HEPTAGON
Capital

04 April 2018

F u t u r e T r e n d s: Q u a r t e r l y U p d a t e

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The Heptagon Future Trends Fund has a very clear and distinct philosophy: we seek to identify and invest in a diverse range of businesses offering exposure to the key trends which we believe will help shape the future. The strategy has delivered outperformance since inception, up over 47% from January 2016, compared to a return of 38% for the MSCI World Index over the same period. Year-to-date, the Fund has continued its outperformance (130 basis points ahead of the index). Looking forward, we remain optimistic on our favoured trends and hence prospects for the businesses in which we are invested.

I n t r o d u c t i o n

Thematic investing is a core part of our investment process at Heptagon Capital. We have been regularly publishing theme-based insights since 2011. We have done this because we believe that, by discussing future trends, not only do we help capture readers' imagination and stimulate debate, but also, more importantly, that we succeed in identifying the businesses that are best placed to survive. It was against this background that we launched Future Trends as a UCITS Fund at the start of 2016. The Fund is currently comprised 23 businesses (our targeted range is 20-25). We are broadly unconstrained by geography, industry and size, seeking only to invest in the best-placed businesses.

W h y f u t u r e t r e n d s m a t t e r

We have written extensively on this topic previously, but a reminder for those investors less familiar with our thought-process is always useful. We believe the logic is simple and compelling: **human development is linear, but technological advancement is exponential.** Thought of another way, while education and skills globally are improving steadily, processing power is increasing exponentially. As a result, **whatever can be digitised, disintermediated, automated or be made more intelligent will be**.

Furthermore, there is a burgeoning level of cross-over between the trends we observe developing; as trends overlap, they generally become mutually reinforcing. Even if technology is an enabler we cannot stress heavily enough that **our approach is pan-thematic**, investing in everything from wind turbines to insulin provision via robots and molecular diagnostics.

This point is crucial, particularly in the context of the headlines over potentially increased regulatory pressure and/or scrutiny over the mega-cap US tech businesses that have dominated investor attention in recent in weeks. We have not been overly surprised by developments and indeed they are something we have warned of as a potential risk (more so than valuation) in our more recent interactions with investors. We have also reflected our concerns in our portfolio construction, as we discuss in more detail later in this commentary.

However, it is worth again considering the bigger picture: **digital is the future**. In other words, advertisers are unlikely to reverse their budget allocations away from the digital arena and shift back towards more traditional formats such as TV, radio and print media. Put another way, there are few alternative choices for advertisers. Furthermore, it is hard to dispute either the choice or convenience offered by a business such as Amazon, particularly in contrast to more conventional brick and mortar retailers. It is additionally worth noting the following: consumers *opt-in* to these services. The modus operandi for regulation has been about whether consumers benefit from choice and from low prices. These businesses can point to the delivery of these outcomes, which makes regulation of them harder.

The more interesting question is whether the current regulatory framework is relevant for these businesses. There is no simple answer. Moreover, the nature and profitability profile of the large tech companies varies markedly. Consider that while Facebook generates a 57% EBITDA margin, Alphabet's is 33% (even if that of its Google division would be higher) and Amazon a mere 9%. Each of these businesses has multiple units and operates in a variety of geographies. Whether 'one size (of regulation) fits all' remains highly open to debate.

Perhaps more contentious are the cash piles on which these businesses sit: over $100bn at Google, $40bn at Facebook and $30bn at Amazon. There is a danger of getting into moral debates over whether it is 'right' that businesses such as these should generate so much cash. The possible use of fines and/or taxes on certain parts of their operations is, somewhat, to miss the point, particularly when these businesses can demonstrably illustrate how they have created jobs and continue to invest for growth. Nonetheless, our sense is that **the debate over possibly increased regulation will continue to run for some time, creating further uncertainty for investors**. The extent to which this may impact business fundamentals (advertisers need to advertise and shoppers to shop) is much less clear and Q1 financial results later in April should bring a much-needed dose of sobriety to this debate.

It is important to focus on what really matters, to distance ourselves from 'noise.' We do not claim to be able to *understand* the future, but we have developed a methodology for attempting to *assess* the future and identify the businesses best-placed to benefit from the confluence of emerging trends. We meet regularly with management teams from a wide range of businesses, attend trade fairs and try to distil our ideas into simple conclusions, expressed both in the insight commentaries we share with investors and via the positions we have in the Fund.

To provide two examples, consider first the day we spent in Nuremberg, Germany, in February. Every year the city plays host to the Embedded World trade fair, an event attended by around 30,000 visitors, with over 1,000 exhibitors present. This conference is the antithesis of the Consumer Electronics Show in Las Vegas (or the German equivalent, IFA), populated largely by engineers and technicians with few gimmicks such as smart fridges on display. If you *really* want to know what is going on with trends in technology, then this is arguably the place to go.

The talk of the town centred on automation, or – put simply – making things more efficient. Although popular journalism tends to conflate the ideas of 'smart' with 'artificial intelligence,' the more mundane reality is that efficiency can often be increased simply by adding more processing power to a device. As many people whom we met explained, the bottlenecks lie primarily in getting hardware to 'talk' to software, for devices to be interoperable ('talk to each other') and for security concerns to be overcome. These are non-trivial matters, which can require more technical expertise than is commonly appreciated. Consumers may be enticed by such devices, but many of them are not essential, at least not today. The real upside – we heard on several occasions – is deploying such solutions in factories and to large-scale industrial applications.

From an investment perspective, there is an additional factor to consider: commoditisation. To give an example, at Embedded World, there were around 60 manufacturers of integrated semiconductor circuits, 50 of sensors and 30 of OLEDs (organic light-emitting diodes) present and competing. Each company playing in one of these fields may have a niche in a certain end-market, but knowing which sub-segments or indeed which businesses will emerge as best-placed over the medium-term remains a challenge. Taking a step back, one conclusion that seems increasingly evident to us is that more (and better) **semiconductor chips will need to be produced**. This is highly supportive to our investment thesis on TSMC (the world's largest outsourced chip manufacturer) and ASML (the market leader in lithography – or chip printing – equipment).

Trend in the spotlight: renewable energy

Despite our above observation regarding semiconductor chips, we are acutely conscious of not wanting to put all our metaphorical eggs in one basket. An alternative way of expressing the same thing would be to say that **the Fund invested in Vestas during the past quarter** following the publication of our 52^{nd} insight commentary, on a renewable energy. Renewables account for ~50% of all new power generation projects today, but this will grow to over 70% by 2040. Before then, renewables will likely have overtaken coal to become the single largest source of power globally. This shift is being driven by a combination of factors: economic, technological, political and social. **Wind is likely to be the biggest winner**. Not only is it free and plentiful, but it produces no carbon dioxide, no greenhouse gases and no hazardous waste. Turbines are becoming easier to construct and are more efficient than in the past. Importantly, wind is now highly cost competitive with other energy sources. Against this background, over $3trillion is forecast to be invested in the wind industry between now and 2040. Scale players such as Vestas look well-placed to benefit

The renewable revolution is a function of multiple factors: economic, technological, political and social. Beyond all this, do not forget that **wind is free and plentiful**. Climate change has, arguably, become the defining issue for our generation. Since 1880, the Earth's average temperature has risen by ~1%, largely driven by an increase in carbon dioxide emissions (per the United Nations). Direct risks include increased frequency of extreme weather events, a greater chance of flooding, higher water stress and altered agricultural production – all of which needs to be thought of in the context of a global population which is not expected to peak until 2050. The landmark Paris Climate Change Conference in 2015 extracted legally-binding emission reduction commitments from 187 countries, starting in 2020. Future investments in energy need to be compatible with a zero-carbon world.

Wind produces no carbon dioxide, no greenhouse gases and no hazardous waste. Unlike coal or nuclear, wind does not consume large amounts of water, which itself is becoming a scarce resource. A standard turbine will generate around 240MW of energy during its 20-year operation, sparing the environment the impact of a net volume of ~230,000 tonnes of carbon dioxide that would be produced were a coal-fired power station to generate an equivalent amount of energy (per Bloomberg New Energy Finance). It is perhaps unsurprising that against this background large numbers of coal, gas and oil plants are being currently decommissioned. Furthermore, within the last two years both China and India announced the cancellation of plans to build new coal plants, preferring other energy sources. Consider also that the construction of new nuclear facilities faces many obstacles globally, while the erection of hydro plants is complicated by planning issues, long lead-times and increasing water stress issues.

Wind turbines are becoming easier to construct and more efficient. Whereas the generating-capacity of turbines in many early wind farms 25 years ago was measured in kilowatts (a thousandth of a megawatt, or MW, the standard unit of energy) and produced only enough power for a handful of households, today they have been supplanted by much more powerful turbines. They have become bigger, with taller hub heights (able to take advantage of stronger wind speeds at higher altitudes) and larger rotor diameters (able to sweep across a wider area). A standard 6MW turbine can provide ~5,500 households with energy in the EU, whereas the largest turbine currently on the market (9.5MW) could power more than 8,000 households. Its blades can sweep an area *larger than the London Eye* (all data per Vestas). Looking ahead, the Wind Europe trade organisation expects that even larger turbines, with a 15MW capacity, could be available before 2025.

Beyond these arguments, **wind is now cost competitive with other energy sources.** The cost to generate a MW of energy from wind has decreased by 80% in the last 20 years and 20% in the last 30 years (per Bloomberg New Energy Finance). Using the preferred industry metric of LCOE (the levelized cost of electricity, or the benchmark to compare the economic costs of different energy sources) onshore wind is now cheaper than *any other* energy source of a global average basis. Research from the World Economic Forum supports this view and highlights that last year, wind and solar were cheaper than fossil fuels in over 30 countries globally. Wind farms already typically generate 17-39 times as much power as they consume, compared with around 16x for nuclear and 11x for coal plants (per the Global Wind Energy Council). Furthermore, advances in technology mean that the LCOE for wind should fall by at least 25% over the next decade, a view endorsed by both the International Energy Agency and Bloomberg New Energy Finance.

From an investment perspective, there is **a long-term secular shift away from traditional energy sources towards renewables**. The wind turbine industry is both fragmented and competitive. Nonetheless, the top-ten players typically control 70% of any given market. Globally, Vestas, GE and Siemens Gamesa dominate, although China and several European markets (particularly Germany) have seen the emergence of regional champions. We favour Vestas since it benefits from scale, a large order book and a growing service business. From a valuation perspective, the business looks compelling on 15.6x 2018E earnings with a 9.4% forecast free cashflow yield. A strong balance sheet with net cash is a further attractive feature, in our view.

First quarter performance

We were pleased with the performance of the Future Trends Fund during the first quarter of the year, with the Fund finishing the quarter flat compared with a 1.3% decline for the MSCI World Index (the Fund's benchmark). However, the quarter needs to be broken into two distinct periods. January represented a continuation of the trends witnessed in 2017 (where the Fund beat its benchmark by over 19 percentage points), whereas February and March saw a reversal, albeit one driven more by stock-specific concerns than mega-cap tech worries in general. January saw the Fund gain 7.9% (versus 5.3% for the benchmark), which contrasted with a 4.6% decline in February and a 2.8% loss in March. These moves compare to negative moves of 4.1% and 2.2% respectively.

Notwithstanding the negative headlines that Donald Trump wants to "go after" **Amazon**, the business closed the quarter up 23.8%, making it both the Fund's best performer in absolute terms and the biggest contributor to performance. Even if the business is now ~10% below its all-time high, Amazon has gained more than 62% in the past year. Against this background, some profit-taking is perhaps understandable, *regardless* of the current headlines surrounding the business. For the record, Future Trends ended the quarter with a 3.7% weight in Amazon, markedly lower than where it stood a year ago (7.7%) and even a quarter ago (4.4%). Even if Alphabet/ Google's performance has not been quite as stellar as Amazon's over the past year, the Fund has pursued a similar approach, reducing our weighting from 7.1% in March 2017 to 3.6% at present.

Other strong performers during the quarter were **MasterCard** (up 15.7%) and **Intuitive Surgical** (13.1% higher). Both businesses benefited from results that exceeded consensus expectations. Moreover, the underlying trends driving both these companies remain strongly intact in our view. We will be visiting MasterCard at their US headquarters later this quarter for an update. Importantly, the fact that businesses as diverse as Amazon, MasterCard and Intuitive Surgical drove performance during Q1 speaks to the diversified nature of the Fund.

At the other end of the spectrum, **Sophos** (24.1% lower) and **Tesla** (down 14.5%) stand out as notable laggards. Context matters, particularly for Sophos, which enjoyed a 117.9% gain last year, the largest absolute upward move for any business in the Fund. As a reminder, Sophos is our favoured way of gaining exposure to the theme of cybersecurity, differentiated relative to its peers owing to its mid-market focus, integrated network and endpoint solution, cloud-based system and use of next-generation (artificial intelligence) security tools. Despite billings growth (the key metric on which investors focus) being up ~20% year-on-year in the trading statement Sophos issued in early February, investors were disappointed since this outcome was 'only' in-line with guidance, whereas in its previous three releases to the investment community, guidance had been raised. Cybersecurity concerns aren't going away. We used the sell-off to add to our position in Sophos.

With regard to Tesla, the business weakened on the back of concerns over whether it would reach production targets for its Model 3 car, while Moody's also downgraded its debt. We see these as near-term factors and in our meeting with Tesla earlier this year, management was emphatic that if it were to stop investing in its business then it could be highly cash-generative almost immediately.

Changes to the portfolio

Our philosophy emphasises a concentrated portfolio with low turnover. We seek to invest only in the leading businesses which dominate the spheres in which they are involved. Our favoured businesses typically tend to spend above-average levels of R&D, a factor that enables them typically to retain a leading level of market share. During the quarter, the only major change we made was to add **Vestas** (as previously discussed). We funded the purchase of Vestas through the sale of **Duerr** and from cash. We had owned Duerr, a German manufacturer of robots since the Fund's launch in January 2016. Our decision to sell was motivated by three factors: higher conviction in Vestas, growing concerns over competition facing Duerr and the knowledge that we retain exposure to the themes of robotics and automation via other holdings in the Fund. We exited Duerr with a 42.7% return from our initial investment.

The other consideration worthy of mention is that the Fund currently has a balance of ~8% cash. This is down from the ~10% with which we began the year, but still markedly higher than the ~1% level at which it stood in March 2017. Our motivation for holding cash is less about a lack of investable ideas, but based more on a decision to be pragmatic, seeking to lock-in some of the gains from 2017 and be opportunistic in the case of stock-specific weakness. Sophos constitutes a good case study, where we used cash to boost our position after February's sell-off. We have also made use of the flexibility our cash position affords us (combined with recent inflows) to increase the diversified tilt of the portfolio. At the end of the quarter, our largest holding is **Novo Nordisk**, at a 6.0% weight. The business is highly uncorrelated with the performance of tech. Fresenius Medical and Kerry Group also feature within the top-ten of the Fund.

Conclusion

The approach we continue to take in managing assets within the Future Trends Fund emphasises a focus on the long-term. This enables us to step-back from more immediate market, regulatory and geopolitical noise. We derive reassurance from the fact that our businesses, on a weighted average basis, are forecast to generate double-digit compound annual growth in profits and cashflow over the next three years (along with 9%+ compound annual revenue growth). If we are right in our contention that the trends to which these businesses are exposed will only grow in importance, then these assumptions may prove to be too conservative. Thank you for your interest in and support of the Heptagon Future Trends Equity Fund.

Alexander Gunz, Fund Manager

Glossary

Balance Sheet	A document that provides information on the financial position of a company at a point in time. It includes what it owns (assets), what it owes (liabilities) and the value of business to equity holders (shareholders' equity).
Basis Point (bps)	A common unit of measure in finance. One basis point is equal to one hundredth of 1%, e.g. 0.01%.
Benchmark	A point of reference against which investment performances can be measured.
Compound Annual Growth Rate (CAGR)	A measure of growth of an investment over multiple time periods.
Earnings before interest, tax, depreciation and amortization (EBITDA)	Measurement of the operating performance of a company without factoring in effects of financing and accounting decisions.
Free Cash Flow (FCF)	A measure of the cash that a firm produces after the cost of expenditures to maintain or expand its asset base.
Market Share (Capitalization)	The market value of the outstanding shares of a publicly traded company.
Mega Cap	A company with a market capitalization of larger than $300 billion.
MSCI World Index	A market cap weighted benchmark index that represents large and mid-caps across 23 Developed Markets countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the UK and the US).
Portfolio Construction	A break-down of a portfolio by its individual parts, such as sector and security exposures and their weights.
UCITS	Undertakings for Collective Investment in Transferable Securities. It is a regulatory framework in the European Union.
Valuation	The process of determining how much a company or an asset is currently worth at a point in time.
Yield	The income that is generated from an investment.

Important information

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Risk Warnings

The Fund is subject to special risk considerations including geographic concentration risk, portfolio concentration risk and operational risk. The investment return and principal value of an investment will fluctuate so that the investor's shares, when redeemed, may be worth more or less than their original cost. Any investor should consider the investment objectives, risks and charges and expenses of the fund carefully before investing. Where an investment is denominated in a currency other than the investor's currency, changes in rates of exchange may have an adverse effect on the value, price of, or income derived from the investment.

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