

Our guiding principles:

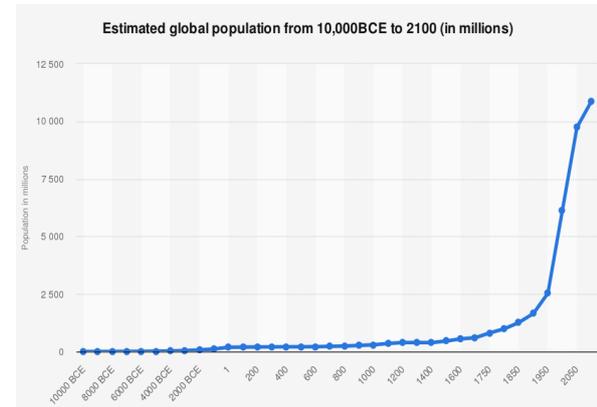
- Transparency & alignment of best interests with our fellow investors
- Adherence to our investment philosophy and process
- Independence of thought to avoid the market herd
- Focus on costs: management fees capped, low stock turnover

‘Scale:’ a study of how creatures, cities and companies scale and what this teaches us about our world

Dear fellow shareholders,

Every once in a while in the world of literature, a book comes along that fundamentally challenges our way of thinking. *Scale: The Universal Laws of Life and Death in Organisms, Cities and Companies* written by Geoffrey West, is just such a book. A book of extraordinary scope, its unifying concept provides a universal insight into growth and sustainability. Critically, his research uncovers the elemental natural laws that bind us together and the extent to which so many diverse aspects of life are related. West covers our own ageing and death, sleep, metabolism, the development of cities, energy use and the life cycles of corporations. As we try and make sense of the world from a business perspective we are naturally drawn to the last of these areas, but at the same time we are fascinated by much of the themes that connect the others.

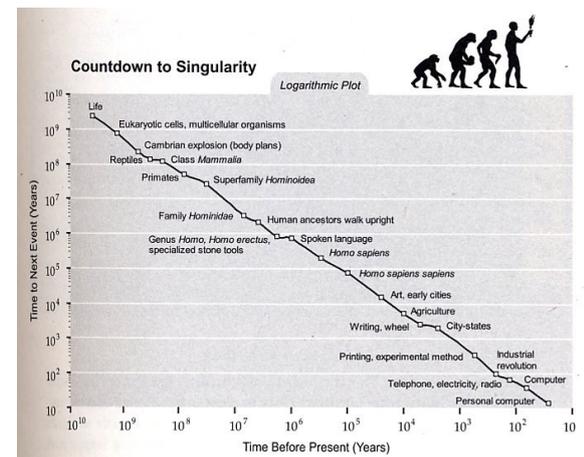
One of the greatest discoveries of the twentieth century, as West notes, ‘was to learn that on a cosmic scale we are living in an exponentially expanding universe.’ Yet what effects our lives even more directly is the accelerating socioeconomic expansion we have seen over recent decades and centuries, driven primarily by the formation of cities. The graph below shows how the world population has grown over recent millennia. As Hans Rosling also predicted in his seminal work *Factfulness*, the world’s population is likely to peak by the end of the century at around 11 billion people. Geoffrey West contends that as such a curve approaches the vertical—i.e. infinite growth, the system stagnates and then collapses. In terms of an ever increasing population and the scarce resources needed to feed such a population, stagnation should be viewed from a positive perspective. However, from an economic standpoint this is more challenging. It creates an interesting thought in itself. Since the industrial revolution, the underlying assumption has been one of continual structural growth in the world economy, fuelled in large part by the productive capacity of humans.



Source: UN DESA History Database of Global Environment Statistica 2020

By the end of this century, as this population growth dynamic subsides, what will take its place? Innovation can help offset the impact of the world’s human population stagnating, whilst continuing to deliver economic growth. However, there is an issue even with this.

As the ‘Countdown to Singularity’ chart shows opposite, the time period—charted logarithmically on the vertical axis, is ever shortening between life changing advances in innovation. This could mean that over the coming decades such quantum advances may not be able to delay further the impact of a global population that has peaked in number. Unless as West argues, innovation can reset the growth curve. Throughout history this has occurred time and again - stone tools created; Iron ore harnessed; steam controlled; the printing press produced; phones, computers and the Internet developed. All these, paradigm shifting innovations. Yet the challenge is that the period between these great shifts, is ever shortening. Some commentators suggest that this point in time, this ‘singularity’, will lead to an explosion of technological growth that is uncontrollable and irreversible. Whichever scenario occurs, it seems likely that disruption both from a social and economic perspective is likely to increase. Through our lens of investing, the implications are profound for businesses operating in this changing environment.



Source: Ray Kurzweil

An analysis brought out by West in *Scale* covers the **Compustat** dataset for companies in the S&P 500 US index from 1950 onwards. He notes in his chapter *Toward a science of companies* that “of the 28,853 companies that traded on U.S. markets since 1950, 22,469 (78 percent) had died by 2009. Of these **45 percent** were **acquired by or merged with other companies**, while 9 percent went bankrupt or were liquidated; 3 percent privatized, 0.5 percent underwent leveraged buyouts, 0.5 percent went through reverse acquisitions and the remainder disappeared for ‘other reasons.’” Whilst devastating at an individual level, this company mortality is an important ingredient for generating innovative vitality resulting from ‘creative destruction’ and ‘the survival of the fittest.’ It raises further the benefit of investing in quality companies that have already proven they can stand the test of time. It is vital though that they continually innovative to ensure their products and services remain relevant in a rapidly changing world.

In the broadest sense we seek companies who are winning their respective ‘technology’ battles, whether its **Unilever’s** digital marketing strategy or **Craneware’s** software as a service solutions for its US hospitals.

The value of investments can fall as well as rise & you may not get back what you invest. Past performance cannot be relied upon as a guide to future returns.

The scale or large size of a business can help protect against a hostile takeover. Here it should be noted that a takeover is generally not injurious to making a positive investment return on a business—i.e. listed companies are normally taken out at a premium to their share prices, before the acquisitive approach. However, as long-term owners were are concerned about the opportunity cost that comes with an acquisition. We may make a quick 20-30% return from a bid premium, but for our high quality, high returning businesses we then forgo the future compounding of returns—returns which can quickly negate any short-term bid premium. Whilst it is true that our average market capitalisation of the fund is circa £35bn, we have a range of different sized businesses. At the smaller end of the scale, it is these businesses that are generally at greater risk of takeover. A long-term stable list of shareholders can often protect companies from unwanted advances. So too can family shareholdings, as with the Herlin family’s ownership of **KONE**.

Compustat’s study highlighted some other interesting observations: 1) Only around half of Initial public offerings (IPOs) survived their first decade, following their exchange listings! 2) After a ‘human generation’ of 30 years, only 5% remained in existence. 3) Nearly all had gone after half a century. With this in mind it is interesting to note that the average age of the businesses in our fund is 78 years! We suspect, as is the case with our companies, that the small number of US businesses that survived in the study, were ‘doing something different.’ Here barriers to entry are vital in preventing competitors both new and existing eroding away the profitability of companies.

We would also make an important distinction, which Geoffrey West does not cover in his analysis. He describes the market as a whole, which as we often mention sees around 90% of the market in perfect competition. Here products and services are more commodity-like and businesses find it difficult to differentiate their business models. Could this be the main reason so many companies struggle to survive in their early years? Under this market structure it is much easier to see how the Compustat data falls into place, with only around half of businesses surviving their first ten years after listing. Our focus is on businesses in the 10% of the market, where differentiation is significant, helping to produce higher returns and in a more enduring manner. Perhaps this in part explains their ability to survive over decades and in some cases centuries.

Companies that persist often have intangible assets, such as brands, assurance benefit qualities to their business models, which transcend a pure pricing decision in the consumer’s mind. It is why we think broadly in four main segments when categorising our companies. 1) Intangible assets 2) High switching costs 3) Network effects 4) Cost advantages. We need to be confident that there is a mechanism in place to protect the business model. This protection also facilitates the allocation of capital, which if done well can lengthen the life of a business.

West talks eloquently about the life cycle of companies, likening their revenues to the metabolism of an organism; their expenses to that of the maintenance costs required in most systems. He identifies that both animals and companies scale in a sublinear fashion. In short this means that their growth is ‘bounded’ with a finite life span. As this manifests itself in a company and returns fall back to the cost of capital, the market eventually takes action. Capital is allocated away from value destructive businesses and towards those of value creation—a crucial point in our investment process which sees us focus on incremental returns on capital. This is designed to give us an early warning signal that all is not well and that future returns maybe diverging from the high returns of the past.

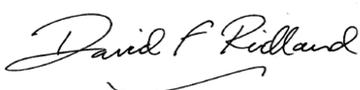
Companies are surprisingly biological from an evolutionary perspective. One underlying system at work here is the ‘invisible hand’ of capitalism, a phrase first coined by the philosopher and economist, Adam Smith. Many companies operate close to the critical point where sales and expenses are finely balanced, making them potentially vulnerable to fluctuations and perturbations of this unseen hand. **This is why our Quality screening for our investment universe aims to identify businesses where there is a much larger margin of safety between this critical point—the gap between sales and expenses.** This in turn means that when completely unexpected events occur, such as Covid, they have the strength and flexibility to survive.

Our table opposite continues to reflect the quality of which we have been speaking. Quality, evidenced by a return on equity over 40%, that is importantly founded on operational excellence and not excessive leverage. The operating margins of our companies are now three times that of the market, with these returns generated using half the leverage of the market. Whilst we continue to remain focused on these important characteristics, it is encouraging to know that from a valuation perspective, our free cashflow yield remains supportive – both in relation to the UK market and to other asset classes.

Quality Table End Sep 21	Castlebay Fund	Market
Return on Equity	42%	19%
Operating profit margin	21%	7%
Net debt to equity	46%	103%
Cash conversion	116%	123%
Free Cashflow yield	3.9%	4.1%

Source: Bloomberg as at 30/09/2021

Thank you once again for your continued support.



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Avon Protection: buying favoured assets when offered at more attractive valuations

The old Avon Rubber used to have two main parts to its business—firstly, the dairy part which was comprised of Interpuls and Milkrite; and secondly the protection division which provided respiratory protection for military and first responder personnel. Recently however, the management team headed by Paul McDonald and Nick Keveth (CEO and FD respectively) have reorientated the business. The lower margin dairy business (circa 7.5% operating margin) was sold in September 2020 and the proceeds used to reinvest in acquiring higher margin protection businesses. As this change of business structure came into effect, it made sense to rename the company. Hence, **Avon Protection** was born.

Avon has made two main acquisitions recently. In January 2020 it acquired the Helmets and Armour division from 3M Company for £75m and then in November of the same year it completed the £100m acquisition of Team Wendy LLC, a US company founded in 1997. Team Wendy make leading helmet liner and retention systems used by the US Department of Defense (DoD). The second of these deals was carried out on a cash-free, debt-free basis given the proceeds from the sale of Avon's Milkrite division. The deal made Avon a global leader in Military and First Responder helmets. Paul McDonald also noted at the time of the deal that it will likely be earnings enhancing in the first year following completion of the deal. Given the way in which the deal was funded, Avon's balance sheet remains in a strong, net cash position following this corporate activity.

One aspect of acquisitions that is often overlooked is that of culture. It can often lead to challenges when businesses are trying to integrate successfully. On hearing the founder of Team Wendy, Dan Moore talk about setting up his business in honour of his daughter Wendy who died from a skiing accident head injury, it is clear how much the business still means to him. It shows the regard in which he holds the management team of Avon Protection. In that way this deal feels like the type of deal carried out by Warren Buffett and reported so eruditely in his annual letter to Berkshire Hathaway shareholders.

In terms of operating profit margin (OPM), Protection is nearly twice as profitable as Dairy (13% OPM v 7.5% OPM for the dairy business.) So Avon is focusing on the higher growth, more profitable business area where their greater technological expertise relative to their competitors is of benefit.

Over the last five years Avon has also dramatically diversified the risk of the business, from a single long-term contract with the US Department of Defense, to multiple contracts with different customers in multiple geographic regions. There has also been a rise in sole source contracts awarded to Avon, which we view as very positive in relation to enhancing the barriers to entry in their sector. In this industry the normal modus operandi is that dual source contracts are awarded for the delivery of long term contracts. Here the customer, such as the Ministry of Defence or NATO, is trying to ensure a consistency of delivery. So spreading the supply over two companies is a sensible precaution. When a sole source contract is awarded it generally means that only one company is deemed capable of delivering on the contract. As Avon leads the sector in its technology, the increasing number of sole contracts can therefore be seen as a positive development. In our view this ties the end customer into a more integrated relationship. Such a dynamic enhances the probability that Avon is increasingly seen as the main player in its market. This is reflected in the fact that within the US law enforcement market their respiratory systems have an installed base of 60% of the market—with incremental market share of 90%!

The business has not been without its challenges though over recent quarters. It has warned the market on a couple of occasions over the last twelve months that trading would be weaker than first anticipated. Following the strength of the share price performance for most of 2020, this led to a large decline in the shares. However, **we believe these issues to be temporary in nature and so we have taken the opportunity to invest more capital into this weakness.** Whilst some of the concerns have surrounded Covid-related supply chain issues, a delay to the Integrated Head Protection System ("IHPS") contract and a test fail for the US Department of Defense body armour contract, saw sentiment turn against the stock. Encouragingly, in the last couple of weeks we have learned that the IHPS contract has been awarded to Avon, on a dual-source basis. This contract is worth up to \$87.6 million over two years. The body armour contract process highlighted a couple of interesting aspects. Firstly, the process was initiated by the Ceradyne business recently acquire by Avon from 3M. The body armour has to go through a rigorous forty-four test process. Avon passed on forty-three tests and failed on one. Management has acknowledged that they didn't get everything right in the process, as they were integrating this new business into the company. Yet, having resubmitted the armour for testing, early indications are positive. In some ways this failed test highlights how high the barriers to entry are in this sector!

In summary, we think Avon Protection has made the right decision to restructure its assets and focus on the protection part of its business. After Team Wendy and 3M's businesses are fully integrated into Avon's, we look forward to further long-term contract wins and future profitable growth driving value-creation for its shareholders.

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