for cooling the blood. 500 years later, Galen thought the most important parts of the brain were the fluid cavities at its centre rather than the grey matter itself. Descartes saw the brain as a kind of hydraulic mechanism; late Victorian medics saw it as a telephone exchange. It's only really with Freud in the early 20th century that we have come to see the brain as the seat of both human reason and human personality. And nowadays, we tend to see it as a computer made of meat.

We know that the brain is plastic – that is to say that it can re-programme itself. If you blind-fold a subject, for example, areas of the cortex which normally process vision will start to process sounds within 48 hours. In computer-speak, the brain is constantly re-programming itself.

The idea of intelligent machines has been around for a long time. In Greek mythology there was the bronze automaton, Talos, which patrolled the island of Crete. But scientists have been thinking about artificial intelligence analytically since the great Alan Turing (1912-54) published his seminal paper *On Computable Numbers back* in 1936 – more than 80 years ago. Turing, by the way, was clear from the outset that the brain was *not* like a computer. It is possible, however, that AI will help us to understand how our brains work – and that, in turn, it could help us to develop better AI.

"IN THE LONG-TERM FUTURE CYBORGS WILL MAKE MUCH BETTER ASTRONAUTS THAN HUMANS AS THEY COULD ADAPT MORE EFFECTIVELY TO PERSISTENT ZERO-GRAVITY AND EXPOSURE TO RADIATION."

At a famous conference at Dartmouth College (New Hampshire) in 1956 the AI pioneer Marvin Minsky announced that machines would exceed humans in intelligence within a few decades. But progress has been much slower than Minsky foretold. Although computer science has leapt ahead in the last 60 years, AI has been a long time coming. But there has been a breakthrough in the last five years as a result of the development of *neural networks* and *machine learning*. These are concepts that have been around for decades but which have been finally realised by companies like DeepMind Technologies (now owned by Alphabet-Google) founded by Demis Hassibis.

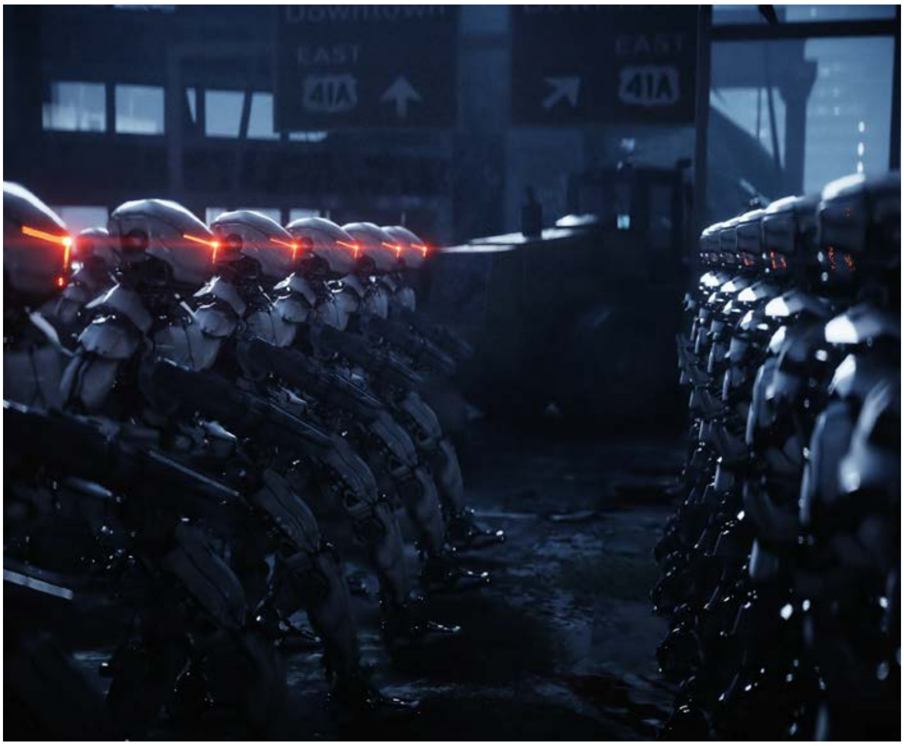
Neural networks only resemble brain networks in a very loose way. They consist of layers of parallel programmes with complex feedback loops between each one. Each programme modifies its input to each other in accordance with predetermined parameters. In this way the entire system can "learn" from experience. They still do not understand what is going on and cannot explain things – they are no nearer to being conscious than were Turing's early valve-powered computers. It is therefore much too early to talk about computers that can "think". Google Translate works (up to a point) not because it can "speak" languages but because it has trawled the entire internet to match an English phrase with (say) a Russian equivalent.

So far all AI programmes can only perform one task. This form of intelligence, as Henry Marsh points out, is reminiscent of some of the patients described in the writings of the late Oliver Sacks (e.g. *The Man who mistook his Wife for a Hat*). They are like "people" who can perform remarkable feats of calculation and yet are hopeless in everyday life.

The ultimate goal of AI developers is not AI but *general artificial intelligence* (GAI). That is a computer system that can mimic a range of human cognitive behaviours and therefore imitate human intelligence. Just as neural networks were inspired by brains, so now there is interest in *neuromorphic* chips. These are computer chips which are designed to resemble nerve cells. This could make computers much less energy-intensive.

The Human Brain Project (HBP), a pan-European research programme, started out with the vaulting ambition of building a brain using computers. Whether this ambition is realistic is highly contentious. One part of the HBP which uses neuromorphic design is the SpiNNker computer at Manchester University. Another research team at the Oxford Computational Neuroscience Lab recently published a paper arguing that a better understanding of how the brain works will holds the key to advances in AI.

AI could one day be harnessed to upgrade our brains – either through implants or by connecting our brains to remote supercomputers. But that is not in view yet. There is no risk that intelligent computers are going to enslave us in the near future (as we have enslaved animals for millennia).



Cyborg soldiers and astronauts

The first fully paid up cyborgs will probably first appear on a battlefield coming your way soon...Seriously, soldiers in the world's leading armies are already kitted out with an incredible technological array in their helmets from infra-red vision goggles to GPS systems and laser-guided weaponry.

The Russians are very active in this field – check out a video on YouTube of President Putin inspecting a robot warrior. Interestingly, last year, Mr Putin made a speech about the ethical implications of using genetics to breed an army of soldiers without any sense of mercy. This may have been for the benefit of the Orthodox Church, prelates of which were present and of which he is a practicing member. But it also suggests that this is the kind of theme in play in Russian defence circles. (If you want to know what is going on in Russia it pays to read those of the President's speeches which are in the public domain. I have always thought that spies are barking up the wrong tree: true intelligence (as in investment) lies right under our noses.)

In the long-term future cyborgs will make much better astronauts than humans as they could adapt more effectively to persistent zero-gravity and exposure to radiation. They may even be up to the challenge of the first mission to our neighbouring stars in search of *Goldilocks-zone* exoplanets which might support life...

If there isn't one already, there will probably be a resistance movement against the rise of cyborgs, possibly even one rooted in religious belief. Although, to the extent that we already have prosthetic limbs or a pacemaker in our hearts or a chip measuring our blood pressure (soon to be quite normal) the process of *cyborgation* has already begun.

Mr Musk's extraordinary vision and drive may even inspire a colony on Mars by the end of his lifetime (hopefully, he should live until about 2065 if he doesn't overdo the weed). But there may be one thing Mr Musk hadn't thought of when he established Neuralink. What if the cyborgs take a dim view of us mere non-cyborg humans and decide we are no longer required?

Action

The advancement of AI and *cyborgation* (as I call it) involve the development of multiple layers of technology combined in innovative and visionary new ways. The niche players which are working on exosuits and prosthetics are at the venture capital phase and are not easily investible. We can assume that many of them will be acquired in due course by the technology behemoths. It was probably inevitable that, in researching this article, the usual suspects came up again and again: especially Apple, Amazon and Google.

Last year I advocated that the social media component of the FAANGS – namely Facebook (plus poor old Twitter) – should be disaggregated from the popular acronym. (Though AANGS sounds like something you could catch.) The big three are at the forefront of numerous components of AI – though don't underestimate Facebook's competitive advantage in facial recognition technology (and possibly in voice recognition as well).

Overall, despite the siren calls predicting the downfall of technology stocks, in my view investors should keep a significant part of their long-term portfolio (depending on its risk profile and size) allocated to one or more high quality diversified technology funds. (I have mentioned the [Janus Henderson Global Technology Fund](#) in this context before). I also think AI/cyborg technology will impact the defence sector very soon – and I'll have more to say on that shortly. For now, I'd just mention **Lockheed Martin Corp. (NYSE:LMT)** and **Northrop Grumman Corp. (NYSE:NOC)**.

"IN MY VIEW INVESTORS SHOULD KEEP A SIGNIFICANT PART OF THEIR LONG-TERM PORTFOLIO ALLOCATED TO ONE OR MORE HIGH QUALITY DIVERSIFIED TECHNOLOGY FUNDS."

About Victor

Victor is a financial economist, consultant, trainer and writer, with extensive experience in commercial and investment banking and fund management. His career includes stints at JP Morgan, Argyll Investment Management and World Bank IFC.

i **Available at: https://www.bbc.com/reel/video/p06tynw5/the-boy-with-the-robot-body**
ii **See *Evolved to Exercise,* by Herman Pontzer, Scientific American, January 2019.**
iii **Henry Marsh is author of *Do No Harm: Stories of Life, Death and Brain Surgery and A Life in Brain Surgery.* I have also drawn on his article *Can we ever build a mind?* Financial Times, 16 January 2019.**

BY MARK WATSON-MITCHELL

THE ECSTASY OF GOLD

Mark Watson Mitchell explains some very interesting facts about gold – and why the precious yellow metal is a long-term winner!

When Napoleon escaped from Elba in 1815 and managed to get straight back into France, he started to go about raising an army. The price of gold was then the equivalent of £4.32 an ounce; however, overnight it leapt to £5.35 on the back of significant demand. The London bullion house Mocatta & Goldsmid declared that the big buyer was Nathan Mayer Rothschild, acting on behalf of the British Treasury. His orders were to dispatch the gold quickly to the Duke of Wellington. Not until Napoleon was defeated, at the Battle of Waterloo, did the gold price simmer down.

In November 1979, the US froze Iran's assets, which was just a few weeks before the Soviet Union invaded Afghanistan. In the two months to late January 1980, the price of gold shot up from $400 an ounce to $850. After Iran's assets were unfrozen, and it became evident that the Soviet Union was hopelessly tied up with Afghanistan, the price fell back to the $400 level.

Gold has proved itself as the enduring talisman for troubled times, such as in times of war, economic uncertainty and geopolitical instability. As Disraeli said, "more men have been knocked off balance by gold than by love". For well over 6,000 years, men and women have fought for it, died for it, cheated for it and slaved for it.

The first gold rush of 1697 brought gold from Brazil into London, partly transported by Moses Mocatta on ships owned by the East India Company, which had a Royal Charter from Queen Elizabeth I.

This inflow of gold led to demand for a purpose-built London vault, which the Bank of England duly set up. Their 'bullion warehouse' served the whole of the European market, as it does now, and was further stocked by the influx to London from the subsequent gold rushes in California, Australia and South Africa.

The refineries that were set up to process this gold were located close to the Bank of England, which played a key role in being a custodian, regulator and facilitator of lending and selling of gold by other banks. In 1750, the Bank set up the London Good Delivery List, which formally recognised those refineries that produced gold bars of a certain standard and could therefore be allowed

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"TODAY, THE BANK OF ENGLAND HAS ONE OF THE WORLD'S LARGEST GOLD VAULTS AND IS THE SECOND-LARGEST CUSTODIAN OF GOLD IN THE WORLD, AFTER THE NEW YORK FEDERAL RESERVE."

to enter the London market. Today, this list is regarded as the only globally accepted accreditation for the bullion market, ensuring that the wholesale bullion bars traded in the market meet standards and quality required by Good Delivery.

By 1850, the London gold market was dominated by five companies (N M Rothschild & Sons, Mocatta & Goldsmid, Pixley & Abell, Samuel Montagu & Co. and Sharps Wilkins), which 150 years later would form the London Gold Market Fixing Company. In 1919, it established the first Gold Price fix, which is the setting of the price of gold by market makers who meet twice a day, at 10:30 and 15:00 GMT. Being at the centre of international time zones facilitated London as being the ideal place from which to operate such a market.

A global market – with London at its centre

The trade in bullion is London-based with a global reach of activity and participants. Today, the Bank of England has one of the world's largest gold vaults and is the second-largest custodian of gold in the world, after the New York Federal Reserve.

The Old Lady's vaults hold over 400,000 bars of gold, worth over £100bn. It also provides safe custody for the United Kingdom's gold reserves, and for other central banks. This supports financial stability by providing central banks with access to the liquidity of the London gold market.

Some 65% of the world's gold production comes from surface mines, with the balance from underground gold mines. Mine production accounts for the largest part of gold supply – typically some 75% each year – with the remaining coming from recycling. The majority of recycled gold, some 90%, comes from jewellery, with gold extracted from technology providing the residual 10%. Around 50% of the gold mined today is used in jewellery.

It is estimated that around 187,200 tonnes of gold, which could fit into a crate of 21 metres cubed, has been mined since the beginning of civilisation. Only 10% of the world's gold was mined before the California Gold Rush, which saw some 40,000 miners join the stampede for the yellow metal, of which only a very small few ever got rich.

It is rarer to find a one-ounce nugget of gold than a five-carat diamond. The largest ever true gold nugget, the 'Welcome Stranger', weighed 2,316 troy ounces when found at Moliagul in Australia in 1869. A 'London Good Delivery Bar' is 400 troy ounces. An ounce of pure gold can be hammered into a single sheet 9 metres square or it can be pulled into a wire 50 miles long. All of the existing gold can be pulled into a 5-micron thick wire which could wrap around the world 11.2 million times.

Carats and ounces

The purity of gold is measured by its fineness (parts per 1,000) or by the carat scale. Pure gold (1,000 parts) is 24 carat; London Good Delivery is 995 parts. Most coins are 916 parts or 22 carats, while high quality jewellery is

750 parts or 18 carats. In the UK, 9 carat (375 parts) is the minimum accepted for the metal to be legally classed as gold. Other metals are combined with gold, like silver and copper, in varying ratios which lower the carat.

By the way, the term carat is derived from Greek and Arabic words, meaning 'the fruit of the carob tree'. The seeds from the tree were known for their consistency and used to balance the scales used by merchants at ancient bazaars.

The weight of gold is customarily measured in troy ounces, which is the equivalent of 31.10 grams. A kilo bar is 32.15 oz. troy, and 1 metric tonne is 32,150 oz. troy.

Today, the top ten largest producers of gold, in terms of approximate tonnage, are: China (429 tonnes), Australia (289 tonnes), Russia (272 tonnes), United States (244 tonnes), Canada (171 tonnes), Peru (167 tonnes), South Africa (157 tonnes), Finland (130 tonnes), Mexico (122 tonnes), Guyana (114 tonnes) and Brazil (92 tonnes).

Gold plays an important part in central banks' reserves management. The largest holders of gold reserves are the United States (8,133 metric tonnes), Germany (3,370), the IMF (2,814), Italy (2,452), France (2,436), Russia (2,066), China (1,843), Switzerland (1,040), Japan (765), Netherlands (612) and India (592). The UK holds 310 metric tonnes – which is a mere 7.3% of our foreign exchange reserves – while the US holds 74%, Germany 69%, Italy 65% and France 59%.

A safe haven in uncertain times

Gold offers a long-term safe-haven for those looking to protect and preserve the value of their wealth, because it is expected to hold significant value. There are hundreds of gold mining prospecting and producing companies quoted in various markets. Compared to the value of gold itself, they can be considered as riskier investments.

There are three main types of gold bullion: bars, rounds, and coins. Each type comes in a variety of sizes. Bars may range from a single gram to 100 ounces each. Rounds and coins are commonly sold in 1 ounce and fractional sizes.

The main difference between a round and a coin is that the former is produced by a private mint while the latter is produced by a government mint. A government-minted gold coin typically has a legal tender face value attached to it – which is considerably less than its intrinsic metal value.

Specialty products such as jewellery and collectors' items are generally not considered to be bullion. Bullion investors should avoid collectible (numismatic) coins that carry high premiums over spot prices.

Where next for gold?

Understandably, the gold price tends to rise as investors in other markets get the jitters. Although it is generally assumed that the cash cost of mining one ounce is around $700, many observers reckon that it is now closer to the $1,000 level. The price of 1 troy ounce peaked at $1,891 in 2011, but came back down to $1,099 and is currently around $1,300. The big question, however, is where is it going now?

Here, in the UK, a big concern is Brexit. There are many factors causing investors to be cautious. Will we or won't we leave, how hard an exit will it be, will it trigger another general election. A problem is that the UK is not the only country going down the road of leaving the eurozone. Italy's political upheaval could see them follow us. Losing two major nations would be a huge blow to the EU economy and the stability of its financial institutions. And Spain may not be that far behind either.

It is now evident that central banks have been buying-up gold at a rate not seen since World War II, driven by concerns over geopolitics, government debt, inflation and the strong dollar.

And although the yellow metal has at times caused short-term pain, it can give better returns than other asset classes in the long-term.

(Sources: the Bank of England; the World Gold Council; Gold.co.uk; Bullion By Post; Forbes; Money Metals Exchange; Gold Price; Quartz; OANDA; Timothy Green; and the US Federal Trade Commission).

"IT IS NOW EVIDENT THAT CENTRAL BANKS HAVE BEEN BUYING-UP GOLD AT A RATE NOT SEEN SINCE WORLD WAR II."

Very important information

When buying bullion coins or collectable coins, ask for the 'melt value', which is the basic intrinsic bullion value of a coin if it was melted and sold.

Always get an independent appraisal of the specific gold product that you are considering.

Consider additional costs, such as insurance and safe deposit boxes, which will cut into the investment potential.

When buying gold that is stored in a third-party security facility, take extra precautions to ensure that the metal exists, is of the quality described and is properly insured.

Advice from The US Federal Trade Commission

About Mark

Director of SQC Research and Author of mw-m.com.

Mark, who has over fifty-five years' experience in the UK stock market, established SQC Research in 1993. He previously worked as a dealer for four stockbroking firms and an investment fund management business. Prior to SQC Research, which provides investment information and comment on smaller quoted companies, he published financial and investment magazines and newsletters.

BY RICHARD GILL, CFA

FROM ACORNS TO OAK TREES

3 SMALL-CAPS TO BEAT BREXIT

As I write, we are just five weeks away from the UK's planned exit from the European Union. But with the likelihood of any deal being agreed still looking slim, the situation may have changed markedly by the time you read this article. Nevertheless, my job this month is to identify three small-cap stocks that will do well no matter what happens with Brexit. In fact, the current uncertainty surrounding Brexit may well provide a good opportunity for small-cap investors.

Small-cap companies are more exposed to the potential negative effects of Brexit, as they have a higher proportion of income coming from the UK economy in comparison to their internationally focussed blue-chip peers. As a result, the past few months have seen investors move away from small caps. This has been reflected in a 16.2% fall in the AIM All Share Index since the markets peaked around June last year, compared to a 6.8% fall in the FTSE 100.

There is huge potential for a bounce back here, in my opinion, should a deal be agreed, either before the current deadline or after an extension. Looking at the Bank of England's recent modelled scenarios based on different assumptions about Brexit, UK GDP is expected to fall markedly in a no-deal scenario, by up to 8% in 2019 compared to current trends. However, should a closer relationship with the EU be inked, steady growth is expected to continue this year and beyond. A deal being agreed therefore should reduce economic uncertainty, improve the fundamentals and boost the small-cap stocks which have been oversold in the midst of the current malaise.

But as I said above, my job is to find those small caps that will perform well regardless of what eventually happens. To do that, as ever, a long-term view should be taken, with the fundamentals focussed on rather than short-term speculation. That considered, here are my three small caps that should do well no matter what happens with Brexit.

4IMPRINT

My first company, a constituent of the FTSE Small Cap Index, has been one of the best performing on the whole of the London markets over the past 10 years. The shares have risen by a huge 2,190% in capital terms since the end of February 2009, with decent levels of dividends having also been seen.

Based in Wisconsin, US, **4imprint (LON:FOUR)** has been around in its current form since 2000. Previously known as Bemrose Corporation, that year saw the business sell off its printing operations, change its name and decide to focus on expanding its promotional marketing division.

The business today describes itself as a leading direct marketer of promotional products. These products range from stationary, clothing, bags, cups, USB sticks and so on, which are all customisable by clients so they can slap on their corporate branding and use them to promote

their own products and services. 4imprint currently has a line of around 50,000 products, processing c.1.2 million orders in the 2017 financial year. Most of these are handled at the company's flagship distribution centre in Oshkosh, Wisconsin.

In 2017, 97% of total group revenues came from the North American markets of the US and Canada. That means this is a business which will be sheltered regardless of what happens to the UK economy after Brexit – although any related changes in exchange rates may affect the company's stock market valuation. The UK & Ireland only made up 3% of revenues in 2017, with the operations being run from facilities in Manchester.

Promoting growth

As you would expect from the share price performance, 4imprint has grown strongly over the past decade. From posting revenues of £119.52 million in 2007, the business grew sales to £480.4 million in 2017 (at current exchange rates – the accounts are now reported in US dollars). That's a CAGR (compound annual growth rate) of c.15%. Underlying profits were up by a CAGR of 15.5% over the same period to the equivalent of £32.5 million. But growth ambitions have not halted, with 4imprint currently having a strategic goal of achieving $1 billion (£766 million) in annual revenues for the 2022 financial year.

Organic growth is being focussed on at present and there is a large market to take advantage of. According to the Promotional Products Association International (PPAI), the US and Canadian promotional products markets see combined annual revenues of $25 billion. While the company is the largest operator in its space, its market share based on the 2017 figures is just c.2.5%. What's more, the fragmented nature of the market (c.23,000 distributors in the US alone), provides consolidation opportunities, although acquisitions aren't said to be a near-term priority.

Investors were cheered by a trading update in mid-January this year, with the headline message being that underlying pre-tax profits for 2018 are expected to be "at least" at the upper end of the range of current market forecasts. The current consensus market forecast is for underlying profits of c.$48 million, implying growth of 13%. Strong organic revenue growth during the second half saw revenues up by 18% at $738.4 million, with net cash at the year-end of c. $27.5 million. As a result, 4imprint said it is now ahead of schedule towards meeting its $1 billion revenue target. To further support growth, a planned upgrade of the Wisconsin distribution centre has been brought forward by a year at a capital cost in 2019 of c.$5 million.

4yourportfolio

Given its long track record of growth, it's no surprise that 4imprint shares currently demand a high valuation. At the current price of 1,985p the historic PE multiple is 24 times. But fast forward to 2019, when analysts at Edison are looking for earnings of c.146 cents per share, and the multiple falls to 17.8 times – not bad for a strong and solid growth business.

There are income attractions here too, with an 80 cent (61.3p) payment expected by Edison for 2019, equalling a pretty decent yield of 3.1%. If 2017 is to be repeated then investors could also see a bonus "supplementary" dividend in the coming years.

Providing a further potential boost for the shares, 4imprint, with a market cap of £558 million, is a large small cap. Should the share price rise in line with expected growth over the coming years then it looks like the company could be knocking on the door of the FTSE 250. This could see the shares rise as tracker funds take up a stake.

"INVESTORS COULD ALSO SEE A BONUS 'SUPPLEMENTARY' DIVIDEND IN THE COMING YEARS."

CARETECH

There are some things which will remain in demand no matter what happens with Brexit. One of those is health and social care, with those sectors having the advantage of being backed by government and local authority funding and being high on the political agenda for increased funding. One company which has been expanding in this area for some years now, and looks well placed for further growth following a large recent acquisition, is AIM listed **CareTech Holdings (LON:CTH)**.

Founded in 1993 and joining the market in 2005, CareTech is a specialist provider of social care services, providing adults and children with a wide range of complex needs in more than 330 specialist services around the UK. Its five core offerings are in the areas of adult learning disabilities, specialist services, young people residential services, foster care and learning services. These are provided to end customers via a portfolio of over 200 properties located throughout the country, with Caretech being paid for its work by local authorities and health service commissioners.

Cambian explosion

CareTech has been growing at a strong rate for well over a decade (see below) but the business was turbo-charged in October last year following the acquisition of fellow London listed company Cambian Group, a children's specialist education and behavioural health service provider. The business was bought for the equivalent of £372 million in a mixture of cash and shares, with CareTech taking on new banking facilities of £334 million to help finance the deal.

Cambian's services have a specific focus on children who present high severity needs with challenging behaviours and complex care requirements, the business is currently looking after more than 2,000 children across a portfolio of 222 residential facilities, specialist schools and fostering offices in England and Wales. Cambian made revenues of just under £200 million in the year to December 2017. Added to CareTech, the enlarged group is now the second largest UK social care operator by revenues and the only one with a UK listing.

CareTech's directors cited that the deal had compelling strategic and financial rationale, with the acquisition providing a wider range of services, a broader geographical reach and offering significant synergies. The deal is expected to be "significantly" accretive to earnings in the first full financial year following completion, with the company identifying pre-tax cost synergies of approximately £6 million per annum, to be fully realised by the 2021 financial year. The Competition and Markets Authority recently unconditionally cleared the acquisition, removing one remaining concern from the company's investment case.

Healthy growth

Despite some difficult years following the financial crisis of 2008/09, when public sector funding cuts hit the sector, CareTech has performed very well since IPO via a mixture of organic growth and a strategy focussed on boosting earnings via complementary acquisitions.

Recent results for the year to September 2018 (which don't include any contribution from Cambian) reported a record set of figures, with revenues of £185.7 million. That was up by 12% over the year and up from just £22.5 million in 2005. Underlying pre-tax profits also grew by 12% to £32.9 million in 2018, up from £2.2 million in 2005. Management were keen to point out that capacity has increased over six-fold since IPO, with underlying EBITDA and diluted EPS up by a compound annual growth rate of 26% and 20% respectively.

Over the years, growth has been driven by a number of factors, including increased outsourcing by local authorities, shortfalls of specialist beds and higher regulatory burdens. Despite its growth, and the Cambian acquisition, Caretech still only has a small share of what is a fragmented market for social care in the UK, estimated by the company to be worth c.£12.6 billion per annum and growing at around 3% a year. So, there looks to be plenty of room for further growth, with CareTech looking at further bolt-on acquisitions alongside organic initiatives.

Valuation

Shares in CareTech have been drifting for over a year now, down from a peak

of 455p in July 2017 to 342p at present. I believe that provides investors with a good opportunity to invest in a business with an excellent track record and good growth opportunities.

Of course, a big risk here is that the Cambian acquisition doesn't go to plan, but that is mitigated in my opinion by the company's experience of successfully integrating a number of other businesses over the years – albeit not at this scale. Borrowings have also risen significantly following the deal, with £414 million of debt expected immediately following completion. Nevertheless, a statement at the end of January confirmed that pro-forma net debt to EBITDA of the enlarged group is expected to be under 4 times, which looks relatively comfortable. It's also worth noting the company has a significant property portfolio supporting its borrowings, with the enlarged property portfolio valued at £774.1 million as at 19th September last year.

Analysts are looking for around 43p per share of earnings in the 2020 financial year, when the major benefits of the Cambian deal are expected to come through, putting the shares on a PE multiple of just under 8 times. The dividend policy is progressive, with a one-third/two-thirds split between the interims and full year. Assuming a similar pay-out ratio to 2017 (31% of earnings), then we are looking at a payment of c.13.5p for 2020, which yields a decent 3.9%.

Following the release of the full-year results last December, broker Liberum re-iterated its 525p target price for the shares, which implies upside of 54% from current levels. Also a potential driver of the shares, the company has highlighted an ambition to move to the Main Market of the LSE in the medium term.

"THE COMPANY HAS HIGHLIGHTED AN AMBITION TO MOVE TO THE MAIN MARKET OF THE LSE IN THE MEDIUM TERM."

H&T GROUP

My final company is one that should continue showing solid growth if the UK economy remains stable after Brexit, but it might also surprise to the upside should things get more shaky.

With a history going back to 1897 when it was then known as Harvey & Thompson, **H&T Group (LON:HAT)** is now one of the oldest and largest pawnbroking groups in the UK. At the core of the operations are 183 pawnbroking shops across the country where customers can get a loan (up to £50,000) in exchange for an item of value such as a watch or jewellery upon which the loan is secured. On this side of the business, at the end of June last year the group held a total pledge book of £47.8 million.

Supporting this is the group's Retail operating segment, which comprises revenue earned from retail jewellery sales. Here, inventory is sourced from unredeemed pawn loans, newly purchased inventory and inventory refurbished from the group's Gold Purchasing operation which sees jewellery bought direct from customers instore. Another income stream comes from Pawnbroking Scrap where income is made on items that are either damaged beyond repair, slow moving or surplus to requirements, and are smelted and sold at the current gold spot price less a small commission.

Complementing these operations, H&T has a smaller Personal Loans business which offers borrowers unsecured personal loans of up to £5,000 for up to 36 months. This is a fast growing area of the business which saw its loan book grow by 79.1% to £17.8 million in the 12 months to June last year. Finally,

"H&T IS A SOLID BUSINESS WHICH MAY SEE ADDITIONAL UPSIDE IF THE ECONOMY STARTS TO WOBBLE."

H&T has a hotchpotch Other Services segment which includes income from foreign exchange services, buyback of goods, third party cheque cashing and Western Union.

Golden era returning

Unlike for many companies, 2009 to 2011 were bumper years for H&T. In the midst and aftermath of the Great Recession the business saw profits soar to an annual peak of £25.5 million after it benefited from a very strong gold price and consumers seeking alternative sources of credit. However, this soon came to an end, the company having a particularly challenging year in 2013 when profits fell by 60% as a result of a fall in the gold price, increased competition and regulatory challenges. However, since 2015 growth has been re-established, with 2017 seeing pre-tax profits up by 45% at £14.1 million.

In January this year H&T confirmed that, following a strong quarter-four performance for pawnbroking and retail, full-year pre-tax profits for 2018 are expected to be in line with market expectations. Across the operations, lending saw the pledge book rise by 8% due to increased customer numbers and loans on quality watches, Personal Loans grew by 35%, jewellery retail saw 7% sales growth, with foreign exchange seeing a 22% income rise. There were some positive noises from management, with the CEO commenting, *"Demand for our products remains strong and we look to the future with confidence."*

Buying the family silver

Since 2013, a year when the shares halved in value, H&T has seen a strong bull run. Nevertheless, they still look cheap, in my opinion. At the current price of 290.5p the company is capitalised at £109.4 million, putting the shares on a historic earnings multiple of just 9.5 times. The yield is a decent 3.6%. There is also solid asset backing to the shares, with net assets as at 30th June 2018 standing at £102.8 million – these were mainly made up of inventory and trade receivables. As a small caveat, net debt stood at £16.8 million as at 30th June last year, but this position was comfortable, with the net debt to EBITDA ratio of 0.97 times being well within the banking covenant test of 3 times. H&T is a solid business which may see additional upside if the economy starts to wobble.

About Richard

Richard Gill is an investment analyst with over a decade's experience of analysing small/mid cap equities. He is the Head of Research at Align Research. Richard qualified with the Chartered Financial Analyst (CFA) designation in 2012 and was awarded PLUS Markets Financial Writer of the Year at the 2008 PLUS Awards. He has been a judge at the Small Cap Awards from 2013 to 2018.

BY JAMIE ROSS OF HENDERSON EUROTRUST

THE ANATOMY OF A GOOD COMPANY: ASML

Jamie Ross, Fund Manager of Henderson EuroTrust (LON:HNE), provides a snapshot of the typical analysis undertaken on every company considered for the portfolio. In this case, he explains the rationale behind the inclusion of the Dutch technology company ASML.

When considering an investment for the Henderson EuroTrust portfolio, we tend not to focus on market noise or any technical factors; the main thing we are doing is trying to establish whether what we are looking at is a good company or not. This is a key part of the research process.

There tend to be many features that most good companies have in common, but there are myriad characteristics and features to analyse that will be unique to each and every business. By undertaking detailed analysis of the 50 or 60 companies we have on our radar (a portfolio of ~40 positions and a watch list of 10-20 names) we try to ascertain whether a business is a good business and if so, whether now is the right time to be invested or not. In this article we will highlight aspects of our process using one of our portfolio companies, Dutch lithography tool manufacturer ASML.

What does the company do?

Based in Veldhoven, Netherlands, ASML is the global leader in the production, sale and aftermarket care of lithography tools. Lithography tools are used by semi-conductor manufacturers to etch 3D patterns onto silicon wafers; an essential part of the complex process of building up a transistor.

Over time, ASML has built up an extremely strong market position. Historically, it has had two competitors (Nikon and Canon), but the huge investment burden (capital intensity and research & development intensity) has taken its toll on its competitors, leaving ASML with a market share of roughly 85% (80% share in immersion technology 'DUV' and 100% market share in next-generation EUV technology). Without significant technological change, it is very difficult to see ASML's market share being challenged in the medium term. Crucially, ASML's strong market position has been partly created through the support (equity investments) of their main customers (Samsung, Intel and TSMC).

> **"ASML HAS BUILT UP AN EXTREMELY STRONG MARKET POSITION."**

Does this company generate strong Return on Invested Capital (ROIC)?

The firm's gross margins (total revenue minus cost of goods sold) are high at 47%; and are expected to climb to more than 50% by 2020. The high over-

> **"IN THE ABSENCE OF SIGNIFICANT TECHNOLOGICAL CHANGE, ASML IS LIKELY TO CONTINUE TO GENERATE A VERY STRONG ROIC."**

all gross margin is driven by the company's market position and ensuing pricing power.

Research and development (R&D) costs are relatively high at about €1.5bn per annum making up around 14% of sales – the equipment used in the lithography tool-making process can be the size of a bus and cost several hundred million Euros; so the R&D burden is a big barrier to entry. Other operating costs make up only a few percent of sales leaving an operating margin of around 28%. In terms of invested capital, most is tied up in working capital and in fixed assets used in the production process. Whichever way you cut the numbers, the above financial characteristics result in a business generating strong double digit ROIC, well above market/industry averages.

What are the risks to the business and to this ROIC profile?

ASML currently has a very strong market position with very few clear challenges. In the absence of significant technological change, ASML is likely to continue to generate a very strong ROIC. However, this is a field of complex technology. It is more difficult to have a strong insight into this industry than with other more straight-forward businesses, like a drinks company, for example. With complex technology, big changes can happen very quickly that you don't see coming at all and new players can come in with a completely new technology or approach. So the risk with ASML is the unknown; that a competing technology could come in and challenge the business' market position, achieving the same thing but in a different, better way.

Aside from the company's ROIC profile, the other risk with ASML, as with any good company, is that the share price valuation is high. This is a relatively expensive stock with a 2019 price-to-earnings* (P/E) ratio of around 27x, which is high versus other compa-

Glossary

Price-to-earnings (P/E) ratio: A popular ratio used to value a company's shares. It is calculated by dividing the current share price by its earnings per share. In general, a high P/E ratio indicates that investors expect strong earnings growth in the future, although a (temporary) collapse in earnings can also lead to a high P/E ratio.

nies in the market. The high valuation means any doubts from the market about the company's ability to deliver on its targets could see the share price underperform. So, the valuation itself makes it risky.

Is there scope for growth?

To some extent, we have covered the 'supply-side' of the business above. As to the 'demand-side', a medium-term outlook of sustained (but cyclical from quarter-to-quarter) demand growth looks likely. Microchips have gone from something we associated mainly with computers, to something that we now see in televisions, mobile phones, watches, heating systems, fire alarms and locks, to name but a few – microchips have become completely ubiquitous, so we know the demand side is very healthy. The demand for microchips is likely to grow very strongly over the next 5-10 years as the trend towards the 'internet of things' continues to drive adoption.

Investment decision?

For us, ASML fits into a buy and hold strategy; we find the business very attractive on a long-term basis and see a medium-term outlook of high, sustainable ROIC together with plenty of means of capital deployment (an attractive and rare feature of a high return business). We might trim or add exposure around different events but principally we want to hold it for as long as possible.

About Jamie

Jamie Ross is a Fund Manager of European equities at Janus Henderson Investors, a position he has held since 2016. He was appointed as joint Fund Manager of Henderson EuroTrust plc in 2018. He is also a Fund Manager on the International Opportunities strategy. Prior to this, he was a fund manager on the UK Equities Team, where he co-managed a UK equities pooled fund. Before that, he was an assistant fund manager on the Pan European Equities Team. He started his career with Janus Henderson Investors (then Henderson Global Investors) in 2007. Jamie graduated with a BA degree (Hons) in economics from Durham University. He holds the Chartered Financial Analyst designation and has 12 years of financial industry experience.

Henderson Global Investors merged with Janus Capital Group in May 2017.

Risk Warning

Before investing in an investment trust referred to in this article, you should satisfy yourself as to its suitability and the risks involved, you may wish to consult a financial adviser. The value of an investment and the income from it can fall as well as rise and you may not get back the amount originally invested. Nothing in this article is intended to or should be construed as advice. This article is not a recommendation to sell or purchase any investment. It does not form part of any contract for the sale or purchase of any investment.

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BY FILIPE R. COSTA

THE MACRO INVESTOR

BEYOND ASSET CLASSES

4 ETFs TO DIVERSIFY FROM THE MARKET

"The grim irony of investing, then, is that we investors as a group not only don't get what we pay for, we get precisely what we don't pay for. So, if we pay for nothing, we get everything."

– John C. Bogle,
The Little Book of Common Sense Investing: The Only Way to Guarantee Your Fair Share of Stock Market Returns

Alternative investing themes

There is a view that the traditional asset allocation strategy is losing its shine as investors find different ways to analyse their investment portfolios. At the same time, the industry that is focused on passive investment strategies has been growing – unlocking new opportunities for investors to manage their savings by themselves, instead of paying very high fees to hedge funds and other fund managers.

Today I look at three ETFs – all of which provide low-priced exposure to alternative themes, help to unlock return potential and offer diversification benefits. Additionally, I propose a *novel* alternative ETF for gaining exposure to the broader US market.

I will also recommend three ETFs that are perhaps not sufficient for now, but are worth keeping in the toolbox for when the time is right. Finally, I look at an ETF that is probably worth avoiding because it adds little value to a portfolio.

The rise of passive investing

During the past few years, passive index investing offerings have grown extensively as those involved in the industry capitalise on the growing demand for ways to bypass the high fees incurred in active fund management and, at the same time, achieve a well-diversified portfolio. According to the consultancy firm ETFGI, assets under management in the US ETF industry reached a record high of $3.42 trillion at the end of 2017. During 2018, global net inflows into the industry reached $516 billion. Data, from the same firm, also show that ETFs are quickly surpassing hedge funds as an asset class in terms of assets under management.

Modern investors are like modern consumers: they do their homework before shopping and are, therefore, a lot more informed than in the past. Many investors go the extra mile and build and manage their own investment portfolios, which has led to the proliferation of index investing offerings. Only a few years ago, the


ETF

ETF industry was a niche market that offered limited options for portfolio diversification to private investors.

Launched in January 1993, the first ever ETF – the **SPDR S&P 500 ETF (NYSEARCA:SPY)** – offered investors the opportunity to buy a small piece of the broader market. Later, as the ETF increased in popularity, the ETF offering expanded into international indexes, to every asset class, to sectors, to factors and even to a few alternative themes – like the robotisation of the economy, a covered-call buy-write strategy and a market tilt towards Catholic values.

A beautiful thing about ETFs is that they don't incur counterparty risk. In addition, they're cheaper to buy than buying each of the underlying assets, there's a large variety to choose from, and they open the door to better diversification to more investors.

Three ETFs to diversify from the market

Janus Henderson Obesity ETF (NASDAQ:SLIM)

Janus Henderson offers investors what looks like an exotic opportunity to benefit from obesity. To be precise, it's an opportunity to profit from the fight against obesity.

Obesity is an *epidemic*. Heart disease is the leading cause of death, and obesity is the main reason behind that, according to data from the Global Health Observatory. Diabetes, which is often associated with obesity, caused 1.6 million deaths in 2015, up from 1.0 million in 2000.

Data from the World Health Organisation shows that 39% of women and 39% of men, aged 18 and over, were overweight in 2016. Globally, 11% of men and 15% of women are officially classified as obese; however, the incidence is far greater in the US, with 36% of men and 37% of women classified as obese. Even among children the data is concerning: 31% of children at age 15 are overweight or obese in the US, according to the OECD.

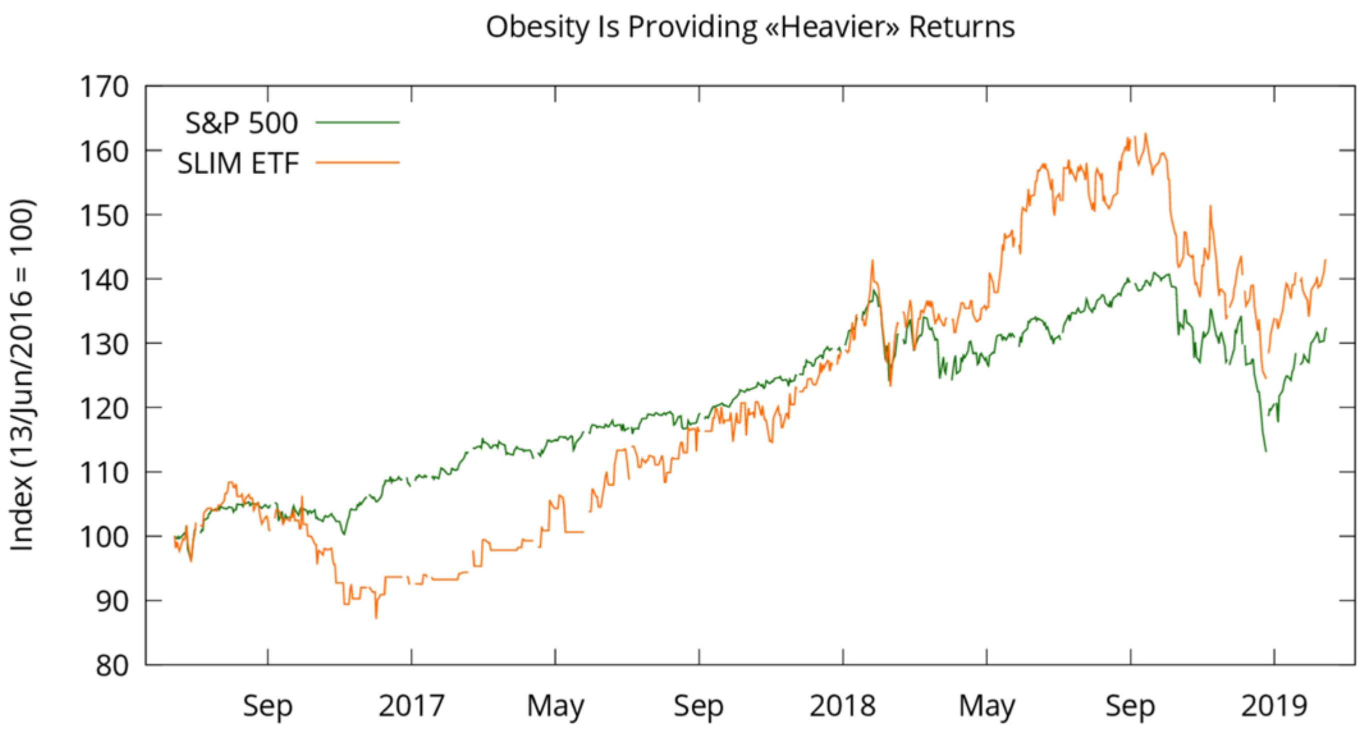
Despite the efforts to fight obesity, the incidence of obesity in both adults and children has grown in the majority of countries, and the OECD now expects that 47% of the US population will be obese by 2030, which is a disturbing figure.

"THE OBESITY ETF FROM JANUS HENDERSON ATTEMPTS TO CAPTURE SEVERAL ASPECTS OF THE OBESITY PROBLEM."

The obesity ETF from Janus Henderson attempts to capture several aspects of the obesity problem. It invests in companies that provide both obesity treatment and/or care offerings and that are focused in fighting obesity and/or in fighting obesity-induced diseases. The offerings include weight loss programmes and supplements as well as treatments for diabetes, high blood pressure, cholesterol, and heart disease.

The fund currently invests in 42 stocks, from across the globe. The majority of the companies are large or medium in market capitalisation size, and its top holding is **Novo Nordisk (CPH:NOVO-B)**, a Danish pharmaceutical company focused on treating diabetes.

The correlation of the Janus Henderson Obesity ETF with the broader US market is low, thereby offering diversification benefits while being exposed to a promising long-term trend.



Global X Longevity Thematic ETF (NASDAQ:LNGR)

Another thematic fund that deserves attention is the Global X Longevity Thematic ETF. It invests in companies that profit from the world's growing senior population, through exposure to health care, pharmaceuticals, senior living facilities and other sectors that contribute to increasing lifespans and extending quality of life in advanced age. Biotechnology and pharmaceutical companies dominate the fund.

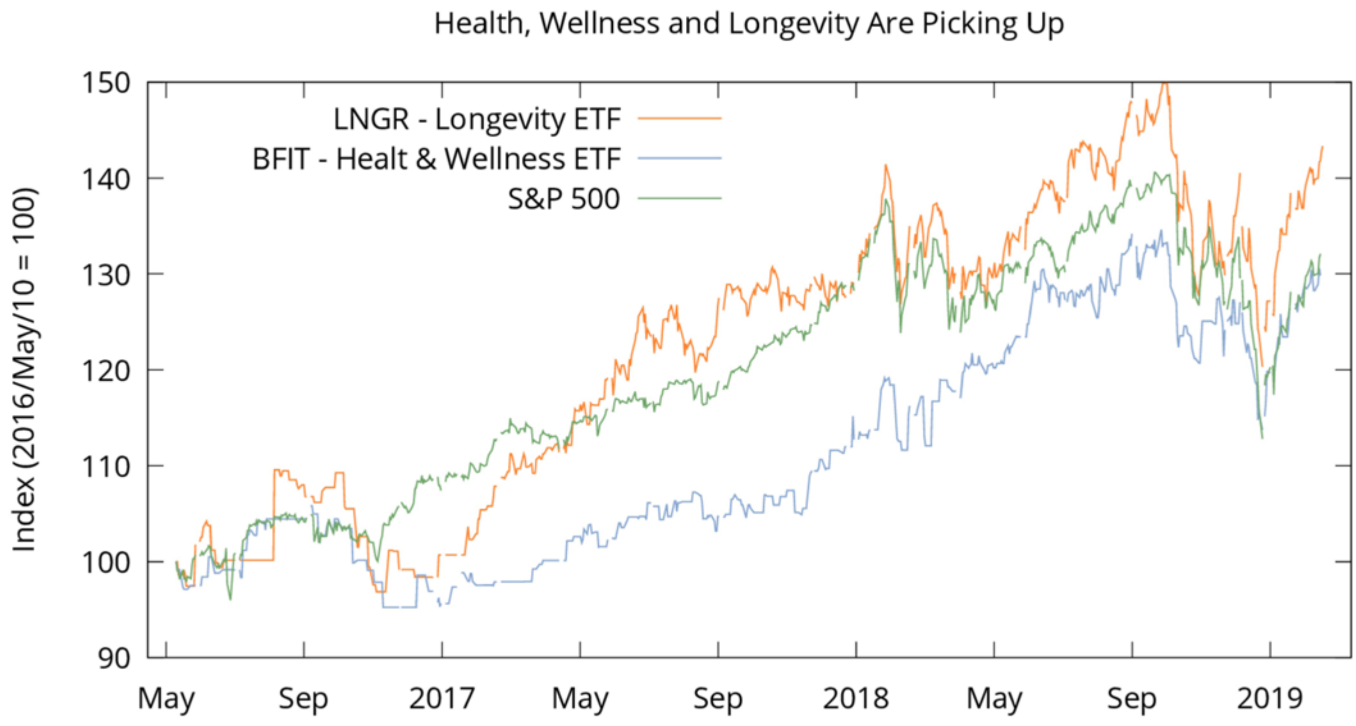
Developments in the longevity industry during the last decade pose a threat to many pension schemes, as we are living a lot longer than anyone first thought. As birth rates fall and life expectancies rise, the demographic landscape is changing. The number of people that are 65 and older is rising much faster than those under 15. At the same time, the older population is a more profitable segment to provide services to, because they're usually more financially endowed than the younger population.

The Global X Longevity Thematic ETF is well managed and has achieved better returns than the S&P 500 – and for lower levels of risk – since its incorporation less than four years ago. It has a total of 98 holdings and its top holdings are **Boston Scientific (NYSE:BSX)**, **Regeneron Pharmaceuticals (NASDAQ:REGN)**, **Edwards Lifesciences (NYSE:EW)**, and **Biogen (NASDAQ:BIIB)**. The vast majority of the holdings are in large capitalisations from the US, but the fund also invests in Switzerland, Denmark, and another 14 countries. This is a fund to keep over the long-term.

Global X Health & Wellness Thematic ETF (NASDAQ:BFIT)

In a similar fashion to the longevity theme, health and wellness are themes that have been increasing in popularity. People live longer and they care

“THE GLOBAL X LONGEVITY THEMATIC ETF IS WELL MANAGED AND HAS ACHIEVED BETTER RETURNS THAN THE S&P 500 – AND FOR LOWER LEVELS OF RISK – SINCE ITS INCORPORATION LESS THAN FOUR YEARS AGO.”



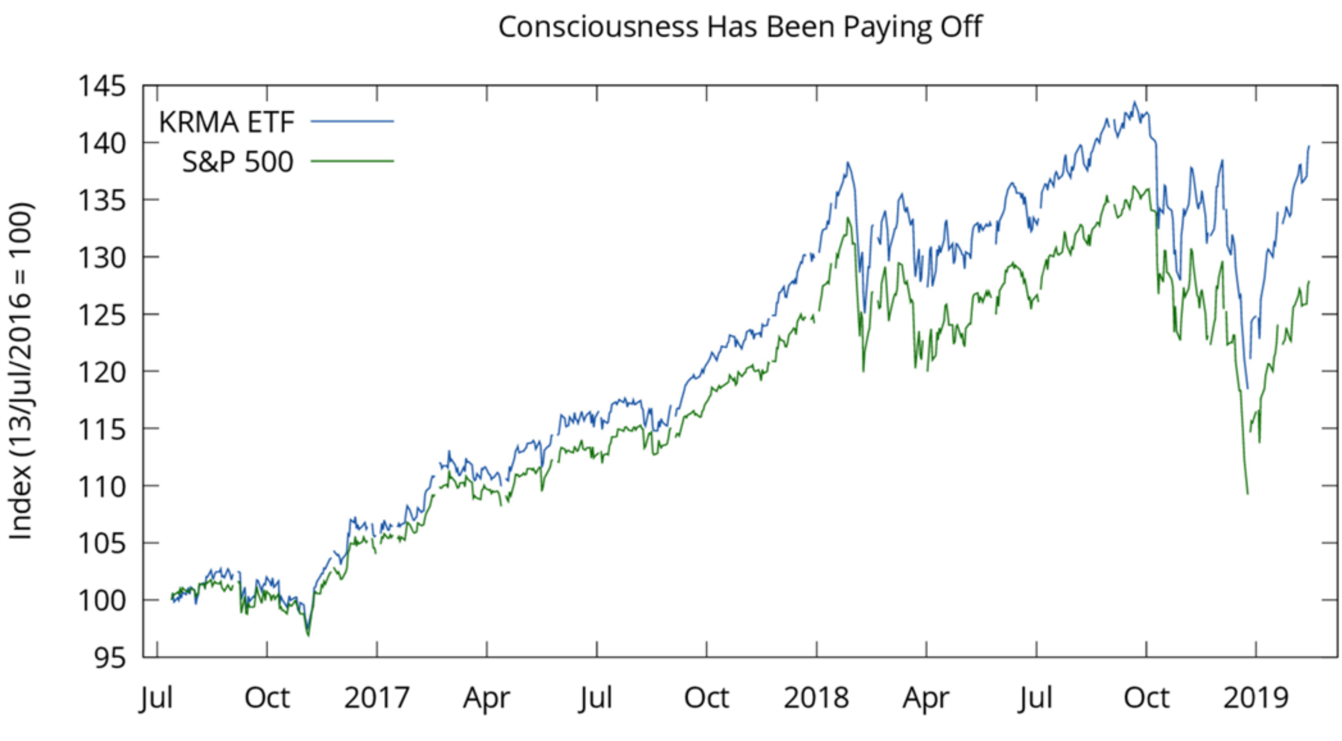
more about their health; society has been refocusing on healthier products; and the popularity of alternative diets has been growing like never before.

The Global X Health and Wellness Thematic ETF attempts to capture the effects of changing consumer lifestyles by investing in companies geared toward promoting physical activity and well-being. Top holdings include **Dexcom (NASDAQ:DXCM), Lululemon Athletica (NASDAQ:LULU), Columbia Sportswear (NASDAQ:COLM)** and **Nike (NYSE:NKE)**. Like the Longevity ETF, this is an ETF that invests globally, not just in the US; in fact, more than half its assets are from outside of the US, in countries such as Japan, UK, Taiwan and Germany.

An alternative ETF to proxy the market

Global X Conscious Companies ETF (NASDAQ:KRMA)

The Conscious Companies ETF is designed to provide investors with an opportunity to invest in well-managed companies that achieve performance in a sustainable and responsible manner. The companies targeted by the ETF achieve positive outcomes for five key stakeholders: customers, suppliers, stock and debt holders, local communities and employees. Since its inception in July 2017, investing in this ETF has paid off. While the S&P 500 rose by 27.9%, the ETF rose by 39.7% – and with less volatility. At a time of increasing consciousness about the social, environmental, and economic impact of our actions, the Global X Conscious ETF is an alternative to a market portfolio.



Four ETFs to avoid right now

"IT MAY BE BETTER TO AVOID THE AI POWERED EQUITY ETF, ESPECIALLY AT A TIME WHEN ECONOMIC CONDITIONS ARE DETERIORATING AND SMALL CAPITALISATION STOCKS ARE EXPECTED TO COME UNDER PRESSURE."

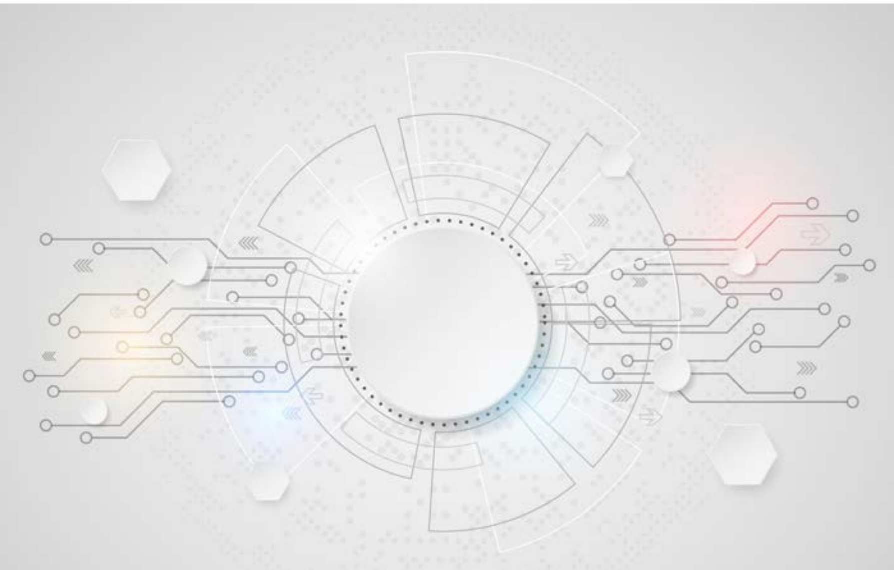
ALPS BUZZ US Sentiment Leaders ETF (NYSEARCA:BUZ)

The ALPS BUZZ US Sentiment Leaders ETF mixes computer science with social media in order to identify stock trends. The strategy is derived from recent research that claims that it is possible to build bullish signs for stocks by analysing tweets[i], news and other sources. The fund targets the most frequently mentioned stocks across social media, determines whether sentiment on those stocks is positive or negative, and even evaluates the quality of the source of the data.

In my view, this ETF represents an excellent attempt at translating theoretical state-of-the-art work in finance into stock market picks. But, I wouldn't buy it at this point for one single reason: it's a momentum ETF. Momentum strategies work well in a trendy economy, one that is growing steadily. After so many years of stock gains, we're at the point where quality, minimum volatility and value are the best factors to rely on. The BUZZ ETF is one to keep an eye on but not to buy at this point.

Global X Millennials Thematic ETF (NASDAQ:MILN)

The Global X Millennials Thematic ETF seeks to invest in companies that are likely to benefit from the unique preferences of the US millennial generation (birth years ranging from 1980-2000). The companies come from several areas, including social media, food and dining, clothing and apparel, health and fitness, travel and mobility, education and employment, and home goods and financial services. There are many companies that are either inside the technology sector or represent momentum plays. The ETF is a well-managed fund, but it's more tailored to a growth strategy, than a value one, and the phase of the business cycle that we're currently in is best suited to value plays. As such, I'd rather focus on other thematic funds.



AI Powered Equity ETF (NYSEARCA:AIEQ)

The AI Powered Equity ETF invests in computer science companies that are considered state-of-the-art. The fund pulls data on more than 6,000 US public companies each day before picking around 100 of them to invest in. And by utilizing artificial intelligence, human error and biases are significantly reduced. So far, the fund has delivered good results against the S&P 500, but that may be primarily due to its small size. While there isn't enough data to fully evaluate the ETF accurately yet, I note that the fund lost one fourth of its value during December just gone, which confirms that the fund doesn't hold-up very well under harsh conditions.

Because no one really knows much about the algorithms behind the fund and because the value of the fund can sink very quickly in harsh conditions, it may be better to avoid the AI Powered Equity ETF, especially at a time when economic conditions are deteriorating and small capitalisation stocks are expected to come under pressure.

ClearShares OCIO ETF (NYSEARCA:OCIO)

The investment style followed by the ClearShares ETF is good. Instead of investing in a specific theme and building a portfolio of equities, the ETF invests in other ETFs. It's an ETF of ETFs. The idea is simple: if top managers are better informed and can beat the market, then mimicking their trades may lead to superior performance. In the case of hedge funds, it's difficult to implement such a strategy because investors have access to their trades late. But in the passive investment world, investors don't have to mimic the trades because they can just buy the ETFs.

The ClearShares OCIO ETF employs a top-down analysis. It evaluates macroeconomic conditions, identifies potential trends, and determines markets, asset classes, styles, sectors, and geographical regions that it believes will outperform in the near future. It then selects a group of ETFs that best fits the identified trends, which is far better and less expensive than selecting individual equities. The fund targets a 60/40 stock-bond composition.

The main aim of building a portfolio of ETFs is to cover several investment angles and achieve diversification. But the ClearShares OCIO ETF falls short of that aim. Adding shares to a portfolio contributes to diversification if, and only if, the shares are different from each other. But the holdings that the OCIO ETF invests in cover many of the same factors.

To help explain the problem, I collected price data for four holdings in the OCIO ETF: **Vanguard Total Stock Market (NYSEARCA:VTI), iShares Core S&P 500 (NYSEARCA:IVV), Vanguard 500 ETF (NYSEARCA:VOO)** and **iShares MSCI USA Value (BATS:VLUE)**. The idea is to analyse the correlations between these ETFs. The results, which are summarised in the table below, are concerning.

Correlations Between Four Holdings In The ClearShares OCIO ETF

VTI	IVV	VOO	VLUE	
1.0000	0.9952	0.9953	0.8819	**VTI**
	1.0000	0.9987	0.8761	**IVV**
		1.0000	0.8763	**VOO**
			1.0000	**VLUE**

Notes:
Correlation coefficients using observations between 2013-04-19 and 2019-02-13
5% critical value (two-tailed) = 0.0503 for n = 1519

Data Source: Yahoo Finance

The correlations between these ETFs are too high. Investing in the VTI, the IVV and the VOO ETFs isn't all that different than investing in just one of them. For a fund with an expense ratio of 0.67%, it seems a waste of resources. The investor may achieve a much better outcome by splitting funds 60/40 between the Vanguard Total Stock Market ETF and the **Vanguard Total Bond Market ETF (NASDAQ:BND)**. The expense ratio would be cut to 0.044% and diversification would be similar.

Final comments

The world has been experiencing a few structural changes over recent decades. The advances in science and awareness have extended our lifespan. The younger generation is a lot more concerned with what they eat and drink and with living a life that is healthier and better for the environment. The LNGR, BFIT, and SLIM ETFs offer investors the opportunity to gain exposure to prevailing long-term trends. As an added bonus, these ETF carry low correlations among them and against the S&P 500, providing diversification benefits. As a fourth option, the KRMA ETF may be used as a key holding, with it being sufficiently correlated with the broader market, while, at the same time, providing an alternative view on sustainable values.

Correlations Between Our Four ETF Picks

KRMA	GSPC	SLIM	LNGR	BFIT	
1.0000	0.8860	0.3472	0.5169	0.3407	**KRMA**
	1.0000	0.3161	0.5235	0.2996	**GSPC**
		1.0000	0.2685	0.2581	**SLIM**
			1.0000	0.2476	**LNGR**
				1.0000	**BFIT**

Notes:
Correlation coefficients using observations between 2016-07-14 and 2019-02-13
5% critical value (two-tailed) = 0.0755 for n = 675

Data Source: Yahoo Finance

About Filipe

Filipe has been a contributor to Master Investor since the earliest years. His specialisation is monetary policy, macro issues and behavioural finance where he allies the practical experience of several years of trading with academic credentials. Filipe in fact teaches courses on Financial Markets and Monetary Economics at the University of Oporto Faculty of Economics, helping traders maximise profits and better manage risk.

i **Ranco, Gabriele, et al. "The effects of Twitter sentiment on stock price returns." PloS one 10.9 (2015): e0138441.**

BY JAMES FAULKNER

SHARPE MINDS

WHY INVESTORS CAN STILL RELY ON INFRASTRUCTURE FUNDS

AN INTERVIEW WITH PHILIP KENT OF GCP INFRASTRUCTURE INVESTMENTS

The infrastructure sector has come under a lot of pressure lately on fears of nationalisation under a Labour government and the risk posed by higher interest rates. In this piece, Master Investor Editor in Chief James Faulkner catches up with Phil Kent of GCP Infrastructure Investments to see whether the sector still offers that attractive mix of income growth and capital protection that won it such popularity among investors.

James Faulkner: Hi Phil and thanks for taking the time to speak with Master Investor. The infrastructure sector became very popular with investors after the financial crisis, with the high, inflation-linked yields on offer proving very attractive in a world of zero interest rates. But the PFI scandal and talk of nationalisation from the Labour Party have taken the edge off of the sector. What is the current state of play in the sector, and how should infrastructure funds be viewed in the context of an investor's overall portfolio strategy?

Phil Kent: *We still see a strong appetite for the infrastructure sector from investors, with a number of benchmarks, such as the privatisation of the John Laing Infrastructure Fund and disposals of PFI assets at significant premia to carrying values, demonstrating this. Whilst we acknowledge market sentiment changes, the nature of the underlying projects has not – infrastructure means physical assets delivering a critical service over a long timeframe. We therefore believe that infrastructure can still be relied on by investors to generate a long-term, stable income stream that is not correlated with general market cycles.*

JF: What is the current portfolio breakdown for GCP in terms of the sectors the company is exposed to and what is the rationale behind this?

PK: *Renewables (across the full range of technologies including solar, wind, hydro, biomass, anaerobic digestion) makes up c. 60% of the portfolio. PFI/PPP makes up 22% of the portfolio and the remainder is in supported living – a subset of the social housing sector. Gravis, as investment adviser to GCP, does not target a specific sector allocation, but rather has sought to take advantage of the most attractive investment opportunities at any time. Over its life, this allocation has shifted from predominantly PFI/PPP exposure to the make-up today, in response to the changing availability of investment opportunities benefiting from public-sector*

“INFRASTRUCTURE CAN STILL BE RELIED ON BY INVESTORS TO GENERATE A LONG-TERM, STABLE INCOME STREAM THAT IS NOT CORRELATED WITH GENERAL MARKET CYCLES.”

"C. 58% OF THE PORTFOLIO HAS SOME FORM OF INFLATION PROTECTION."

backed cash flows in the primary and secondary markets.

JF: GCP Infrastructure has a lower level of inflation linkage in comparison to many other infrastructure trusts, but the flipside of that is that it has less exposure to PFI projects. How should investors view the level of inflation linkage in the context of the composition of the portfolio and the tilt towards PFI subordinated debt?

PK: *The lower level of inflation linkage is a result of the portfolio being predominantly debt investments, which have a fixed rate of return. That said, c. 58% of the portfolio has some form of inflation protection across two mechanisms built into the debt structures, providing some protection in a higher inflation/ interest rate environment. The focus on debt means investors are less exposed to changes in the performance of the underlying assets and/or market conditions.*

JF: The collapse of Carillion has highlighted the significant counterparty risk faced by companies operating in the PFI sector. Where you are involved in PFI, what does GCP do to make sure this risk is properly managed?

PK: *All investments that adopt a project finance approach to investing (as is the case in PFI, and more widely across the GCP portfolio), where a project company builds, owns and operates an asset, is reliant on multiple third parties that provide services to monetise such asset. These services may include building, operating and maintaining the asset as well as using the services provided by an asset (e.g. purchase of electricity). A key part of any due diligence is therefore understanding such reliance in significant detail, including the counterparties providing the services, their financial strength and track record. Protection from a failure of any counterparty in this structure comes from an ability to replace each service provider. Therefore, a critical part of our assessment is the extent to which service providers can be replaced at the same cost and risk profile, in order to mitigate the impact on the project and its investors.*

About Philip

Phil is a director of Gravis. He acts as lead adviser to GCP Infra. Phil joined Gravis from Foresight Group where he was responsible for investments in the waste and renewable sectors, including large waste wood combustion projects and a pipeline of AD projects across the UK. Phil has been involved in the energy sector for over ten years, working initially as a consultant within PA Consulting's Energy practice, focussing on energy markets and energy asset valuations. In 2008, he moved to Gazprom Marketing and Trading, working in risk management across a number of commodities before moving into the Clean Energy team. Phil graduated with a degree in geography from Oxford University.

JF: Are you concerned by the fact that interest rates continue to rise in the US? Presumably we will see rates rise here in the UK again at some point once the Brexit situation becomes clearer. What implications does that have for infrastructure funds like GCP?

PK: *We believe interest rates would have to rise significantly before the relative attractiveness of GCP becomes a consideration. The portfolio generates c. 8%, which represents a considerable buffer against an equivalent duration gilt. That said, as noted above, the portfolio does have inflation protection that would respond to the extent interest rate rises are linked to a higher inflationary environment.*

JF: Last year saw the trust make its first investment into the offshore wind sector. What attracted you to this area and how does it complement the rest of the portfolio?

"OFFSHORE WIND REMAINS A GROWING SECTOR IN THE UK, AND WE ANTICIPATE FURTHER INVESTMENT OPPORTUNITIES WILL ARISE."

PK: *GCP has reviewed a number of opportunities in the offshore sector over the last two years, culminating in its first investment last year. We are attracted by: (i) the higher level of subsidy income as a percentage of revenues compared with onshore wind projects (reflective of the higher capital cost); (ii) the scale of counterparties involved in building, operating and managing the projects, which are typically utility scale; (iii) more consistent and predictable wind resources compared with onshore; and (iv) significant opportunities to optimise value through life extensions, refinances and asset optimisation. We believe this complements the portfolio through additional diversification of our renewable exposure. Further, offshore wind remains a growing sector in the UK, and we anticipate further investment opportunities will arise.*

JF: The most recent annual report speaks of "limited opportunities for new investment in primary assets". Why is there such a dearth of new infrastructure investment projects coming on-stream? Is this mainly down to a lack of support from government?

PK: *Government support is a key driver of new infrastructure development. Highly capital-intensive investments that are repaid over the long term rely on a stable policy backdrop to provide investors with comfort over the enduring demand for the service an infrastructure asset provides. Support for renewable electricity has significantly reduced in the last few years, and the government confirmed in the 2018 budget that no new procurement would happen under the PFI/PF2 models. Support does remain in a number of areas, such as renewable heat (i.e. the renewable heat incentive and heat networks investment programme), which we remain positive about. Whilst we expect policy to change as the government's priorities for new infrastructure evolve, we also need to ensure policy is stable and deliverable over a sufficiently long timeframe to support large investment decisions.*

JF: Conversely, you appear to be finding lots of opportunities on the secondary market. But given the reduction in opportunities in the primary market, is this being accompanied by an increase in competition for these assets? What parameters do you have in place to ensure that you don't overpay?

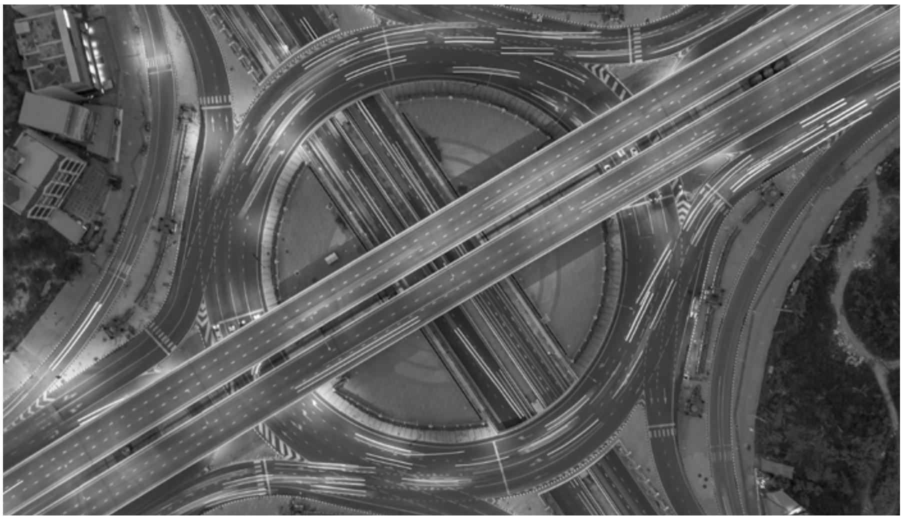
PK: *We do find particular sectors in the secondary market competitive as a result of a number of investors targeting such sectors. We therefore focus on assets, or portfolios of assets, where the asset characteristics mean we have a competitive advantage. This may be a result of size (i.e. too big or small for others), asset classes (e.g. a blend of different assets means an opportunity falls outside of the scope of competition), or approach (e.g. flexibility in the capital structure). Each proposed investment is independently valued by Mazars prior to completion on such investment, which validates the pricing in each case.*

JF: What implications does Brexit have for the infrastructure sector?

PK: *This largely depends on the eventual arrangements for Brexit. From a macro perspective, potential implications include a reduction in the general attractiveness of the UK for foreign investment, in the context of uncertain regulation as any transition period evolves into longer-term arrangements. We also think the government resource effort that has been allocated to delivering Brexit has detracted – and is likely to continue to detract – from the formation of domestic policy that may support new infrastructure.*

On a more project-specific level, impacts are likely to include: (i) the need for arrangements on the island of Ireland given the connectivity of road, rail and energy and a single market for electricity be-

"THE GOVERNMENT RESOURCE EFFORT THAT HAS BEEN ALLOCATED TO DELIVERING BREXIT HAS DETRACTED – AND IS LIKELY TO CONTINUE TO DETRACT – FROM THE FORMATION OF DOMESTIC POLICY THAT MAY SUPPORT NEW INFRASTRUCTURE."



tween Northern Ireland and the Republic of Ireland; (ii) access to, and the cost of, plant and equipment – particularly in the energy sector a significant component of the supply chains for replacement parts relies on supply from European companies. As such, foreign currency movements, tariffs, and the ability to freely import such parts could impact the costs and/or downtime incurred by projects in procuring parts; (iii) the cost and availability of labour impacts the cost of project delivery.

JF: Where do you believe the best opportunities for infrastructure investment will be in the future?

PK: *From a UK perspective, we see the following areas as likely to create attractive future investment opportunities:*

- *Renewable heat and transport – both are significant contributors to fossil fuel emissions that need investment to enable the UK to meet its binding emission reduction obligations. The electrification of vehicles, and the associated charging and distribution infrastructure that will be required to support this, is expected to create opportunities. Improving the efficiency of energy use (across heat and electricity) continues to be an area with significant opportunity;*

- *Digital infrastructure – the UK has fallen behind it's developed world peers in the rollout of high-speed broadband, and we have seen a number of investment opportunities associated with the roll-out of this infrastructure;*

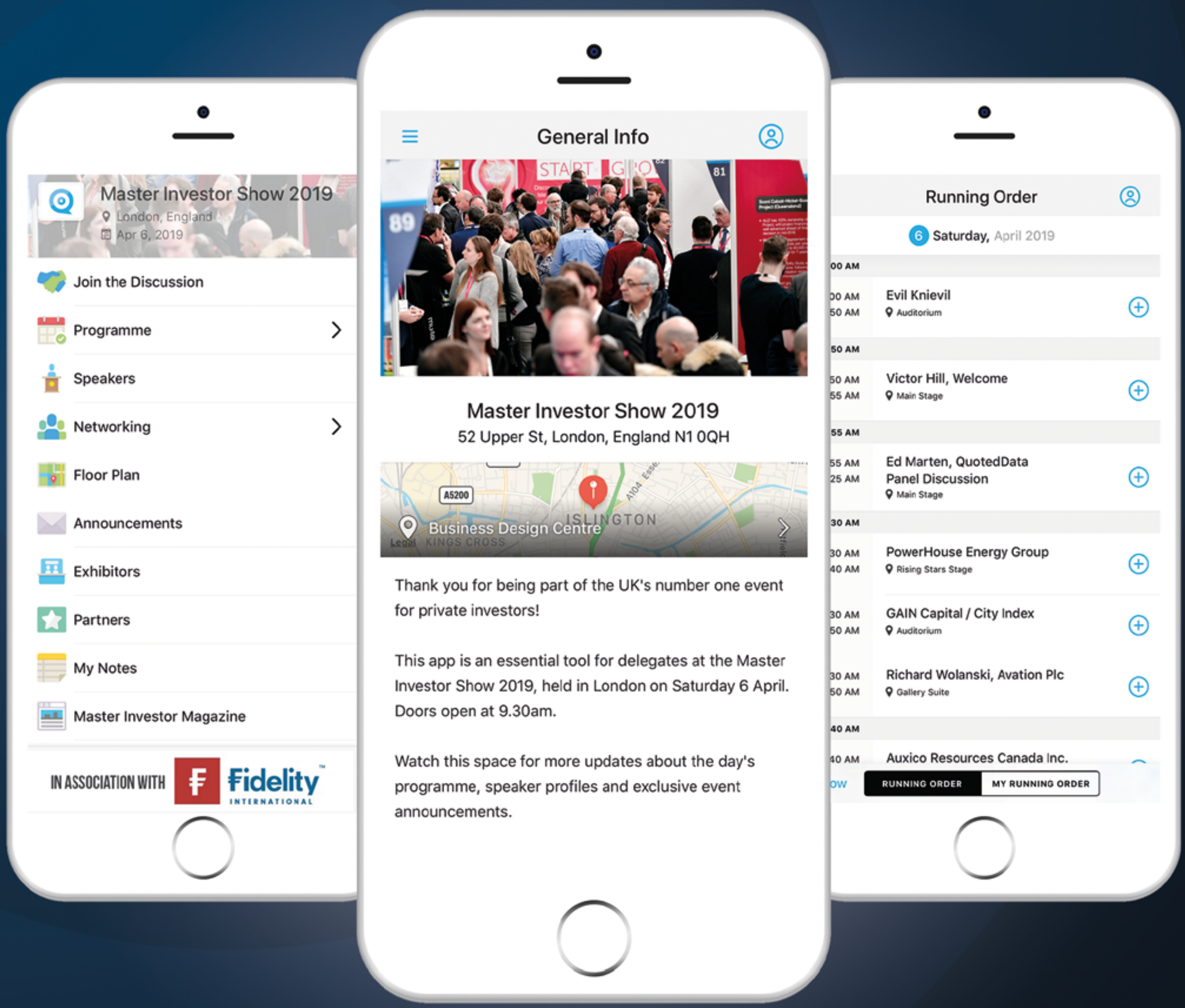
- *Smart grids and smart cities – relieving congestion in cities through new transport infrastructure and intelligent systems to manage traffic flows; and grids that include smart meters, more demand side management, batteries and flexible purchase and sale of electricity;*

- *Housing continues to be an issue in the UK, with an excess of demand over new supply, and presents a significant investment opportunity;*

- *Infrastructure to adapt to the effects of climate change – including protection against more extreme weather (such as flood protection), is likely to become more relevant in the short and medium term.*

About James

Our Editorial Director, James Faulkner, began investing in the stock market in his early teens. With over a decade of experience covering the stock market under his belt, he has also been a judge at the Small Cap Awards, and is an Associate of the Chartered Institute for Securities & Investment.



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BY DAVID JONES

CHART NAVIGATOR

WHEN IS A MARKET OVER EXTENDED?

USING TECHNICAL ANALYSIS TO HIGHLIGHT EXTREMES

I thought it would be timely in this month's piece to take a look at the concept of a market being overbought or oversold – where the trend in question is still strong, but maybe it is getting somewhat overstretched. If we think about the true value of a market (whatever that may be), then price tends to oscillate around that level, a little like an elastic band getting stretched and then eventually snapping back.

At the time of writing, plenty of markets would appear to have enjoyed extreme moves. The popular US Dow Jones index has rallied 4,000 points in less than two months; gold is up more than $100 since the beginning of December and the oil price has risen by more than a third since its Christmas Eve lows. These are significant moves! From a trend-following point of view, and despite how far these three markets have come, the rallies are still intact. The question is: Should we buy in now or wait for at least a small correction? This is where technical analysis will use overbought/oversold indicators to try to gauge the temperature of the market.

What sort of indicators are popular?

Before I get into this, first of all a word of caution. I qualified as a technical analyst more than 20 years ago – yes, there is an actual exam you can pass that tests your skill at looking at squiggly lines! Since then, technical analysis and charting has massively increased in popularity. As access to markets for the wider public has been improved through products such as spread betting and contracts for difference, there are many more private investors and traders trying to profit from the moves across a whole range of financial assets. Charting is the preferred method for many of these people – and the area that has really grown is the number of indicators available. Many charting packages now have tens of these technical tools, deployable with a couple of clicks of a mouse – you can manipulate the price data every which way you want to. And I think this has caused a real problem for those new to markets. In my experience, plenty of newer traders and investors feel that the Holy Grail to making money can be found in these indicators – it is just finding the right one.

Nothing could be further from the truth. All indicators typically do is show the price data in a different

"WHEN THE TREND IS IN OUR FAVOUR, THE OBJECTIVE IS TO RIDE THAT TREND FOR AS LONG AS POSSIBLE, TO SQUEEZE OUT THE MAXIMUM PROFIT FROM OUR INVESTMENT."

way – they are not some sort of market magic. They can be useful of course – but basic principles such as the overall trend of the market, which shows us the real sentiment out there, should still be the starting point when looking at charts in my opinion.

With that caveat, let's look at one of the more popular indicators, the Relative Strength Index (RSI).

How the RSI can help take the temperature of the market

The RSI has been around for 40 years and is a relatively simple indicator – but no less useful for that. It oscillates between two extremes, from 0 to 100%. When the RSI is below 30% the market is said to be oversold – it has fallen too far and is due a rally. When the RSI pushes up through 70%, the market is thought to be overbought – it is due a slide. The RSI looks at the recent price changes in a market (for example over the last 10 days) and compares where the market is trading now to that recent overall range. On the basis that a picture paints a thousand words, here is an example using the 10-day RSI.

You can see how the RSI oscillates with the movement of the market. After the market has rallied strongly, the RSI moves into overbought. And then with the large sell-off experienced by markets in December, the RSI falls back and goes below 30%. This is oversold, suggesting that maybe the market is due a bounce. This is the most simplistic application of the RSI – look to sell when the RSI is above 70%, and prepare for a bounce when it drops below 30%.

In this Dow example, the RSI did a pretty good job of calling the highs and lows for the index from October through to December – and since that December oversold signal, the Dow has experienced that 4,000-point rally I mentioned right at the beginning.

Dow Jones Index – 10-day RSI

But no approach is perfect – we have to accept that there is not a technique that works all the time. And that can be seen at the right-hand side of the Dow chart. As the market moves higher, the RSI gets dragged up towards overbought. In February this year as the Dow moved through 25,000, the RSI went above 70%, signalling the market is overbought. But since then the Dow has continued to rise by almost an additional 1,000 points. The RSI "sell signal" was too early and this is a common problem for indicators in strongly trending markets. This shows that indicators such as the RSI should not be used in isolation – so let's look at a different approach.

Combining the RSI with the trend

When it comes to my own preferred approach to charting and technical analysis, the trend is king. If a market is going up, I want to look for buying opportunities – and vice versa in a falling market. So how can the RSI help here?

This support services share is a great example of how to use the RSI in conjunction with the trend. On this chart we can see the RSI moving from one extreme to another. But the price of **Bunzl (LON:BNZL)** has been trending higher. So, we should look to only take the signals in the direction of

Ticket Offer

Meet me and the rest of the team behind Master Investor Magazine on 6th April – just use the discount code JONES to claim your complimentary ticket [here](#).

that trend – ignoring the RSI sell signals and just waiting to see if the RSI moves into oversold, suggesting Bunzl has slid too far and is due a bounce. This happens in October 2018 when the price drops back. The RSI falls through 30% suggesting the slide is overdone and the share price is oversold. The price does stabilise and then the trend resumes. This is an almost text-book example of using the RSI with the prevailing trend. The indicator is being used to time a buy into the existing uptrend – so it is refining our approach based on what the trend is doing, rather than trying to override the major trend in the Bunzl share price.

I mentioned at the beginning the drawbacks of using indicators – they can get you to trade against the major trend and, for me, trend is all important. But, as the Bunzl example shows, they can be complementary to a trend-following approach. They can still be very useful for traders and investors alike.

"THIS IS AN ALMOST TEXT-BOOK EXAMPLE OF USING THE RSI WITH THE PREVAILING TREND."

Bunzl – 12-month chart – 10-day RSI

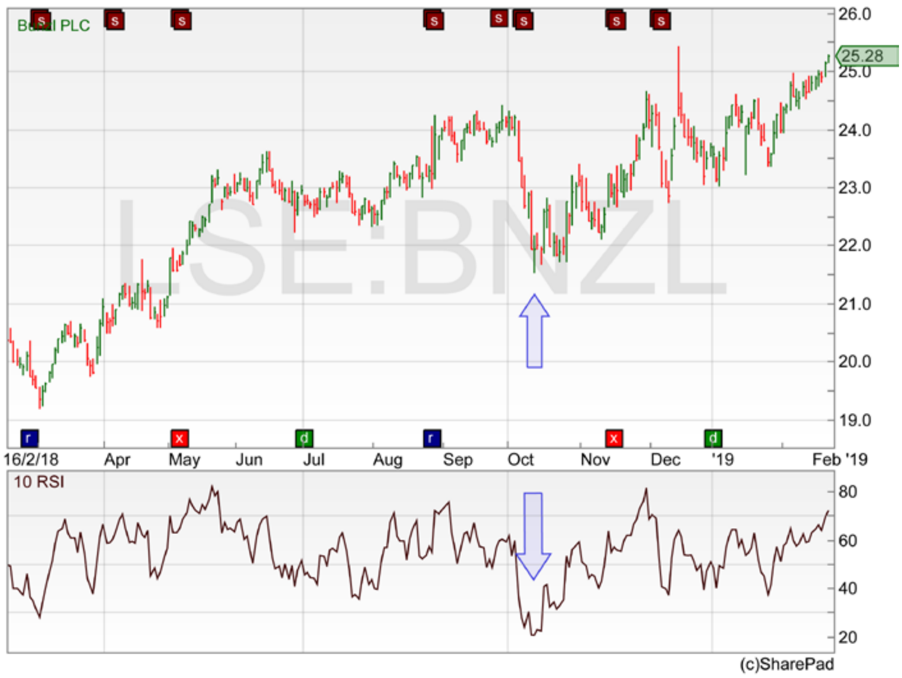


Chart of the Month

As this month's topic has been all about using the RSI to identify overbought or oversold situations, I thought it was only right that we look at a chart of a company where the RSI is close to giving a signal – and it is in line with the all-important trend.

Pearson (LON:PSN)

After something of a rocky time since 2015, this FTSE100 media company has been trying to stage a recovery over the past 18 months. Since September 2017, the price has rallied from below 600p to recently trade above 1000p. This has established – so far at least – a good uptrend. Recently the price has been dropping back but this is of course perfectly normal. No market moves in a straight line up or down.

As the price has been dropping back, it is no surprise that the 10-day RSI is falling too, as this oscillator moves with the ebb and flow of the market it is based on. At the time of writing it has not *quite* got back to the oversold level below 30%, but if there is much more weakness in the Pearson share price it should dip into that extreme zone.

What is interesting here is that it could well drag the price back to the uptrend line, currently coming in around the 840p level. After that there is a recent major low around 770p. So, this zone is an interesting one to watch – if the RSI works again this time around it could help with the timing of a buy into the recovery of Pearson.

"IF THE RSI WORKS AGAIN THIS TIME AROUND IT COULD HELP WITH THE TIMING OF A BUY INTO THE RECOVERY OF PEARSON."

About David

David Jones qualified as a technical analyst in 1995 and started his City career as a currency analyst. He then went on to work for trading companies CMC Markets and IG Group as Chief Market Strategist. Since leaving the industry in 2013 he has been a presenter on BBC Radio 5 Live's Wake up to Money programme and the Chartist for Shares magazine. He is an active trader and private investor.

BY NICK SUDBURY

FUNDS & TRUSTS IN FOCUS

THE BEST FUNDS FOR BREXIT

It is hard to believe that so little progress has been made in the two-and-a-half years since the UK voted to leave the European Union. The 29 March deadline is almost upon us, yet the question of whether we will face a hard or soft Brexit remains unresolved and the outcome still has the potential to have a major impact on investor portfolios.

One of the most objective ways of measuring the effect of the Brexit uncertainty on the country's share prices is to look at the relative performance of the UK Brexit High 50 and Low 50 benchmarks. The first of these contains the 50 companies in the Cboe 100 UK Index that derive the largest portions of their revenues from the UK, while the latter has the 50 with the lowest.

Both indices start on 31st December 2015. The UK Brexit High 50 was still trading close to its opening level on the day of the referendum on 23rd June 2016, but plunged around 20% after the result was announced. It has since recovered some of the lost ground, although at time of writing it was still down around 8% from the end of 2015.

The Brexit Low 50 index rose on the day of the referendum, due largely to the fall in the pound boosting the value of the constituent stocks' overseas earnings, but it has been drifting lower in recent months. At time of writing it was trading at around 13,500 points, which represents a gain of about 35% over the period that the index has been calculated.

As you would expect, the High 50 contains the most domestically-oriented stocks listed on the London Stock Exchange and includes the likes of Barclays, Lloyds, Sainsbury, Tesco, Persimmon and Taylor Wimpey. Its Low 50 counterpart is more internationally exposed with companies such as British American Tobacco, Burberry, Diageo and Unilever.

Funds that are exposed to the sort of stocks in the High 50 index have been through a tough time and would probably sell-off even more in the event of a hard Brexit. Any other outcome could result in a Brexit bounce, while the Low 50 stocks would be expected to give back some of their gains as the stronger pound erodes the value of their overseas earnings.

"IF PARLIAMENT AGREES SOME FORM OF DEAL AND WE LEAVE THE EU ON 29 MARCH IT IS LIKELY TO BE PERCEIVED AS POSITIVE NEWS BY THE MARKETS AND WE COULD SEE A RALLY IN DOMESTIC, MID AND SMALL CAP UK STOCKS."

Done deal

Patrick Connolly, a Chartered Financial Planner at Chase de Vere Independent Financial Advisers, says that if Parliament agrees some form of deal and we leave the EU on 29th March it is likely to be perceived as positive news by the markets and we could see a rally in domestic, mid and small cap UK stocks.

"However, sterling is likely to strengthen, which would be bad news for many FTSE 100 companies that earn a significant proportion of their revenue from overseas, as this would then be worth less when converted back to sterling. It would also be bad news for UK investors with overseas assets."

One fund that could benefit from this scenario is **Liontrust UK Smaller Companies**, which is high risk, but works really well for those taking a long-term view.

"It has achieved an impressive track record as the managers have focused on investing in companies that have a sustainable advantage that is difficult for its competitors to replicate; this could be having high recurring income, distribution networks, or intellectual property such as brand and culture," explains Connolly.

He also suggests **M&G Property Portfolio**, a diversified commercial property fund that benefits from having one of the most experienced management teams in the sector. It has a yield of 3.2% and could profit from any upturn in sentiment about the prospects for the UK economy, although there could be liquidity issues in the event of a no deal.

Soft Brexit

Adrian Lowcock, Head of Personal Investing at Willis Owen, says that a soft Brexit might not be as big a deal as many people think, in which case the **CF Woodford UK Equity Income fund** could do well.

"Neil Woodford has always believed that Brexit wouldn't be as significant for the UK economy as many others believed. The CF Woodford Equity Income fund has been positioned for this view for some time and the performance has suffered because of it, but this reflects the contrarian, high-conviction, long-term approach of the manager."

Woodford Equity Income has a greater exposure to stocks found at the lower end of the market-cap scale and to unquoted companies than in funds Woodford has previously managed.

Darius McDermott, MD of Chelsea Financial Services, warns that even if a deal is agreed the UK would still need to get through a lot of 'unknowns' until things settle down.

"In this scenario we would pick a sterling strategic bond fund like **GAM Star Credit Opportunities**, which can be flexible if things change. The fund seeks to produce a high level of income by investing predominantly in investment grade bonds."

It is a 'safety first' fund with very low turnover, as the managers' process looks for bonds they can buy and hold for 10 years. Very little of what they own yields less than 6% at the initial purchase point and this gives them far less interest rate sensitivity than many of their peers.

Brexit bounce

Any outcome that avoids a hard Brexit would also be beneficial for a number of domestically focused investment trusts. A prime example is the £1.5bn **Edinburgh Investment Trust (LON:EDIN)**, which has been recommended by the analysts at Numis and Canaccord Genuity.

Manager Mark Barnett looks for undervalued businesses with strong balance sheets and disciplined management that prioritise dividend growth

Carry on regardless

Some funds should be able to continue to deliver and perform irrespective of the Brexit outcome and these provide a way to remain invested without taking on too much event risk. A good example is Merian UK Smaller Companies Focus, where the manager invests in excellent companies that are able to drive their own growth. Another option would be an absolute return fund that can make money from falling as well as rising prices. Many of these have failed to deliver, but BlackRock UK Absolute Alpha might fare better. It is a UK equity long/short fund that aims to achieve a positive absolute return regardless of market conditions.

"BARNETT BELIEVES THAT THE VALUATIONS OF MANY STOCKS ARE PRICING IN A HARD BREXIT AND A UK RECESSION."

over the long-term. He has built up a good track record, but the recent performance has been poor because of his large exposure to cheaply valued domestic stocks.

Barnett believes that the valuations of many stocks are pricing in a hard Brexit and a UK recession, with investors willing to pay twice as much for UK companies generating US revenues as those coming from UK businesses. He thinks that this valuation differential is extreme and has been increasing his domestic exposure while selling companies with international revenues.

Another investment trust that would benefit from a soft Brexit is the £973m **Temple Bar (LON:TMPL)**, run by the highly experienced Alastair Mundy. Mundy takes a contrarian approach and invests in undervalued, out-of-favour companies with strong balance sheets. He has an excellent long-term record, although the recent performance has been mixed as value stocks have languished behind growth, yet it is still on the Numis list of recommendations for 2019.

Alex Wright, who runs the £829m **Fidelity Special Values (LON:FSV)**, would also be expected to benefit from a soft Brexit. He is a contrarian investor who looks for unloved stocks that have limited downside and where there is a catalyst for change. This approach has enabled him to build up an excellent record since taking over the fund in September 2012, due in part to the fact that he has little exposure to large-cap defensive stocks such as those operating in the Tobacco and Pharmaceutical sectors.

No deal

If Parliament can't agree a deal and the UK leaves the EU on WTO terms, it would mean more uncertainty, which would be bad news for domestically-focused stocks including the majority of mid and small cap companies. Investors can protect themselves from this sort of scenario by holding FTSE 100 stocks with significant international earnings, as well as overseas funds, as these would all benefit from the fall in the value of the pound.

Connolly says that one of the cheapest ways to profit would be to invest in the **HSBC FTSE 100 Index**, a tracker fund that replicates the performance of the FTSE 100 and has ongoing charges of just 0.1%. Its largest holdings will always be the UK-listed companies with the highest market capitalisations. These currently include the likes of HSBC, Royal Dutch Shell, BP and British American Tobacco.

Another option that he likes is **Rathbone Global Opportunities**, which has been managed by James Thomson since 2003, during which time he has established a strong track record. The fund invests predominantly in the US and Europe with the manager looking for under-the-radar and out-of-favour growth companies.

Lowcock prefers the **Lindsell Train UK Equity** fund that he says is packed full of great British companies that are competitive on the world stage and which would benefit from a weaker pound.

"Manager Nick Train looks for unique and high-quality companies that offer a high and sustainable return on investment, show low capital intensity, and are cash-generative. The result is a concentrated portfolio that has generated strong performance and unusually consistent relative returns over the medium to longer term."

FUND OF THE MONTH

Gary Channon, the manager of the **Aurora Investment Trust (LON:ARR)**, believes that the negative sentiment around Brexit has pushed the price of domestically exposed UK stocks well below their intrinsic value and that the short-term uncertainty has created a great buying opportunity.

Channon and his team focus on stock picking and adopt a contrarian value approach driven by in-depth fundamental research, with the aim being to identify companies with a strong business franchise, a high return on capital and good management.

This strategy has enabled them to draw up a candidate universe of between 70 and 90 UK stocks, which they then monitor over extended periods to see whether a value opportunity arises that would allow them to buy at an attractive entry point.

Fund Facts

Name:	Aurora Investment Trust (LON:ARR)
Type:	Investment Company
Sector:	UK Growth
Total Assets:	£110m
Launch Date:	March 1997
Current Yield:	1.4%
Net Gearing:	0%
Ongoing Charges:	0.54%
Website:	www.aurorainvestmenttrust.com

The fund has an extremely concentrated portfolio of 12 to 20 UK-listed stocks and at the end of December, the 10 largest holdings accounted for 77% of the net assets. These included the likes of GlaxoSmithKline, Sports Direct, Lloyds Bank, Bellway, Dignity, Tesco, Stanley Gibbons and Redrow. The biggest sector exposures at the end of June were Retail (30%), Finance (20%) and Leisure (13%).

Aurora's high exposure to consumer stocks makes the fund extremely sensitive to the UK's economic cycle and this means that a favourable outcome of the Brexit negotiations could result in a period of excellent returns. The investment trust analysts at Winterflood have included it as one of their recommendations for the year.

Overseas funds

Another way to benefit from the fall in the pound would be to invest in an overseas fund that provides exposure to other currencies. A good example according to McDermott is **Lazard US Equity Concentrated**, which is fully invested in dollar denominated assets.

"It is extremely concentrated, typically holding no more than 20 to 25 companies, ranging in size from the fairly small all the way through to the very large. It contains the best ideas from across Lazard's US equity range."

Lowcock suggests **JPM Japan** because he says Japanese equities are cheap and the currency is often seen as a safe haven for investors during difficult times.

"Manager Nicholas Weindling has consistently demonstrated a firm understanding of the companies he invests in and has applied a quality-growth investment philosophy to generate excellent returns over the long-term. The focus is on quality smaller companies that have good visibility on future earnings, with Weindling running a high conviction portfolio of future winners."

About Nick

Nick Sudbury is an experienced financial journalist who has written extensively for a range of investment publications aimed at both private and institutional investors. Before moving into journalism he worked both as a fund manager and as a consultant to the industry. He is a fully qualified accountant and has an MBA with finance specialism.

BY JOHN KINGHAM

DIVIDEND HUNTER

IS UNILEVER STILL A NO-BRAINER FOR DIVIDEND INVESTORS?

There are few defensive dividend-payers more obvious than Unilever (LON:ULVR). The company's long track record of steady dividend growth, powered by an array of defensive consumer brands such as Domestos bleach, Ben & Jerry's ice cream and Matey bubble bath, has given the company a devoted following of very happy investors.

And Unilever's investors are right to be happy. After all, the company's share price has almost tripled since 2007. With dividends included, the company's UK investors have seen average returns of almost 15% per year for more than a decade.

But have these impressive annualised returns left the company overvalued, or is Unilever still the ultimate no-brainer? Let's try to find out by asking a few basic questions.

Has the company had a consistent business model?

YES: Unilever has been selling fast moving consumer goods (products which people buy repeatedly and frequently) for almost a century. It started out as a margarine and soap manufacturer and has since acquired or developed a wide range of other non-durable consumer products. Those products are currently grouped into Beauty & Personal Care, Food & Refreshments and Home Care.

Most of the company's success and profitability comes from the strength of its brands, rather than the quality of its products (although I'm not saying its products are low quality; just that the brand is more important). 13 of these brands generate revenues of more than one billion euros, including Dove soap (Beauty & Personal Care), Magnum ice cream (Food & Refreshments) and Surf washing powders and liquids (Home Care).

Over the years, Unilever's business model has remained very consistent. That business model is, in very simple terms, to develop awareness and trust of its brands in consumers through marketing, and then to sell those branded goods to consumers at a price point above less well-known competitors. This generates higher profit margins which are then used to fund additional marketing, and so the cycle continues.

A very simple example would be Magnum ice cream. You wander into a shop on a hot day and open the ice cream freezer. Inside is a Magnum for £2. Next to the Magnum is a very similar looking but unfamiliar 'choc ice on a stick' for £1.50. You know what a magnum tastes like and you have no Idea what the other one tastes like. If you buy the Magnum for £2 you know you won't have wasted your money, but if you buy the other ice cream for £1.50 you may not like it. So, you buy the Magnum for £2 and Unilever gets a sale with a wider profit margin than its less well-known competitor.

Toshio Chan / Shutterstock.com

monticello / Shutterstock.com

While the business model has remained largely unchanged, the company's portfolio of brands has gradually evolved over the years. Acquisitions and disposals have occurred on a regular basis as management try to continuously improve the portfolio. In the last ten years alone, the company spent around £14 billion on acquisitions. That's a lot, but I don't think it's excessive as Unilever generated net profits of almost £50 billion over the same period.

Does the company have a successful track record?

YES: Unilever has had a very successful decade or so and, in fact, its success stretches back much further than that. But let's focus on the period from 2007 – i.e. just before the financial crisis kicked in.

Here's the good news. In 2007, Unilever's dividend was 75 cents (Unilever's dividend is paid in pounds and euros as it's listed on two separate stock exchanges, but the rest of its results are in euros, so I'll stick with that currency). In 2018, the dividend had grown to 155 cents. That's an increase of 107% in 11 years, giving the company an annualised dividend growth rate of 6.8% per year. That's quite impressive for such a large company selling defensive items such as soap and washing powder (these items are defensive because people will buy soap even in the deepest of recessions).

But that's not the end of the story because dividends don't exist in a vacuum. In the long run, they should be covered by earnings, so we should look at the company's per share earnings to see if they've kept pace with dividend growth.

Back in 2007, Unilever reported earnings per share of 128 cents. In 2018, its earnings had increased to 350 cents. That's an impressive amount of growth at just over 170% in 11 years. However, the 2018 earnings were boosted by a one-off gain when Unilever sold its spreads business (including brands such as Flora margarine) due to consistent underperformance. The sale boosted Unilever's pre-tax profits by 4.3 billion euros and, in this instance, we should strip out this one-off gain as it has nothing to do with Unilever's core business. We can do this by looking at Unilever's 'underlying' earnings.

Unilever's underlying earnings are stated at 236 cents for 2018, which is almost double the 2007 figure of 128 cents. To be precise, it's an increase of 91% in 11 years, or 6.1% annualised. So, both earnings and dividends have increased by about 100% since 2007, which is quite impressive.

The company's earnings have consistently covered its dividend, but dividend cover has fallen from 1.7x in 2007 to 1.5x today. This may be entirely sensible as the company, now much larger than before, may have less opportunity to reinvest earnings for growth. In that case, paying out a higher portion of earnings as a dividend makes sense.

Unilever has also generated enough free cash to afford those dividend increases, with free cash flow covering the dividend on a consistent basis (free cash is cash generated by business operations minus interest, tax and capital expenses, which is then available for acquisitions, share buybacks or dividends).

The next item I like to look at is revenues, because without long-term revenue growth there can be no long-term earnings or dividend growth. Looking back at 2007 again, Unilever reported revenues of just over 40 billion euros, or 1,409 cents per share. By 2018 those revenues had grown to 51 billion euros, or 1,950 cents per share. On a per share basis, that's an increase in revenues of 38% over 11 years, which is an annualised growth rate of 3% per year.

"UNILEVER HAS A RELATIVELY DEEP AND WIDE ECONOMIC MOAT TO PROTECT IT FROM COMPETITORS."

This is interesting. The company's revenues have grown about half as slowly per year as its earnings and dividends. The result is total revenue per share growth which is about a third of its earnings and dividend growth since 2007. How can that be? How can a company drive up earnings and dividends without driving up revenues to the same extent?

The answer is that Unilever increased its return on sales, or net profit margins, from 9% in 2007 to 12% today. This has come about in a variety of ways, such as: a) moving from lower margin spreads to higher margin personal care products; b) improving operational efficiency and stripping out costs; and c) premiumisation, where lower margin mass market products are given a makeover, plus a few tweaks to the ingredients, and then sold at a higher price point. One example of premiumisation is Domestos Power Fresh Ocean Toilet Gel, which sells for about twice the price of standard thick Domestos bleach.

As with dividends growing faster than earnings, earnings growing faster than revenues is also not sustainable in the long-term. Eventually Unilever will have stripped out all excess costs, shifted completely to higher margin products and premiumised the living daylights out of them. In other words, the company's recent margin expansion is a one-off tail wind which will have to be replaced, at some point in the next few years, with a different driver of long-term growth.

Does the company have good long-term prospects?

YES: Unilever has a relatively deep and wide economic moat to protect it from competitors. That's because large numbers of people tend to stick with certain brands for very long periods of time. They may have used Dove soap for 20 years and will keep on using it for as long as they live. Or they remember using Matey bubble bath as a child so they use it to wash their children who, eventually, may use it to wash theirs. This brand stickiness means Unilever doesn't have to compete aggressively on price with less well-known brands.

Brand stickiness also gives Unilever an enviable degree of predictability. As long as the world's population grows in number and wealth, it's hard to imagine a future in which Unilever is not selling more branded products to more people in more countries, ten, twenty or thirty years from now. So, I don't think the key question is whether Unilever has good long-term prospects. I think the key question is how prosperous (i.e. how big) will it be, and how quickly will it get there?

In terms of how big Unilever can be, I'm sure there's lots of room for growth. However, Unilever is a very large and very mature company. We know that individual companies cannot grow faster than the rest of the economy indefinitely, and as they approach their maximum possible size their growth rate tends to slow down, with each decade's growth typically being slower than the previous decade's.

"IN TERMS OF HOW BIG UNILEVER CAN BE, I'M SURE THERE'S LOTS OF ROOM FOR GROWTH."

One way to measure the long-term growth of a company is to look at how much capital (provided by shareholders and debtholders) the company is putting to work, or 'employing'. We can do this for Unilever, looking at capital growth across two separate ten-year periods from 1998 to 2007 and 2009 to 2018.

In 1998, Unilever was employing about 9.3 billion euros of capital; 4.7 billion in the form of shareholder equity and 4.6 billion as debt capital. Fast forward ten years to 2007 and Unilever's capital employed had increased to 22 billion euros, with 12.4 billion coming from shareholders and 9.6 billion from debt holders. That's an increase in capital of 137% in ten years, or just over 10% per year. During that decade, Unilever's average return on capital was 15.2%, which is above average.

Let's have a look at what happened in the following ten years. In 2009, the company still had 22 billion euros of capital employed. By 2018, that capital had grown to 26.5 billion, largely because the company's debts had grown from 10 billion euros in 2009 to 24.9 billion in 2018. Even with this debt expansion, Unilever's capital had only grown over those ten years by 65%; equivalent to 6% growth per year. During this ten-year period the company managed to achieve a slightly higher average return on capital of 17%.

This is exactly what I'd expect to see. As a very large company becomes even larger, the growth of its already enormous capital base begins to slow. And because returns on capital employed from a particular business model tend to be quite stable over time, I would also expect to see its earnings growth slow, which ultimately leads to a slower dividend growth rate.

This doesn't mean I'm bearish on Unilever. It just means I think its growth rate in the future is very likely to be slower than its growth rate in the past. Its increasing size alone would be a major factor in this slowdown, but I can think of other headwinds such as changing consumer tastes in the west (where younger people tend to like newer brands rather than brands they grew up with), the ease with which new competing brands can scale (thanks to the internet and social media) and the ever-present threat of Amazon and its rapidly expanding range of Amazon Basics products.

Overall, I think Unilever is likely to have a prosperous future, but unless the company can significantly and sustainably boost its capital and revenue growth, it will eventually have to settle for a lower earnings and dividend growth rate than investors have become used to.

A reasonable ballpark estimate would be that Unilever can achieve some sort of middle ground between its historic ten-year revenue growth rate (3.5%), its capital growth rate (6.2%) and its dividend growth rate (7.9%). The average of those three is 5.9%, and I think that's a reasonable and possibly opti-

"I THINK UNILEVER IS LIKELY TO HAVE A PROSPEROUS FUTURE, BUT UNLESS THE COMPANY CAN SIGNIFICANTLY AND SUSTAINABLY BOOST ITS CAPITAL AND REVENUE GROWTH, IT WILL EVENTUALLY HAVE TO SETTLE FOR A LOWER EARNINGS AND DIVIDEND GROWTH RATE THAN INVESTORS HAVE BECOME USED TO."

mistic estimate of Unilever's dividend growth rate for the next decade.

Is the company available to buy at an attractive price?

As I write, Unilever's share price is 4,246p, giving the company a dividend yield of 3.2%. Using the dividend yield plus growth model, that would imply returns of about 9% per year over a five or ten-year period (about 6% from dividend growth using the assumptions in the previous section, and about 3% from dividend yield). An estimated high-single digit return is not brilliant, but it's not bad either.

I also maintain a stock screen which ranks FTSE All-Share companies based on a combination of their growth rates (across revenues, capital and dividends), growth consistency, profitability and debt levels, as well as valuation ratios such as price to ten-year average earnings and dividends. There are 186 companies in this list, so halfway - position 90 - is about average. The FTSE 100 is included in the list as a benchmark, and it currently sits in position 88, more or less where I'd expect it to be. Unilever, on the other hand, is ranked 59 out of 186, which implies that it has a more attractive combination of growth, consistency, profitability, leverage and value than the average company.

I tend to restrict purchases to the top 50 stocks, so it's not quite in that range. For me to buy Unilever its price would have to drop below 3,500p at the very least, which is less than a 20% decline from where it is today. At that point it would have a yield north of 4%, but that would be unusual for Unilever so I'm not holding my breath.

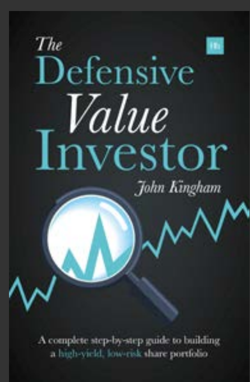
Although I wouldn't buy Unilever at its current price, I would be quite happy to hold at current levels and I think the shares are far from overvalued. They're not super cheap, but they are perhaps slightly cheap. So, is Unilever still a no-brainer for dividend investors? I think it probably is, but investors shouldn't expect the sort of 15% annualised returns achieved over the last decade.

About John

John Kingham is the managing editor of UK Value Investor, the investment newsletter for defensive value investors which he began publishing in 2011. With a professional background in insurance software analysis, John's approach to high yield, low risk investing is based on the Benjamin Graham tradition of being systematic and fact-based, rather than speculative.

John is also the author of *The Defensive Value Investor: A Complete Step-By-Step Guide to Building a High Yield, Low Risk Share Portfolio*.

His website can be found at: www.ukvalueinvestor.com.



BY DAVID JONES

FORENSIC FOREX

WHERE NEXT FOR PRECIOUS METALS?

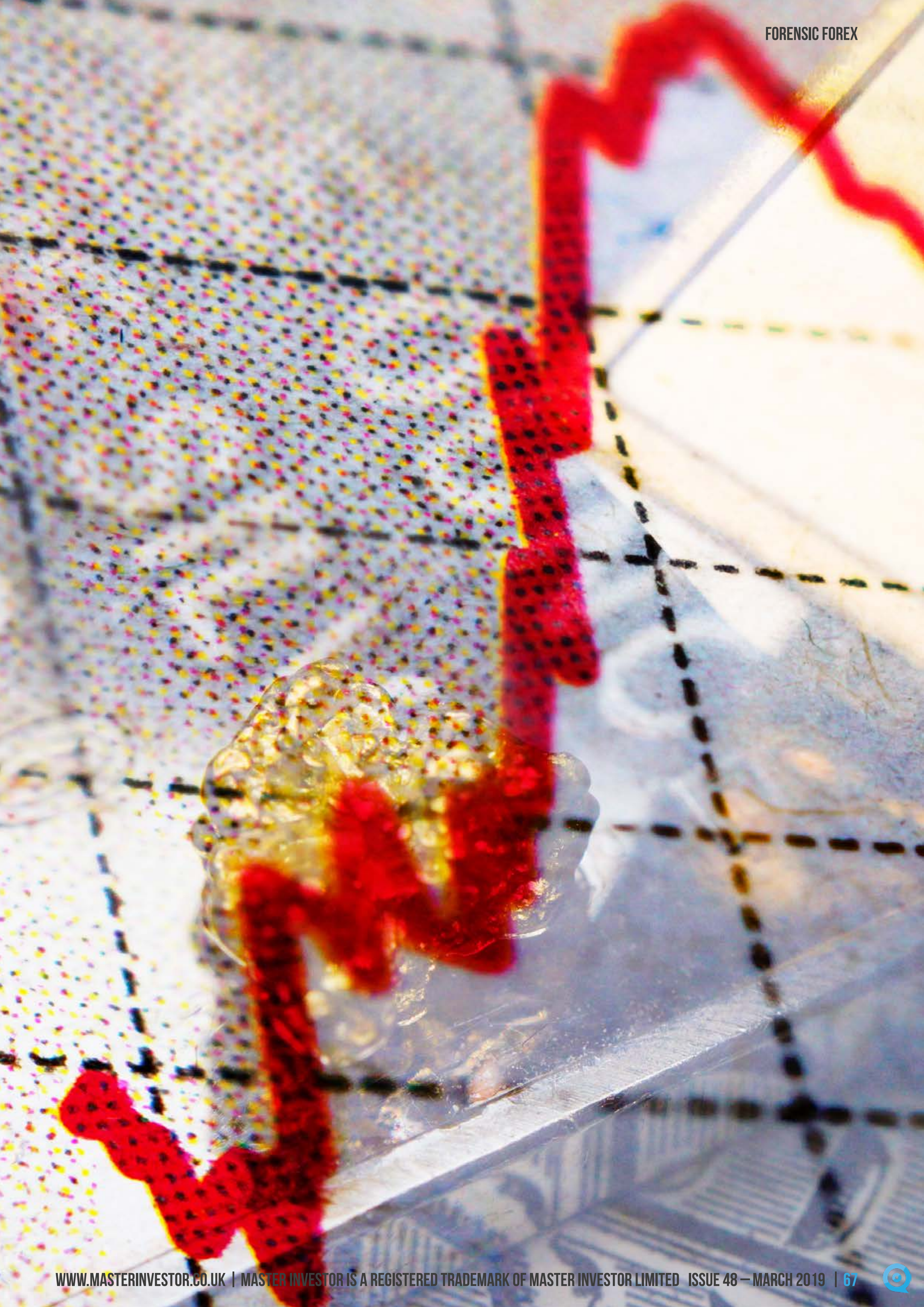
It has been a few months since we last looked at the value of gold – and in that time the price has continued to recover. Given the strong start it has made to the year, I thought it was worthy of a catch-up with the yellow metal and its close relation, silver. These sorts of assets are traditionally seen as safe havens in times of uncertainty, and we have certainly had that by the bucket-load so far in 2019.

Why have the prices of gold and silver been rising?

Both of these metals have done well over the past six months, rising by at least 10% since the end of the summer. If you are unfamiliar with these markets, one way to view them is just like any other currency, such as the euro or pound. If the value of the US dollar rises, it does not rise in isolation; it means another currency (such as the euro or the pound) is falling. In recent months, the US dollar has been sliding; however, gold and silver have seen their values increase during the same period with both of these metals quoted in dollars.

But there is more to it than that. Global stock markets experienced some incredible volatility towards the end of 2018, with the US benchmark index, the Dow Jones, having its largest December fall since the Great Depression. Market uncertainty leaves investors looking for somewhere to park their money – the safe haven. Traditionally that has been gold and, to a lesser extent, silver. Although the US dollar has grown in favour with investors looking for safety in recent years, it experienced a run of strength for much of 2018, during which stock markets witnessed a period of turmoil.

"MARKET UNCERTAINTY LEAVES INVESTORS LOOKING FOR SOMEWHERE TO PARK THEIR MONEY – THE SAFE HAVEN. TRADITIONALLY THAT HAS BEEN GOLD AND, TO A LESSER EXTENT, SILVER."



Gold six-month chart

Silver six-month chart

As stock markets recover, why aren't precious metals falling?

What is interesting is the continued appeal of the two precious metals into 2019. By mid-February, the Dow rallied by 4,000 points from its December lows and stock markets have, so far at least, experienced what is best described as a "V"-shaped recovery. But investors have not deserted the precious metals; silver has reached a six-month high and gold is at its highest level in nine months.

For now there seems to be more to their appeal than just insurance against plunging equity markets. Given the size of the fall that both metals experienced from April to August 2018, one argument could be that they were simply undervalued. Markets do overshoot in both directions, and gold, for example, dropped $200 in a little over four months. Plenty of investors may have thought the sell-off had simply gone too far.

But regardless of how you measure it, the financial and political climate is more perilous now that it has been for a long while – and increased uncertainty traditionally helps the precious metals. In the UK, we have Brexit looming large. It doesn't matter which side of the fence you sit on, the lack of progress as we get down to the wire is not doing anything good for the economy. The uncertainty also impacts continental Europe. We have already seen Italy slip into recession – admittedly there is nothing particularly new here as it's the third time the Italians have entered into a recession in a decade. But more concerning is that the German economy came very close to following Italy down the recession road, with the traditional industrial powerhouse posting zero growth in its latest quarter. It's entirely possible that Germany falls into a recession in the near term as time goes on.

There are still ongoing talks on settling the trade war between the Chinese and Americans. The global economy did not look in peak condition towards the end of last year, and as talks drag on, it is just another factor that is doing little favours for the economy.

Despite the strong bounce back by stock markets over recent months, the above mentioned factors are helping to keep the likes of gold and silver in the spotlight, providing an attractive alternative asset class in an uncertain world.

What could de-rail the metal rally?

Just because both silver and gold have performed well in recent months, it does not mean they should be taken for granted and that the rest of the year will be plain sailing. There are factors that the prudent investor should be aware of.

As unlikely as it might seem, a soothing of the waves of the geo-political situation would be expected to negatively impact the appeal of safe havens, as investors turn-up their risk appetite once again. If Brexit gets negotiated successfully – to the satisfaction of everyone – the European economy booms and China and the USA resolve their differences and live happily ever after, then silver and gold will lose their shine. Let's not hold our breath.

A resurgence in the US dollar is a little more realistic, but recent US retail figures left investors disappointed enough to start muttering about the possibility of a US recession. The US central bank, the Federal Reserve, has also started to backtrack on its planned interest rate rises this year, which could well stem any major US dollar progression.

Perhaps the biggest threat is just how far these markets have come since their 2018 lows – particularly with regard to the gold price. The $1,370 area has been a real cap to any progress for more than two years now.

And for silver, the argument could be made that the trend from mid-2016 is still intact and the current run of strength is nothing but a "dead-cat bounce" before the price turns lower again.

But unless the political and economic worlds clean up their acts overnight, these two markets are likely to retain their appeal with investors and traders alike and remain interesting assets to follow for the rest of 2019.

Gold three-year chart

Silver three-year chart

About David

David Jones qualified as a technical analyst in 1995 and started his City career as a currency analyst. He then went on to work for trading companies CMC Markets and IG Group as Chief Market Strategist. Since leaving the industry in 2013 he has been a presenter on BBC Radio 5 Live's Wake up to Money programme and the Chartist for Shares magazine. He is an active trader and private investor.

OXFORD CAPITAL BY OXFORD CAPITAL

TIME TO TURN TO ALTERNATIVES?

Alternative investments used to be the domain of the larger institutional investor only, but no more. Since it was launched back in 1994, the Government sponsored Enterprise Investment Scheme has attracted over £18 billion, with more than 28,000 companies having received funding (Source: HMRC).

Aims and origins of EIS

You may have heard of the 'equity gap' – the challenge that many SMEs face in getting investors' attention in order to fund their business operations and growth plans. Well, the government set up The Enterprise Investment Scheme (EIS) to overcome precisely this problem – offering tax incentives to people who are prepared to take on the high risks associated with investing in small businesses.

As well as being vital to the economy, start-ups are an exciting and varied stage to invest. At Oxford Capital we focus on companies working in ecommerce, fintech, mobility, digital health and artificial intelligence. We back entrepreneurs with big ideas who are building companies in these sectors where the UK has a competitive advantage.

Choosing to invest in an EIS isn't just about choosing which sector to invest in. You can invest in either a single company or a portfolio of companies where your subscription is spread across several EIS companies.

The pros and cons

EIS investments offer a range of tax advantages – reducing your exposure to tax, deferring or exempting yourself from capital gains, and mitigating inheritance tax. They also have an element of downside protection: if any companies in your portfolio are sold at a loss, you may be able to claim loss relief against your income tax/capital gains.

You can find out more about the associated tax reliefs in the Guide to EIS from Oxford Capital, but here's the simplest scenario. Provided you have sufficient income tax liability, you can claim back 30% of the amount you invest in an EIS-qualifying scheme against income tax – either in that tax year or the previous one. What's the upper limit? Answer: £2m* invested per tax year (*subject to EU state aid approval).

How to manage the inherent risk in EIS investing

Due to the early stage of the companies involved, and the risks involved, investors should expect losses in any EIS portfolio – and these may well show before the gains in the companies that

> "EIS INVESTMENTS OFFER A RANGE OF TAX ADVANTAGES – REDUCING YOUR EXPOSURE TO TAX, DEFERRING OR EXEMPTING YOURSELF FROM CAPITAL GAINS, AND MITIGATING INHERITANCE TAX."

can produce a substantial return multiple. But it's important to remember that, with the right choice of Fund Manager, there are ways to mitigate some of that risk.

Tom Bradley, Head of Ventures investing at Oxford Capital, explains how their particular investment strategy helps to manage the risks.

Diversification is crucial, and it's not just based on the number of underlying companies, although that is important. You also have to consider the **sector**, the **stage** of investment, and the **maturity** of the companies. "We believe that the right level of diversification for venture capital portfolios utilising EIS is between 12 – 15 companies".

Timing is also key. "At the initial funding round, we will typically invest a small amount of capital, which will translate to approximately 5% of a client's portfolio. We will then work with that company, whilst sitting on their board, to help them grow and develop. If the company meets certain metrics and targets, we will then invest a greater amount, representing say 10%. There is really no better **due diligence** than working closely with a company for 12-18 months. And if the company continues to perform well, we will embark on a third funding round (up to a maximum of 15% allocation)".

Oxford Capital also **co-invests** alongside other large institutional investors, which helps to mitigate the financing risk in the EIS portfolio – and also adds further experience and expertise. Often strategic investors will be involved in the later funding rounds, which adds another potential route to exit. A good example of this is Eight Road Ventures, Fidelity's Venture Capital arm, investing alongside Oxford Capital in their portfolio company Moneybox.

Patience. Realistically, clients should expect the EIS portfolio to exit within five to seven years, as it's important to allow some time for the underlying companies to grow, and to not sell the star performers too soon.

Where next?

Oxford Capital may be just one of many firms that manage EIS investments, but not many of the others launched their first EIS fund as far back as 1999. You can find out more about EIS investing in this Guide to EIS. Download the EIS Guide at oxcp.com/freeguidetoeis.

Speak to someone at Oxford Capital – Tel: 01865 860760 – oxcp.com

Disclaimer

Oxford Capital invest in unquoted securities. Capital is at risk. The tax advantages summarised above depend on an individual's circumstances and are based on current legislation which may be subject to change.

BY ANDREW LATTO

QUALITY INVESTOR

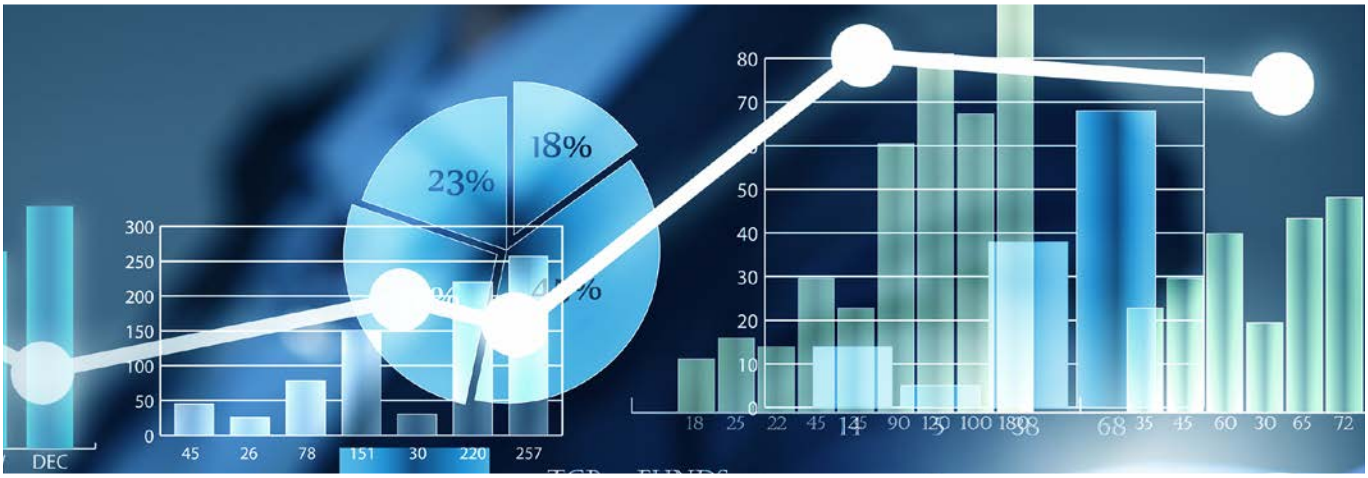
EUROPEAN BLUE CHIPS

Equity markets in Europe have performed differently to equity markets in the United States in recent decades. This reflects Europe's exposure to low-quality sectors that include oil & gas, banking and telecoms. There are, however, a number of high-quality companies in Europe that merit consideration.

Paris-listed cosmetics group **L'Oreal (EPA:OR)** is a case in point. Founded in 1909, it has survived the Great Depression and two World Wars, and its shares have returned a whopping 13% a year since 1991. L'Oreal, which spends heavily on research and marketing, is known for the iconic advertising tagline, "Because I'm worth it".

Another European company that has performed well is Madrid-listed **Amadeus IT Group (BME:AMS)**, which has seen its share price increase by 500% in just eight years (excluding dividends). A global market leader, Amadeus IT's distribution division connects airlines to travel agents. Its other main division provides information technology offerings to airlines and is also a market leader in its field.

L'Oreal and Amadeus IT both earn a high return on capital employed (ROCE) and benefit from growing demand, which has enabled them to invest in profitable growth opportunities and deliver strong earnings per share growth.



Amadeus share price since the 2010 IPO: In "flight mode"

L'Oreal share price: worth it for investors

Quality and Growth – Three key criteria

One way to find quality companies is to screen for businesses that earn a high ROCE. The challenge, however, lies in evaluating whether these high returns will continue into the future. The following three key criteria can help in your assessment:

1) High returns: ROCE over 15% with good cash flow

A ROCE in excess of 15% is generally seen as the threshold for quality. Profits are of no use if they don't convert into cash. Therefore, it's important to assess the free cash flow conversion. An operating profit margin of at least 10% is helpful because it reduces business risk.

2) Ability to maintain high returns

When companies earn a high return on capital, this acts as a beacon that attracts new competitors. High returns are likely to be sustained if there is a 'competitive moat' to keep the competition at bay. In *The Little Book that Builds Value,* Pat Dorsey highlights five competitive moats to look out for: intangible assets; switching costs; network effect; cost advantages; and size advantages.

3) Scope to invest in growth

Companies that don't have opportunities to invest in growth tend to return excess cash to investors. The potential to reinvest profits at a high rate of return is extremely valuable, and quality companies with growth tailwinds should perform well over the long-term.

Sectors

Sectors offer an additional way to identify quality companies. The consumer staples and healthcare sectors, for example, have performed well over the long-term. Low-quality sectors include banking, real estate, insurance, energy, utilities and materials. European equity markets are heavily weighted towards low-quality sectors and it therefore pays to be selective.

"EUROPEAN EQUITY MARKETS ARE HEAVILY WEIGHTED TOWARDS LOW-QUALITY SECTORS AND IT THEREFORE PAYS TO BE SELECTIVE."

FTSE Developed Europe index (ex UK) at end of 2018

Sector weight	%	Country	%
Banks (regional and global)	21.1%	France	22%
Drug manufactures	14.9%	Germany	19.4%
Packaged foods	10.7%	Switzerland	18.8%
Diversified industrials	10.3%	Spain	6.9%
Insurance diversified	8.7%	Netherlands	6.8%
Oil & Gas Integrated	7.8%	Sweden	5.8%
Telecom Services	7.5%	Italy	4.7%
Household & Personal Products	6.5%	Denmark	3.8%
Auto manufacturers	5.8%	Finland	2.9%

Source: Vanguard (VERX ETF)

Return on Equity: Europe lags behind the US

FTSE Europe index (ex UK)	S&P 500
12.8%	16.3%

Source: Vanguard

Quality focused fund managers

We can also find quality stocks by looking at the portfolios of quality-focused fund managers, two of which are managed by prominent UK investment houses Fundsmith LLP and Lindsell Train Limited. Both of these houses own five European stocks.

Fundsmith Equity Fund	Lindsell Train Funds
L'Oreal	Heineken
Coloplast	Juventus
Novo Nordisk	Remy Cointreau
Kone	Laurent-Perrier
Amadeus IT	RELX (also UK listed)

Source: Fundsmith, Lindsell Train

Growth drivers and listed companies

1) Luxury spending

The luxury goods sector has seen spending increase by 6% per year from 1996 to 2018, boosted by demand from consumers in emerging markets during a period of economic growth. The consultant Bain & Co estimates that personal luxury goods spending will increase by 3-5% annually during 2018 and 2025, with the proportion of Chinese spending set to increase by 13 percentage points to 46%.

Paris-based **LMVH (EPA:MC)** is the world's largest and most diversified luxury goods business with €46.8

billion revenue in 2018. **Hermes (EPA:RMS)**, another luxury goods business, generates higher returns (ROCE and margin) than LVMH. **Ferrari (BIT:RACE)**, which is considered by many investors to be a luxury goods business rather than just a carmaker, generates a high return on capital employed, but free cash flow conversion has been weak.

Company / Listing	Sector	Growth Driver	3 Year Av ROCE	Operating margin
LVMH France	Luxury: Fashion & Leather goods etc.	Luxury demand	12.6%	19.5%
Hermes France	Luxury: Leather goods etc.	Luxury demand	39.8%	35%
Kering France	Luxury: diversified	Luxury demand	19%	29%
Ferrari Italy	Premium sports cars	Luxury demand	25%	23%

Source: SharePad

2) Beauty/cosmetics

Demand for global beauty products has been resilient, especially during 1993 to 2017, with spending increasing by 4% a year. Annual spending even improved during the 2008/2009 global financial crisis!

Makeup consumption per capita in the United States is almost 20 times greater than in China, which highlights the scope for beauty product spending in emerging markets as consumers move towards higher-end brands.

L'Oreal states that it is the "number one beauty player worldwide", with €27 billion revenue in 2018. Like-for-like sales increased by 7.1% in fiscal 2018 and by 4.8% a year earlier. Asia-Pacific is the fastest growing region for L'Oreal with like-for-like sales up by 24.1% in 2018 and by 12.3% in 2017. L'Oreal's market share in Asia-Pacific is 9.6% and the region currently accounts for 29% of group revenue.

Company / Listing	Sector	Growth Driver	3 Year Av ROCE	Operating margin
L'Oreal France	Cosmetics: makeup, perfume	Emerging markets	16%	18%

Source: SharePad

3) Eyewear

Eyewear is another category that is set for growth, with 2.5 billion people in the world currently needing vision correction. This compares to the 1.9 billion people that have actually had their vision corrected. The growth rate of myopes (short-sightedness) is estimated at 3.3% a year and presbyopes (long-sightedness) at 2.5% a year. An ageing global population and increased screen time are two factors behind this growth.

Created by way of a merger in October 2018, **EssilorLuxottica (EPA:EL)** is the world's largest eyewear company, with a market capitalisation of €46 billion. Essilor, which is a subsidiary of the holding company EssilorLuxottica, is a leading global player in ophthalmic lenses and also makes ophthalmic optical equipment. Luxottica, which owns the Ray-Ban and Oakley brands, is a leader in sunglasses and frames and also has a strong retail presence.

Company / Listing	Sector	Growth Driver	3 Year Av ROCE	Operating margin
EssilorLuxottica France	Eyewear	Demographics / emerging markets	27.8%	17%

Source: SharePad

4) Airline travel

Airline passenger growth has been 1.3X to 1.6X faster than economic growth, in large part due to the growth of tourism. This trend doesn't show any signs of slowing down, but travel demand typically experiences weakness during downturns.

Amadeus IT Group, which has a transaction-based business model, is relatively defensive in nature. EBITDA profits have grown every year since 2000, during which time the airline industry experienced only four years of losses.

Amadeus IT became the largest airline global distribution system in 2007 and has continued to take market share. The takeover of Navitaire in 2016 also helped make the group a leading provider of airline IT systems.

Company / Listing	Sector	Growth Driver	3 Year Av ROCE	Operating margin
Amadeus IT Spain	Information Technology	Airline travel	36.5%	27.3%

Source: SharePad

5) Semiconductor chip demand

The demand for semiconductor chips is set to continue to grow as more products become 'smart'. Amsterdam-listed **ASML (AMS:ASML)** is the leading maker of the machines that manufacture semiconductor chips (semiconductor lithography), with an 85% market share, according to The Information Network.

Company / Listing	Sector	Growth Driver	3 Year Av ROCE	Operating margin
ASML Holding Holland	Chip making machines	Chip applications	23.8%	27%

Source: SharePad

6) Healthcare

Increasing demand for healthcare is driven by ageing demographics, emerging markets, product innovation and changes in lifestyle. Diabetes, for example, has become much more prevalent as our diets have changed.

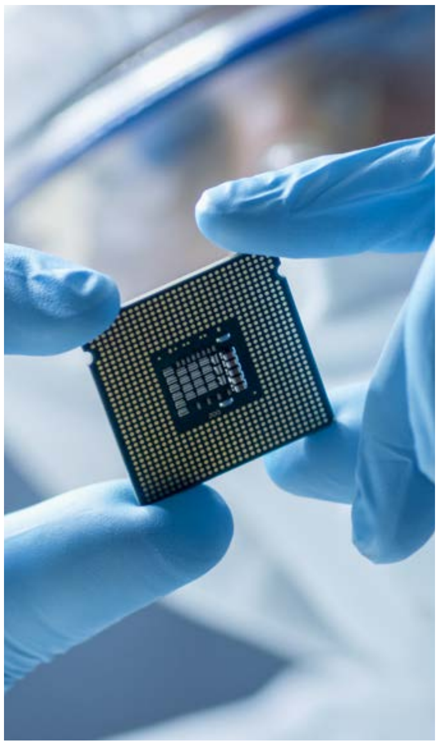
Novo Nordisk (CPH:NOVO-B) is one of the world's largest producers of insulin and has been in the diabetes care space for over 95 years. **Coloplast (CPH:COLO-B)**, another Danish healthcare company, has a leading market share in Ostomy care and continence care.

Company / Listing	Sector	Growth Driver	3 Year Av ROCE	Operating margin
Novo Nordisk Denmark	Healthcare	Diabetes	90%	42%
Coloplast Denmark	Healthcare	Demographics	87%	31%

Source: SharePad

Ticket Offer

Meet me and the rest of the team behind Master Investor Magazine on 6th April – just use the discount code LATTO to claim your complimentary ticket here.



7) Urbanisation

Urbanisation had driven demand for lifts and escalators in the West and fast-growing emerging markets. **Kone (HNL:KNEBV)** and **Schindler (SWX:SCHP)** are two of the largest lift and escalator groups and have benefited from growing Chinese demand. Kone saw Chinese new equipment orders increase by 35% a year from 2006 to 2014. The Finnish company has a 25% revenue share in the Chinese market and the Asia-Pacific region accounted for 38% of Kone's revenue in 2018.

Company / Listing	Sector	Growth Driver	3 Year Av ROCE	Operating margin
Kone Finland	Lifts & escalators	Urbanization	23.6%	13.8%
Schindler Switzerland	Lifts & escalators	Urbanization	24.9%	12%

Source: SharePad

8) Premium beverages and emerging markets

Increasing demand from emerging markets has provided a tailwind for European spirit groups such as **Remy Cointreau (EPA:RCO)**. There has also been a trend towards premium beverages such as the **Heineken (AMS:HEIA)** premium lager brand. Heineken is the world's second-largest brewer and has recently benefited from the success of its non-alcoholic Heineken 0.0 beer. The Heineken lager brand delivered an impressive 7.7% sales volume increase in 2018.

Company / Listing	Sector	Growth Driver	3 Year Av ROCE	Operating margin
Heineken Holland	Brewing	Premium/Emerging markets	15.3%	17%
Pernod Ricard France	Spirits	Premium/Emerging markets	11%	26%
Remy Cointreau France	Spirits	Premium/Emerging markets	11.4%	21%
Davide Campari Italy	Spirits	Premium/Emerging markets	13.6%	21%

Source: SharePad

Summary

High-quality businesses with long-term growth drivers are rare and are well placed to see continued growth over the long-term. It is worth hunting for them, particularly in international markets such as Europe.

L'Oreal, Amadeus IT, ASML Holding and EssilorLuxottica are all market leaders in their respective fields and are expected to see further growth, if competition can be kept at bay.

About Andrew

Andrew Latto, CFA is an independent analyst who writes for Cube.investments. He recently founded www.Fund-Hunter.co, which is set to launch soon. Fundhunter uses asset allocation (where is best to invest) and fund selection (active and passive). Andrew previously worked for an investment manager and a research company.

BY ROBERT STEPHENS, CFA

STOCKS IN FOCUS

DIAGEO

WHY INVESTORS WILL CONTINUE RAISING THEIR GLASSES

Companies that offer a mix of growth and defensive qualities are hard to find. Usually, stocks are classed as either 'cyclical' or 'defensive', with hybrid opportunities being limited. At the moment, though, investors may be seeking stocks that can offer the best of both worlds. Risks to not only the UK economy, but also the world economy, appear to be mounting. At the same time, however, there is likely to be a desire for growth opportunities among many investors.

One stock which could offer investment potential given current economic conditions is FTSE 100 alcoholic beverages business **Diageo (LON:DGE)**. The company has a diverse business model, with it operating in 180 countries across the world and having a large range of popular, premium brands. The nature of the alcoholic beverages industry means that demand may remain robust relative to other industries – even if the global growth outlook deteriorates.

The company's growth potential could be boosted by an efficiency strategy which is set to improve margins over the medium term. It is also seeking to deliver further product innovation, while benefiting from growing demand for premium beverages in a variety of markets. With rising consumer demand expected to be reported in emerging markets as wages rise, the company could justify what remains a rather high valuation.

Innovation and demographics drive growth potential

Diageo is seeking to build a stronger sense of loyalty among its customers through the release of increasingly innovative products. It is aiming to understand and adapt to changes in consumer tastes in order to keep its range of brands relevant. For example, in response to an increasing trend among consumers for more natural ingredients, it has released Ketel One Botanicals vodka. It has no artificial flavours or sweeteners, as well as no added sugar. The company has also released Gordon's Premium Pink Distilled Gin in the UK, which contains only natural fruit flavourings. It has been the most successful new spirits launch of the last decade, and suggests that further innovation could strengthen the company's product portfolio.

The business is seeking to enhance the strength of its brands in order to capitalise on demographic change and rising incomes in a large number of its markets. The premium status of many of its brands can be

"THE COMPANY FORECASTS THAT THERE WILL BE 730 MILLION NEW CONSUMERS ACROSS THE WORLD WHO WILL BE ABLE TO AFFORD PREMIUM SPIRITS OVER THE NEXT DECADE."

Vershinin89 / Shutterstock.com

ZRyzner / Shutterstock.com

seen in last year's San Francisco World Spirits Competition, where it was awarded 72 medals. Alongside premium quality products, it is seeking to deliver stronger personal connections between consumers and its brands. Examples of how it is seeking to do so include a visitor experience in Edinburgh which is focused on its Johnnie Walker whisky brand, as well as a new Bulleit visitor centre in Kentucky which celebrates its Bourbon.

The aim of such moves is to take advantage of the growing popularity of premium alcoholic beverages. The company forecasts that there will be 730 million new consumers across the world who will be able to afford premium spirits over the next decade. This could drive growth across its brand portfolio, with a premium focus likely to allow for greater product differentiation and a competitive advantage.

Many of those new consumers are likely to be from emerging markets. Diageo has consistently sought to strengthen its exposure to developing markets. For example, it recently increased its stake in China-focused Sichuan Shuijingfang Company from 39.7% to 60%. This may enable it to capitalise on China's GDP growth, which is forecast to remain above 6% per annum through to 2022. With the Indian economy expected to grow by at least 7.5% per annum during the same time period, it is unsurprising that the country is one of its key investment areas in the developing world.

Alongside the potential for growth, the company is also aiming to improve its efficiency. It is in the process of refocusing its portfolio towards core brands where it feels it has the most appealing risk/reward opportunity. As part of its strategy, margins are expected to increase. In its most recent trading update, for example, the company stated that it is on track to report a rise in its organic operating margin of 175 basis points over the three years to June 2019.

Dependable growth in an uncertain world

The prospects for the world economy are, of course, highly uncertain at the moment. A number of risks could cause global GDP growth to come under pressure. For example, the trade relationship between the US and China is at a low ebb, with both countries having placed tariffs on imports as part of increasingly protectionist policies. The IMF estimates that such tariffs, as well as the ones put in place by the EU, Canada and other countries in recent years, could wipe as much as 50 basis points from global GDP growth by 2020.

Alongside increasing protectionism, risks such as Brexit, rising US interest rates and a slowing Chinese economy could cause the growth outlook for a number of stocks to become less certain. With Diageo operating in 180 countries and its sales and profitability being spread relatively evenly across multiple continents, it is not overly reliant on one single country or region. This may help it to deliver improving financial performance even if specific countries or regions see their growth rates decline over the medium term.

The nature of the alcoholic beverages business also means that the company enjoys relatively inelastic demand for its products. Consumer loyalty is high across the industry – especially among premium beverages – and this could provide the company with a significant amount of pricing power. Therefore, even if volume growth is less impressive than forecast, there may be scope to offset this with a more aggressive pricing strategy that allows the company to generate top and bottom-line

"DIAGEO COULD BECOME INCREASINGLY DESIRABLE TO INVESTORS WHO ARE BECOMING MORE AWARE OF THE POTENTIAL RISKS FACING MANY GLOBAL STOCKS."

growth in a variety of economic circumstances. Given the uncertainty present across the world economy, a wide economic moat such as that enjoyed by Diageo could become increasingly desirable to investors who are becoming more aware of the potential risks facing many global stocks.

Fundamentals: premium brands, premium rating

While the FTSE 100 has fallen by around 9% since reaching an all-time high in May 2018, the Diageo share price has moved 10% higher. Its outperformance of a wide range of its index peers means that while they have seen their valuations move down to more appealing levels, the alcoholic beverages company continues to trade on a relatively high valuation. For example, using last year's earnings per share figure of 118.6p, it has a P/E ratio of 25.6. For a stock that is due to post earnings growth of 7% in the current financial year, this may suggest that it fails to offer a margin of safety at a time when many other FTSE 100 stocks trade on low earnings multiples.

Although a debt-to-equity ratio of 85% is relatively high, the stability and resilience of the company's business model suggests that it is not a major concern. Moreover, its net finance costs were covered 14.2 times by operating profit in the last financial year. This indicates that the company is unlikely to experience major financial challenges should interest rates continue to move higher over the next few years. A dividend yield of 2.2% is low, but yet unsurprising, given the strong performance of the stock relative to the wider index in recent months. The company expects to grow dividends per share at a mid-single digit percentage rate over the medium term.

Investment appeal

At a time when the global economy faces a number of potential threats, the defensive appeal of Diageo could become increasingly attractive. The company has a diverse range of products which enjoy a relatively high degree of customer loyalty. This could provide it with pricing power that may be able to offset weaker volume growth should the world economy experience a downturn. The company's wide geographical spread may also mean that it is able to avoid potential risks facing specific countries or regions, with it not being overly reliant on one part of the world economy for its sales and profitability.

While investors may be somewhat cautious at the moment, growth stocks are likely to remain appealing. On this front, Diageo's strategy could provide a growth catalyst over the medium term. It is becoming increasingly innovative, with it seeking to keep up with changing consumer tastes. Its premium products may also become more popular among consumers at a time when wage growth across large parts of the global economy is set to increase its total addressable market over the next decade. Its increasing focus on emerging markets may also enable it to capitalise on the fastest-growing regions of the world economy. Meanwhile, an efficiency programme could create a more profitable and stronger business for the long term.

Although Diageo's valuation is relatively high, a mix of defensive characteristics and its growth potential could mean that it is able to justify its current P/E ratio. A high debt level is unlikely to prevent investors from remaining bullish about the stock's prospects, although its dividend yield is unlikely to make it an obvious income choice. However, for investors who are seeking a mix of defensive characteristics and growth potential, the company could be a worthwhile buy for the long term. It could outperform the FTSE 100 in a variety of future scenarios.

About Robert

Robert Stephens, CFA, is an Equity Analyst who runs his own research company. He has been investing for over 15 years and owns a wide range of shares. Notable influences on his investment style include Warren Buffett, Ben Graham and Jim Slater. Robert has written for a variety of publications including The Daily Telegraph, What Investment and Citywire.

BY RICHARD GILL, CFA

BOOK REVIEW

INITIAL PUBLIC OFFERINGS

THE MECHANICS AND PERFORMANCE OF IPOs

BY ARIF KHURSHED

Initial Public Offerings – otherwise known as IPOs, new issues, flotations, going public et al – are one of the most talked about and potentially lucrative areas of the stock market. Who could forget the hype and excitement surrounding the Royal Mail IPO in 2013 when demand for shares was so great that the offer to non-institutional holders was seven times over-subscribed? Punters were attracted to a "hot" (but cheap) IPO at the time, with many looking to put in place a "stagging" strategy – selling IPO shares quickly following a sharp initial rise in price to bank a gain.

Royal Mail shares rose sharply following their initial listing, from 330p to just over 600p within a couple of months, making many investors a quick, tidy profit. But, as we have recently seen in the small cap markets, IPOs are not a guaranteed way to make a fortune.

Those interested in learning more about this fascinating area of the market should read *Initial Public Offerings*, by author Professor Arif Khurshed, whose purpose is to provide information on how IPOs work and how they perform in investment terms. This is the second edition of a book which was first published in 2011. The new edition is updated with information on how the IPO industry has developed since then, including discussions of some of the most high profile new companies to have listed in the past few years, including Facebook, Alibaba and Royal Mail itself.

Prof. Khurshed is well versed in the subject matter being a senior lecturer in the Division of Accounting & Finance at the University of Manchester's business school. He has taught corporate finance for more than 10 years and has been an active researcher in the field of IPOs, institutional investments and corporate governance. He has published his research in several finance journals and has contributed many book chapters.

From private to public

In simple terms, an IPO is when a previously private company lists its shares on a stock market and makes them available to the public for the first time, often in conjunction with a fundraising. But they are often much more complicated than that, with there being many different ways of going public, incorporating complex legal & regulatory processes and involving armies of expensive corporate advisors.

Chapter One of the book eases investors into the IPO process, explaining when companies look to list in the context of their lifecycle, why exactly they do it and the various advantages of being a public company. Of course,

"*INITIAL PUBLIC OFFERINGS* IS AN IN-DEPTH, THOROUGH AND WELL WRITTEN GUIDE TO THE WORLD OF IPOs."

there are several disadvantages involved with IPOs as well, not least the fact that they tend to be an expensive and time-consuming process. Khurshed finds that for companies raising up to £5 million upon their LSE listing, the costs can amount to around 11% of the total funds raised.

In the second chapter, Prof. Khurshed looks at the history of IPOs, mainly those that have taken place on the London Stock Exchange, but also some high profile international listings. Here in the UK, from beginnings in the 17th-century coffee houses of the City of London, the LSE now hosts over 2,000 companies with a combined market cap of around £4 trillion – that's around the same as the annual GDP of Japan! Things have developed considerably on the regulatory front over the years, with companies these days having to issue detailed prospectuses before being eligible to list. This is a far cry from around a hundred years ago when companies had to put an advert in a newspaper before they were allowed to list.

The author then covers seven high-profile UK and international IPOs of recent years in detail, examining their business models, how they went about their public offering, investor reactions and how they went on to perform. From Visa to Facebook, Google to Admiral, these companies represent a wide range of sectors and remind potential investors that all IPOs should be assessed based on their own individual characteristics.

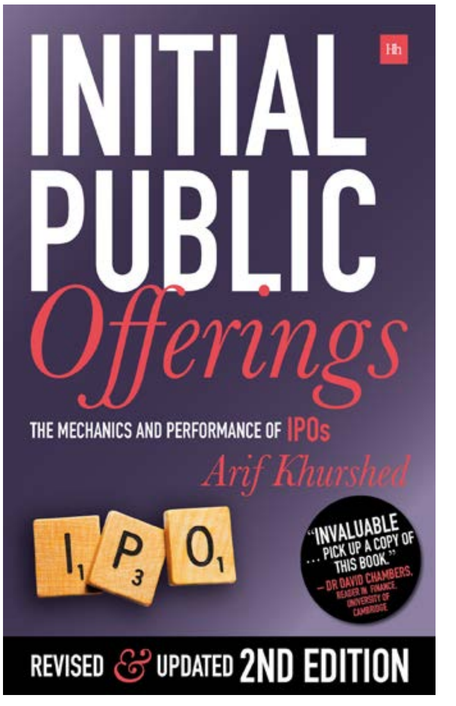
Delving deeper, Chapter Three goes into the specific mechanics of an IPO including the various methods of flotation, including public offers, placings, their various derivatives and the differences between them. Useful for investors looking to analyse whether the IPO price is good value, the author demonstrates how a newly listed company might be priced, including two detailed examples of the discounted cash flow and comparative firms approaches.

Over/under-performing?

Perhaps of most interest to investors with some experience in the markets will be Chapter Four, which covers the performance of IPOs. The crucial initial period of trading (when many investors look to make a quick profit) is covered, along with companies' performance over a longer term time horizon. The headline finding is that, in general, IPOs tend to be under-priced on listing, but they underperform in the long-run.

One shocking statistic is that a study by Khurshed et al found that nearly 55% of AIM companies which IPO-ed from 1995 to 2004 had left the market within five years of listing. It would be interesting to see the statistics after that period, especially given that it covered the financial crisis of 2008/09. It's worth noting that AIM's recent high profile disasters, Conviviality and Patisserie Holdings, both went bust just under five years following their IPOs.

A brief section also looks at UK privatisation IPOs and how shares in the some 50 state-owned enterprises flogged off over the past few decades have fared. Khurshed finds that in general these IPOs, including those of BT, Jaguar and various utility companies, were initially under-priced ("leaving money on the table") as the government looked to increase household participation in the stock market. In the long-term they tend to outperform too. That may come as some comfort to Royal Mail investors, who over the past few months have seen shares in the letter poster crash below the IPO level to an all-time low of 260p.



Finally, Chapter Five examines how to invest in IPOs, including where to find information on upcoming new issues, how to analyse a company prospectus and how to identify a potentially good or bad IPO.

A great new issue

Initial Public Offerings is an in-depth, thorough and well written guide to the world of IPOs. The book is an ideal compendium for a range of different readers including private investors, professionals and academics, as well as company directors thinking of taking their business public. After reading it, not only will you be more clued up on this often complex area, you might be better placed to make money out of it too.

About Richard

Richard Gill is an investment analyst with over a decade's experience of analysing small/mid cap equities. He is the Head of Research at Align Research. Richard qualified with the Chartered Financial Analyst (CFA) designation in 2012 and was awarded PLUS Markets Financial Writer of the Year at the 2008 PLUS Awards. He has been a judge at the Small Cap Awards from 2013 to 2018.

BY TIM PRICE

THE FINAL WORD

GÖTTERDÄMMERUNG

THE FALL OF THE "BOND KING"

"Witty market commentary is more fun without having other people's money at stake. (At least for Lex). Bill Gross may soon agree. On Monday, Janus Henderson announced that the septuagenarian sage will retire. The Bond King joined Janus Capital Group in 2014 after an ugly split at Pimco.

"At Janus he maintained his trademark eccentric punditry. In one dispatch last year, ostensibly about the direction of the US 10-year Treasury yield, Mr Gross name-dropped Moses, Stalin, Hitler, Pol Pot, and mentioned The Lord of the Flies. However, what counts is performance, and his has faltered of late.

"Assets under management at his global "unconstrained" bond fund had dipped beneath an embarrassing $1bn.

"Mr Gross's exit is not just a denouement for a fallen legend but also for a 30-year bond bull market and active asset management more generally.

"The overall expense ratio for Mr Gross's fund is 78 basis points. What did that buy you? Since its 2014 inception (just before Mr Gross's arrival) through to the end of 2018, the fund returned an annualised 38bp. Compare that to 91bp for receiving a three-month US Libor rate. Worse, according to the Janus Henderson website, he badly trailed a benchmark for free-ranging bond funds such as his.

"On the day Mr Gross joined Janus in 2014, its shares jumped by more than 40 per cent. The hope was that his record and relationships would attract a flood of new capital to the relative minnow which then had less than $200bn in total AUM. Since then Janus has merged with the UK's Henderson Group. The market value of the merged group has nearly halved in the past year. The business model for active money managers has struggled.

"Mr Gross packaged dull bond investing into a product that showcased his facility with macroeconomics, geopolitics and even pop culture. Perhaps robots will do the asset allocation part now. Mr Gross, however, need not stop writing. "

- The Financial Times' Lex column on the retirement of former bond 'king', Bill Gross, 'Lost the plot', 5th February 2019.

“BILL GROSS, MORE THAN ANYBODY ELSE ALIVE, PERSONALLY EMBODIES THE GREAT BOND BULL RUN OF THE LATE 20TH CENTURY.”

"THE UNCOMFORTABLE REALITY FOR GIGANTIC ASSET GATHERING FIRMS IS THAT MOST INVESTORS WILL BE BETTER SERVED BY BOUTIQUES."

As a summary of how traditional media regard the asset management business, this Lex column is hard to beat. It is a fine tradition of Fleet Street, for example, that the great and the good must be built up, in order that they can be subsequently knocked down. Having read and inwardly digested this extraordinary piece of snark, I did a quick search of the FT's online archive, which revealed over 4,000 stories relating to Bill Gross over the years. The bigger they are, the harder they fall.

It is difficult not to conclude that the article in question is motivated, at least in part, by some form of private or professional envy. Whatever his achievements and his more recent investment performance, Bill Gross did what he did in his own name, in the full glare of public (and the FT's) attention. He did not starve away in a garret, anonymously – like either the Lex columnist or the entire retinue of The Economist, who continue to publish their curiously ***anti***-free market narratives without any form of personal accountability. Whereas Bill Gross retires a billionaire.

And this is really the point. Bill Gross, more than anybody else alive, personally embodies the great bond bull run of the late 20th century. This bull run started under the aegis of Paul Volcker at the US Federal Reserve, during whose tenure the prime interest rate in the US touched the now extraordinary-seeming level of 21.5%. With Volcker – unlike all subsequent Fed chairmen – having successfully and definitively squashed inflation using painfully high interest rates, the bond market needed little impetus to embark on a monumental rally. It was a rally that nobody rode more successfully than Bill Gross himself. Until recently, at any rate.

Whatever you felt with regard to Bill Gross' whimsical monthly commentaries (and I, too, found them painfully self-indulgent at times), you always sensed that he was being honest about the market and his interactions with it. He was basically a bond bull who outstayed his welcome. It is probably true that as in politics, almost all fund management careers end in failure. When staying in the limelight is consistent with earning large sums of money from a respectful clientele, who would willingly relinquish that attention?

This takes us to the second "judgment of Lex": that only huge asset managers are worth paying any attention to. Managing less than $1 billion in his last incarnation would therefore have been "embarrassing" to Mr Gross. Well, speak for yourself. Writing as someone who would be extravagantly happy to be managing even $1 billion by way of assets, this statement deserves further examination. The reality, at least from the perspective of this asset manager, is that a paying public will be best served by fund managers who deliberately keep their asset base low. Stray beyond anyone's reasonable ability to deliver value – by managing nearly $300 billion within the Pimco Total Return Fund, as Gross once did – and the likelihood of beating the market, or even the majority of your professional peer group, starts to look vanishingly small. It's worth remembering that whereas the stock market is wildly inefficient (at least on a comparative

basis), the bond market is ruthlessly *efficient* – as you might expect from a market dominated by large, institutional players. So, the capacity to add any real value by exploiting price inefficiencies is simply not that great – as Gross ultimately found out to his cost.

The uncomfortable reality for gigantic asset gathering firms is that most investors will be better served by boutiques. Smaller fund managers have the luxury of competing on the basis of net returns and not on the basis of marketing heft. The best fund managers I co-invest with have already closed to new investors by the time they reach or exceed $200 million or so under management. Neither Pimco nor Janus Henderson could profitably operate with that level of assets – but a good boutique manager can, especially operating within a niche market, like, say, small-cap Japan value. The FT cannot plausibly operate without an implicit conflict of interests here, given its dependency on advertising revenue from fund management giants. Most boutiques simply don't advertise at all – in large part for commercial reasons, but also in part for philosophical ones, they market their wares by word of mouth alone.

The single most intriguing aspect of Bill Gross' retirement goes barely mentioned by Lex. What does the departure of "the bond king" say about prospects for the global bond market as a whole? While I am loath to succumb to

"I THINK THE RISK THAT BOND INVESTORS IN THE YEARS TO COME GET SAVAGED BY A BEAR MARKET IS UNCOMFORTABLY, OUTRAGEOUSLY HIGH."

a subjective narrative that might yet be wildly off the mark, it strikes me that it says a great deal about the future returns that are likely achievable by bond investors. They are going to be lousy.

This is not a forecast predicated upon some windy, unsubstantiated prognostication about an uncertain future. It is a reflection of simple mathematics. While there has never been more debt in existence, the yield on that debt has rarely been lower. Interest rates globally are starting – gently, admittedly – to rise from 5,000-year lows. To put it another way, it is unrealistic to be buying an asset (which, more strictly, is actually a liability) at a 5,000-year price high and expect the future to be highly profitable. In short, I think the risk that bond investors in the years to come get savaged by a bear market is uncomfortably, outrageously high. For this reason, I don't own bonds in any form and I recommend that you don't, either. The dilemma facing central banks has been neatly underscored by the Fed's sudden volte-face on interest rates. Having previously suggested to the market that it should expect at least two rate hikes this year, Jerome Powell at the US Federal Reserve appears to have gone into hibernation. As the economist Daniel Lacalle points out,

> An economy that cannot take 3% rates with 3.7% unemployment and a 3.4% annualized growth rate is either not a "strong economy" or the central bank policy only looks to inflate financial assets.

This is not a perspective that Lex chooses to discuss, at least not in its obituary for Bill Gross' professional career.

Ticket Offer

Meet me and the rest of the team behind Master Investor Magazine on 6th April – just use the discount code PRICE to claim your complimentary ticket here.

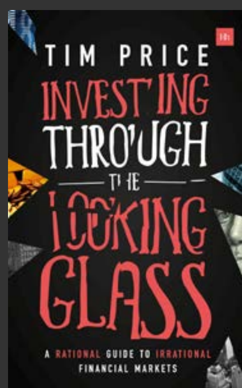
Which brings us back to the dubious merits of journalism. I particularly liked the following tweet from the US lawyer and ASI member Preston Byrne, in response to the self-interested press reaction to hundreds of layoffs at the digital publisher Buzzfeed:

> *Coal industry dies
>
> * Journalists: "Learn to code, miners."
>
> --
>
> *Overfunded tech company dies
>
> *Journalists: "LOL Theranos 2. Suck it, techbro man-babies."
>
> --
>
> *Overfunded media company lays off 10 people
>
> *Journalists: "Capitalism is evil and this is the end of our democracy."
>
> --

Present company clearly excluded, but when it comes to journalism, there has to be the risk that many journalists are simply loathsome creatures, and, not to put too fine a point on it, we would all be better off without them.

About Tim

Tim Price is manager of the VT Price Value Portfolio (www.pricevaluepartners.com) and author of 'Investing Through the Looking Glass: a rational guide to irrational financial markets'.



MARCH 2019

INVESTOR EVENTS DIARY

TUESDAY, 5 MARCH

Event:	Meet the Entrepreneurs of the North
Organiser:	UKBAA
Time:	15:00-18:30
Place:	NatWest, 280 Bishopsgate, London EC2M 4RB
Tickets:	https://www.ukbaa.org.uk/events/competition-launched-to-find-growing-northern-businesses-to-pitch-to-london-investors

WEDNESDAY, 6 MARCH

Event:	Glimpse of the Future – Investment Showcase
Organiser:	Oxford Capital Partners
Time:	18:00-20:00
Place:	The Salter's Company, 4 London Wall, London EC2Y 5DE
Tickets:	Email events@oxcp.com

WEDNESDAY, 27 MARCH

Event:	Mayor of London's TechInvest Clean Tech Showcase
Organiser:	UKBAA
Time:	17:00-20:00
Place:	Level 39, 1 Canada Square, Canary Wharf, London E14 5AB
Tickets:	http://techinvest.london

SATURDAY, 6 APRIL

Event:	Master Investor Show
Organiser:	Master Investor
Time:	09:30-17:00
Place:	Business Design Centre, 52 Upper St, London N1 0QH
Tickets:	https://masterinvestorshow-2019.reg.buzz Use code: M319 for a free ticket

SATURDAY, 6 APRIL

Event:	London Cryptocurrency Show 2019
Organiser:	Investor Conferences (UK)
Time:	09:30-17:00
Place:	Novotel London West, 1 Shortlands, London W6 8DR
Tickets:	https://www.eventbrite.co.uk/e/the-london-cryptocurrency-show-tickets-45189200114 Use code: MASTERINVESTOR19 for a free ticket

TUESDAY, 9 APRIL

Event:	London South East Investor Evening
Organiser:	London South East
Time:	18:00-21:00
Place:	Brewers Hall, Aldermanbury Square, London EC2V 7HR
Tickets:	Email amanda@masterinvestor.co.uk

TUESDAY, 14 MAY

Event:	London South East Investor Evening
Organiser:	London South East
Time:	18:00-21:00
Place:	Brewers Hall, Aldermanbury Square, London EC2V 7HR
Tickets:	Email amanda@masterinvestor.co.uk

TUESDAY, 9 JULY

Event:	London South East Investor Evening
Organiser:	London South East
Time:	18:00-21:00
Place:	Brewers Hall, Aldermanbury Square, London EC2V 7HR
Tickets:	Email amanda@masterinvestor.co.uk

TUESDAY, 10 SEPTEMBER

Event:	London South East Investor Evening
Organiser:	London South East
Time:	18:00-21:00
Place:	Brewers Hall, Aldermanbury Square, London EC2V 7HR
Tickets:	Email amanda@masterinvestor.co.uk

FRIDAY, 25 OCTOBER

Event:	London Investor Show
Organiser:	UK Investor Events
Time:	09:30-17:00
Place:	Novotel London West, 1 Shortlands, London W6 8DR
Tickets:	https://www.eventbrite.co.uk/e/london-investor-show-2019-tickets-53471905910

TUESDAY, 12 NOVEMBER

Event:	London South East Investor Evening
Organiser:	London South East
Time:	18:00-21:00
Place:	Brewers Hall, Aldermanbury Square, London EC2V 7HR
Tickets:	Email amanda@masterinvestor.co.uk

MARKETS IN FOCUS

FEBRUARY 2019

GLOBAL EQUITIES

Index	Last Month %	YTD%	52-Week Strength
CSI 300	14.6	21.9	
S&P/ASX 200	5.2	9.3	
CAC 40	5.0	11.6	
Euronext 100	4.8	12.0	
Swiss Market	4.7	11.9	
Dow Jones	3.7	11.1	
DAX Xetra	3.1	10.2	
S&P 500	3.0	11.1	
Nikkei 225	2.9	7.9	
NASDAQ 100	2.8	12.1	
Hang Seng	2.5	11.5	
FTSE All-World	2.5	10.5	
FTSE 100	1.5	5.8	
Bovespa	-1.8	8.8	
Russian TSI	-2.3	10.9	

COMMODITIES

Commodity	Last Month %	YTD%	52-Week Strength
Palladium	14.8	25.7	
Bitcoin	13.4	5.2	
Crude oil (Brent)	9.0	22.2	
Cocoa	6.7	-4.3	
Platinum	6.3	9.2	
Crude oil (Light Sweet)	6.2	24.9	
Copper	6.1	12.6	
Sugar (No. 11)	1.9	7.8	
Gold	-0.6	2.5	
Natural Gas	-1.1	-5.3	
Silver	-2.2	0.9	
Iron Ore	-2.6	15.3	
Cotton	-2.7	0.2	
Coffee	-6.6	-2.9	
Palm Oil (Crude)	-6.9	2.1	

FOREX

Pair/Cross	Last Month %	YTD%	52-Week Strength
GBP/AUD	3.6	3.0	
USD/JPY	2.3	2.1	
EUR/JPY	1.6	1.1	
GBP/USD	1.2	3.8	
USD/CHF	0.3	1.7	
USD/CAD	0.3	-3.4	
EUR/CHF	-0.3	1.0	
EUR/USD	-0.6	-0.9	
EUR/GBP	-1.8	-4.5	
AUD/USD	-2.3	0.6	

CENTRAL BANKS – RATES & MEETINGS

Central Bank	Key Rate	Next	After
Bank of England (BoE)	0.75%	Mar 21	May 02
European Central Bank (ECB)	0.00%	Mar 07	Apr 10
Federal Reserve System (FED)	2.50%	Mar 20	May 01
Bank of Japan (BoJ)	-0.10%	Mar 15	Apr 25
Bank of Canada (BoC)	1.75%	Mar 06	Apr 24
Reserve Bank of Australia (RBA)	1.50%	Mar 05	Apr 02
Swiss National Bank (SNB)	-0.75%	Mar 21	Jun 13
Banco Central do Brasil (BCB)	6.50%	Mar 20	May 08
Central Bank of Russia (CBR)	7.75%	Mar 22	Jun 14
Reserve Bank of India (RBI)	6.25%	Apr 04	

FTSE 350 TOP RISERS

Company	Last Month %	YTD%	52-Week Strength
Dairy Crest Group PLC	30.3	48.7	
Micro Focus International PLC	29.0	35.9	
Lancashire Holdings Ltd	17.5	9.2	
Travis Perkins PLC	17.3	34.5	
Serco Group PLC	17.1	37.6	

FTSE 350 FALLERS

Company	Last Month %	YTD%	52-Week Strength
Plus500 Ltd	-48.7	-42.6	
TUI AG	-30.7	-27.8	
Centamin PLC	-22.5	-16.6	
Petrofac Ltd	-22.2	-9.7	
Sainsbury (J) PLC	-19.7	-12.4	

FTSE 350 SECTORS RISERS

Sector	Last Month %	YTD%	52-Week Strength
Software & Computer Services	13.1	18.7	
Industrial Metals	10.4	21.0	
Construction & Materials	6.7	16.0	
Life Insurance	6.1	16.1	
Nonlife Insurance	5.8	5.4	

FTSE 350 SECTORS FALLERS

Sector	Last Month %	YTD%	52-Week Strength
Automobiles & Parts	-8.4	-3.3	
Oil Equip, Services & Dist	-8.1	3.2	
Fixed Line Telecommunications	-7.4	-8.9	
Forestry & Paper	-6.0	7.8	
Food Producers	-3.0	8.9	

IA SECTORS RISERS

Sector	Last Month %	YTD%	52-Week Strength
North American Smaller Comp	4.8	13.5	
China/Greater China	4.2	10.3	
Technology and Telecom	3.9	10.7	
North America	2.8	8.6	
Global	2.5	7.3	

IA SECTORS FALLERS

Sector	Last Month %	YTD%	52-Week Strength
UK Index Linked Gilts	-0.5	0.4	
Global Emerging Markets Bond	-0.4	2.2	
Global Bonds	-0.4	-0.2	
UK Gilts	-0.2	1.1	
Money Market	0.0	0.1