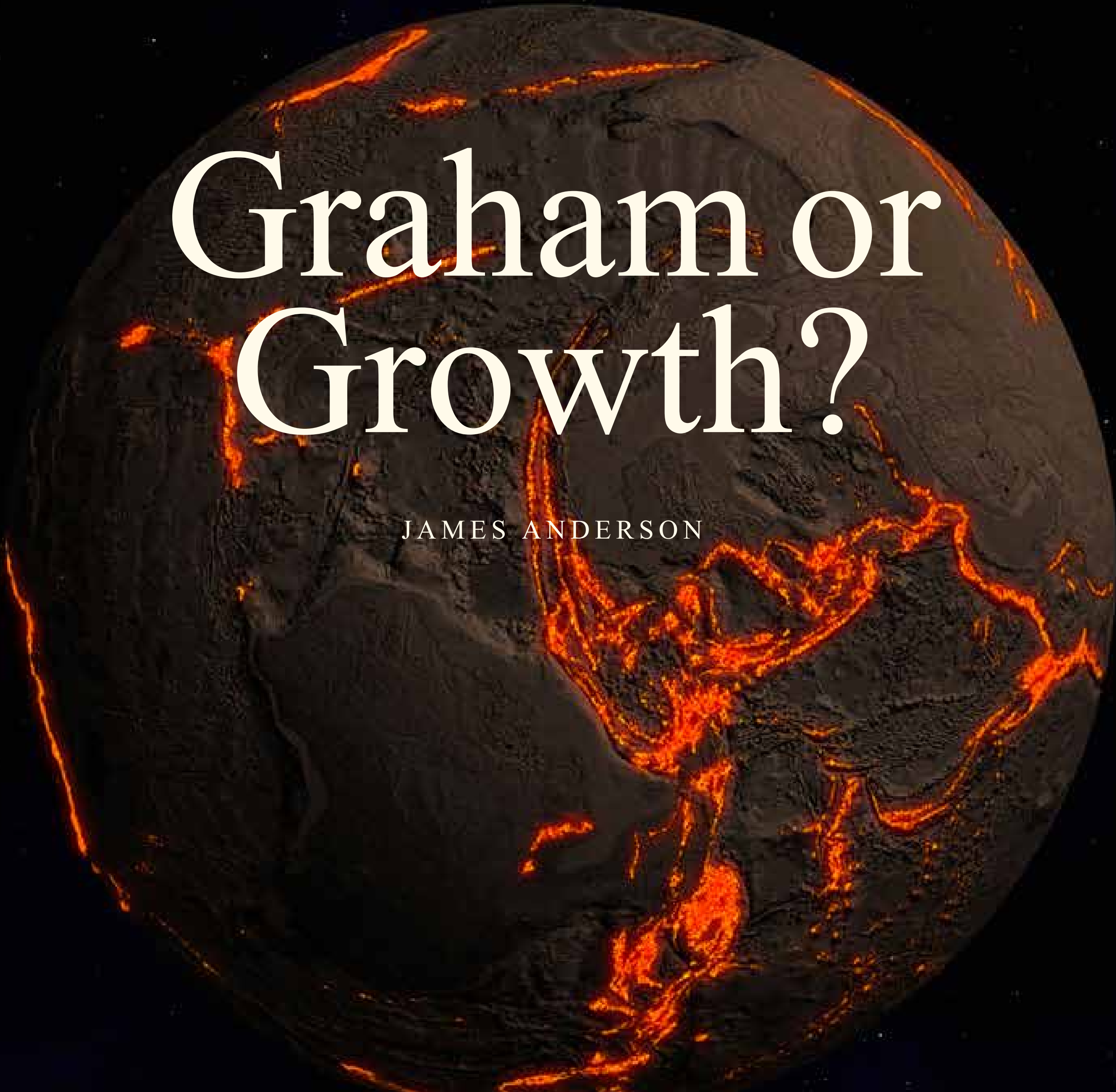
Graham or Growth?

JAMES ANDERSON



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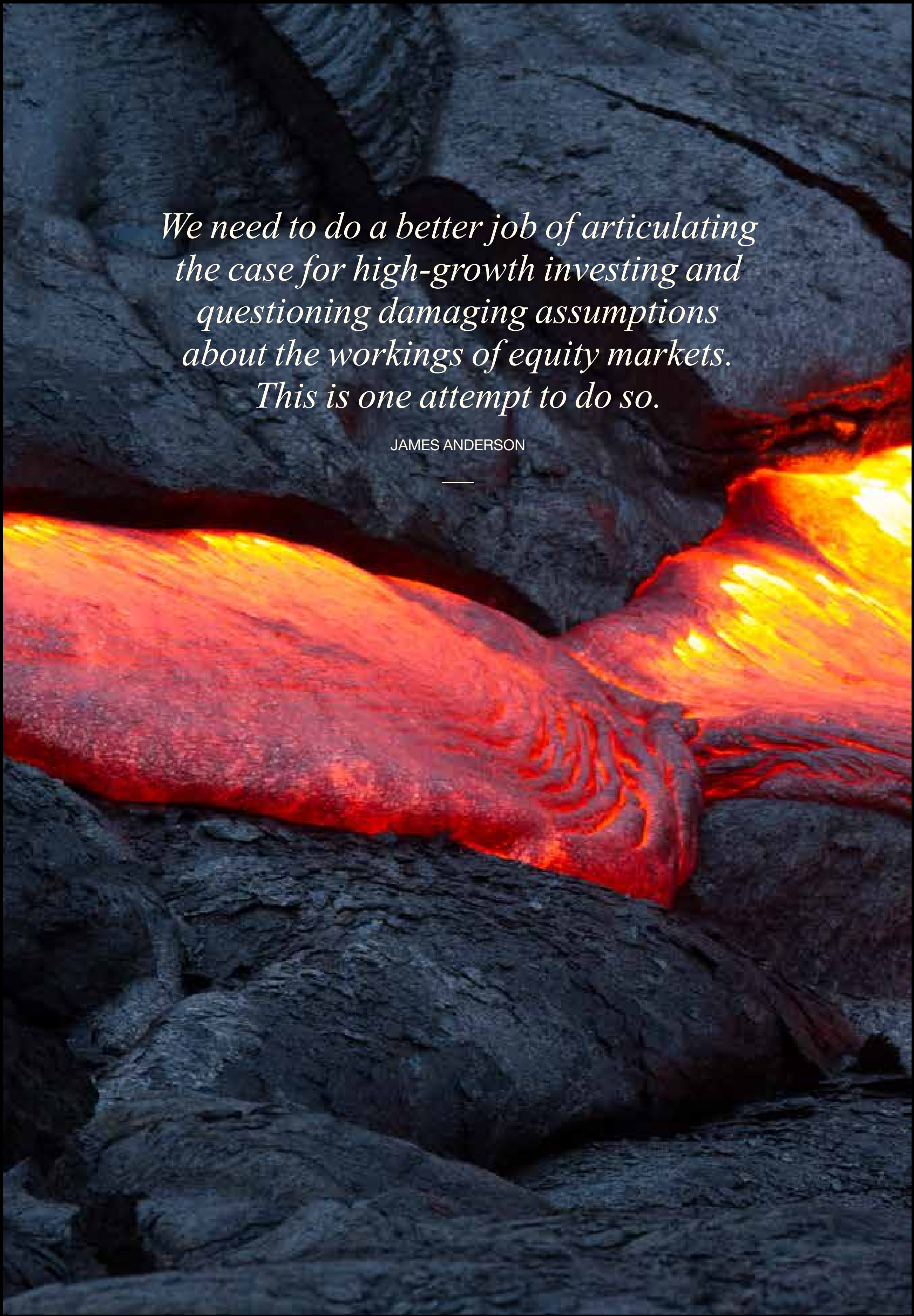

We need to do a better job of articulating the case for high-growth investing and questioning damaging assumptions about the workings of equity markets. This is one attempt to do so.

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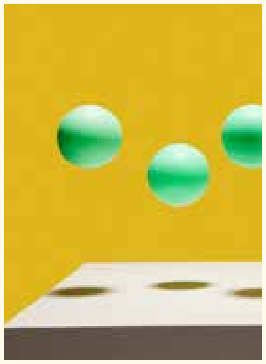

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WILL THE MEAN REVERT?

TWO TRADITIONS, BUT ONLY ONE LITERATURE

When we first attempted to explore and explain our enthusiasm for Growth Investing 15 years ago it was natural to try to learn from our predecessors. The problem was that there was very little literature to guide us. The only text in the canon of investment that espoused Growth Investing was Philip Fisher's 'Common Stocks and Uncommon Profits'. It dates from 1958.

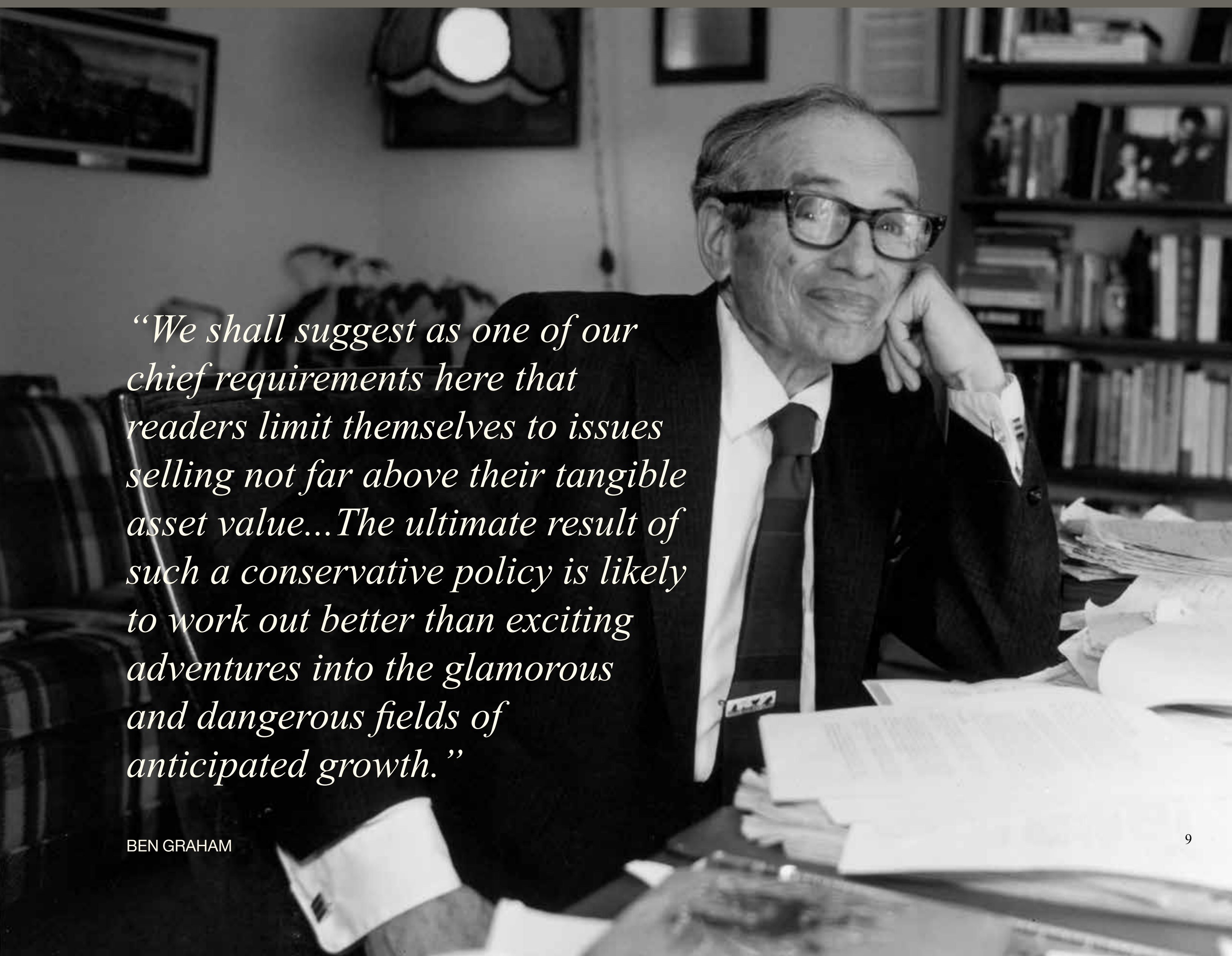
Fifteen years on, markets and facts have been generally kind to the cause of Growth Investing. But there is still a shortage of material, whether written, internet or podcast, available that makes the case for a serious and consistent commitment to Growth investing. There's little evidence here that when the facts change investment opinion adapts. There's equally little evidence given for the widespread presumption that time will inevitably and eventually ride to the rescue of value. All too often this is accompanied by a disconcerting sub-text of moral superiority that Growth investors are momentum junkies with no serious commitment or beliefs. Perhaps as a consequence the great majority of clients still seem set on rebalancing away from Growth in determined manner, despite or because of long-term performance well ahead of supposedly unbeatable passive benchmarks.

But in marked contrast to the poverty of the Growth literature there is an intellectual tradition, a canon of classics, that surrounds Value investing. This is very much intact in our era from Buffett and Munger to Klarman and Marks. In addition the doctrine of Value has a bible or at very least an Old Testament. So I reread Ben Graham's *The Intelligent Investor* (in the edition with Jason Zweig's excellent commentary).[1] Of course it is wonderful. Of course it has fathered magnificent interpreters and investors. But I don't believe that it invalidates Growth investing. I do believe that transformations in our economic and corporate structures open serious alternative interpretations.

1. Graham, B., Buffett, W. and Zweig, J. (2013). *The Intelligent Investor*. New York: Harper Collins.

THE INTELLIGENT INVESTOR

What are the main tenets of Graham’s philosophy? Early on he sets out his case:



“We shall suggest as one of our chief requirements here that readers limit themselves to issues selling not far above their tangible asset value...The ultimate result of such a conservative policy is likely to work out better than exciting adventures into the glamorous and dangerous fields of anticipated growth.”

BEN GRAHAM

This summarises his position and requires little embellishment but a few further quotations may be worthwhile. Graham regards “true growth” as meaning per share earnings “should at least double” in 10 years but that any such stocks are commonly subject to “excessive” enthusiasm that has “introduced a speculative element of considerable weight”. This means that growth stocks are subject to losses in market downdraughts. Such volatility saw IBM twice losing 50 per cent of its value in its era as the ‘best’ growth stock. Better therefore to invest in a “group of large companies that are relatively unpopular”. Later this evolves into a verdict that:

“Extremely few companies have been able to show a high rate of uninterrupted growth for long periods. Remarkably few, also, of the larger companies suffer ultimate extinction. For most, their history is one of vicissitudes, of ups and downs…”.

This formulation is, I think, the closest Graham comes to explicitly endorsing what has become the extraordinarily influential belief in the return to the mean as a fundamental principle of investing. Not though quite as fundamental to Graham as to where he concludes that “to distill the secret of sound investment into three words, we venture the motto, MARGIN OF SAFETY.” Most uncharacteristically the capitals are his.

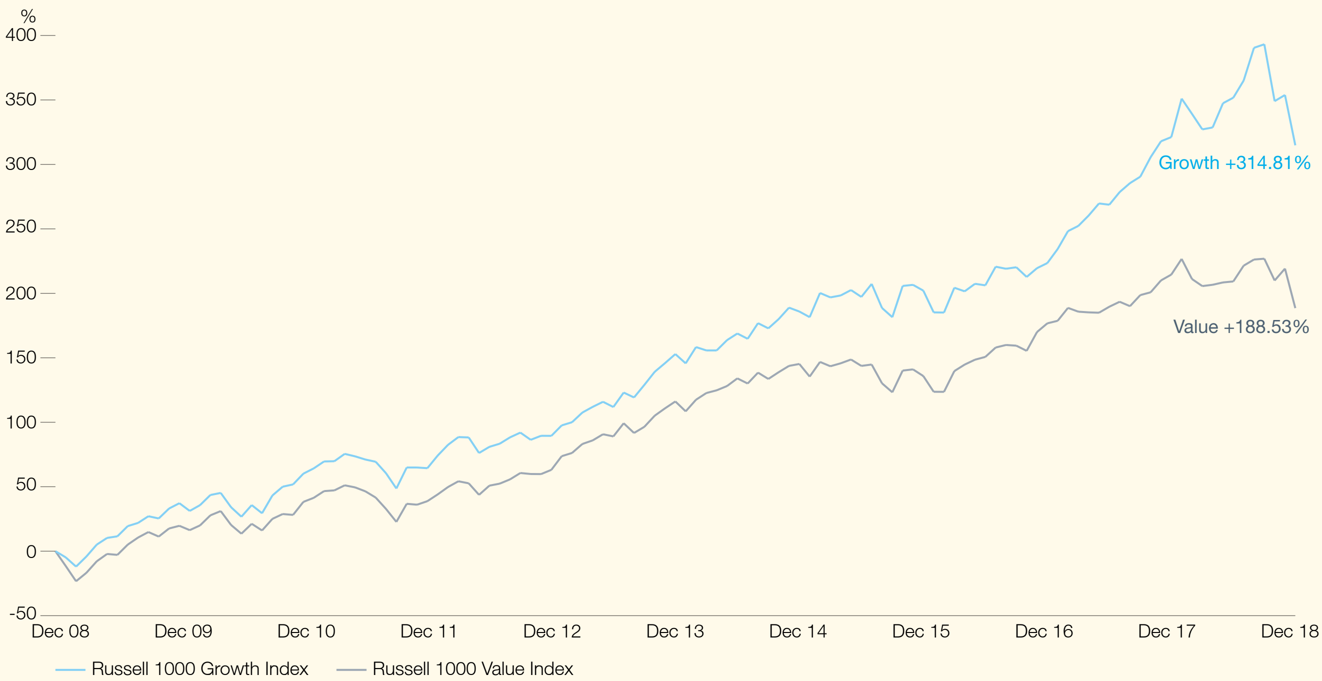
As these quotations make clear, Graham was willing to set out broad statements of principle and philosophy. But he always backed these by references to specific examples and overall market outcomes over a period of time. He tells of market declines, of the inability of Growth mutual funds to outperform. In the background is the knowledge of his own superior performance which is not trumpeted as much as the failure of others.

So let’s start with performance. It’s quite plain that in the last decade the situation has not been the same as that Graham points to and that many of his clumsier successors point to as an iron rule. It hasn’t been better to invest in “a group of large companies that are relatively unpopular”. It’s been much better to participate in the “glamorous and dangerous fields of anticipated growth.”

It becomes still more troublesome if we turn to individual stocks and to far longer periods. Graham believed that doubling earnings over 10 years was a reasonable definition of growth and that such is difficult to achieve – especially for an already large company. At least by implication extending such a record was highly improbable.

Yet this simply hasn’t been the case. Let’s take the comparatively staid Microsoft as an example. By 2008 it had revenues of $60 billion and earnings of $1.87 per share

Growth vs. Value Performance



Source: Baillie Gifford & Co and underlying index providers.

but it also had Steve Ballmer as CEO and not unrelatedly appeared to have gone permanently ex-growth. Regulators had controlled its influence and the attempt to reinvent led to the damaging acquisition of Nokia in the years ahead. But by 2018 Microsoft had revenues of $110 billion, clean earnings of $3.88 and appears still to be growing at low double digits.

The story of Microsoft's last decade is one of impressive persistence of growth and returns at scale and from apparently dire initial circumstances. But its entire history since its IPO in March 1986 at an implied value of a little over $0.5 billion (which Bill Gates thought worryingly demanding) represents an extraordinary challenge to the sceptics of Growth and proselytisers of mean reversion.

In its last year as a private company Microsoft made net profits of $24 million. For fiscal 2018 it earned $30.27 billion. That's at a 24 per cent compound growth rate over 33 years with operating margins still over 30 per cent. It's hard to prove but equally easy to believe that this is the most extraordinary record in global corporate history.

It's most improbable that anyone predicted such a prolonged period of extraordinary success – and even more improbable that any investor who argued that it was possible and invested accordingly would have been taken seriously. But it's such extremes that matter – and that need to be acknowledged and understood.

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Alphabet is far racier. Again it's quite a challenge to the Graham hypothesis. In 2008 Google earned $4.2 billion on revenues of $21.8 billion. Ten years later this has become $30.7 billion on revenue of $136.8 billion for Alphabet. Moreover it has never been that difficult an investment thesis to comprehend: as Graham's disciples at Berkshire Hathaway acknowledge the competitive moat was such that as Charlie Munger put it in 2017 he and Buffett were "probably smart enough" to have figured out Google so "we failed you there".

Alphabet, of course, has generated huge amounts of free cash but there's still another category of deeply successful stocks to this point that would presumably have aroused wry and mordant humour from Graham. What would he have made of Netflix? Or Amazon? Almost certainly he'd have mocked their tolerance of losses but if we are tempted by potential how do we think about subscribers or sales growing as shown below:

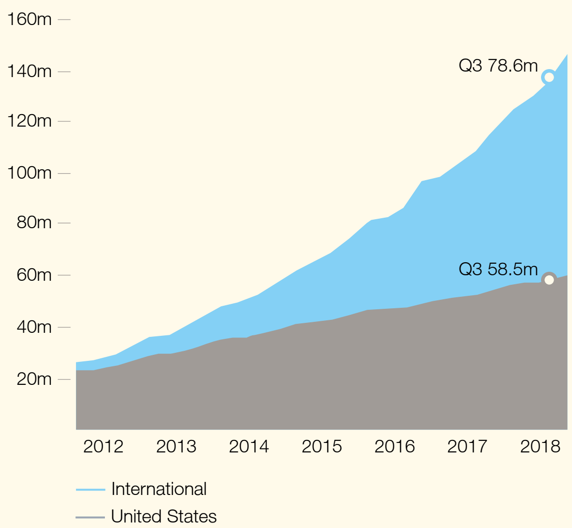
Of course Graham didn't cover China but Alibaba and Tencent would probably not have met his desire for a margin of safety at any point in their ascent.

Now in a sense I'm reluctant to lay out these examples over the last decade as I really don't wish to seem either dismissive or smug. What I'm trying to convey is that over time frames Graham himself used the outcomes have been inordinately different from his philosophical and practical expectations.

Yet outcomes are simply the starting point for attempting to understand what might be happening. Graham and several of his most notable followers were and are great investors and deep thinkers. So for their approaches to be so challenged by events there must be at least the possibility that something profound may have changed in heaven and earth. What this might be is fascinating. It's also potentially vital to trying to understand what may come next. This is much more important than crowing about the last decade.

Netflix Continues to Grow Internationally

Netflix's worldwide streaming subscribers at the end of the respective period*

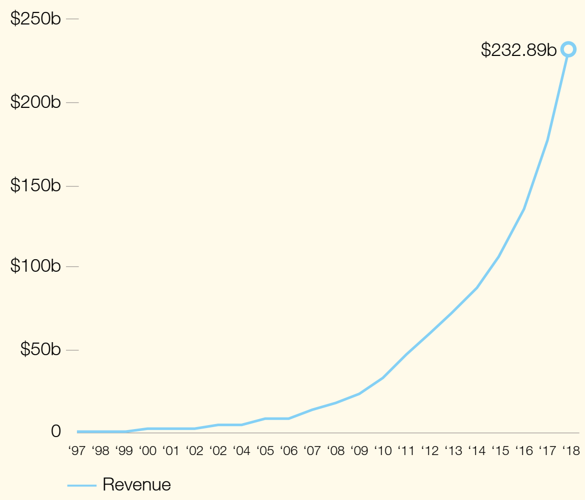


*Q4 2018 figures as forecast by Netflix in October 2018

Source: Statista, Netflix.

Amazon's Impressive Long-Term Growth

Amazon's revenue from 1997 to 2018 (in billion US dollars)



Source: Statista, Amazon.

UNCERTAINTY

First though we need to reflect on the limitations of our understanding. It's crucial that we acknowledge this. Whether it be the inherent confidence of Graham that despite oscillations he would turn out to be generally correct, or less justified certainties of the great majority of market commentators and stock analysts that we now have to endure, I'd suggest that we need to be acutely more sceptical about the significance of outcomes.

This is the direction that the far more rigorous disciplines of science and mathematics are encouraging us to take. The very idea that 150 years of chance occurrences in a small and acutely biased selection of countries provides satisfactory evidence to make projections about the working of markets and the range of outcomes would horrify most of the greatest minds of our times. As Nobel laureate, co-founder of the Santa Fe Institute (and according to The New York Times headline The Man Who Knows Everything) Murray Gell-Mann frequently stresses we are far too prone to see what has happened as both preordained and a far smaller percentage of the possible outcomes than we care to believe. As he wrote we and our surroundings are better thought of as "the frozen accidents of history".

An example he used over 20 years ago has especial piquancy today. Gell-Mann pointed out that Henry VIII only inherited the English throne because his brother Arthur, of a rather different temperament, happened to die (after making a marriage that immensely influenced the Reformation). Gell-Mann concluded that this led on finally to the "antics of Charles and Diana." Brought up to date he might well say it led onto Brexit.

There's another example that is perhaps even more provocative. In Buffalo Bill's Wild West Show Annie Oakley proclaimed her ability to shoot the end off a cigarette and requested volunteers to demonstrate her skill. Normally no one came forward. So Annie's husband hid in the audience in order to take on the role. But at a show in Europe there was a brave volunteer. Annie had been drinking in a beer garden late the previous evening and was unnerved by the turn of events. Such was her professionalism that even with a thick head she managed the trick. Now this may be thought of as impressive but unimportant. But the unexpected volunteer was her great admirer the young Kaiser Wilhelm. There have been many lurches in the accepted historiography of the First World War but few, if any, accounts, think his aggression and personal failings were irrelevant. If only Annie's hand shook or if the beer had been of Belgian not German strength world history might have taken a very different path.

These are historical examples but they are emblematic of the flaws of both financial and economic theories. Personally I lost any belief in the twin notions of predictability and efficiency on October 19, 1987. The S&P 500 losing 20 per cent of its value on no news at all seemed a little hard to rationalise away. But whatever the trigger for each of us, surely we have to accept that we live in markets and economies (see 2008) that are profoundly inimical to the traditions of equilibrium economics.

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Instead we live and work within complex, unpredictable and probably inexplicable systems. In an analogy described by Melanie Mitchell in *Complexity* capital markets are as strange, opaque and puzzling as the workings of our immune system. Or as Gell-Mann suggests, as hard to predict as circulating particles with brains and emotions. The actual outcome that occurs is just one choice amongst an infinite number. Moreover that one now frozen occurrence influences the future path in often unfathomable ways. Soccer commentators are fond of mouthing the cliché that 'goals change games' but in business too reversing time and chance is impossible. We can write all we like about the underlying causes of Microsoft's astounding success but it rested on accidents. One of the twists was that when IBM first asked Bill Gates for advice on its proposed operating system Gates suggested that their best source was a company called Digital Resources. But it was run by a gentleman named Gary Kildare who preferred to go hot-air ballooning rather than turn up on time to meet IBM. Only then did IBM go back to Gates.

It seems likely that the complexity, unpredictability and path dependence of our markets has grown over the decades since the early rites of Microsoft let alone the marriages of Henry VIII. But even without this surmise it seems that we may be better off simply acknowledging existential uncertainty in return structures. Both the Value driven dictums of Graham and the extremes of Microsoft and other platform Growth stocks may be the near random outcome of an almost infinite set of possibilities in each period. Neither should be treated as permanent laws of finance.

If only Annie's hand shook or if the beer had been of Belgian not German strength world history might have taken a very different path.

FUTURE STATES

Nevertheless we can only posit the nature of possible future returns if we develop some perspectives about the underlying nature of the global economy. This is very far away from predicting GDP or interest rates in the next year. What it seems to require from us is contemplating the conceivable directions and levels of change that may take place over the coming 10 to 20 years.

All too often the oscillations between growth and value, between extreme growth and GARP (Growth at a Reasonable Price) are seen as independent financial variables disconnected from the evolution of the underlying economy. In the long term, outcomes are generally guided by the battles and interaction between systemic change versus comparative stability and then merely reflected in their market versions of Growth versus Value. In conditions of relative but progressive calm then Berkshire Hathaway reigns supreme, in repeating but not transforming cycles then the philosophy of "vicissitudes" and "ups and downs" of Graham are formidable weapons. But if change is wrenching and dramatic then the equation is likely to be very different. It becomes evident that as Schumpeter proclaimed "Surely, nothing can be more plain or even more trite common sense than the proposition that innovation… is at the centre of practically all the phenomena, difficulties and problems of economic life in capitalist society".

So beneath the periodic financial crises that have marked the last decades, what we have been living through seems to have been rapid structural change in the Information Technology driven areas but deep stability in most sectors reinforced by globalisation. Hence the arguments between those like Robert Gordon who see innovation as exhausted and the optimists of Silicon Valley.

Our own contention would be that the likelihood is that we are now entering a period where transformations will be much more dramatic – and much more demanding for incumbents. What has assailed newspapers and retailers of DVDs may well spread far more dramatically – 2018 provided meaningful clues. So for instance even investment banks are now willing to acknowledge that investors are questioning the terminal value of oil companies as the fossil fuel era wanes. We're likely to be moving into an age where mean reversion is much less significant than mass creative destruction. The post World War Two model is likely to seem quaint by 2030. Or once again much as Schumpeter put it decades ago:

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"This civilisation is rapidly passing away, however. Let us rejoice or else lament the fact as much as everyone of us likes; but do not let us shut our eyes to it."

JOSEPH SCHUMPETER

A WORLD UTTERLY TRANSFORMED?

But what if the world coming into view is so profoundly different from our prior existence that we simply can't contemplate or analyse it in any meaningful sense? It's possible that the transition that we are facing is just as wrenching and disorienting as the emergence of the industrial revolution appeared to agricultural labourers. It's not just that the rules of the games will be unknown but that the nature of the economy and corporate life will be mysterious. Against such a potential background of existential uncertainty it's surely wrong to have confidence in any patterns of past behaviour persisting as iron laws of returns. Predicting is intrinsically dangerous, especially if it's in the form of believing that it can be measured in terms of historic volatility. All we can do is explore the possibilities. Keeping an open but prepared mind seems to be the best policy. Another compatible methodology is to adopt the Taleb philosophy of putting our portfolios at risk of beneficial Black Swans without pretending that they are other than unlikely and unpredictable.

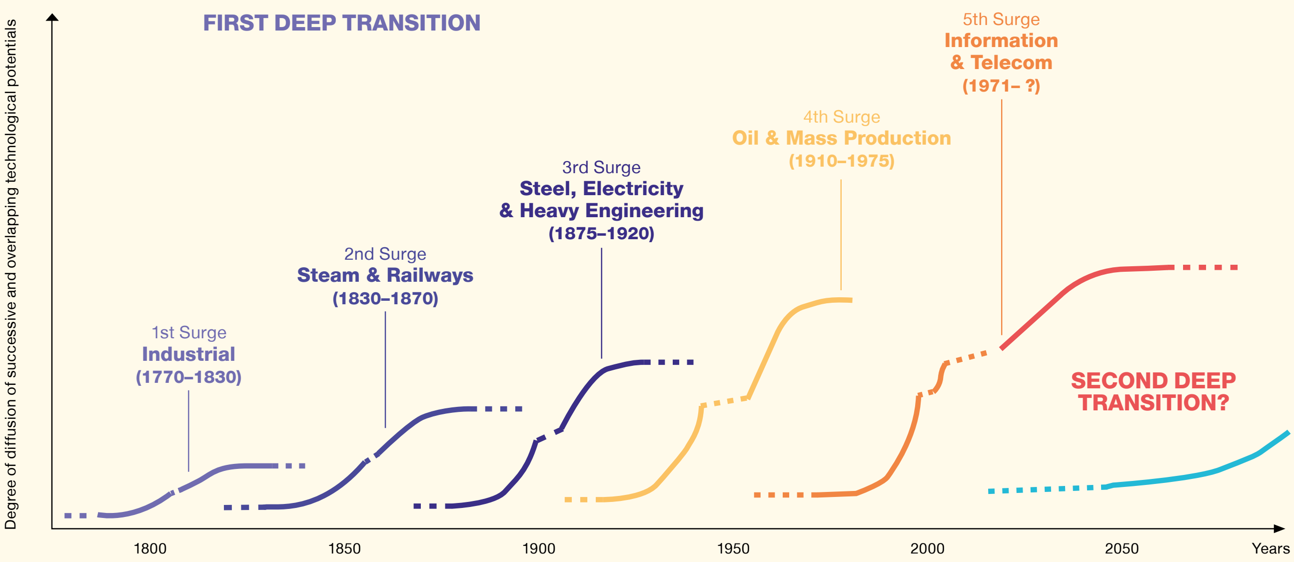
We should disassociate such musings from the mantras of finance. This world of deep uncertainty and tectonic shifts is radically opposed to what after 50 years of failure is still presented as 'Modern Portfolio Theory'. Perturbingly this with its broader partner of equilibrium-based economics, still holds general academic and professional sway. Amongst our academic partnerships we've had a focus on the importance of history at the broadest possible level in terms of time frame, global reach and its meshing with economics at those scales. We've talked about the work of Ian Morris in the past in this context. We've also cited

Carlotta Perez of Sussex University and her brilliant *Technological Revolutions and Financial Capital*. We therefore started to work with Sussex University on the possible transformations of the future. This led to the somewhat complex chart below, but to the much simpler conclusion that we might indeed need to prepare our minds for a New World or even a New Golden Age.

Professor Perez herself is less convinced of the likelihood of this transformation than her colleagues. She thinks we need a financial bubble in order to create the pre-conditions – and that we don't get beneficial bubbles just because we require them. Finance is too risk averse for that. Alternatively or additionally we need major government action to make the necessary changes. It's quite possible that this is happening in China under an autocratic regime.

Given the dominant narrative of first neoliberalism and then populism it does appear unlikely that the government action that Professor Perez focuses on as an essential ingredient in building a Golden Age stands any chance of occurring. But it may already be driving the seeds of transformation. The Californian enthusiasm for electric vehicles (EV's) may be cultural but it is also the direct output of legislative pressure and incentives decades before Tesla. In Europe the spate of national and urban plans to ban internal combustion engines in the aftermath of the diesel fiasco seems poised to twist the future. Trump, Brexit and the AFD in Germany excite headlines far more but the rising popularity of green policies and programmes may become more significant. This might even affect American national politics.

First and second deep transitions



Source: Johan Schot & Laur Kanger, Deep transitions: Emergence, acceleration, stabilization and directionality, 2018.

THE IMPACT IN STOCK RETURNS

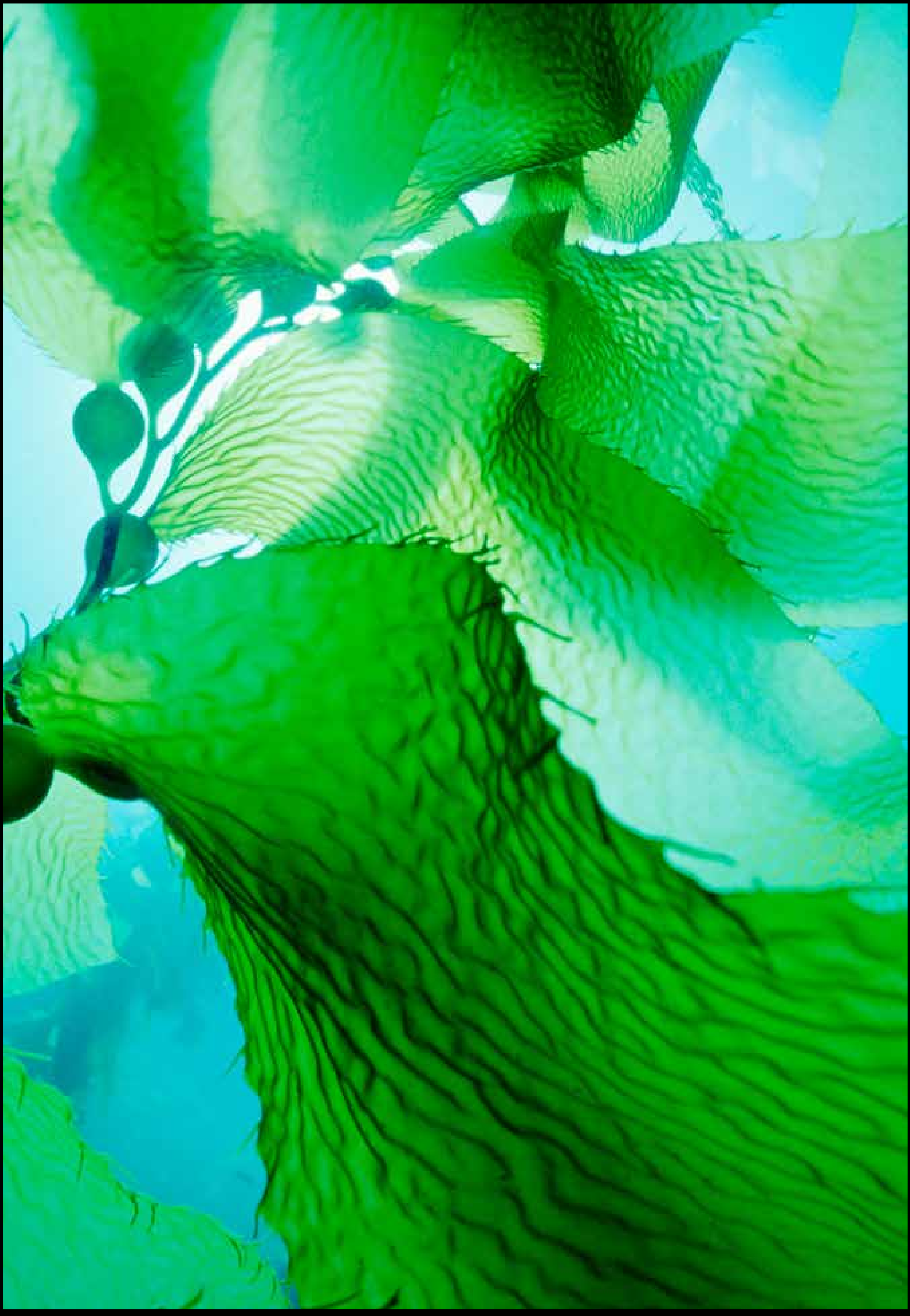
If economic and social change set the bounds of stock market possibilities we all know that they are insufficient to drive great stock performance over the long term. Revenues and returns require persistent competitive strengths and cultural evolution. The examination and identification of competitive moats has been central to the splendour of Buffett and Munger. But just as the neoclassical equilibrium-based version of macroeconomics (and its financial cousins of the calm world of measurable risk within a smooth bell curve) appears distant from reality so too does the established microeconomic legacy seem unable to explain corporate success and failure today. In particular the central idea of declining returns to scale seems lacking in explanatory power. The importance of assets and hence Tobin's Q appears undermined with many physical assets worthless and with dominant companies which have few assets themselves.

But Graham's model has found new support from an unanticipated direction. One of the most stimulating books of recent years is Geoffrey West's Scale: the universal laws of life and death in cities and companies. Professor West, though once President of the Santa Fe Institute himself, takes the view that beneath deep complexity there are not just patterns but laws that control the destiny of companies. West sets himself a series of demanding challenges. This is not least true of his putative project assessing companies: "Could there possibly be a quantitative, predictive science of companies...how they grow, mature and eventually die".

Certainly companies occur and vary in size according to a power law as do cities. Yet cities get stronger and more resilient the more they grow, demonstrating an increasing return to scale. But there's no historic evidence that this is so in the corporate world: companies have done about as well as organisms and much less well than cities as they grow "many of their key metrics scale sublinearly like organisms rather than superlinearly like cities...their sublinear scaling therefore suggests that companies also eventually stop growing and ultimately die". This is surely the territory of Graham's "vicissitudes". All large, mature companies revert to market growth as West concludes.

Yet this compelling general picture across times and societies is challenged by the examples we cited earlier. Plainly there have been companies that have scaled superlinearly in recent decades: is this a temporary chance that is noise in the data or something more serious? The answer to this probably carries the future prospects of Growth and Value investing in its wake.

Our answer would be that there's reason not to exclude the probability of further superlinear scaling in coming decades with the associated extreme performance implications. As to why, we'd turn to a long-time colleague of Geoffrey West. At about the same time that Microsoft's business model first appeared, Brian Arthur started writing about the changing nature of returns. This was not coincidental as Microsoft was one of his key examples.

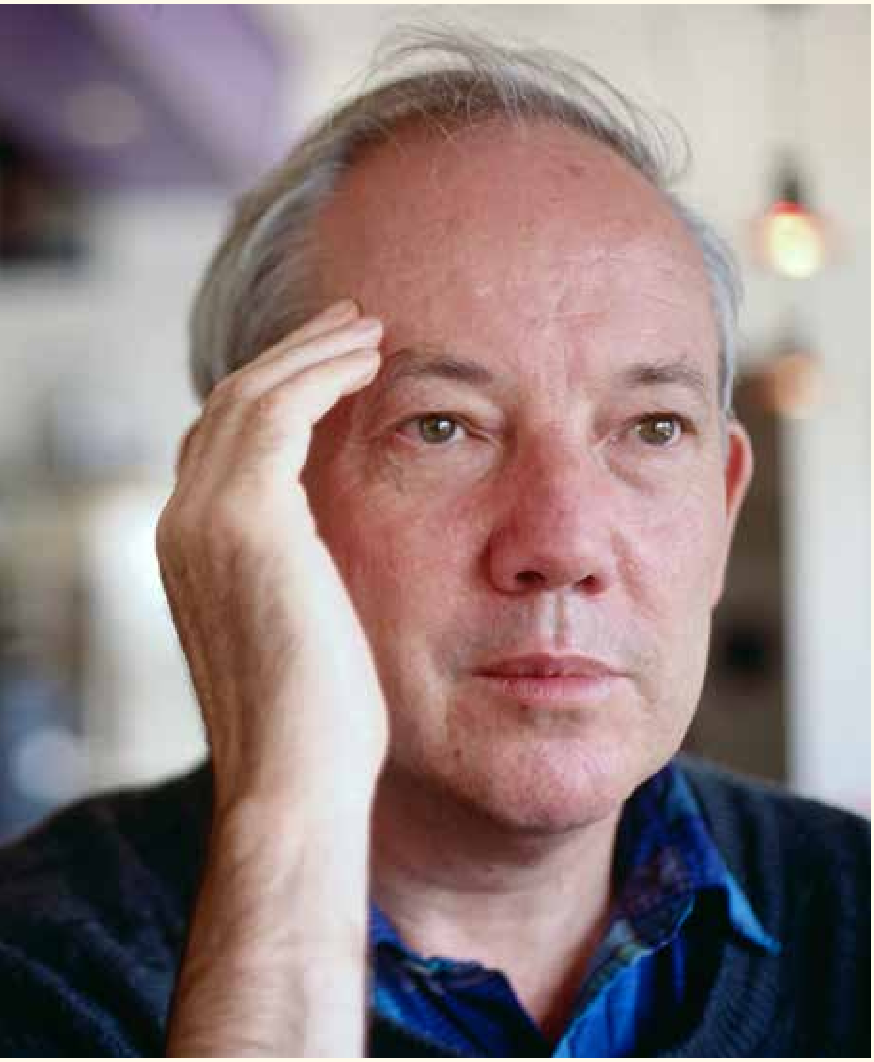


INCREASING RETURNS TO SCALE

Brian Arthur's theory – or rather early explanation of emerging economic reality – provides a convincing rationale for why the era of Value ended. If there are increasing returns to scale (and indeed self-reinforcing increases in revenues to scale) then surely it's rational for firms displaying such characteristics to have the opportunity to be persistently attractive investments. Or in contrast to Geoffrey West's models to be able to display superlinear characteristics. One might even want to suggest that such firms are in important ways more like cities as they are the centres of ecosystems and their advantages stem from this more than traditional competitive moats. It would be naive to expect otherwise. After all the noted economist John Hicks prophesied back in 1939 that any notion of increasing returns would lead to "the wreckage of the greater part of economic theory" so surely it can wreck the best laid plans of stock market participants. As Brian Arthur himself puts it the world is divided:

"So we can usefully think of two economic regimes or worlds: a bulk-production world yielding products that essentially are congealed resources with a little knowledge and operating according to Marshall's principles of diminishing returns, and a knowledge-based part of the economy yielding products that essentially are congealed knowledge with a little resources and operating under increasing returns".

BRIAN ARTHUR



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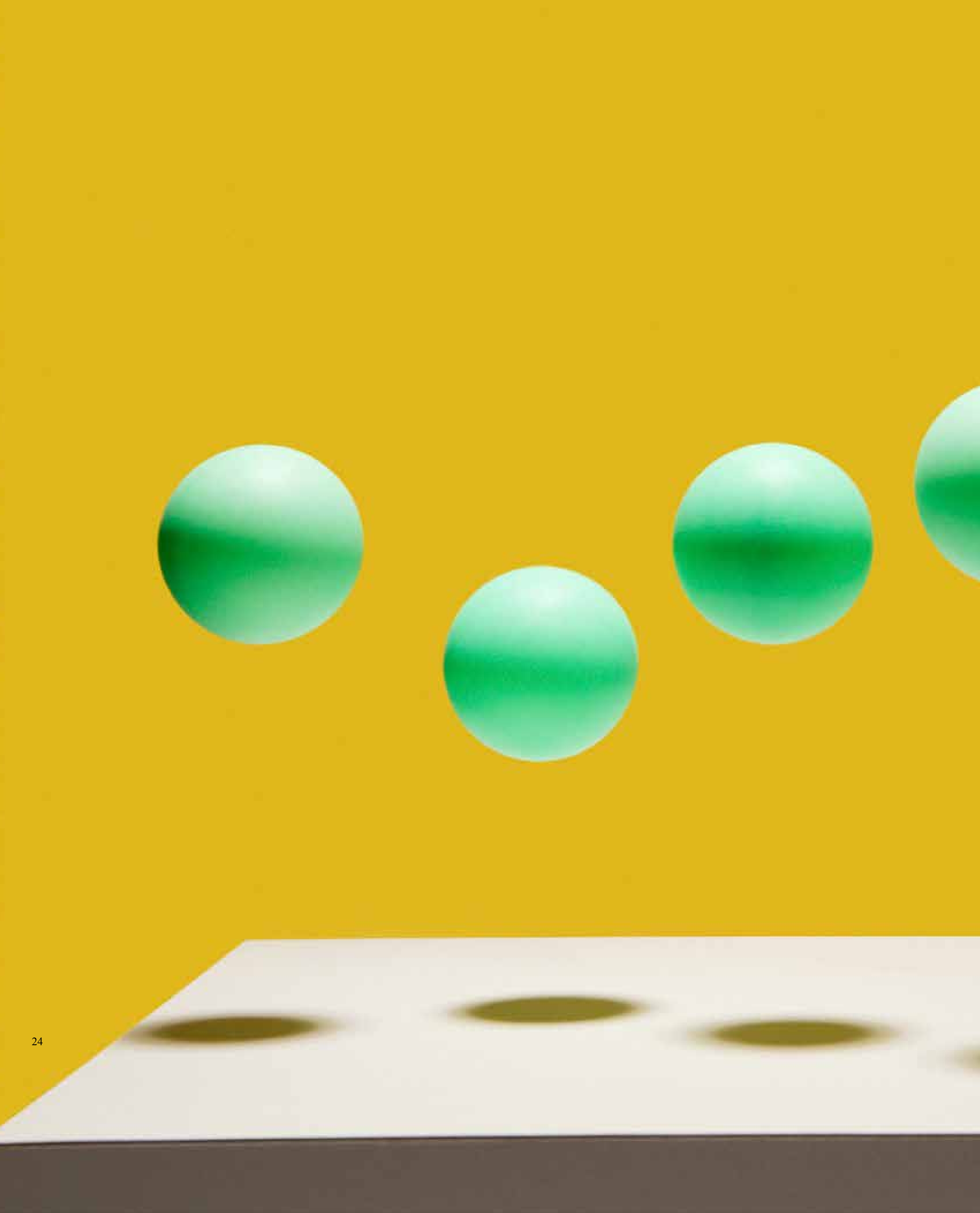
It would be strange indeed for these two systems to produce similar stock market outcomes. Plainly we consider it likely – as far more importantly does Brian Arthur judging by both his recent writings and our enjoyable conversations with him – that the increasing returns system is growing in relative power. Whilst the stock market has intuited much of this it seems questionable to us as to whether practitioner adjustment is nearly complete.



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EXAMPLES NOT THEORY

One of Ben Graham's communication gifts lay in his simplicity. A classic instance of this lay in his gentle but pointed use of extended company comparisons. Glamour was punctured and persistence extolled. So Chapter 13 of Intelligent Investor *is 'A comparison of four listed companies'. The four chosen are ELTRA, Emery Air, Emhart and Emerson Electric. Only the last survives in its own right. Then Graham gets even keener on this technique: Chapter 17 offered the guidance of 'Four Extremely Instructive Case Histories' but didn't exhaust the theme as Chapter 18 comprises 'A Comparison of Eight Pairs of Companies'. Jason Zweig modernised the examples in homage. I can't manage either the style or the number of companies that either provide but how would this exercise look now? The purpose isn't to preach growth but to try to elucidate how the structure of corporate returns, their rewards and disasters may reflect the structural changes that may have occurred over the last 35 years.*

COCA-COLA VERSUS FACEBOOK

Choosing Coke as an example is an easy choice. For many decades it has been an essential ingredient in the Berkshire Hathaway portfolio. Moreover it is the focus of one of the great discussions of investing vision as propounded by Charlie Munger. It begins:

"Imagine it's January of 1884 in Atlanta, Georgia...You and twenty others are invited to present a plan to start a business that will turn a $2 million investment into a business worth $2 trillion by 2034".

Munger sketched his plan for Coca-Cola back in 1996. It required only simple principles and simpler maths. The calculation is what less elegant speakers would describe as that of a Total Addressable Market. Munger then inverts as so often – in order to be worth $2 trillion the world population of 8 billion in 2034 will need 64 ounces of water a day. If a quarter of this comes from cleaner and tastier drinks and your company garners a half of that then you have a market of 2.92 trillion eight ounce servings. With a modest 4 cents a time net he envisages $117 billion of earnings (still growing) by 2034. Then you need practical stimulators and psychological imperatives to come together to give a Pavlovian response that in Munger's terms represents a "lollapalooza" multiplication of motivations and rewards.

There's no doubting that such an approach generated a fabulous business for Coke and terrific returns for Berkshire Hathaway. But is it going to attain the $2 trillion by 2034? In the

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late 1990s the capital value of the company was already over $175 billion and Munger's targets with reinvested dividends might have seemed feasible if demanding. But over the last 20 years the equity value has only gained 12 per cent in aggregate – $2 trillion looks far off.

Is this just the toll of demanding valuation? After all Graham, who captured stocks in Price Earnings (PE) multiples even though he naturally knew that long-term cash flows were more meaningful, was perennially suspicious of anything over 20x. Before final results, Coca-Cola sells for 23x likely 2018 earnings with a presumed growth rate of 6–8 per cent for the long term. Graham might not have appreciated the double digit Price to Book.

But whether this is a classical Value stock or not, the most perturbing feature is that there is a clear possibility that the lollapalooza of mutual reinforcement of advantages might be reversing. If it was a vision of wealth, health and modernity in 1884 then by 2019 it seems rather tarnished. As Coca-Cola records in its 10K listing of risk factors "Obesity and other health-related concerns may reduce demand" and separately but additionally "Public debate about perceived negative health consequences of certain ingredients" may reduce demand. Therefore Coke has diversified into water, juices and buying Costa Coffee as its own confidence in the original vision diminishes. I confess that there seems to me to be more scope for a negative lollapalooza here.


Times Sq-42 St
Subway Map

FACEBOOK

So here we have a quintessential high growth company and until recently a noted momentum stock as the initial letter in 'FAANG'. Anything part of a Jim Cramer acronym can hardly be other than likely to make Mr Graham shudder. But if we blind ourselves to the name how does it compare to Coke as a Value investment or an investment for the long term from here which is essentially what Graham was trying to elucidate in his pairs.

Facebook went public on May 18 2012 at \$38 per share. This represented an historic PE multiple of 88x. With a peak market value that day of \$45 it was capitalised at over \$100 billion. Where are we at the start of February 2019? Facebook trades at 22x historic earnings for 2018. It is forecast to grow 15–25 per cent per annum over the next five years according to NASDAQ.

If we venture beyond PE towards periods of greater longevity then uncertainty comes more strongly into play. But Graham offers his own formula for assessing medium-term growth. It is sufficiently simple that he felt it important to introduce caveats and a degree of caution later but since what we are considering is the relative values it throws up then we do not have to worry too greatly. The formula is:

Value= Current(Normal) Earnings x (8.5 plus twice the expected growth rate).

So what does this suggest about Coca-Cola and Facebook? For Coke the formula would suggest that the market believes the analyst forecast company is set to grow at a little more than 7.5 per cent over the next 7–10 years. For Facebook the answer appears to be much more at odds with the analysts. In fact Facebook discounts growth just lower than Coca-Cola at a little below 7 per cent. It may be convenient to my suspicions but Coke has since suggested that earnings are likely to be flat in 2019 in its year-end statements.

What would Graham have said about this? For sure he might have felt that Facebook was an evil fad and that analysts are ever seduced by aggressive growth. Yet isn't there another possibility here? It's hard to say which company relies more on continuing addiction. Yet it's close to indisputable that the Margin of Safety for Facebook is higher on Graham's metrics. Which is the Value stock therefore? Which is more attractive? As Orwell wrote in Animal Farm it's eventually hard to distinguish which is human and which animal.

MARGIN OF...UPSIDE?

Let's pause though and try to put the systemic economic complexity musings back into the stock equation. What they tell us is that we can't know about earnings progress over the next decade – let alone beyond that – but that confessing to deep uncertainty does not prevent us coming to all conclusions. We can formulate different scenarios. We can factor in the possibility of asymmetrically high returns. We can, if with even more openness to doubt, give these visions of the possible future different probabilities. This enables us to form a quite educated sense of whether the upside is substantially higher than the downside. I confess to finding the Margin of Potential Upside more alluring than the classic Margin of Safety.

The balance of the potential asymmetries matters to Coke as much as Facebook and to Value as much as Growth investing. I'm not at all sure that there is any business about which one can be confident enough – even with the famed Margin of Safety – that losing money can be excluded as beyond the bounds of credibility. In both these cases it would seem far from improbable that the capital loss may be substantial. As we know both Coca-Cola and Facebook operate close to the frontiers of addiction. Their power is therefore also their vulnerability. In both cases there are forceful arguments that consumers would be better off without the product.

But what about the reverse situation? Which of the two companies offers the better opportunities for substantial upside? Even without a 'lower' starting multiple and higher returns it's considerably easier to construct a scenario, or an associated discounted cash flow analysis, that is more alluring for Facebook than Coca-Cola. Put another way Instagram and WhatsApp appear much stronger subsidiaries in both competitive and growth metrics than Dasani and Costa Coffee.

THE CAR INDUSTRY

There are few, if any, industries where the decibels of disagreement about stock selection are as rancorous as in the car industry. Why this should be is something of a mystery to me as I have no great enthusiasm for the product. In the last year this has reached fever pitch as amidst more conventional debates the rise of EVs and the very specific controversies surrounding Tesla have reached new levels of hysteria. Amidst the volume of noise the Graham comparison technique seems to offer room for gentler reflection. In this industry we are better off considering a wider set to capture the full range of companies from value to brand to disruptive potential. So here are five examples running the full gamut of the industry and the stock market:

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GENERAL MOTORS

The first incarnation of General Motors created a large amount of value, despite bankruptcy in 2009. The marvellous Bessembinder study suggests that GM ranked as the eighth largest value creator in US markets since 1926. The new GM has already taken on many of the hues of the old – apart from its repute for managerial incompetence which has been impressively dispelled by Mary Barra's team. This has included a vigorous attempt to innovate in both the EV segment via the Bolt and autonomous vehicles through Cruise that have been the content underpinning a new slogan 'Zero crashes, Zero Emissions, Zero Congestion'.

For 2018 GM has announced automotive free cash flow of $4.4 billion on a volume of 8.38 million vehicles on earnings per share of $5.72. According to the Graham formula used previously, GM is discounting moderately shrinking returns in the future (though it may not be a surprise that analysts forecast 8.5 per cent annual growth). So GM appears to have a value case if you believe that it will contain its vicissitudes to "ups and downs".

BMW

BMW probably stirs more favourable emotion than any other German company or car company. Drivers usually love the product and analysts are just as prone to superlatives about the calm and collected approach to data and finances. Yet despite this BMW meets the Graham standards for an out of favour blue chip. The shares have persistently fallen from a high of €120 in 2015 to a level of €70–75 in recent months. Perceived virtue has not been its own reward.

BMW generated €4.46 billion (approx. $5.1 billion) in automotive free cash in 2017 on unit sales of a little under 2.5 million. After three quarters in 2018 cash flow was down by 25 per cent. Although the car industry demands respect for cash more than earnings BMW currently trades at 6.5x likely 2018 earnings. These earnings have been hurt by multiple factors from diesel regulation to loss of Californian market share to weak market conditions in China. The multiple assigned to the earnings and free cash has fallen even more sharply. This translates into the Graham equation predicting a state of affairs similar to GM in the next five years: BMW too discounts annual earnings shrinkage in the low single digits. Plainly this is more of a break with the past decades than for GM.

John Elkann.
Source: © Getty Images.

FERRARI

For those who believe that the car industry is dependant on large volumes and is bereft of profitability above the cost of capital Ferrari is the exception that proves the rule. In 2018 Ferrari made €405 million ($463 million) of industrial free cash which was an improvement of 23.5 per cent on sales of just 9,251 cars. So this translates into free cash of €43,779 per vehicle or over 10 per cent of GM's absolute dollars on just over a thousandth of the production volume. The Graham formula indicates that at a share price of €110 Ferrari is still thought capable of compounding its earnings at around 12.5 per cent in the next 7–10 years. There are no analyst forecasts that go out this far but this is below the five year forecasts that do exist.

Many observers of Ferrari opt to assess it as more of a luxury brand than a car company. But chairman and Agnelli family leader John Elkann disagrees with this. He believes that unless Ferrari is at the cutting edge of automotive technology that brand, let alone nostalgia, will not keep it thriving. What is clear is that if the returns are sustainable then this is a fabulous business. Selling fabulous businesses is something we should be wary of doing on a regular basis. Or as Philip Fisher wrote the time to sell is "almost never".

Selling fabulous businesses is something we should be wary of doing on a regular basis. Or as Philip Fisher wrote the time to sell is "almost never".

TESLA

The Graham approach with its reliance on simple financial data should be still more valuable in assessing Tesla. Emotions in capital markets are seldom higher than with Tesla. That comes as a persistent given between the founder, the short positions and their associated personalities and the significance of the project to both backers and critics.

So what do the basic numbers say? Tesla ended 2018 with free cash flow of -$2.377 million. This red zero is the amalgamation of two contrasting halves: an outflow of $1,793.5 million for the first six months followed by an inflow of $1,791 million in the last two quarters. It's plain that the finally productive ramp of the Model 3 was the cause of the stark difference between the two periods but there is still room to argue about the future pattern. Of course we're happy to argue that the second half is the lead indicator but that is unfair to the Graham reticence to predict especially when optimism is involved. What is clear is that to judge Tesla we need some forward-looking contentions. I'll return to this after a last example.

NIO

For all the controversies surrounding Tesla it’s actually a very basic investment story. It’s completely clear that it dominates the EV competitive landscape in America and Europe. In fact as a pure play it has basically zero competitors. In terms of time frame it may be 6–7 years ahead of anybody else in its markets. If you gain conviction in the appeal and economics of EV technology then the case for Tesla is simple. But for NIO the challenge is very different.

China appears to have close to 500 EV manufacturers. The chaotic and exuberant scene is much like that of the nascent US automotive market before the transforming rationalisations of first Ford and then GM. NIO is far from being the current leader with BYD the historic leader. NIO has few claims to technological leadership and indeed most of its operations are outsourced. NIO has no imminent prospect of turning cash flow positive. It’s uncontroversial to suggest that Graham would not have owned NIO.

COMING TO AN OVERALL PERSPECTIVE ON AUTO STOCKS

If we try to put this all together, how should either a fair minded Value or Growth investor feel about these five car companies? However hard I try I find it hard to see a plausible mean reversion explanation of the past or a convincing hypothesis based on it to guide an assessment of the future. This applies both to the business fundamentals and to equity outcomes.

Although it's probably not what mathematicians would identify I'd hazard that the commonest day-to-day practical incarnation of mean reversion in the car industry is the common view that says that it's the profit on every vehicle produced that must mean revert. That's why I mentioned vehicle sales numbers for several of these examples. This is most frequently aimed at Tesla on the basis that its 245,000 sales in 2018 make it inconceivable that it can be worth as much as GM (or Ford or potentially even Toyota). Oddly though, very highly reputed and very self-confident auto analysts find it impossible to imagine that the historic premium returns and premium market rating of BMW are anything other than a permanent and sacrosanct feature. Ferrari meantime is seen as such an extreme outlier that, as we've discussed, the standard approach is to refuse to see it as a car company at all.

But surely the dominant characteristic of this industry and its stocks isn't mean reversion. It's been deep cyclical uncertainty and it's now sudden change. It's very much analogous to the story of the turkey. Every day it sees the farmer approach and every day without variability it receives a decent supply of food. It looks like the perfect stock – constant dividends with no volatility! That's the very definition of low risk.

But then the farmer kills the turkey. This is not far away from GM. From September 1908 to June 2009 come wealth, crisis or war GM survived and mostly prospered enough to mean that even eventual bankruptcy could not remove its proud status as one of the best lifetime investments in US history. So if you could have the owned the shares for 101 years your institution was very happy. If you bought in 2008 you were less so. But of the mean in performance there is little to be seen.

Is there any way through these thickets? I'd suggest that there is but that it requires re-thinking most of the traditional verities. It seems clear that the automotive industry is subject to such wild lurches that picking one outcome is remarkably foolhardy. What we can do to ameliorate the situation is to acknowledge existential doubt. The notion of one forecast of the future, of one expected growth rate and one associated discounted cash flow analysis is just too simplistic. This issue arises in comparing Coke and Facebook's upside but here it's much more serious and dramatic. We need multiple versions of the conceivable futures stretching from the scarcely imaginable best case to the end of the turkey's life.

With considerable humility it's then probably helpful to probability weight these different scenarios and update as the path develops. In general it's imperative to push the boundaries of the extreme cases much further than analytical caution usually permits. This isn't about a conventional bull and bear case. On the upside indeed creativity rather than analysis has to be the focus. We're back to Charlie Munger and Atlanta in 1884. In the opposite direction it's better to assume bankruptcy is an ever present

But surely the dominant characteristic of this industry and its stocks isn't mean reversion. It's been deep cyclical uncertainty and it's now sudden change.

possibility for all stocks unless argued explicitly otherwise. That's salutary. It doesn't leave much room for a Margin of Safety. We cannot be safe and investors. But it may leave the possibility of significant upside.

If we adopt such a process for the automotive stocks then I think we come to a more realistic perspective and one that is considerably more likely to pay off especially when put in the context of an overall portfolio rather than left in isolation. To illustrate this we will take a closer look at the return spectrum for Tesla and NIO.

What persistently surprises me is how straightforward it is to construct a roadmap for Tesla being worth many times its current market value. It also requires less imagination than in most of the investments we make. This is probably because Tesla 'only' needs to capture currently existing markets to have dramatic potential whereas many of the internet platforms have had to create a new world. On the other hand, whilst it's unlikely that Tesla goes bankrupt (this was a plausible outcome even six months ago) it's still quite possible that the share price could fall 75 per cent. But isn't this the type of skewed, asymmetric and to many frightening sets of potential pay-offs that we should welcome. One way or another it will be growth at an unreasonable price.

Let's first simply consider Model 3 economics on their own. Unit sales could easily reach 1.5 million a year even considering just the current markets for the luxury producers before any beneficial demand shock (akin to the iPhone compared to Nokia). We know that aggregate pricing points will exceed the $35,000 base ambition by some way. So revenues of $75 billion are conceivable. Current operating margins are 5.8 per cent but the consistent long-run target has been double digit (and indeed up to 30 per cent at the gross level). The unparalleled control of the battery supply, its technology and data make the competitive advantages plausibly sustainable.

Remembering that it isn't a central case we're discussing but an exploration of the possible upside, let's posit operating margins of 20 per cent (Ferrari makes 25 per cent) and net margins of 16 per cent. That would give earnings from the three of $12 billion per year with free cash of similar dimensions as capital expenditures would principally be of a maintenance type. Ferrari sells on a free cash flow yield of 2.5 per cent so let's say 3 per cent for this lesser comparator. That gives us a putative equity value of $400 billion in five years time. What are the chances of such a scenario happening? We are dealing with an unlikely but far from outrageous scenario. The competitive moats seem secure over such a time frame. Customer demand and satisfaction seem supportive. So let's be conservative and say there's a 20 per cent chance of such an outcome for the Model 3 project.

But, of course, the Model 3 is most unlikely to be the sole contributor. The crossover Y series soon to be unveiled attacks a market at least as large and with even greater pricing indulgence. Then there is the Tesla Truck. Then there is Tesla Energy which is gradually showing its potential under more vigorous leadership. There's the underpinning emphasis on software and software driven upgrades but all this is before the most unlikely but potentially most rewarding opportunity of all in the form of autonomous vehicles. That Tesla has an unusual approach to this challenge should surprise no one. The attractions are that its chances of success seem to be inching upwards from the highly improbable to the merely unlikely and that the size of the prize is hard to estimate but large in the extreme. Adding these possibilities together make it seem that Elon Musk's comment to us six years ago that: "There is a small but growing possibility that Tesla will be the largest company in the world" represents a now highly realistic scenario. None of this means that it is a certainty.

For NIO the situation is substantially more unpredictable. It's quite clear that the range of outcomes we consider must include a substantial possibility

that the shares prove to be worthless. I don't want to inflict too much detail on the reader but our parameters go from a 30 per cent chance of zero or its functional equivalent to a 5 per cent chance of making a 65x return. This is a world of deep uncertainty and few, if any, anchors. In Nicholas Taleb's terms it's Extremistan. I find the idea that there can be a Margin of Safety here extremely odd and a mean to revert towards is once again a meaningless nirvana. What matters is the path dependent but attractive potential asymmetric pay-off. Naturally NIO needs to be a small portion of an adequately diversified portfolio until it has negotiated the terrifying chasms that it has to cross. But we think NIO's leadership and strategic bravery offer that chance.

The dominant point that I'd like to establish is that whilst for both Tesla and NIO there are severe challenges, many outcomes and no certainty about the future path there is undeniable and asymmetric upside. Probability adjusted upside is substantial. For BMW and GM we find this a great deal harder to establish. If the former proves more resilient to the challenge of EVs then it might go back to prior valuations but that would not multiply the value of our holding. For GM it seems to us that upside is dependant on the moves to electric and autonomy succeeding. But we know transformation of an established company is very tough.

3

GOVERNANCE

Ben Graham covered this current preoccupation too:

"Ever since 1934 we have argued in our writings for a more intelligent and energetic attitude by shareholders toward their management...But the idea that public shareholders could really help themselves by supporting moves for improving management and management policies has proved too quixotic to warrant further space in this book".

As Jason Zweig points out these words were far from mere rhetorical flourish. They were the bitter fruits of real disillusion. Over the editions the relevant section shrank by 75 per cent. The only hope that Graham saw was the rise of hostile takeovers.

But where are we now? Hasn't this picture changed substantially even if it superficially seems that shareholders are as ineffective as Graham complained? I think it has changed utterly. There are three reasons that this is so. The first is that the rise of the institutional investment industry has exerted untold, and often invisible, influence on the corporate mentality. The impatience to see quarterly results, the demand for regular outperformance, the longing for stable and growing dividends all exert pressure on the boards and executives through an endless parade of meetings, appointments requirements and votes as well as the direct sanctions of buying and selling. This often appears to be the opposite of the careless negligence that Graham bemoaned. As in his time it usually avoids direct engagement but the systemic pressures to short-termism have risen inexorably.

This is underwritten by the rise of the aggressive activist hedge funds. This has been displayed in case after case from JC Penney to Sears to Sony to Nestlé to Barclays. Seldom is inaction an option whatever the situation. The first half of 2018 saw a record 145 new campaigns against 136 companies. Elliott alone launched 17 campaigns. As short-sellers similar individuals and funds have been equally fearsome – and with tactics and targets that seem to exceed the utility that short-selling could once claim. This isn't the world Graham observed. All too often the enemy isn't a company squandering cash flow on inane ventures to satisfy managerial ego as he feared but rather a race of companies scared to invest adequately in an uncertain future.

The third factor is the remorseless rise of Corporate Governance teams at asset managers, asset owners and advisory services. As with the rise of professional investment management this theoretically beneficial development is deeply concerning in the wrong hands. If the besetting sin of professional asset management is preoccupation with short-term performance then that of governance teams is their tendency to believe in a set of policies – at best guidelines, at worst rules – that are applied to all companies. Generally these policies are about detailed prescription rather than broad principles. That seems to us to be the polar opposite of a thoughtful and constructive approach to corporate stewardship. It's strange indeed to believe that all companies at all stages of their evolution in vastly different industries, geographies and with markedly different capabilities, characteristics and leadership should be governed by prescriptive diktats. This isn't just a rant. It's a response to the challenges of our era. It's less a complaint than a justification for a different approach. I've tried to set out the case that we live in a complex, chaotic and initially path dependant world. In such an environment a

small number of simple principles tend to work far better than detailed prescription. Indeed this seems to us to be in turn a reflection of the nature of competitive advantage. As John Kay wrote 25 years ago "the strategy of the firm is the match between its internal capabilities and its external relationships". Or as he followed on more recently:

"There is a role for carrots and sticks, but to rely on carrots and sticks alone is effective only when we employ donkeys and when we are sure exactly what we want the donkeys to do.'

This is acutely the case in our style of hyper-growth investing: we're usually dealing with sensitive but brilliant racehorses, not donkeys, and we do not think it wise to issue instructions in a world full of great but unpredictable opportunities.

What can we do therefore? There seems to be one overriding principle and three associated attitudes of mind. The principle is that we should encourage companies to focus all their efforts not on metrics but the overarching and qualitative goal of building long-term competitive advantage. If this is the focus and the approach is thoughtful then we will be enthusiastic supporters. By definition this requires the ability to find and build unique characteristics – not the meeting of the same attributes as required by all. Competitive advantage cannot be adhering to a predefined generalised notion of best practice. The associated mentalities are suggested by the nature of our own investment philosophy. We are long term. Therefore we need a culture that is long term. Often this is greatly helped by leaders confident in their long-term mission and secure in their role. We believe that even in the greatest firm hard times are inevitable. Therefore our instinctive, but not inevitable, reaction is sympathy not condemnation when 13 nasty weeks come along. They will.

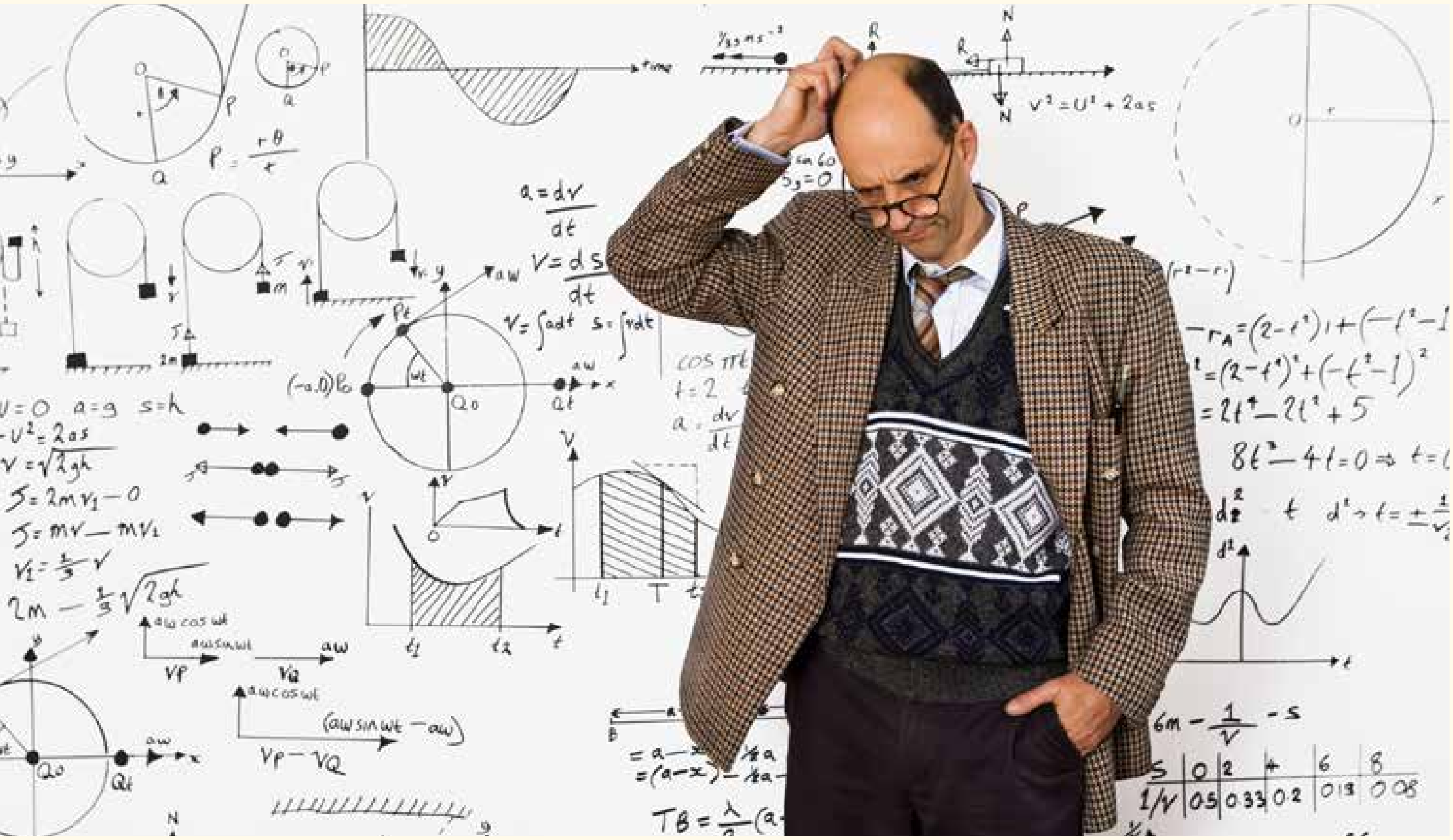
Lastly, and similarly, if we understand the potential opportunity and we think the pay-offs justify the inevitable risks we will applaud the effort to create great new opportunities even if the attempt fails. In short: what we are aiming to do is reclaim activism for high-growth investors. Activism shouldn't be confined and owned by all too often negative and destructive hedge funds – nor by the detailed and overly generalised rule book of Governance departments.

...we're usually dealing with sensitive but brilliant racehorses, not donkeys, and we do not think it wise to issue instructions in a world full of great but unpredictable opportunities.

CONCLUDING THOUGHTS

At the end of these explorations I'm left with conflicting views. But in aggregate I think that the world so brilliantly described by Ben Graham is unlikely to return. That's partly because he and his exceptional followers have been so influential. As Charlie Munger (aged 95) remarked about 'groupie' fund managers who follow Berkshire principles they are "like a bunch of cod fishermen after all the cod's been overfished. They don't catch a lot of cod, but they keep on fishing in the same waters. That's what happened to all these value investors. Maybe they should move to where the fish are".

But it's not just that Value has been overfished. It's a simple statement of fact that there have been great growth companies that have defied the scepticism of Graham and the mantra of mean reversion. They have endured for decades even at massive scale. I don't see this as a contention but as an observation. Ironically they've altered the patterns of stock market return sufficiently that the very utility of the 'mean' has been undermined. The mean is now so far above the median stock that our entire notion of the distribution of returns has to be reviewed. The first chance to reassess came with Microsoft over 30 years ago. The investment community has been slow indeed. We can react to economic data or quarterly earnings in seconds but adjusting our world view has proven far harder.



... it's surely time for those whose mental models are locked in Modern Portfolio Theory and Equilibrium Economics to cease viewing themselves as the essence of intellectual modernity and sophistication.

But the observation of Black Swans of Growth can surely be put in a much more structured context of thinking about our corporate and economic world. If you live in a technology and knowledge driven universe of great complexity and initial path dependence, why wouldn't you expect the lucky emergent few to buck the notions of the fallibility of growth stocks? Given these features of our time then Brian Arthur's Increasing *Returns to Scale* becomes the canonical description of at least a very large – and probably expanding – portion of the investment universe. Put more bluntly it's surely time for those whose mental models are locked in Modern Portfolio Theory and Equilibrium Economics to cease viewing themselves as the essence of intellectual modernity and sophistication. A little modesty and much more reading might be in order. It's possible that the Graham world may still operate in sectors supposedly immune to the Arthur rules but the area insulated from its operation has shrunk year by year.

What of the future? It seems reasonably probable that the percentage of our economy sparked by knowledge, technology and networks will continue to expand. A major contributor to this prospective pattern is that the access to data is becoming ever more important. As technology executive and artificial intelligence (AI) expert Kai-Fu Lee points out, brilliant data scientists can and will be beaten by mediocre colleagues with more data. That's the extreme essence of increasing return markets.

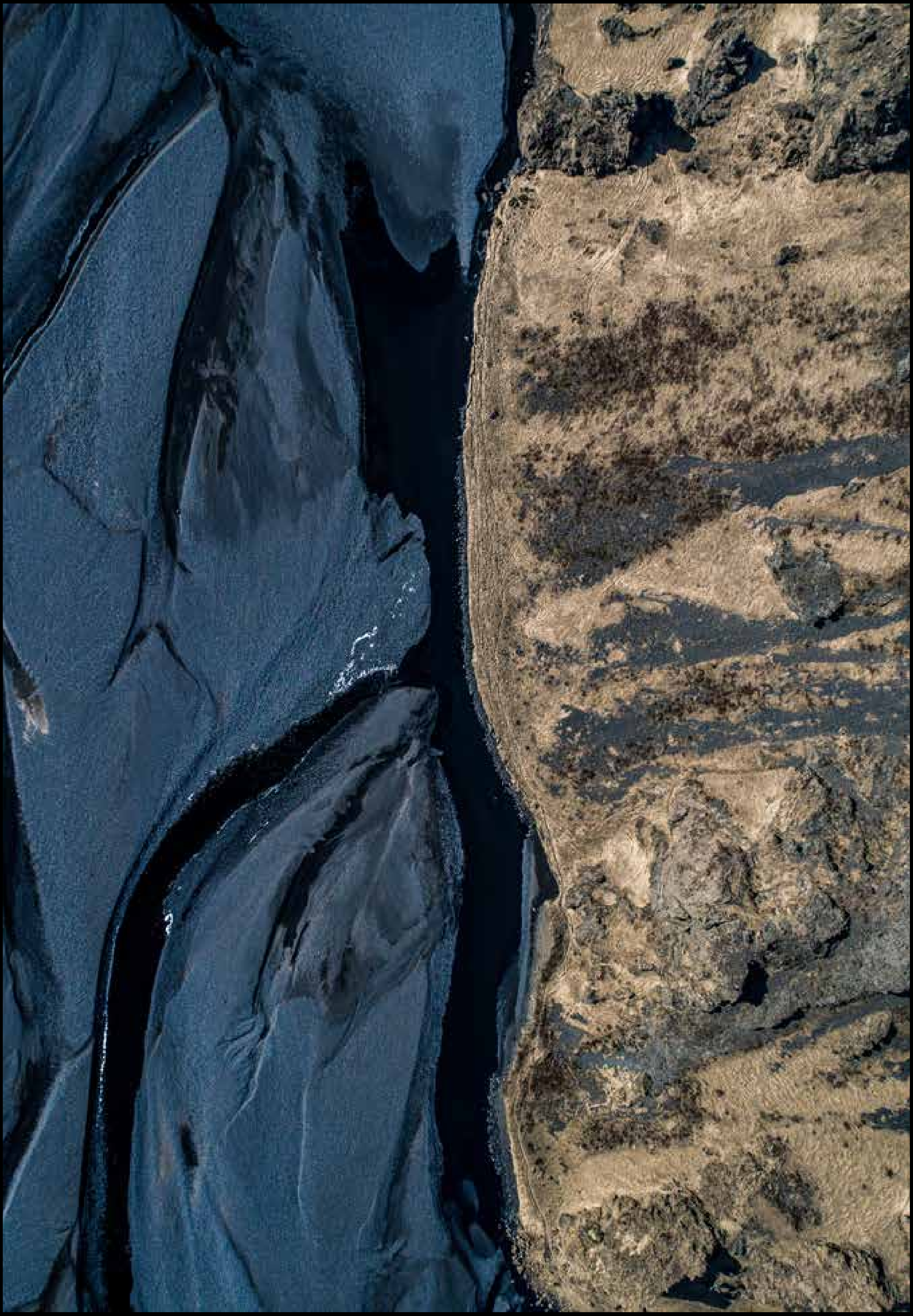
But in stock markets it is right to express several cautions. Although the perception of most market participants and asset allocators is, as we know to our cost, strongly disbelieving of the justifications for growth investing the fact is that in markets it has been the dominant force for a prolonged period. It's not mean reversion we should fear but market prescience. Our waters may become as overfished as those of Newfoundland. Yet that would appear to be a topic to remind ourselves of as a potential Ides of March when and if Growth Investing becomes accepted by the investment industry at large. That appears still far off.

The second caution would be that it's a serious possibility that public equity markets have become so hostile to companies investing substantial capital in genuinely risky businesses that the next generation of founders has no appetite for the rigours of quoted life. With the amount and comparative patience of venture finance so increased why would you bother? This matters still more as in the early stages the workings of chance may propel a venture forwards so far and so fast that it may be established as a platform of increasing returns without the pause to go public – let alone the delay of returns until after an eventual IPO. Even passive funds would inevitably miss out in this context.

The venture capital alternative is equally relevant in thinking about returns. Recent research demonstrates clearly that the return distribution in quoted equity is much more akin to venture principles than has been imagined. One consequence is that one success matters more than one failure. The value tradition finds this challenging: we're back to Rule 1 being not to lose money and Rule 2 being not to forget Rule 1. At a portfolio level that may not be wise.

Lastly there's an ugly parallel to the self-reinforcing, path dependant but then unstoppable growth trends that we've discussed. That's the methodology of climate change. The consequences for the global economy are potentially so hard to fathom that debates between Growth and Value may be equivalent to medieval debates about the number of angels that could dance on a pin-head.

Yet beneath all the sound and fury of Growth versus Value there is much to be admired and learnt from the best disciplines of the latter. There is far better articulation of ideas and of the moral and practical purposes of investment. There's a wonderful focus on patience too. As long as it's possible to steer clear of the questionable focus on dubious metrics such as 'low PE' or 'low book value' and the factually unfair denigration of terrific company records with mean reversion defying decade after decade then isn't there much in common? I'd love to be capable of equalling Munger's tale of Coca-Cola as imagined in 1884. But wasn't it in direction, if higher in quality, a quintessential long-term Growth formulation? It required creativity not analysis, it described why returns wouldn't revert for 150 years and why they would not be constrained by physical asset multiples, it discussed what founders and management needed to do and not do to mould the prospects. It acknowledged doubt but embraced the contemplation of the enormous addressable market. Perhaps we're not so far apart when all is said and done.



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