
EMBRACING THE EXTRAORDINARY: IN CONVERSATION WITH TOM SLATER

Tom Slater, co-manager of the Scottish Mortgage Investment Trust, discusses the areas in which he sees potential for exponential growth. Tom discusses the companies in the portfolio that are helping to facilitate a post-carbon world, revolutionising healthcare, and accelerating the ongoing digitalisation of the economy, making it clear there is no shortage of exciting growth opportunities. Tom then goes on to answer questions from the audience.

All investment strategies have the potential for profit and loss. Past performance is not a guide to future returns.

A Key Information Document for the Scottish Mortgage Investment Trust PLC is available by contacting us.

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Richard Lander (RL): Hello and welcome to this Baillie Gifford event entitled, embracing the extraordinary. I'm Richard Lander of Citywire and I will be your host today. The trust in focus today is the Baillie Gifford Scottish Mortgage Investment Trust. One of the very few investment funds today that needs little or no introduction and that's the function of several factors, including its impressive returns and a £17.4 billion market cap.

It's also a function of a management team who are very clear about the direction of travel and the type of businesses they want to invest in. So, I'm very pleased to welcome one of those managers today, Tom Slater. So, a warm welcome, Tom and thank you for joining us. Again, sorry the delay.

I did just say there that Scottish Mortgage Trust is a fund that needs very little introduction but at the risk of slightly contradicting myself and telling some of the audience what they might already know, let me ask you first of all, what is the purpose and mission of the Scottish Mortgage Investment Trust?

Tom Slater (TS): Hi, Richard. Great to be here today. To answer your question, the purpose is to identify the world's most exciting growth companies and where we find them to be very long-term, supportive owners and allow that return to accrue to our shareholders and we'll do that regardless of whether a company is public or private or where in the world it happens to be headquartered.



RL: So, you've got this great big remit and how has that changed or indeed been reinforced by the pandemic which has overshadowed all our lives in what is now getting on for 18 months?

TS: Well, I think the pandemic has accelerated some trends that were already underway in the economy. The move to the digital enterprise, the move towards greater delivery as opposed to physical retail, the move to doing more of our socialising online. Many of these trends that have been in place for some time have been accelerated.

But we've also seen the structure of returns and the way that the market operates over much longer periods compressed into a short period of time. The outsized impact of a very small number of exceptional companies that are able to adapt, move quickly, and serve their customers and create value for their shareholders.

RL: And could you perhaps put a number on how many years have been compressed into this pandemic? Have we moved what we were going to do in 2030, is that going to happen perhaps say in 2025?

TS: Well, I think that touches on what I consider to be a really tricky and interesting investment question. If you're looking at a company where you think the demand has been brought forward, so, if you're an online grocery and you were going to get some of these customers over the next five years but now you've got them in the past six months, then I think you have to reassess the opportunity and say, right, if we've brought forward all this demand, what are the prospects of growth from here?

And I think we need to be cautious about some of those companies. At the same time, you have a set of companies where they have a dynamic and evolving opportunity. So, you've seen things happen faster than they might otherwise have been the case but actually, that then lets them to go on and do more and address a much bigger opportunity.

So, Zoom, for example, the video conferencing software, you've seen a massive pull forward of demand. There's this product that's been pushed into the hands of more and more people and they use it in their daily lives to a much greater extent than we thought possible but now that company can build all sorts of new services on top of that ubiquitous distribution that it has.

So, we think the opportunity for the company has got much bigger, not just that the demand that they otherwise would've addressed over the next five years has been brought forward into this pandemic period.

RL: And so, that's maybe in contrast with a company such as Netflix where everybody piled into their Netflix subscriptions because we couldn't go out to the cinema but how would you characterise a company like that? Has it simply brought forward growth that would've been there anyway without creating a bigger market?

TS: Well, I think that is the question we're grappling with all of these companies. I think that the thing people focus on with Netflix is the number of new monthly subscribers the company has added in the US and it reflects its origin as a US company but the insight for us has been that this is actually a global phenomenon and there was this really open question about whether Netflix could repeat the success it had had in the US overseas.

And particularly, when there were established competitors. Think of LoveFilm here in the UK if you go back five years which was owned by Amazon. It was far from clear that Netflix would come in and completely dominate the market. And so, I think the opportunity from here is to grow to be the world's first global video distribution business.



And we're only really a short way down that road. There's the opportunity to double in size from here and then double again. So, yes, you might have brought forward some of those US subscribers. I think this time last year anybody in the US who was going to subscribe for a Netflix account probably had one but you've got to see that in the context of this much longer growth opportunity as the network becomes dominant across the world.

RL: That does bring us nicely into the title of today's talk which is embracing the extraordinary. How does this fit in with the vision that you're seeing for companies around the world as the world itself changes so rapidly?

TS: Well, I think what we've seen is a really dynamic, interesting, evolving opportunity in a fairly narrow part of the economy and I think that is set to continue to evolve. The retail business has been transformed by the likes of Amazon but there are all sorts of categories that haven't seen that type of progress.

So, I don't know, hard furnishings, second hand cars, really big categories which have actually really early in their move online, grocery as another huge example. So, I think that continues but what I see more broadly is there are all sorts of areas that haven't seen this type of technology-led business model disruption that we're now starting to see move.

So, healthcare, for example. We live in a world where the cost of healthcare is inflated far faster than costs elsewhere in the economy and in complete contrast to the type of cost deflation we've seen in the broadly defined technology area. So, I think that's one area. I think transport is another where we can see the models that we're used to starting to breakdown in the face of different challenges.

Payments, food consumption. There are all these big categories that have yet to see the real impact of these big changes and so, I think that's, as a group investor, that's what makes the outlook so interesting and exciting at this point.

RL: Let's drill down a bit into these key sectors. So, obviously, you're very interested in not to mention your co-managers, James Anderson and Lawrence Burns. And let's start with healthcare because I guess healthcare is many things. It's the drugs and the innovation that have really got us out of this pandemic or is getting us out of this pandemic and that's one thing.

And the other is how people use healthcare. Do they go online? Do they have video appointments? How do they ensure themselves? Which areas of healthcare are the ones that really interest you?

TS: Well, I think if we link this to some of the questions you've asked about COVID, certainly from a personal standpoint as I look at the way I've interacted with the healthcare system it's completely changed. It was really difficult to change the model that people would visit their GP when they had an illness in-person until you had the pandemic which has forced the adoption of telehealth type of technology.

And I think that's kickstarted a process of change and looking at the efficiencies that you can drive from a different way of approaching the task. But I think the fact that we hadn't seen that previously speaks to the slow pace of development and the slow pace of change in this industry.

If you look at the way that we've approached healthcare in Scottish Mortgage, in the past we've owned big pharmaceutical companies but we became increasingly disillusioned with the research progress that was being made and the costs that were being led into the system and that reached its nadir in about 2008 when the healthcare weighting in the portfolio hit zero.



And since that's time, it's gradually ticked up again and that started in companies that we actually thought were genuinely doing interesting research, that were research-led organisations rather than sales-led organisations. And then, through time, we've been building positions in companies that are applying technology in this industry and our criteria have been can this company improve clinical outcomes for patients?

And secondly, can it do that at the same time as taking costs out of the system? And the shining light in that process have been genomic sequencing, which has seen huge cost declines far in excess of what we're used to in the technology industry. But now, I think the emerging trend is the companies that are applying the tools of information technology to healthcare.

So, some examples. A company like Tempus in oncology. What they're doing is taking the huge volumes of data that we collect about patients and actually cleaning it up from electronically medical health records and actually getting that data into a form that's processible by computers that we can make sense of and then matching it to the genomic data that they're doing when they're testing the genes of patients with cancer.

We've now reached the point where the technology exists to do this at a reasonable price point and what it means is you can say, for a given individual, if they have this genetic sequence in their disease, let's look at all past patients who've had a similar genetic sequence, let's look at the outcomes for them from a physiological point of view, let's look at the clinical trials which are relevant to this genetic footprint, and then suggest the best course of treatment for that patient as an individual.

And I think what you're doing these is actually building on the accumulated wisdom that's there in the system rather than relying on a single physician to be on top of all that vast trove of data. And I think that is the path that we're going down now is using the tools of vast data repositories of machine learning artificial intelligence to actually deliver treatment pathways that are better for each patient as an individual.

And there are many more examples of actually starting to see this technology that improves every year, the cost declines every year, being deployed against these really difficult and important problems for society.

RL: You're speaking there not only to the technology but the way companies are run that as you said big pharma companies, the ones that you took out of our portfolio. It's difficult to get these decisions right up to the top because they're so big. Managers are incentivised by sales. The shareholders want their cash dividends every year. Do you think this is a much wider problem with very big companies that they simply can't innovate in the way that investors, growth shareholders want them to do?

TS: I think that when you start to see a change in the underlying technologies and that facilitates new business models, it's really difficult for the incumbent companies that have grown prosperous by doing things a certain way to actually assimilate those revolutionary changes and adapt with them.

And we've seen various examples from different industries but let's stick with what we're talking about here. So, we have a big holding in Moderna which has become a household name because of its COVID-19 vaccine. Now, what's been interesting to me about the response to COVID is that none of those big companies that have vast vaccine franchises have actually really delivered in the pandemic.

Sanofi, GlaxoSmithKline, we would've expected those would be the companies that would actually be producing the vaccines that would save us but MRNA is a new technology, it has vast



potential, but the expertise in the companies that were expert in this technology were not the big household names and they were able to move faster, they were able to get these drugs into clinical developments sooner, and deliver the solution to the crisis that we found ourselves in.

You can draw parallels to the automotive sector. Why have we got electric cars? It's not because the big incumbent OEMs have adopted this technology and pushed it. It's because smaller upstarts have been able to move more rapidly and demonstrate the demand from customers. And you could go on. There are parallels in lots of other industries.

RL: Well, I'm glad you bought transport up because I was about to do that. It is, as you say, a sector where Tesla, the one big name there, has driven itself into the industry. VW and Mercedes are all for years been deciding how their wing mirror should look. Tesla's come right in there. Obviously, Tesla's been a central part of your growth story and I think most people on here will know that you've sold down Tesla, you still have a significant shareholding. But there's more to the transport sector than electric cars, isn't there? So, maybe could you tell us what else fascinates you in the sector?

TS: Well, it goes back to this central premise that it's a sector that has not seen a huge amount of change if you look over the past ten or 20 years. The growth that we have seen in that industry has mostly come from globalisation, the emergence of China as the world's largest automotive market.

But now, you can see these waves of technological driven change washing through. Electrification is one and Tesla and NIO, its Chinese counterpart, are benefiting from that. I think automation is the next one and we're seeing more and more autonomous technologies coming through. From Tesla itself but also from companies like Aurora which are trying to simply invent an autonomous driver, a software system, that they can then sell into the automotive industry.

Ownership is another. Do we own our vehicles in the future in the same way that has been the case up until now? So, we're seeing all of these changes wash through the passenger car industry but you can broaden it still further. So, we own companies that are developing flying cars or flying taxis. This is the realm of science fiction until very recently but just these really predictable trends in driving down the costs of storing energy in batteries in microelectronics, in software, in Moore's law, and making possible these technologies, these experiences that we haven't been able to do before.

So, that's a new disruptive model that's coming through. Or you could look at the space companies. Commercial access to space has been cost prohibitive but what SpaceX has done is brought down the cost of access by several orders of magnitude. Suddenly, you get this market exploding in the commercial sector wanting to access space at the same time as this is huge market for government contracts.

And so, this is an industry which in many areas is being transformed and that is probably a process which is going to take decades. It's not going to be all change next year but that's what makes it so interesting for the long-term growth investor because we can watch these developments over long periods of time and the revenues and cash flows that come from that will be really long duration attractive franchises.

RL: Well, we can't talk about transport and electrification without talking about the move to a new low carbon transport infrastructure. How much is the drive to net zero by 2035, 2040, whatever different countries have set? How much is this a driver for the way you're allocating capital?



TS: Well, I think that these transitions from one energy model to another happen extremely rarely in the global economy and they're hugely disruptive events. As we look at it, it's trying to find the companies that can lead that change, that can carve out a position which is hard for others to challenge which really adds value for people as you go through that change.

And think through the second order implications which are just really difficult to know and not being too confident in any of those predictions. So, if you look at some of the specifics of the companies we're invested in, Tesla has been a really important driver of this. They've demonstrated that there is huge pent up demand for electric transport if you can get the product right.

We've invested in a private company called Northvolt. We think they have the opportunity to be Europe's largest supplier of batteries to electric vehicles. A company run by a former Tesla engineer. We've invested in the US's largest electric vehicle charging network because we think the way that we're going to power our electric vehicles in the future will be very different to the model of gas stations that we've had historically.

So, there are lots of interesting opportunities. At the same time, I think that the market has started to appreciate just how profound these changes will be. There's a lot of capital around at the moment searching for opportunities. So, it's really important that we're very selective when we're looking for the companies that we think can benefit from these long run shifts.

RL: We've spent a good amount of time on healthcare and transport. What are the other key sectors that you think will face the same amount of disruptive change? I know you mentioned payments and finance briefly a few minutes ago.

TS: Well, payments is an interesting one because this used to be a utility. I'm setting up my ecommerce site, how do I allow customers to pay for their goods? But what we're seeing is that there's been a real change in how many business operate. So, if I had a store, a physical store two years ago, the way that I got my customers to pay was at a point-of-sale cash machine and that's all I had to worry about.

But today, particularly with what the pandemic has driven in terms of changing habits, my customers might come into store. They might buy from my online store. My website. Or they might reach me through Instagram or Facebook. They might order from the store but expect the products to be delivered. They might want to do kerbside pickup.

There are all these different touchpoints between me and my customers and it's really, as you try to integrate all those different aspects, having an integrated way of charging them for the products, gathering that data, getting this picture of who your customers are becomes more and more important and more and more complicated.

So, for companies, we own companies like Adyen or Stripe. They're making that process much easier for all those businesses that are trying to take payments from their customers. And if you are that single point, that single service that a business is using for payments, there are all sorts of auxiliary things that you might want to do around that.

You think offering customers the opportunity to pay in instalments or doing fraud detection. All these additional services. And so, these payments companies have gone from being a sort of utility, just a necessary part of the flow, to being one of these unifying technologies that's really important to a huge swathe of businesses and I think there's all sorts of interesting things that follow from that.



Perhaps more controversially, we've made our first investment in a Bitcoin company and all the companies I've talked about up until now have been built on the existing payments infrastructure. But what Bitcoin has done is introduce the concept of scarcity online and this idea that you actually instead of digital goods being infinitely replicable at very low cost, you could actually have scarcity and therefore have an online currency.

And so, it's really nascent but a completely new paradigm and challenge to this existing way of doing things. So, I think the whole payment space is one that has huge potential if we look out over the next five or ten years because these customers are increasingly providing services that are really valuable to the businesses that use them.

RL: You mentioned Stripe there. You're also, I know, been a long-term investment in TransferWise. Now, simply called Wise. And that's all started when these companies are private and they're still all private although Wise is coming to the market soon. What do you get out of private companies? Is it just the investment potential or is it as much for the intellectual feedback that you get from these companies?

TS: Well, the investment trust structure is really well suited to investing in private or public companies. What's important when you're considering a private company is that the management team of that company can choose their shareholders and there's lots of capital around so why would they want you as a shareholder?

I think that's a really difficult question that as a fund manager you have to ask yourself. But we think the rewards of being really patient long-term owners of public companies is that we are attractive to these private companies and in particular, we can be indifferent about if they want to stay private, if they're considering a path to public markets.

We can back those entrepreneurs in controlling their own destiny. And what we've seen is the trend towards companies staying private for longer. Because the costs of starting a company have decreased because the costs of scaling a company have decreased, these companies haven't been as dependent on external capital.

And they can stay away from public markets where you have to face the scrutiny of short-term owners where there are all sorts of compliance rules that you have to jump through. And instead, as private companies, they have an advantage because they can take decisions for the really long-term. Not worry about what that does to their earnings this quarter or next quarter.

And so, the age of private companies has extended. For a new start-up to move from private to public has gone from about eight years to about 12 years and so, for us to maintain our opportunities here, to find the world's most exciting growth companies, we've developed this capability to invest and be agnostic about private or public.

And so, many of the new ideas that have come into the portfolio over the past five years or so have come from this private arena where I think we can be genuinely useful to these companies in helping them take that long run view, providing capital, providing patient support. And if you look at the portfolio today, 40% of it is in companies that we first owned when they were private or companies that are still private. So, a really profound impact on what we do.

RL: I guess another aspect of the Scottish Mortgage Trust and Baillie Gifford as a whole is really the emphasis on investments in Chinese companies. I know for a lot of investors on this webcast today, China is exciting, it's fascinating, and it's also worrying for them for obvious reasons. Talk a bit about what



excites you about China and whether you think that's going to play a bigger part in your portfolio going forward.

TS: So, what we see in China is a raft of entrepreneurs that are able to grow their businesses to real scale and still innovate and drive forward at that scale. They are addressing a huge domestic market, a really dynamic domestic market where consumers are prepared to embrace new services, try new things.

And where a new model or a new idea arises, you get ferocious competition and the companies that emerge from that competition are battle hardened, they're at scale because of the size of that domestic market, and they emerge with leaders with a real vision for what they want to achieve. So, think companies like Meituan in the food delivery space, PDD, Pinduoduo, that's a company which has addressed the next half billion of Chinese consumers who have not been as familiar with the only services offered by companies like Alibaba.

And what PDD do is provide a model that's unlocked a lot of that demand into the online channel and they've achieved massive scale. They were founded in 2015, they've now overtaken Alibaba by monthly active users. More than 800 million monthly active users. And at that scale, they can now go back and look at the supply chain. Think of grocery supplies in China.

And really modernise that supply chain but based on this huge dataset. So, it's that innovation at scale, the ability to address really big opportunities, the ability to operate despite the dominance of the two big platforms, Alibaba and Tencent that sets apart some of these Chinese companies from their Western counterparts, their Western peers. And so, I think it's going to be a really important source of entrepreneurial great companies if you look over the next ten, 15, 20 years.

RL: So, we've talked a lot about the companies that are in your portfolio and what excites you. Just to reflect a bit more on the people who run it, you and James and Lawrence. So, James has announced his departure which is not until next year and he had a very forceful Valedictory statement on the changing world and the best way to approach it and said his one regret was he probably wasn't as bold enough. So, is it now the job of you and Lawrence after he departs to be even bolder than the trust has been over the past decade?

TS: Well, it's really interesting looking at what generates investment performance and it's really easy as an investor to get drawn towards the norm, the average, the index, doing what everybody else is doing, but it's really hard to generate good investment performance for your shareholders if you go down that route.

You have to be doing something different and you have to have a rationale for believing why you might be good at doing something different. And so, that's what James' is getting at when he talks about being bold. It's thinking about what our own advantages are as investors and then backing ourselves in pursuing those advantages.

Critical amongst those is being patient in this most impatient of industries. That we can take the long view. That we can go after the most attractive companies regardless of where they are in the world. We don't have to worry about how that looks relative to a benchmark index. We're not trying to replicate an index. We don't just have to own a company because it's big. We can go to where we see the most exciting entrepreneurs and go to where we see the best growth.

And then, it manifests also in things like going to private companies. Why do we have a reason to exist as an investor in private companies? And actually, thinking that through, thinking why it's



important, not just doing the same as everybody else investing just in public markets and pursuing that because we think it will generate long-term returns for our shareholders.

And so, I think it's absolutely critically important as you look forward over five or ten years that Lawrence and I continue down that path of thinking carefully about where our advantages lie, where we might have an edge as investors, and then pursuing those opportunities relentlessly on behalf of our shareholders.

RL: So, one last question just before we move onto audience questions of which there have been plenty. It was Frank Sinatra who said the best is yet to come. Without giving your compliance department a heart attack because you can't make forward predictions, do you think things are going to get more exciting and help make the world a better place?

TS: As I think about my time managing the trust from 2009 to across the past 12 years, the trend has been to see this broadening of the set of growth opportunities and also an increase in the pace of exploitation of those opportunities. Companies able to grow faster at scale than they've grown when they were smaller companies. That defies the academic microeconomics.

Companies are supposed to slow down as they get bigger, not accelerate. They're supposed to need more capital as they get bigger, not pursue these capital light business models. And so, it really has been a phenomenal time to be a growth investor. But there are all these industries that are really big, really important that haven't seen that.

And as you get these multiple technologies layered on top of each other, Moore's Law, advanced software, ubiquitous mobile communication, declining cost of gene sequencing, declining cost of energy storage, declining cost of data storage, falling energy generation costs. The combination of all these factors is making all sorts of changes possible in areas that have been calcified.

And so, you see these debates about growth versus value but what I see is just an opportunity set that's broadening and a set of entrepreneurs who are not locked into the way of doing things of the past but are actually embracing these technologies to make a real difference. And that's what's so exciting for me as a growth investor if I look forward to the next ten or 15 years. It's the ability of some of these entrepreneurs to drive real change and in that process, hopefully make strong returns for their shareholders.

RL: Thank you. It's been a fascinating discussion. We're now going to move onto some questions from the audience. Let's start with one that I think every fund manager should be made to answer. What were the worst investments and investment decisions you've made in your career and what did you learn from them?

TS: Well, we've made lots of mistakes. Companies that we've invested in that didn't turn out to have the potential that we hoped. Either because we got that initial assessment of the opportunity wrong or just because things have happened subsequently. Those type of mistakes are really important because if you're going to identify the real outliers, you have to be investing in companies with a really uncertain future.

And some of those companies will work out and some of them won't and the ones that do work out will pay for those inevitable mistakes. Some of our worst ones if you look over the past ten or 15 years, we invested in renewable energy companies some of which did not turn out to have an enduring competitive edge. Others were squeezed during the financial crisis.



We've invested in individual stocks where things like LendingClub as an example where they just haven't managed to capitalise on that opportunity. But some of the most painful mistakes are actually things that we looked at that we analysed and that we didn't buy. I think, for example, Netflix in 2012.

We looked at that company, we were interested in it, we thought it has a special culture, we thought it had special management, and then they took some missteps. They tried to separate their streaming business from their DVD rental business and in the process it alienated a lot of their customers. I think they lost about a million subscribers that year and we didn't quite have the conviction to go in and buy the shares.

It subsequently went up about five-fold before we bought in in 2015. So, these are always the difficult stocks to buy. Ones that have done really well but you still think have a big opportunity in front of them. Take a more recent example. We bought a holding in 10x Genomics. And what this company does is instead of looking at the genetic sequence from a huge set of an individual's cells, they look at the genetic sequence in one cell at a time.

And that's really important because you get different levels of gene expression in different tissues and it can make a real impact on the way a disease progresses. And we looked at it around the time that it listed a few years ago and it looked quite expensive on conventional valuation metrics but what we hadn't understood is just how widely applicable that technology would be, how important it would be to researchers studying any type of disease.

So, the shares have done really well. We've bought it recently despite that share price rise. We would've done much better for our shareholders if we decided to take the plunge at the time we first looked at it. I think we have one of our board members, Professor Maxwell, to thank for helping us to really understand the scale of the opportunity in single cell sequencing. So, it's those sins of admission that can be the most painful mistakes we make on behalf of our shareholders.

RL: That's interesting because I suppose if you buy a share, it can only go down to zero, but if you don't buy a share it's got absolutely no limit to it.

TS: Yes, absolutely.

RL: Question about China. Has the attractiveness of China declined compared with a year ago in view of the Chinese governments very public attack and clampdown on their big technology companies? This question is particularly referring, I'd like to know what's happening with A.N.T International. We alluded that before, people are worried about China, the geopolitical tensions that are there, but also the internal tensions that are there with a very strong government.

TS: We've seen this. I guess it started with Jack Ma and a clear... I don't know what the word would be but pressure on him from the government and him stepping back from his prominent position as regards to Ant Financial and Alibaba. Now, that got a lot of headlines but what's always struck us as really important about Alibaba has been the partnership structure.

They attracted a lot of criticism at the time of their IPO because they set up this Alibaba partnership where 20, 25 of the most senior leaders in Alibaba retained voting control of the organisation when it listed. For us, that was really forward thinking. They understood the importance of being in control of your own destiny, being able to think long-term, but they also understood that you have to have intergenerational shifts and if all that power resides in the hands of one person, it's harder to bring through the next generation of managers.



And so, unlike Bezos at Amazon or Larry Page or Sergey Brin at Alphabet Google or Zuckerberg at Facebook, they actually thought about how the company hands on power to the next generation, how it enables that next generation to still control their own destiny and not put all that power in the hands of Jack Ma.

So, he's stepped back but actually the infrastructure was absolutely there to support the continued investment and growth in Alibaba. You also saw that in Ant Financial where, in response to government pressure, the CEO stepped back, was deployed elsewhere within the Alibaba Group as part of that partnership, and you could put someone else in who could help to improve the government relations there.

RL: Sorry. I was going to say it doesn't significantly alter your view on the potential of these Chinese companies?

TS: Well, I think it's really important that these companies work with the grain of society. They are trying to push forward the agenda of Chinese society more broadly and whether that's social, financial inclusion, the development of the consumer economy, if they're aligned with those sort of aims, they have to manage the regulatory environment, they have to manage their relationships with government.

Something that they have successfully done over a long period of time, albeit with these moments of strains, but so long as they're aligned then we think the opportunity there remains strong. And we've seen other companies in the portfolio also look at how they adapt to that change in tone and the focus on individual leaders and the concerns about the celebrity founder in PDD or in ByteDance.

We've seen the founders think about exactly what the public profile of their role is. This is how do you push forward the aims of the company and the collective over and above that individual fame and celebrity.

RL: Just looking, there's a question here about the size of the trust. I think I mentioned at the beginning, it's just over 17 billion. Now, obviously, as an investment trust you don't have to worry about inflows and outflows on a daily basis which is great but do any of you at Baillie Gifford ever worry that the trust is getting too big and it makes it too difficult to make the investment decisions that you want to make?

TS: We do look carefully at this on a regular basis. If you look at the portfolio of public market investments, it's really very liquid. We could manage a lot more money in this way and still be able to easily trade in and out of these holdings when we need to do that.

If you look in private markets, scale can, or at least can be, a real advantage. If I'm a CEO of a private company looking to raise finance, do I want to phone ten investors to get a syndicate to fund my business? Or do I want to be able to phone one investor who could write that cheque. And I think scale allows you to get that first phone call which can be a really important source of edge.

So, I don't worry that scale is becoming more of a challenge for us in the private area. I think it's helping us. And then there are another couple of advantages that I think scale brings. First of all, it makes it much easier for people to trade our own shares without incurring costs, incurring significant costs. And so, we think that's in shareholder's interest and then scale also allows us to bring down the cost for individual shareholders.

We've continued to push down the ongoing charge ratio of Scottish Mortgage, take advantage of that scale. So, it is something we monitor, it's something we keep an eye on, but we see no



signs of it impacting our ability to invest in public markets and we think it's improving our ability to invest in private companies.

RL: Moving on, another question here, working from home versus working from the office post-pandemic seems to have divided the opinion of many global tech firms. I guess there's two parts to this question. One, what have you been advising your portfolio companies if you do offer that advice at all? And B, how's that changed the investment opportunity set there? Because really, two years ago, if we'd been talking about everybody working from home all of the time or part of the time, we would be considered very odd. It has come upon us very quickly.

TS: We're very cautious about what we would advise companies to do. We don't think we know better than they do how they should go about running their businesses and the choices they should make that suit their own internal cultures. So, we'd be very cautious about doing that.

But we do try to learn from what they're doing and how they think about this set of issues. For technology companies that employ a lot of software engineers, there are potentially some big efficiencies that come from working remotely and so, we see some of the companies really embracing this distributed workforce.

It allows them to think about the costs of their office spaces, it allows them to think about talent recruitment and accessing talent pools in different parts of the world, potentially at lower cost. Or maybe just getting access to better engineers.

For our own business, fund management is a people business and what's really important is that not only doing the day-to-day aspects of the job but making sure that the younger investors, the younger people in our organisation are getting all those opportunities to learn all the softer factors around the transfer of skills and the dissemination of information.

So, I don't think we will go to a wholly remote operating structure anytime soon. I think those cultural factors are much more important for us as a people organisation.

RL: Next question is concerned about the copper price and the effect that this will have on all those... I mean, copper is so important in all the electronic transport investments that you're making. Will that affect them and I think this is part of a wider question about does inflation worry you? Big section on the Today programme about Ken Clarke, the former Chancellor, talking about he was very worried about inflation. In general, does it worry you and does it also affect those electric transport investments that you have?

TS: The starting point for me in this discussion is that predicting economic variables is just extremely difficult. The global economy is a complex system and you predicting the outputs, the variables that come out of a complex system is just inherently a really challenging task and what's more, there are lots of very smart, very well paid people trying to do exactly that. So, do we have any edge in predicting those things better than others? I highly suspect we don't.

I think the next part is trying to think through some of the challenges here. There have been big disruptions in global supply chains. So, as we've gone through the COVID restrictions and then come out of the other side at least in some areas, there's just been a lot of disruption which is going to take its time to work through.

I think the part of this that seems really interesting to us is the semiconductor shortages that we're seeing at the moment and I think that speaks to just the ever-broadening demand for



semiconductors. Think how much silicone there is going to be in an autonomous vehicle versus one driven by a human driver as an example.

And that speaks to the central importance of one of our holdings, ASML, that make the equipment for manufacturing semiconductors. In a real tangible way, I think they are responsible for the progress of Moore's Law at this point and it's quite remarkable for this company to have become such a central point in underpinning the technological progress of the world, if you like.

So, I think in a way, you can find the companies that have that edge, that have that vision and roadmap for how they actually drive things forward, how they create a huge amount of value for all these other industries. Those are really important companies to own.

I'm afraid on the specifics of copper, I don't have a strong view on that one. Where the copper price is going. And we don't own any companies in the portfolio that are direct beneficiaries or indeed victims of significant changes in copper prices.

RL: I'm going to combine two questions now because they're both about Tesla and the first one is obviously, Elon Musk is an extraordinary character who now that Donald Trump has gone off Twitter is probably the most random tweeter that we have out there and the question here is, how much does the company depend on him and given his maverick character, is that a worry?

The second question is Tesla has provoked all the main car makers in the world to selling more electric vehicles. Do you think this limits the potential growth for Tesla?

TS: Yes. So, I think Musk was on Saturday Night Live fairly recently and I think he made some comment along the lines of I've founded an electric vehicle company and a rocket company to send people to Mars, were you expecting a normal guy to turn up? In a way, I think he was sort of channelling George Bernard Shaw in this. Unreasonable men persist in trying to adapt the world to themselves.

And therefore, all progress depends on the unreasonable man. I think we bring that up to date by saying, or women, of course. But I think it's that unwillingness to accept the status quo and even in the face of overwhelming evidence that what you're trying to do is impossible, that really sets apart some of these entrepreneurial driven leaders.

And so, I think individuals like that are really important in driving dramatic change. At the same time, a significant part of what Tesla has to do from here is around operational execution. They've already got to this remarkable point in terms of dominance in market share in the electric vehicle industry and so, it's can you push onto the whole next level that maybe is dependent on his leadership and genius?

But, in fact, the ability to become a large and very profitable business is a question really of operational execution. I think that we are seeing much more focus and attention on electric vehicles now from the incumbent automotive companies. I think it's Volkswagen that is the standout in terms of real commitment and investment in this area.

Probably as a result of all the challenges they've faced in regard to their legacy diesel technology. They've had to find a new approach and a different way of doing things. And so, we see them as really the most serious of the OEMs in going after this opportunity at this point.

But Tesla is not demand constrained, they're supply constrained. They could sell as many cars as they can make. So, I think what's critical to Tesla's growth and profitability over the next five



years is expanding supply rather than worrying about if the traditional OEMs can actually address some of that huge pent up demand that exists today.

RL: I think we've got time for one more question because we're coming up to an hour on here. So, you made your first digital currency investment. Are we likely to see more acquisitions in Bitcoin and blockchain?

TS: Well, my attitude to new areas that are coming through like that this where there is a really interesting fundamental technology underpinning is to look for the teams, the entrepreneurs in this area that can help us to learn and that have the opportunity to take advantage of those changes.

So, I think we see that in the team at blockchain and we've made an investment there and we're on the lookout for other teams where we think you have visionary leaders. And that's no different from say if you look at quantum computing. We've dipped our toes in the water with our first investment in a quantum computing company. These technologies are in early stage. There's huge uncertainty. But let's find teams we rate, back them, and learn from them as we move down this path towards commercialisation of these opportunities.

RL: Tom, I'd like to thank you very much for taking part in this conversation today and for patiently answering all the questions from the audience. And really, to thank you everyone who joined us today. I think it's been a fascinating discussion. Again, apologies for the delay in when we got going. I see there's almost more than 800 of you out there still so thank you for your patience and joining in and I think that's a testament to the incredible popularity of this fund. That is the fourth investment trust webinar we've done for Baillie Gifford over the past few months. I hope you've enjoyed them all. We're going to take a break for the summer now and hopefully we'll see you. Have a fabulous break and we'll see you back in the autumn.

Scottish Mortgage Annual Past Performance To 31 March each year (net %)

2017	2018	2019	2020	2021
40.9	21.6	16.5	12.7	99.0

Source: Morningstar, share price, total return.

Past performance is not a guide to future returns.

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