GLOBAL ALPHA RESEARCH AGENDA

2020

BAILLIE GIFFORD

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GLOBAL ALPHA RESEARCH AGENDA

We are pleased to share our forward-looking Research Agenda for 2020 which outlines some of the key thematic areas we intend to research over the year ahead. While we are resolutely bottom-up and stock-focused in our approach, this agenda is an important working document as it provides us with a framework to help guide where we should hunt for unrecognised growth opportunities, and where the existing portfolio requires the greatest scrutiny. The timescale we work towards is open-ended; some research projects may result in portfolio changes over the next few months, while others may not have an impact for several years. Investment is a continuous process and our curiosity and appetite for learning remain undimmed; we believe this should help the portfolio remain fresh and full of future potential.

The area which resulted in the most material portfolio changes from last year's agenda was transformative healthcare. We made five new purchases for the portfolio over the year, including Illumina (gene sequencing), Abiomed (miniature heart pumps), Novocure (novel cancer treatment), Teladoc (remote medical services) and Sysmex (diagnostics). We also increased investments in developing markets

following our search for structural winners with the ability to shrug off concerns relating to trade wars and slowing economic growth. These activities included additions to Prudential (life insurance) and Alibaba (ecommerce and cloud computing), while we also purchased new positions in Reliance Industries (Indian petrochemicals, telecoms and retail) and Brilliance (BMW's Chinese joint venture).

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THE FUTURE OF POWER AND THE GREAT ENERGY TRANSITION

Fossil fuels like natural gas, oil and coal supply over 75 per cent of the world's energy required to heat homes, power transportation, cook our food, and charge our devices. They are also the primary cause of global warming, a problem which looks set to shape many aspects of investing for years to come.

Given the potentially dire consequences of inaction on climate change, it seems clear that there must be a major transition towards alternative, renewable energy sources. In the months ahead, we will look carefully for opportunities to invest in businesses helping to shape a new low-carbon environment, whether these be businesses delivering renewable energy technologies, cleaner transportation solutions, carbon capture or product recycling. Tesla has emerged as a scalable business driving change within transportation and energy storage, but where is the next wave of winners?

At the same time, we will consider the implications of an energy transition for carbon-extracting incumbents. Some energy 'majors' are already investing billions of dollars into renewable

technologies; might they prove to be an important part of the solution? Won't natural gas, as the cleanest of the fossil fuels, be vital in any transition? Could we actually be set for a huge capital cycle given the collapse in growth investment at a time when demand for fossil fuels has continued unabated, supported by developing market growth?

There are many complex questions to be considered, not least how we would balance any enthusiasm for capital cycle arguments with a 20-year view that the energy environment will change dramatically. We must also consider the growing imperative to both maximise investment returns and encourage our investee companies to fulfil rising ethical obligations to society.

Our current exposure to fossil fuels is modest, shaped by our view of the long-term outlook and scanty evidence of incumbents delivering change. We remain open to altering these views, but above all else our ambition is to discover businesses which can create value, while leading the future of power to a new and sustainable place.

THE CHANGING FACE OF CAPITALISM

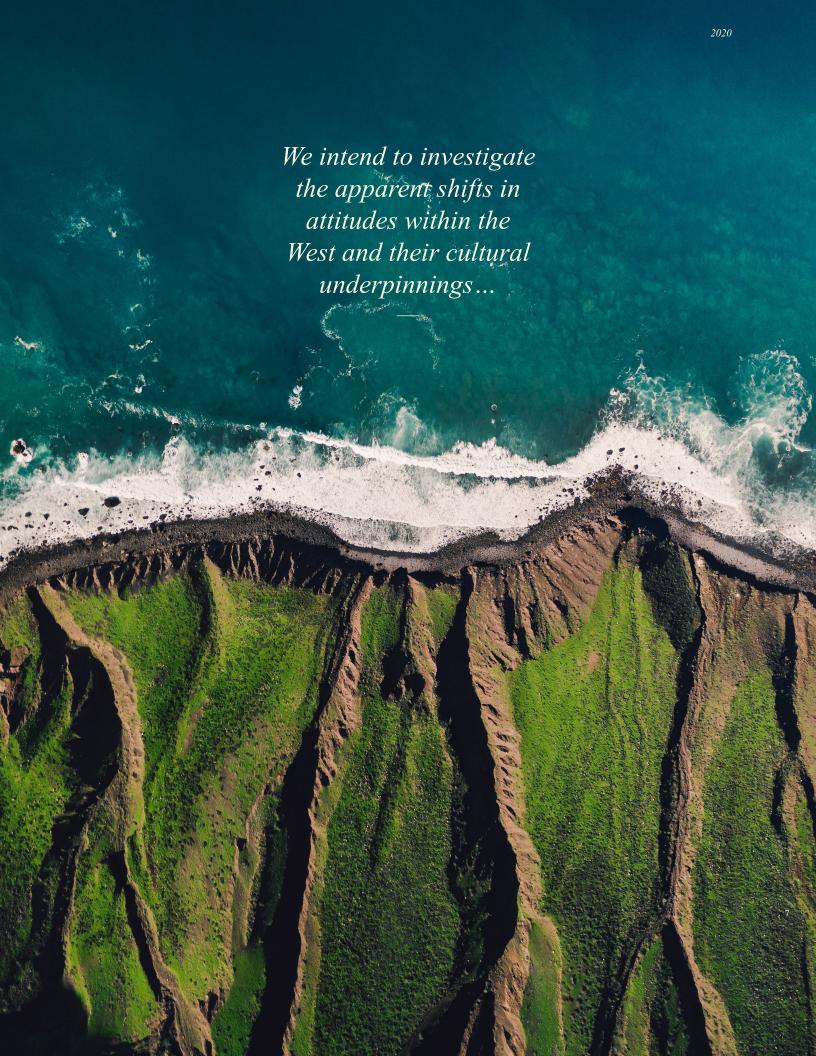
For some time now, we have been intrigued by low-level signals hinting we may be on the cusp of a demographic and cultural inflection point of major significance. Our interactions with business leaders and beyond suggest that a new narrative is forming across Western societies. We sense that ruthlessly capitalist attitudes within corporations are being superseded by those placing greater emphasis on a broad range of stakeholders, including employees, customers, suppliers, and government, alongside shareholders. We have always felt that an open attitude towards all stakeholders is vital for the long-term sustainability and success of our investments.

To this end, we are excited to consider that many businesses' evolving alignment is converging with our long-run interests, and that a new generation of innovative companies could present us with opportunities. An existing investment which exemplifies changing attitudes is Microsoft. From a company which had become insular, defensive and near gouging in its business practices, Microsoft has evolved into an outward, ambitious and customercentric organization under new management. As an example of the new wave of innovators we would highlight the ecommerce platform, Shopify, whose model is largely aligned with the underlying success of its customers and broader ecosystem.

We intend to investigate the apparent shifts in attitudes within the West and their cultural underpinnings; be those a reaction to stagnant income growth, wealth inequality or broader concerns about the environment. We understand that this apparent trend could be transitory and that we must watch the actions of business leaders, not just their words. However, if we are witnessing a shift driven by a deep change in culture, this could prove both powerful and long lasting.



Satya Nadella, chief executive officer of Microsoft Corp. © Bloomberg/Getty Images.



THE BATTLE FOR CONSUMER ATTENTION

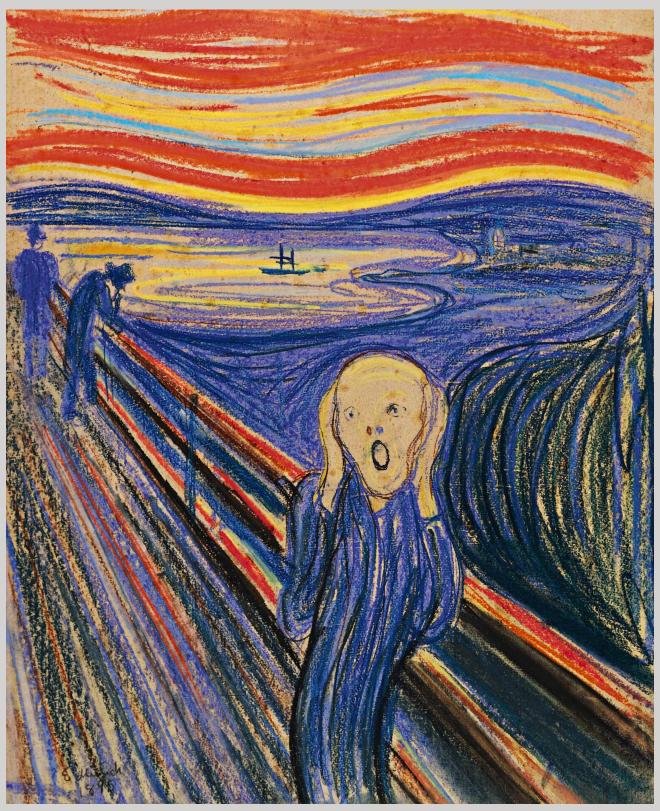
The digitising of news, social interaction, gaming, retail, TV, music and films has been a helpful tailwind to a significant proportion of the portfolio over recent years. New business models offering near unlimited choice, with everincreasing convenience, have taken significant share from slower-moving incumbents. This year we plan to test how far we are through this revolution. Will maturity dull the growth outlook for businesses such as Facebook, Tencent (owned through Naspers) and Netflix? Might excess supply and growing competition for our time hurt their prospects? Which companies still have the greatest opportunities?

We believe that there are some early indications that excess choice could lead to paralysis. In ecommerce, 25 per cent of Amazon Prime day shoppers reported being 'overwhelmed' by the number of product offerings in a 2019 study. When there are over 100,000 listings for something as simple as coat hangers, one can see their point. Similarly in media, an average of a billion hours of YouTube content is watched globally every day. This would take 100,000 years to watch in one sitting. And do many of us realistically do more than just scratch the surface of our Netflix subscriptions?

One helpful way to think about these evolving dynamics across a wide variety of industries is through the lens of companies battling for the limited time and attention of consumers. What happens when there are too many products to buy, too much music to listen to, too many films to watch and too many games to play? There are now so many reviews to help with product and media decision making that they may be contributing to this overabundance. How will consumer behaviour change in the face of this? What will be the impact of new consumer interfaces such as virtual home assistants? What's the right way for businesses to adapt to retain their attention?

Our early working hypothesis is that business will have to adapt to retain customer attention. Superior distribution and choice may be little more than competitive 'table stakes' in retaining the attention of consumers. Instead, the quality of content, superior customer service, exceptional recommendation engines, trust and media curation become the ways to compete and standout. Our suspicion is that from a consumer perspective, simplicity will rule. Delivering this will be complex, but it is where the battle will be won.

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 $\label{lem:condition} The Scream, 1895. From a private collection. Artist Munch, Edvard (1863–1944). \\ © Hulton Archive/Getty Images.$

THE CLOUD-BASED REVOLUTION

The Global Alpha portfolio has meaningful exposure to the growth of the cloud-based software industry, particularly holdings such as Alibaba, Amazon and Microsoft which are providing infrastructure and services at a large scale. The explosive demand for these offerings has surpassed even our own optimism as entrepreneurial startups and incumbent enterprises alike have adopted these services.

There are three major questions relating to this industry which we will seek to address in the year ahead. The first relates to where we might be within the adoption curve for cloud services. This is important as the now large revenues and impressive margin profiles of businesses, such as Amazon Web Services (AWS) and Microsoft (Azure), are also accompanied by large market capitalisations. Our core thesis has been that we remain early in the 'S-curve' and that large businesses are only now starting to shift mission critical workloads to the cloud, implying that very high levels of capital investment are fully justified. We would like to deepen

our conviction here. The second closely-related question is the ultimate level of profitability that we can expect from these companies. The provision of value-added services has enabled AWS to deliver operating margins above 20 per cent. Can we expect this level of profitability to persist? Will only the largest scale players deliver in this way? Could this profitability increase even further?

Finally, as AWS and others provide more and more tools and services, what is the long-term outlook for the specialist cloud providers (such as Salesforce, Dropbox, etc.) of today? Can these providers continue to thrive as part of a broader cloud-based ecosystem, working collaboratively with the likes of AWS and Azure? Or is it near inevitable that they will be out-competed by the largestscale players in the market, whose ability to sell integrated product bundles is supported by vast innovation budgets? Again, this feels important given the valuations awarded to many companies operating in this area.

MENTAL MODELS

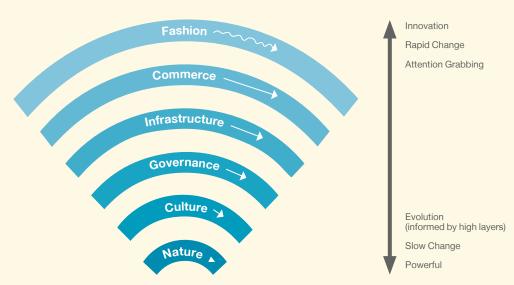
In previous agendas, we've shared with you efforts we've made to improve our own processes. In 2020 we intend to spend time refining the way in which we use mental models. A mental model is a simplified big idea. A good mental model is akin to a map, in that it takes a complex reality and distils it down to its core essence. A map with a scale of one foot to one foot would be as big as the world and therefore of no use in simplifying what is important. Using mental models from different industries and academic disciplines can bring new insights and cognitive diversity to bear on a problem. Looking at the question in multiple dimensions allows us to understand and identify the variables that will govern any changing situation.

Indeed, the pace of change itself can be thought about using a mental model. One model which we have found particularly valuable within our work is the concept of pace layering, first introduced by the writer Stewart Brand. This model is based on the principle that there are different 'layers' within society and economies, from fashion and commerce at the top, down through infrastructure,

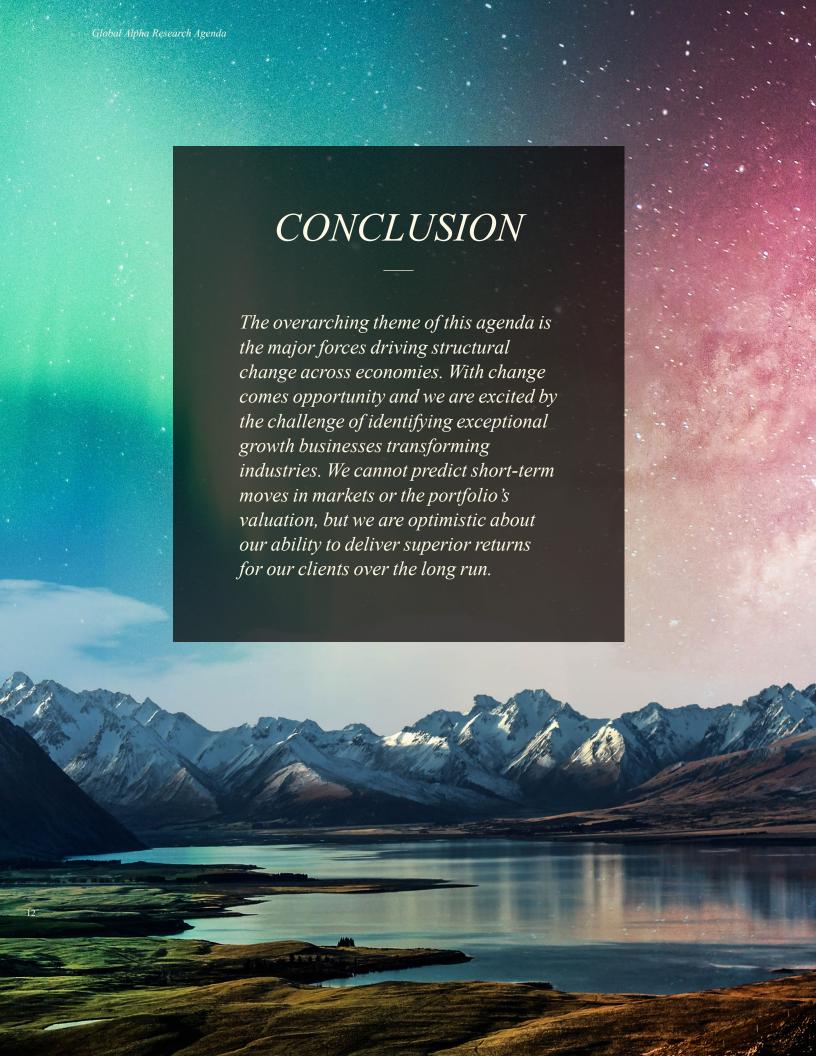
governance and culture, all the way to nature at the bottom. The layers at the top are the most rapidly changing, and those at the bottom are the slower moving, but ultimately most powerful. Brand's work has materially influenced our thinking on platform businesses such as Amazon and Google. We would argue that these companies have penetrated through the commerce layer and become 'infrastructure', affording them far deeper competitive moats. Whether they will ultimately be constrained by 'governance' (regulation) remains an open debate.

We commit to spending time identifying the big ideas from multiple academic disciplines, investigating their relevance for investors and understanding their limitations. If we deepen our bank of mental tools and the knowledge of how to wield them properly, we can think more rationally about the world and the direction of its structural changes. The ultimate goals are to make better initial decisions, have broader context and think critically about what other people are telling us. We look forward to sharing those we believe to be the most impactful.

Pace Layering



*Adapted from 'The Clock of the Long Now', Stewart Brand, 1999.



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