SCOTTISH MORTGAGE INVESTMENT TRUST

Scottish Mortgage Investor Webinar: your questions answered

Tom Slater, Lawrence Burns, Stewart Heggie

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Stewart Heggie 00:08
Hello, and thank you for dialling in to this live Scottish Mortgage webinar. I'm commercial director Stewart Heggie, and I'm joined today by the Scottish Mortgage managers, Tom Slater and Lawrence Burns.

Invitations for this webinar went out a few weeks ago. And the purpose is for the managers to answer your questions. Thank you for sending so many in advance. To make sure the managers can answer as many of those as possible, I think it's likely that we're going to run over the allocated 45 minutes.

Now, just to give you an idea of what's coming up, the most popular topics that you raised in your questions were performance, private companies, and the discount. So I'll begin by asking some questions on those. We're then going to open out to live questions that you can submit in the Q&A function that you should see at the bottom of your screens.

Now, this webinar will be focused on the management of the investment portfolio. Several of the questions that you've sent are directed towards the Board of Directors, all of those are being passed to the Board. To be clear, Scottish Mortgage Investment Trust plc is an independent company with its own Board of Directors that stand for election at the AGM each June. As such, it is a client of Baillie Gifford. So the Board wants to address the questions that you've been raising. And I'm pleased to inform you that separately, they will release a communication in April.

So Tom, coming to you first, before we get into investment matters. Do you have any reflections on the past couple of weeks?

Tom Slater 01:43
Well, I think the starting point is to apologise to shareholders for this difficult period. And it's not helpful to anybody to see the trust in the headlines like this. My experience of the Board of Scottish Mortgage is one of independence, strong governance and appropriate challenge for the managers over the years.

I'd go further than that, and say that they've really helped us to get better. So, if you look at some of the specifics, I think we're going to get into some of the topics that have been raised. But on the one of the governance, I have huge respect for what the Board has done over the years.

Stewart Heggie 02:30
Okay, that's great. Well, let's get into some of these shareholder questions that have been sent in advance. Lawrence, the first of those relates to performance. It's, "*I entrusted a large chunk of my savings to Scottish Mortgage. I fully understand the long-term strategy, but I'm disappointed by the 60 per cent fall in the share price. As investors, how are you going to turn around portfolio performance?*"

Lawrence Burns 02:54
Yes, I think the first thing to say is it's important to recognise and I think, frankly, apologise for the painful experience that our shareholders would have had over the last 18 months. The last 18 months have not been what either of us would have expected or hoped for, to be back to where the share price was three years ago.

I do find these times helpful to look back at history. And the progress has never really been a straight line for the companies we invest in or for Scottish Mortgage. And the Trust has suffered a number of material falls over its history, several of which are larger than we have today.

But coming out of those, each time the Trust has recovered, as have broader markets as well. And we hope that this will obviously have a similar journey. And I think it's very important, what are we doing as managers to help in that journey? And I think there's a few things.

I think the first one is, we're trying to, as much as we can, take advantage of a difficult situation. So we're able to go out, find, own and also look within the portfolio, for companies that are trading at valuations that are materially lower than they were before, and that, to us, seem quite attractive.

So to give one example, over the course of last year, we added on a couple of occasions to MercadoLibre, the leading ecommerce and fintech platform in Latin America. We were able to do that at a valuation where the share price was 50 per cent lower than it was two years ago. And that was despite really quite remarkable operational progress at the company. So I think their latest results have showed that revenues are up about twofold. Operating profits also up even more than that, I think, almost nearly tenfold.

In addition, we've been using this period as an opportunity to continue to plant those long-term seeds for future possible outliers. Investing in companies like Climeworks, for machines that can take carbon dioxide out of the air and store it. Investing in companies like UPSIDE Foods that hope to revolutionise meat production, and also more advanced growth companies such as Cloudflare and Roblox.

The second thing that we've been doing is, I think also trying to remain long term despite the stresses and difficulties of this period. Again, it's that progress isn't a straight line and trying not to give up on exceptional growth companies, when they hit a rough patch. We'll absolutely have got things wrong in this period and made mistakes, we'll need to move on from. But we need to be careful not to give up on exceptional companies.

Within that, if you go back to previous share price falls, you go back to 2001, for example, Amazon fell 90 per cent. If you go back to the financial crisis, Apple fell about 60 per cent. I think it got down to $100 billion market cap, it's now $2.5 trillion today. So what we don't want to do is give up on those incredibly special companies, when they are hitting this rough patch.

And if there's a third and final thing, it would just be to say that the companies themselves that we own are recognising that this environment is different. And they need to take different actions. They're, I think, shifting faster than they expected or planned to, in terms of profitability. They're focusing on using this period as an opportunity to cut costs to streamline their operations, after a decade of quite a bit of excess of in the tech system where there hasn't been that level of focus on cost.

So the hope is that for a number of them, they can use this as an opportunity to exit a storm on a better financial footing actually than they entered it. So those are examples of some of the things that we and our portfolio companies are trying to do to help through this difficult period.

We're remaining long term because we think that is core to our edge, core to our distinctiveness. It is very easy to be long term when times are good, it is much harder when they're difficult. And we're going to continue to do all we can to help with that.

Stewart Heggie 06:41
So I suppose if I'm a shareholder, listening to that, the long-term performance has been strong, particularly over the last decade, though, in that period of time, we've been in a low-interest rate environment. And that means that some of the high growth companies that you're looking for, have been able to access capital really cheaply. But also, investors have been changing their asset allocation decisions, because you couldn't make a real return on cash. And all of that has acted as a tailwind. Are you making any changes to your approach, bearing in mind the changing environment of higher interest rates?

Lawrence Burns 07:15
So I think the thing that's most painful isn't necessarily high interest rates, it's the change because when interest rates go up steeply like they have, the impact that has is the cash flows that are further out in the future become less valuable.

So I think a lot of the hope at the moment in financial markets is that we're towards the end of these rising interest rates. If that is the case, I think that's a less painful environment and a lot of that pain will be behind us. If you think the interest rates actually end up getting cut in due course, then that would be a helpful thing for growth companies valuations. If you think that there's basically no change, then again, I think a lot of that pain is behind us, if you think they go up, then it will be a headwind to valuation.

I think it's important, though, not to lose sight of a couple of things. The first is we're trying to back companies that drive really radical change in the world. And those companies, because that change is so radical, because they are trying to genuinely change the world, the impact of what they do in financial returns is so strong that they will be valued and valuable by the market, irrespective of that broader macroeconomic context.

And so again, I think, I find at least an example from history here is helpful. If you go back to the 1970s, it was a decade very much alike in some ways to where we are now, high inflation, energy shock rises, shock interest rate rises, it's a very difficult environment to invest in. It was also the start of that decade, October 1971, when Intel listed, and Intel was a company that changed the world, in the computing and technology space. But by the end of that decade, and it was a very, very bumpy ride if you're a shareholder of Intel in the 1970s, but by the end of it, shareholders were sitting on a return of 18 to 20-fold. And I think that, to me, if you're doing something transformative, you will be rewarded for that if you are successful, irrespective of the macroeconomic environment.

The final thing I would say is that you talked about the access to cheap capital there. There's also a silver lining to that. A lot of our companies are market leaders that actually had to deal with huge amounts of capital coming in to compete against them. That capital has now rescinded. And so a lot of them are using their position to consolidate market share, and also being able to actually push more easily towards profitability, as I mentioned earlier.

Stewart Heggie 09:26
Okay, great. Well, the next question is on privates. Tom, I'll come to you on this Scottish Mortgage has a 30 per cent limit that can be invested in private companies measured at the time of purchase. Based on the last fact sheet, you're at that level. Why are you there and what impact is it having?

Tom Slater 09:48
So take the 'Why are we there?' first. So the context for the limit is that we went to shareholders, I think at the AGM in 2020 to raise the limit in private companies from 25 to 30, to give us the flexibility to invest in private companies. And what we've seen is that those companies that we own that are private, and bear in mind that about five of them make up half of that weighting, have generally performed better than their publicly listed peers. That is raising money at higher valuations last year, despite what was going on in the broader market. And so it's pushed that relative or weighting in privates up as public markets have come down.

We were above the 30 per cent limit for about a third of the past year. And for about two thirds, we were below that limit. So we've put about $350 million so far this fiscal year for the trust, into private companies. So it's not been a constraint, but we have been close to that limit this year.

Stewart Heggie 10:55
Okay, well, I'm sure we'll come back on to privates, so I won't do a follow up there. The next question is on the discount, and I might just do a quick explainer on this. Because Scottish Mortgage shares are bought and sold on the stock market, the share price is affected by supply and demand. And that means that the share price can be higher (at a premium) or lower than (at a discount), to the value of the assets known as the Net Asset Value, or the NAV. Now, just for some context, investment trusts as a whole are sitting on the highest discount level we've seen for about a decade. And that is also the case for Scottish Mortgage. And the discount is about 20 per cent.

So Lawrence, we've had quite a few questions relating to this discount. I think what they're really asking is, "*Can you outline the approach the company takes in managing the discount, and the impact it's having on your running of the portfolio?*"

Lawrence Burns 11:52
Yes. So firstly, as you said, we're currently trading at a discount, which is that the value of the portfolio, the companies we own, is actually higher than the share price value. And the policy of the trust is to try as much as possible to have a share price that is close to the NAV because we think that is the fairest situation for all stakeholders.

An important mechanism of allowing us to do that is buybacks. Two things, I suppose, with buybacks that are worth touching on. The first is that when the trust goes out and buys back its own shares, one of the effects of that is that it raises the share price, and that brings it closer to the NAV and so narrows that discount. The second important benefit of that is that by buying those shares, what you're in effect doing is buying back that portfolio at that discount, which isn't a bad thing to have to do, either.

And so that's a mechanism we relied on throughout last year. We did buybacks on 45 occasions, we spent somewhere around £230 million on buybacks over the course of that year. And that's the mechanism that we'll continue to use in the future. We haven't so far felt particularly constrained in our ability to do that, as portfolio managers.

Stewart Heggie 13:09
And I suppose, on the buybacks, should you be buying back more shares? Or I suppose, are you constrained from doing so? For example, you know, with the gearing or perhaps being at around this 30 per cent level?

Tom Slater 13:23
So, if you look at the course of the past year, we've deployed capital into new investments. We've deployed some capital into paying down debt. And we've deployed some capital into buybacks. And there's an element of balance in that. We think the most useful thing we can do with our capital is identifying companies that we think are going to be big long-term winners. And that will be the first place we deploy capital. But as Lawrence said, we also have in mind that we want, in the interest of fairness for stakeholders, to try and trade close to the asset value, and where we think we can have an impact on that we

will. But we don't tie ourselves to numeric targets on that, because the evidence suggests that anybody who's tried to do that has failed. So, number one priority: investing in the growth companies of tomorrow, but also make sure that we are managing the debt within the range that we want to have it, and also trying to, where we can, influence that discount between the share price and the asset value.

Stewart Heggie 14:35
Okay. Well, we're now going out to the live questions, and there's lots appearing on my screen. So we've got some on privates and I'm going to tie two of them together. First of all, are the valuations in the portfolio stale, and secondly, does Baillie Gifford have enough resources to closely audit the true position of the unlisted companies?

Tom Slater 15:00
I'll start on that. So the way that we value the private companies that we have on the balance sheet. The starting point is that we will get a third party - S&P Global - to do a valuation assessment of that company. That valuation assessment is then passed to the private companies valuation committee within Baillie Gifford.

We have five accountants who work full time on this, they will take that report, they will provide another layer of challenge and the target there is to try and get to the best estimate we can of the value of these private companies, if those shares were to trade today.

So it's not based on historic prices. It's based on the value today. The output of that private valuation company is reviewed by the audit committee of the Board and then the external auditors. But bear in mind that these assets may be held in not just Scottish Mortgage's portfolio, but other trusts that are managed by Baillie Gifford, or funds that are managed by Baillie Gifford. So in fact, they will get three or four external audits from four big audit firms.

And those revaluations happen on a regular cadence. So every three months under normal circumstances, but where you're seeing significant moves in their listed peer group, which we of course, have seen a lot over the past year, we're revisiting these valuations much more frequently than that. Lawrence, do you want to pick up on the second point?

Lawrence Burns 16:45
In terms of the resources, I think an important thing is that neither I or Tom are involved in coming up with what the valuation should be of the unlisted company. So we get an email telling us basically, when they've changed. And that is done by a four-strong team that we've got within private company valuations doing that, and they report to an internal committee. And we've resourced up that team over the decade that we've been doing private unlisted. Obviously, when we started, we didn't have that. We built up that team. And then we also brought in an external party to help. So there's been a process of building up those resources over the last 10 years that we've been doing the unlisted investments.

Stewart Heggie 17:22
Okay. We still have more questions coming in on privates. So just to stay on this topic. Are you as managers comfortable with the current level? The current 30 per cent cap level on privates? And are you still looking for opportunities in this space?

Tom Slater 17:39
So what's the objective of investing in private companies? It's because so many of the world's greatest growth companies are choosing to stay private. And they're choosing to do that for a number of reasons. They get to choose their shareholders. They don't have what's seen as a significant administrative burden that goes with being a listed company. I think partly that the allure of being a listed company has declined somewhat, particularly through the financial crisis.

And so the view that we've had is, if we're going to invest in the world's greatest growth companies, we have to have the flexibility to invest in public or private.

Take the top five holdings. As I said earlier, five holdings make up about half of all our private exposure. Take SpaceX, I think the press reported it was valued at about $130 billion, last time it raised money. ByteDance, the owners of TikTok. Again, I think press reports, $220 billion. Stripe, the payments provider, valued last in the press, was reported it was valued, week or two ago at $50 billion. And the other two, Northvolt and Brandtech, again, multi-billion-dollar companies. So these aren't small companies.

We think they are exposed to growth areas that we can't get exposure to if we invest in public companies. And we think they have some of the biggest growth opportunities in the world. So we shouldn't think of this as an asset class. We don't invest in the asset class, we invest in a relatively small number of companies, which we feel have got exceptional growth opportunities. And sure, there are headwinds, we have to make sure we get the valuations right, that sort of thing, but these are some of our best ideas.

Stewart Heggie 19:33
Well, you've mentioned ByteDance, so that's a chance for a segue into China. We've received a few questions. So Lawrence, I'll come to you on this. First is: *"Is it time to abandon China?"* And then: *"Your private investment into China's ByteDance, owners of TikTok, has had several problems like potentially being banned from the US and other countries, as well as a very high valuation. Can you please comment on why you think it's still a great investment?"*

Lawrence Burns 20:03
Yes, firstly on China, I think we've had to recognise that the bar has basically gone up for Chinese holdings within Scottish Mortgage. And why has it done that? I think there are two reasons.

Reason number one is there is that increased geopolitical risk between China and the US that could result in tensions, sanctions, lots of different forms that could be punitive to the share prices of Chinese companies. Some of those might be low probabilities, but they're potentially high impact and we need to account for that risk when taking a holding.

The second one would be that having to adapt to a regulatory environment within China, that is more willing to get involved in companies and potentially put some forms of limit on the upside that they might be able to attain.

And even if those limits aren't really there, the cultural impact of the perception that they're there, in terms of people running the companies, I think matters as well.

So that bar has risen. We haven't got to the point of saying that's the same as saying that one should abandon China, because there are still some truly exceptional growth companies there.

NIO, the electric vehicle maker, is building into what is probably the most efficient maker of electric vehicles in the world, and one of the largest markets, or the largest market for electric vehicles. Horizon Robotics, which is one of our private companies, as well.

So there are still quite large opportunities. It doesn’t go as far as saying one should abandon the world's second largest economy and one of the world's most dynamic economies. But we do have to take into account those risks. That means there's a higher bar, and we go in there with our eyes open.

On ByteDance, specifically. I think ByteDance is one of those companies in the portfolio that is performing well on the fundamentals. And a lot of that is actually coming from the domestic China Business, which today accounts for, anyone probably doing the valuation, the vast majority of its value. And so a lot of the valuation is adapting for the fact that, actually, the US business is that risk that you outlined. And that has been obviously taken out and been very clearly displayed through the Congress questioning of TikTok CEO.

But I think for us, ByteDance is a once in a generation business, that has incredible scale. Its absolute valuation might be large, but it is not particularly large relative to the positive cash flows and profitability of that business. They've become an incredibly important platform, just in China alone, and are continuing to move and expand into new areas, which quite frankly, are actually posing some interesting questions for some of our holdings in terms of their moves into commerce into, local services, very successfully monetizing that incredibly large user base that they have. So there absolutely is that risk and uncertainty around the US, but I think a lot of our attention and value is really ascribed to the domestic Chinese business.

Stewart Heggie 22:54
Sorry, I'm actually just going to jump back on to privates. And this is in recognition of the number of questions that are coming in on one specific topic. I’ll pose this to you Tom. *“After being caught in the Woodford fund, can I be confident that Scottish Mortgage and Baillie Gifford have not gone and done exactly the same thing?”*

Tom Slater 23:15
Two crucial differences. The first is if you look at the size and geography of the investments. So I think the average size of the companies that Woodford funds were investing in, was UK companies valued at $200 million. We're investing in global companies with an average size of $10 billion. We aren't getting into small companies. We're big, these are big established investments for the main part.

The second difference is that we are solely a closed-ended vehicle. Therefore, we are not a forced seller of these assets. And those are two absolutely fundamental differences in approach.

Stewart Heggie 24:06
We have some questions coming in on the gearing that I mentioned earlier. So just to be clear, Scottish Mortgage is a company, so it has the ability to borrow money, just like any other listed business, and that's known as gearing. So there's two questions here. *"What is the interest rate the trust is paying on debt? And secondly, have you got the leverage under control in stressed scenarios?"*

Tom Slater 24:35
So the strategy here is that we think it makes sense for shareholders to have a modest amount of debt within the company, because we think that their portfolio will rise in value over the long term. And so having a bit of debt in there will increase the returns to equity owners.

We don't try to time the market. We don't increase or decrease that exposure in response to a view on market levels. We're stock pickers, we focus on company fundamentals, not trying to time markets. And so what you see with the debt levels is that when we saw such strong asset appreciation, over the past 10 years, we've gradually raised more debt to try and keep that overall percentage of debt, roughly the same. We've done that a slow pace in response to the appreciation in the assets, generally in behind with the lag.

And then over the past year, when you've seen substantial declines in the asset value, we've made modest reductions in the debt level as well to just try to make sure we manage it within that range. And again, to reiterate, that is not taking a view on markets. But there is this helpful stabiliser in there that debt as a percentage of the assets will go up when markets have declined and will naturally decrease as assets appreciate.

And as to what are we paying for the debt? Well, another trend over the past five years when interest rates have been so low, is that we've been proactive in taking out long-term borrowings. So switching the balance of the debt from being predominantly bank debt to being predominantly private placement debt with a tenure of 25, 30, 40 years. And we're paying about 3 per cent, on average, on that piece of the debt.

The other pieces of debt, we have some revolving facilities, relatively small in the mix, those are quite expensive. So about 4.5 to 6 per cent. And then we have some term debt. So 3,4,5-year debt, and we're paying about 2 per cent.

Stewart Heggie 26:50

Okay, great. Going back to performance, Lawrence, looking back, is there anything that you would have done differently to avoid the 60 per cent fall? And are there any lessons learned going forward?

Lawrence Burns 27:06
Yes. So I think in any period, there are lessons and there are even more intensive learning in periods like the one that we've been through.

I think a couple worth sharing would be, one, going back to the China one. I think we were slower than we should have been to have realised that there was more of a seismic change in the way that the Chinese government was interacting with its companies. We spent a lot of time with the companies trying to understand this, but I think we were slower to sort of incorporate that into our mental models of investing in the country than we should have been.

And then I think more generally, we saw incredible fundamental performance for our companies going back a couple of years ago. And that was recognised very quickly by the market. Even though we had faith and continue to have faith in a lot of those businesses over the long term, I think we could have been more cognisant of where the market valuations were pushing them, and more aware of that than we had been.

Stewart Heggie 28:05
Now, looking into the portfolio, Tom, possibly to you, how do you tell an exceptional company from the average one?

Tom Slater 28:18
So I think there are two components to that. The first one is around the opportunity that the company addresses. So you're going have some fantastic businesses, but they're in markets that aren't growing or don't have the prospect of meaningful growth, then for all the good qualities they may have, it's unlikely that business is going to be a multiple of its current size in the future.

So the starting point of an exceptional growth business to me is, is there an opportunity that's big enough, that if we're right about it, it could grow to be a multiple of its current size?

And then the second part of it is, what is it about that company that places them uniquely to exploit that opportunity? Why do they have a greater likelihood of success than other companies? And that may be to do with some structural advantages. Northvolt is the European Electric Vehicle battery producer and has great access to low-cost renewable energy sources in northern Sweden as an example.

But I think if you look at the big winners over the past 10 or 20 years, it's often been intrinsic qualities of the firm that have been really important. Often we've seen this coming from the influence of founder managers that allow businesses to take really long-term decisions that aren't focused on maximising short-term profitability, but really thinking, what do we have to do today to build for five or 10 years out? I think Bezos at Amazon is the archetypal example of that.

It may be that that you just approach a problem from a completely different perspective. So Tesla is a software company operating in the automotive sector, and it moves at a completely different pace. Again, it has that founder, that long-term vision, that ability to avoid maximising short-term profits.

So zooming out, is the opportunity big enough that if you're right, that it could be a multiple of its size, and all the characteristics of the business that uniquely place it to capitalise on that opportunity?

Stewart Heggie 30:31
Okay, well taking that, then we might use another example, because we've had a few questions. *“Why is Moderna still such a large position, and being added to? Vaccine is dead, and mRNA is a dubious technology. Interested in manager's views.”*

Lawrence Burns 30:50
So, we're all aware of Moderna from a Covid vaccine, which many of us have probably had. Saved about a million lives in 2021 alone. What's interesting about Moderna to us is that it wasn't created to develop a Covid vaccine, it was created as a platform for mRNA technology to address a wide range of potential ailments. It just so happened, it was one of the most nimble and effective platforms for addressing Covid.

And so, we definitely recognise and you're seeing that now fewer people are going to be having Covid shots in the next few years, than they were in the middle of the pandemic. It's probably going to be something like flu, that’s with us for a very long time. And particularly vulnerable and elderly people will have recurring Covid shots for a very long period of time. But actually, our greatest enthusiasm for Moderna has been this, that it is a platform, and that it is using that technology on a far wider range of ailments.

And you've seen throughout the year – and I think this is one of the things that's encouraged us to add to the position – further scientific validation of that broadening platform. And so they've basically developed in a very short space of time, a near world-leading flu vaccine. They've also developed an RSV vaccine, and previously, we've never had available on the market, a vaccine for RSV. And, you know, they've also even developed within cancer, a personalised cancer vaccine that's cut risks of death by about 44 per cent. And so that's been incredibly meaningful in terms of these new areas that they're unlocking that could be hugely valuable and make a huge difference to human health, well beyond Covid.

And particularly of interest to us is the idea that you can combine some of these treatments into a single shot. So you could have Covid, flu, and RSV, potentially given to you in one shot on one visit to the doctor, and have a pan respiratory vaccine, which would be incredibly valuable and efficient to health systems around the world.

So it is around that broader platform where we think the value has been lost by the market because of the focus on ‘*what happens to Covid revenues in any one given year*?’.

And so we've seen that scientific validation, the market hasn't particularly moved on the basis of, for example, showing that it has a personalised cancer vaccine and could develop several of those. And so we've added. We continue to think and see the evidence that the scientific evidence is that it's a strong platform, and mRNA has a very important role to play in healthcare systems, we hope for a very long time to come.

Tom Slater 33:18
Maybe I'd just add a couple of additional points just to link it to the previous question. The first is, Moderna is a software company. Now, if you look at the big winners of the past decade, in online consumer platforms, if you see a business emerge today, which has some of the obvious traits of the big winners of the past 10 years, then the market is going to recognise that very quickly. If you are a two-sided consumer marketplace, internet consumer marketplace, people know how that story ends, winner takes all economics, etc, etc. You know, the value that gets placed on these things makes it quite hard to make money.

Moderna is a software company, but it's in the healthcare sector. In a sector where you don't have software companies in a sector where the problems are harder, but the rewards for success are bigger. And we see lots of signs that this business operates in the same way as some of the big, successful software companies of the past decade. And the segment which, just a follow on from this point about Covid, which I don't think you mentioned Lawrence, Covid and the Covid shot has given Moderna the resources to go after all these other things. The balance sheet is $20 billion today. So not only have we had validation of the platform through Covid, but it's given it an enormous cash pile with which to go pursue these big opportunities.

Stewart Heggie 34:51
What would that cash pile have been prior to the pandemic, just for some context?

Tom Slater 34:56
5 per cent of the size.

Stewart Heggie 35:00
We've had some questions about, I suppose, the resilience of the portfolio companies. So perhaps one for you, Lawrence, *"How many companies in the portfolio are loss making or not cash generative?"*

Lawrence Burns 35:13
So if you look at the listed portfolio I think the number we have is about 13 per cent are not producing either positive earnings or positive free cash flow, of the listed portfolio. But then what might surprise people is if you look at the private portfolio. I think a lot of people would assume well, everything that's private is presumably not making money yet, actually, 18 per cent of the private portfolio is cash generative. And some of the companies there are incredibly cash generative.

So in terms of resilience, I think Scottish Mortgage has had a tendency to back market leaders, back companies with low debt and tend to be in a net cash position if anything.

And so that's what gives you that degree of resilience that when you do hit tough times, they aren't highly levered up, and they can actually take advantage of some of those circumstances.

Stewart Heggie 36:01
Okay. Some questions on valuations, perhaps one for yourself Tom. “*Are valuations of the publicly traded companies still expensive, relative to historical averages? Or do they have further to fall?”*

Tom Slater 36:18
I think the first thing would be to dissociate two parts of the question because whether they're cheap or expensive, relative to historical averages, doesn't necessarily tell you whether they're going to fall or not. If you look with perfect hindsight at what happened in the portfolio that we own, then two things. One is that the growth rates accelerated to really remarkable levels. And with that, if you look at the valuation of these companies, relative to their sales, that multiple increased, the price-to-sales multiple increase.

If you look at the portfolio today, that price-to-sales multiple is back below where it was at the start of the pandemic. So that valuation uplift that you saw has come out. At the same time the growth rates, or the overall growth rate of the portfolio, has come down markedly because some of the unique factors that were driving that pace of growth have also gone.

So I think I can fairly confidently say that that pandemic bump in valuations that you saw has come out. In some instances, it's gone a lot further, you'd have to go back to the Great Financial Crisis to see Amazon valued on the price-to-sales multiple that it trades on today, for example.

We should always just be wary about saying, ‘Well, what does that mean, what’s going to happen to the share prices of these companies because the undervalued companies can get more undervalued?’. I think what crucial for us, the way we look at it is ‘What's the operating performance of these companies?’ You know, there's some element of cyclical headwinds that they face today because of higher interest rates because of that excess that you saw in the tech sector. That is the structural growth story in tech, because that's what's going to drive the share price in the long run.

Stewart Heggie 38:06
The next question is on the portfolio, and quite specific: *“Question to both managers. which companies in the portfolio have surprised you most over the last year and why?”*

Lawrence Burns 38:20
I think over the last year, in some ways, I’d probably call out MercadoLibre, one we mentioned earlier, and why would I do that? I think it's a couple of reasons. I think one is that you were talking about the sort of pandemic boost. That's an interesting example of a company that did get a pandemic boost. But actually, it continues to grow incredibly strongly, still growing 40 per cent in US dollar terms. Ecommerce penetration went up to around 11 per cent. But it's still low relative to other markets, Latin America versus the rest of the world.

And at the same time, they've made incredible progress on delivering financial services to those that aren't served well or at all, by the traditional financial industry, in large banks in the country. To be quite frank, had you said a year ago, can you deliver 40 per cent growth in revenues with a material improvement in profitability at the same time? I would have said, 'it's probably a bit tough to do both of those'. But that's exactly what they've done. So I think that has been surprising. I think that picks up on some of the things that Tom was mentioning earlier, it's an exceptional opportunity set they face, but also driven by an exceptional management team have navigated the conditions remarkably well.

And if I could just make a broader one before giving Tom one, I think the other one that's surprised me has just been a more general one of those companies that aren't profitable, we've tended to say they're not profitable by choice. And what we mean by that is that they're choosing to reinvest any profits back into the business to strengthen their position to grow the market opportunity.

And in terms of that reaction to the current market conditions, I think what's been quite surprising, how quickly some of them have been able to pivot towards profitability. Delivery Hero is one example where it's been heavily loss making its entire history. It now plans to be free cash flow positive by the second half of this year. That's been a pivot to profitability that's happened a lot stronger and a lot faster than I would have anticipated a little over a year ago.

Tom Slater 40:29
I've a couple of positive ones. And I go back to what Lawrence was saying about Moderna in cancer. It was astonishing, the data that Moderna revealed towards the end of last year on cancer. That you could test that technology against the standard of KEYTRUDA. And, and in this phase two trial showed this over 40 per cent increase in survival. That was absolutely remarkable validation of the technology.

SpaceX, the other I'd point to. They did more than 60 launches last year, more than one a week. Basically in the space of a single year they've created the commercial space industry. And you know, I think that could be huge over the coming years.

There have been negative surprises. Something like Carvana, which is a retailer of second-hand vehicles in the US. I still believe the proposition that actually selling these vehicles online is a much better experience for consumers. But just how quickly that business model has come under pressure, given the pressure in that market and the rise in interest rates, and how quickly it's unravelled, frankly, has been a surprise as well.

Stewart Heggie 41:55
Okay. Tom, perhaps one for you. *"Has Ginkgo Bioworks been a mistake? Or do you still believe it can make money?"*

Tom Slater 42:07
So Ginkgo Bioworks is a synthetic biology company. So what they're doing is using the tools of biology to make products. So rather than using oil-derived products, for example, they will use bacteria to produce chemicals.

We invested in it as a private company, I think through the course of about three private investment rounds. And then subsequently it went public. I think that if you look at it over the course of the investment, the private investments that we made, with the benefit of hindsight, have been good ones. That point at which it went public, it came at a valuation which in the long run it couldn't support. And so its performance as a public company has been very disappointing, in share price terms.

And so, looking at the fundamentals, the way that this business works is that you sign a programme, it's all about getting volume, basically you drive down the cost of these biological processes by getting volume. And they've absolutely been following through on that part of the premise, finding new applications, seeding the market, growing the business. So I think they're doing all the right things from an operational standpoint, but as a listed stock price, it's been pretty disappointing. Absolutely, we still have faith in the team that are driving that opportunity.

Stewart Heggie 43:40
I've had a couple of questions coming in. Let me just get this right. *"There have been media reports around short sellers. Are you worried about the level of short interest in the trust?"* Lawence.

Lawrence Burns 43:56
It's not something that's been massively on our radar, or our thought process and I think some of the recent numbers have shown that the short interest is also coming down.

Stewart Heggie 44:07
Yep, that's fine. And, Tom, you mentioned SpaceX earlier. *"Is there any likelihood that SpaceX will ever list or is this destined to remain unquoted for many years in your view?"*

Tom Slater 44:21
So I really don't know, is the starting point. I think one the luxuries that the Trust has is that as a closed end fund, we can be pretty relaxed about that. What's most important is the creation of value. Now, if the press is to be believed on this, there's a suggestion that they may list some parts of the assets.

So Starlink, which is a mobile communication network, it's using low Earth orbit satellites, to provide mobile communications, you could potentially list that part of the business while allowing the launch business to remain private. Will that happen? I don't know. I mean, you can see the logic of it, because if you are providing mobile data services, that tends to be a recurring business, with monthly subscriptions, that you might want to borrow against those revenues. And it's the sort of asset that public markets like and probably will value more highly than private markets. So that's a possibility.

And I think the other dynamic that's at play is, as businesses get older, the pressure to go public increases. Because if you're a software company, and you hire a load of 20-something engineers to go build a product, and 10 years later, you're still private, and you've been really successful, then those engineers have a lot of paper wealth, but that won't allow them to go out and buy a house for their young family.

And so unless you can ease that dynamic of actually providing a cash return for insiders and for employees, through secondary sales or some mechanism like that, then actually the pressure tends to mount over time for a company to pursue a public listing.

And that's, you know, that's what we've seen in the Scottish Mortgage portfolio over time. I think we've had just shy of 40 private companies that we own list on public stock markets. And that doesn't come from any pressure from us, it's just that dynamic that exists within private companies.

Stewart Heggie 46:32
And I think I'm right in saying there were no IPOs last year. I suppose that segues into, we've had more questions on privates. One is, Lawrence, I'll perhaps ask you this: "*With regard to your 30 per cent privates limit. Are you currently able to make follow on investments with your existing private holdings? And if not, how problematic is this to your investments? And the relationships with the company founders?*"

Lawrence Burns 47:46
Yes, for a lot of last year, we were still able to make private investments. And I think if you go back over the course of the year, there was one investment that we would have liked to have made that we weren't able to because we happened to be at, or close, to the limit at that point. So we've still had that flexibility. I think we invested £260 million into private companies last year. So we haven't felt totally constrained yet. But it is something that we're monitoring and thinking about. And it's not something where we've yet been in a position where we've felt that we're not fulfilling our duties as a responsible shareholder to them, but it's something that we continue to monitor.

Tom Slater 47:40
It's also worth making the point that that 30 per cent limit, there's a number of things that go into that number. It depends what happens to the prices of listed assets, it depends on the marks we make on our own private portfolio. It depends if we deploy more capital into privates, it depends if we have companies that are IPOing, it depends on the Dollar/Sterling exchange rate. There are so many variables, that it's actually quite a volatile number. So it's quite hard to manage to. But as Lawrence says, two thirds of the time, last year, we had the ability to make private investments. So that's not been too much of a constraint so far.

Lawrence Burns 48:14
And just to link the two things, I think people forget how quickly that number can change because of some of those variables that Tom was talking about. But also your own one in terms of, you know, going from quite a large number of IPOs each year to zero, it only takes one of the larger private companies to potentially decide it wants to list for that number to change quite quickly as market conditions change. And so that I think, again,

speaks to the volatility of the number but also how you could quite quickly be in a much lower position very quickly.

Tom Slater 48:45
I think, if we felt it was a problem for our shareholders and the returns they can earn, or that it would impact our relationships with companies, we'd come back and have that conversation. You know, that's the history of it. When we started doing these things back with Alibaba in 2012, there was no limit on the Trust's ability to invest in private companies. I think it was either 15 or 16, we came to shareholders and said 'We're doing more of this. We had a discussion about where to put the guardrails around it, and then we put the limit at 25%. And then we came back in 2020 and said, 'We've seen more opportunities, we believe it's in the best interest of shareholders to raise it, and again, had that dialogue. So, again, if we think there are missed opportunities, we'll come and have that conversation with shareholders.

Lawrence Burns 50:22
I think the other one is that we remain long term and the way we interact with those private companies is the same. So we've said we don't push them to go for IPO, we push them to do what's in the best interest for the business and the long-term value creation.

And that remains exactly the same even throughout this period. We want companies to do what makes sense on a five- and 10-year view, not what might make sense for us or them on a six-month view.

Stewart Heggie 49:53
Okay. Well, no Scottish Mortgage conversation would be complete without a question on Tesla. Tom: *"Falling vehicle prices, loss of competition from the mainstream manufacturers, no new models as yet. Where now for Tesla?"*

Tom Slater 50:14
Well, I think what you've seen from Tesla, over the past two or three years is fantastic execution. With the challenges of Covid, and then the extreme pressure on supply chains, they've managed to grow volumes, really consistently and successfully through that period. You've also seen a big expansion and profitability. The cashflow that they've been generating, has put them in a very strong position to invest for the future.

I think one of the big changes in recent months has been on subsidy levels and government encouragement in this area. The Americans were very aggressive on this with the Inflation Reduction Act, pushing significant subsidies, so long as you met certain requirements, so around the price of the vehicles, and the extent to which they were manufactured in America. And the extent to which that supply chain existed in America.

And what you've seen from Tesla is that they've really leaned into that, their mission as a company, is to accelerate the world's progress towards a sustainable energy future. And to do that, you need to drive down the price points, and drive up the volumes. And that's exactly what they've been doing. So when you're trying to judge their behaviour, it's absolutely in line with that mission.

And as I think the question suggested, others have been struggling to grow volumes in the way that they'd hoped. So I am more convinced than ever, about Tesla's advantage, both as a manufacturer and also in terms of its software, and its position relative to other manufacturers. I think they have a huge opportunity in front of them. It's a very big market, they still only have a relatively small portion of.

And the other piece of it is in stationary storage. And that business, providing storage to energy networks, energy grids, again, should benefit very significantly from the incentives that have been put in place here. And I think they're way ahead of everybody else in this.

Stewart Heggie 52:40
If we can just extend that question out into the founder. *"So Baillie Gifford and Scottish Mortgage, talk a lot about founders, the founder, or Elon Musk is involved in SpaceX, The Boring Company and now Twitter. Is that a concern for your investments in the likes of SpaceX and Tesla?"*

Tom Slater 53:02
I think ever since we've invested alongside him, one of the most remarkable aspects of what he does is the incredible bandwidth. It's a guy who works incredibly hard, has the ability to take on several challenges simultaneously. I think that he has that focus on, you know, Tesla is the entity which is generating a lot of his wealth, which allows him to pursue some of those other things. This is important to him. But the follow-on question, and it's really important is 'What is the structure that's in place around him?'

You have somebody who's got this brilliant, big picture thinking and total grasp of the details of what they're doing. Where's the operational infrastructure to make that happen? And I think you've had that for a long time at SpaceX with Gwynne Shotwell, president. I think when you go back to the launch of the model 3 at Tesla and the struggles they had in the production ramp, one of the questions for me was whether that operating infrastructure was there around him. I think they've resoundingly positively answered that question in the past three years.

Lawrence Burns 54:13
Just to give you an anecdote, I was visiting Tesla last year and met with one of their executives. And I won't give it away, but was an important division in what they were doing in Tesla. And he'd recently joined from another large tech company. And we sort of asked him about the differences. And he gave a number, but one that really stuck with me was he said, "well put it this way, the CEO of my last company, never came down to talk to me about what I'm doing. Elon comes down not just to talk to me about what I'm doing, but to test me to see if I'm any good at my job."

So it's impressive, but I think that gives an idea of the involvement that he still has with these companies, despite having to juggling multiple opportunities at the same time.

Stewart Heggie 54:56
A question here, I'll put it to yourself Lawrence, on the macro outlook, which seems to have come through in very small typeface. *"What factor, theme or innovation, do you think will have the biggest impact on investment returns in the next decade?"*

Lawrence Burns 55:14
Yes, so a lot of time, we talk about the two big opportunities that we see as being the intersection between healthcare and technology, and the energy transition. So I think that would be one way of looking at. I think another way would be, it's really the role of AI becoming more incorporated into everything that we do.

So healthcare is one part of that, some of the consumer companies we own are another part of that, within finance, within huge numbers of professions, some of which we don't even have quite a grasp on the potential yet. And so we don't actually know what that change looks like. But we know it could be quite meaningful and quite radical and would be not contained to any one industry or sector.

And part of that is underlying some of the enthusiasm we have for individual companies that are able to leverage the huge amount of data they have and apply machine learning to get insights to run their business better. And then another part of it is owning the picks and shovels of that revolution. And I think NVIDIA is a good example of providing that. when we talk to professors and academics in AI, they say, you know, basically, all roads lead back to NVIDIA in terms of enabling this revolution.

So I think AI is a really, really big thing that will continue to be a bigger part of our lives and of the Scottish Mortgage portfolio. And again, I'll just touch on that energy transition that I think will have a lot of macroeconomic inputs, because trillions of dollars need to move away from hydrocarbons towards a sustainable and, potentially in the long run, cheaper future based off renewable energy.

Stewart Heggie 56:50
Any, any observations from yourself on that?

Tom Slater 56:53
I think Lawrence is right. Any move towards AI is going to require a lot more silicon so yes, NVIDIA but also ASML, which is the absolutely crucial enabler of all of this. But it's hard, because the implications are so uncertain, but I think the results that are coming out of some of the latest AI stuff, which are now becoming extremely visible, because, you know, something like ChatGPT, the front end has just made this technology really accessible, is that you could see it having a profound impact in a very short space of time.

That could really drive productivity across a whole set of sectors that will be hugely deflationary. The idea of humans, augmented by AI, and the potential that goes with that. I just think one of the frustrations of the past year, 18 months is just this disconnect between what we're seeing at a fundamental level, the opportunities, both at the companies but also in the progress of technology. And then the gloom and pessimism that pervades financial markets at this point in time.

Lawrence Burns 58:02
ChatGPT has been a good answer to some of the questions of 'Is tech dead?'. Chat GPT is a sign that people can try and see the improvements and see the improvements with each new version. And I think what's key as we think down the portfolio is that, you know,

there's a possibility over the next decade that actually AI impacts pretty much everything. And I think that comes back to some of the things we're looking at is having teams that are forward thinking that are managing these companies, that are able to incorporate that technology and use it to their advantage. And so I think you both need that adaptability, the tech mindset and the data to be able to do that effectively. And I think companies that don't have that, may struggle with the pace of change that AI causes.

Stewart Heggie 58:41
Okay, we're coming up to the last couple of questions. First is, *"What is your message to shareholders who are concerned about Scottish Mortgage, given the current macro environment, and who may wish to sell?"*

Tom Slater 58:59
And so I'm not sure who came up with this quote, originally, but I'll attribute it to a guy called Gavin Baker on Twitter, which is that no bear market ends until every bottom up investor has a nuanced view of the macroeconomics. And so what the reason in saying that is, what, over the long run, matters is the fundamentals of the companies.

And you know, that is what we focus on. We focus on growth businesses. And I don't know when the current macroeconomic situation is going to improve. I don't think we have any edge in trying to predict it. No one knows. It's a complex system. But over the long run, share prices follow fundamentals. And so, we will continue to do what we've always done.

And I know that hasn't produced a good outcome for shareholders over the past 12 or 18 months. But as we've always said, you invest in Scottish Mortgage if your time horizon is five years or more. We're not going to try and ameliorate volatility. Markets go down as well. As you know, we all know that. If we focus on the long run fundamentals of these businesses, that's what will ultimately drive their share prices.

Stewart Heggie 1:00:22
Well, finally, I'm going to ask what I've been told is the most popular question. Are the managers encouraged to buy Scottish Mortgage shares with their own money?

Tom Slater 1:00:31
Yes, I bought some last week. And it's not just the individual managers. If you look across the partners and employees of Baillie Gifford, there's been a lot of buying in recent weeks and months.

Stewart Heggie 1:00:50
Good. Well, Tom Lawrence, thank you both very much for your time. And thank you to everybody that's joined us today.

A few things to make you aware of, first of all, the session has been recorded, and it will be available on the website with a transcript shortly.

For those of you that have asked questions that we've not been able to answer today, we're going to review all of the questions that have been asked, provide a summary of this webinar that will cover some of those additional topics that you've raised.

Now, the best way to make sure that you receive the updates on that is by signing up to emails by the Scottish Mortgage website (scottishmortgage.com). The last thing to say is thank you very much for joining us and your ongoing support. Goodbye.

Annual Past Performance To 31 December each year (net %)

	2018	2019	2020	2021	2022
Scottish Mortgage Investment Trust plc	4.6	24.8	110.5	10.5	-45.7

Source: Morningstar, share price, total return, sterling.
Past performance is not a guide to future returns.

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