SHORT BRIEFINGS ON LONG TERM THINKING – EPISODE 34

The science and art of picking growth stocks

MB – Malcolm Borthwick

MU – Mark Urquhart

MB: Cast your mind back to Scotland in 1996. A scientist created Dolly the cloned sheep. *Braveheart* won the Best Picture at the Oscars, and it was also the year that Mark Urquhart joined Baillie Gifford as a graduate trainee.

At the time, our largest investments included lender, Lloyds TSB, and oil and gas multinational British Petroleum. Today's top holdings are the computer chip equipment maker ASML, and the ecommerce giant Mercado Libre.

So, at first glance, these companies do appear pretty different. However, at the time of investment they reflected a common characteristic, growth. Well-run businesses chasing big opportunities.

Welcome to *Short Briefings on Long Term Thinking* I'm Malcolm Borthwick, managing editor at Baillie Gifford. And over the next 30 minutes or so, Mark – now an investment manager and partner – and I will discuss Baillie Gifford's approach to growth investing.

But first, a quick reminder, as with all investments, your capital is at risk, and your income is not guaranteed.

Mark, welcome to Short Briefings on Long Term Thinking. Thanks for joining us.

MU: Thank you very much. Nice to be here.

MB: So, let's just start with how you joined Baillie Gifford. You graduated from Oxford with a first, won a Kennedy Scholarship, had a PhD, all before the age of 25. So, a lot of opportunities ahead of you. How did Baillie Gifford come about?

MU: Really by chance. I thought I was going to be an academic, hence the perpetual student approach. During my PhD, which was on Scottish nationalism, and Italian regionalism, I got a bit disaffected with how narrow it was really. And it was very



interesting. I enjoyed it immensely, but as an academic, you specialise and specialise. And I also discovered I didn't particularly like teaching undergraduates because they're quite lazy.

So, I thought I need to do something different. I took myself off to the Career Service at Edinburgh University. Back in the days, this was pre-Google, which was invented in a garage in 1997, the following year. I went through the various ring binder folders and Baillie Gifford popped up. It started with B, so near the start of the alphabet. And I thought, hmm that looks intriguing.

I knew nothing about investment. I wasn't one of these who'd read the *FT* since the age of four. But thought, well, this might use a bit of the politics, bit of the economics, give it a whirl. So I put my application in and was interviewed by the then senior partner, Gavin Gemmell, and the head of the UK, Max Ward, and was offered the job. And that's how it started.

MB: You mentioned ring binding folders there: these were different times. How different was Baillie Gifford in 1996 to now?

MU: We were obviously in a different office. I think there was about 160 staff when I joined. So, we're about tenfold bigger now. We had £12bn or so, sterling, in assets under management, dominated by UK clients and, I think, around 50 per cent of our assets were invested in the UK stock market. That would now be 8 or 10 per cent, I think. So very different.

We expanded into the US, we had some US pension fund clients but, geographically, now our reach over the last 25 years has gone into numerous different countries. But the biggest difference would be we were organised regionally.

So, I started in the US team, went to the UK team, went to the Japanese team in the well-tested rotation, but there are no global teams, there was no international teams. So that was a big change, just around the turn of the millennium.

MB: And in terms of the style of investing, I mentioned a couple of companies in the introduction, British Petroleum, now BP, Lloyds TSB, now Lloyds Bank. How has our attitude to investing in growth companies evolved over the years?

MU: It's moved a long way. Partly that's internal. Partly it's external. I think the external factors are the advent of the internet, connectivity, the whole idea we've all got supercomputers in our pocket, changed everything, really. You know, in the sense that everything was disruptable. If you think back to 1996. It was those companies we loved, Yellow Pages, directory businesses, which for younger listeners will mean absolutely nothing, but those tombstone books used to search for a plumber or an electrician. And when Google did come along they sort of disappeared overnight, almost to what was a fantastic business, steady Eddy, just gone. So, there was something about that change of form factor through the late-1990s, it created the stock market bubble, it got ahead of itself. There's always truth that a bubble, I think, and some of the companies which emerged over the 2000s, or the 2010s, have these extraordinary network effects, have this ability to



grow exponentially and into very large markets. So, to me, that's the most exciting thing that disruption of traditional economics, my sort of first topic of study, and the markets' difficulty in pricing that I think and in really understanding that it's the disrupter rather than the incumbent that that holds the ace cards here.

MB: And were these companies back in the mid-90s, the likes of Lloyds, BP and Vodafone and others, would you describe them as growth companies, growth opportunities?

MU: Absolutely. But I think a good growth company then would be 10 to 15 per cent, you know, something that could compound, the sort of steady Eddies, stalwart growth, whatever you want to describe it. I think the opportunity set now is, and notwithstanding the events of the last two or three years, where some companies have been challenged, in terms of their growth, we can quite often find companies that can sustainably grow 25, 30, even 35 per cent. So that's a quantum of difference.

And obviously, anyone who understands the arithmetic of exponential growth, the difference that makes the endpoint is really quite significant, you know, a company growing at 15 per cent for five years is attractive, it will double. But a company growing at 30 per cent for five years will go up five-fold. So it's that sort of difference in the opportunity set, which I think is hugely exciting, and something we seek to systemically exploit.

MB: And one of the very early companies you looked at was Microsoft.

MU: Yes, that's right. So, I was the young thing on the US team, and had used a very rudimentary computer for my PhD. So, back then we didn't have desktop computers. I think we had one terminal, which had internet access, at the end of the desk, which people treated with suspicion, broker research came through on fax machines. So, it was the job of the young trainee to get the faxes every morning.

And I was seen as the chap that might understand this new-fangled technology: software, which was a relatively new term. It was probably the easiest investment report I've ever written in the sense that, you know, here was a company that had 90 per cent plus market share, was growing really effortlessly, because every computer sold had Microsoft installed, and had that software there, it had huge operating margins and was led by a visionary in the form of Bill Gates. So, I sort of quickly concluded we should buy it.

And I think, much to my surprise, and some of the other people on the team's surprise, Mick Brewis, who was the partner in charge of the US team, and to his credit, bought the shares. So suddenly, that's quite a different thing when you recommended something, and then the trigger is pulled and you own the shares. But fortunately, they did very well.

And I think that was quite an informative moment for me quite early on, that you could get these companies which could grow very quickly, but could then double



again and could double again.

And that's been a mindset I've always tried to keep throughout my career.

MB: And what do you look for, ultimately, in a company? I guess it's a really interesting balance you're referring to there in terms of the kind blue skies thinking, but also the fundamentals in terms of looking at things like cash flow and pricing power. How do you get that balance?

MU: You're exactly right. It's trying to find companies which have that opportunity set but in itself, that's never enough because economic theory would suggest it should be competed away.

So, if we take a company like Hermès, which has been one of my favourites, which amuses my colleagues that a 50-something Aberdonian likes handbags so much.

In theory, they shouldn't be able to sell handbags at the price they sell them at, it's bonkers. Even if they do, which they do, they sell the Birkin and the Kelly and these iconic handbags, others should be able to compete with them, there's no barrier to entry in procuring leather and making nice fastenings, etc, but they can't. And that's because that bag has an iconic brand. It's globally known, it's associated with a sort of era of Hollywood glamour, you can't replicate that. And the company itself has been around since the 1840s. So a new entrant just doesn't have the heritage.

So that leads to the second part of your question, that leads to tremendous margins, tremendous cash flows, being able to finance its own growth. So, I would love to find 35 or 40 Hermèses. They don't exist, or I'm still looking for them. But you're looking for companies that have that opportunity set, but also have those really strong and lasting barriers to entry. Because what I'm ultimately looking for is longevity of growth. I want companies that that aren't just growing for the next 12 or 18 months but can grow for the next decade and more and to allow the share price to compound along with the sales and earnings.

So, I get very excited when you find companies with those barriers to entry, which then translate into the strong financials.

MB: And you started at Baillie Gifford in the US and UK teams. Then you joined the Japan team. I think it was in 1999. Maybe you were a little bit sceptical about joining the Japan team, but that quite informed your thinking, I get the impression.

MU: I was more than sceptical. I was hugely disappointed. I sort of thought, crikey, what have I done wrong? I've been sent to Japan!

The context back then was Japan was in a long bear market, you know, sort of post, I think it was 1990, the Nikkei peaked and that was famously when the Imperial Palace, the real estate there, was worth more than the whole of California was the statistic often bandied around. I was entirely wrong. I had four of the best years of my career. I got to work with some great investors, George



Veitch, who was the partner in charge of the team and, more closely, with Sarah Whitley, who until recently ran Japan Trust, and at the time was running Shin Nippon.

I was working on Small Cap Japan. It taught me to be open-minded. I had gone in with the impression 'oh, these Japanese companies are so staid and boring, the Sony and Toshibas of the world, and they won't change.' But actually, below that, the underbelly, there were all these new companies. Shin Nippon literally means 'New Japan'. And you met these madcap entrepreneurs. I remember meeting the guy that runs a company called Don Quijote. And his idea was that shopping should be chaotic, should be madness, and it was that whole thing of through western eyes, that makes no sense. We want Marks and Spencer's and regimented underpants.

But actually, shopping as entertainment was brilliant, and the Japanese loved it and lapped it up. And it was a huge success, competing against boring department stores. And the second thing was the ability of entrepreneurs, and I think this is something that stayed with me, to really drive through and deliver. So, in the portfolio that I now run we're looking for these special individuals, not always, sort of neat bow ties and very organised individuals. Sometimes mavericks, madcaps, people that will take risks, will do things differently, will see the world differently. So, from the Japanese startups to the Elon Musk's of the world, I think, for me, there's quite a connection.

We're very privileged with the job we do, getting to meet so many interesting people, but it's the mavericks who I really sort of take to.

MB: It's often said, and I've heard your colleague Tom Slater say this a few times, in terms of, usual people don't do unusual things. Is it the Mavericks that are probably key to disruption and bringing about change?

MU: I'd 100 per cent agree.

If you take that example of electric vehicles, 10 years ago, when we were first investing in Tesla it seemed bonkers. You know, first of all, the cars didn't go very far. The batteries weren't very good. People remember the electric vehicles of the 90s and noughties, and, sort of glorified golf carts, really. Didn't look very nice. Even if they were successful, well the big guys would eat their lunch. You know, the classic incumbents.

But what Tesla did was invert that and said, 'let's make really sexy vehicles and people will want to drive them. Oh, and by the way, if we really push the bounds here, we can get 300 miles of range', which is the same as an average tank of petrol. But it took a very brave individual. And this was also someone, remember, who made a lot of money through PayPal, who was then putting his own capital at risk, you know, whereas the bulk of us would have been off sailing yachts and drinking cocktails.

He put it into not just one company, but several companies, obviously with SpaceX. So, there is something about people like that, and entrepreneurs like that,



that is special, I think.

It comes with wrinkles. He has these amazing attributes, but they come with a cost, I think he tweeted so much he bought Twitter. It was that classic razor blades [advert], Braun's 'I like the product so much I bought the company.' So yeah, it's looking for those people who do see the world differently, I think.

MB: And probably have the operational teams around them to execute.

MU: Correct. So, sticking with Tesla, they were making probably about 25,000 vehicles 10 years ago. This year, they'll make about 2 million. When we were first investing, we used BMW as a sort of benchmark of, well, where might a luxury brands get to, and it was selling about to 2.2 million vehicles I recall.

So operationally, it's scaled magnificently, actually. And that's no mean feat. They've had troubles along the way, you know, the tents in California, and the moves into China and Germany, but actually, now they can produce at that quantity. So, you have to have the idea. But you also have to be able to deliver on it and operationally, as you say, hit those targets. And that creates that virtuous cogwheel of cash flows and profitability, which can then fund the growth.

MB: So shortly after you joined, there was the Asian financial crisis. You've been through a lot of volatility with financial markets, the dot com crash, the great financial crisis later. What have you learned going through these crises? Particularly in relation to going through the pandemic and coming out of that as an investor?

MU: I think by my reckoning, there's about 10 crises in a 25-year career. So averaging one every two-and-a-half years. As you said, you could add in the European sovereign debt, there were things in Dubai. The market's always throwing these things at you. I think there's a couple of things that you learn. The first is you cannot control the share prices – you can't at any time – but especially during a crisis.

So, in 2008, the baby and the bathwater were being thrown out and everything was being sold. Quite often it was equities, actually, that were taking the brunt of it, because they were liquid. People could get money out to fund margin calls elsewhere.

All I can do at a time like that, and the team can do, is to focus on the operational performance to really say, okay, is this company delivering what they said?

My third and final child was born in November 2008. I remember coming back into the office, so you know, staggering two weeks parental leave as we had then, and you're back in and noticing that Apple's share price was down near \$100. And I had in my head it was \$200 and turned to Tom, who I was working with at the time, and said: has it had a stock split? 'No, no, just sold off, you know, just one of these markets.' That was October, November 2008. The market was falling 8-9 per cent.

So, it wasn't particularly unusual. But this was a time where the iPhone had been



launched in 2007. It was firing on all cylinders. It was obvious by then that Apple was completely transforming the mobile telephony market at its usual high margins. And so, it was one of those Warren Buffett would describe as a: "pitch you want to swing at". One of those moments where the market was completely disconnected from the fundamentals of the business. And I think keeping that in mind has been a real lesson.

The second is almost an antithesis to the first. That there are times, where the macro does invade the micro. There will be moments such as in the inflation crisis, the cost-of-living [crisis], where some companies business models, are just hugely disrupted. So, we have to retain a humility, I think.

The secret to investing is to hold your ideas passionately, but lightly. Because firstly, things might change in terms of the competitive environment, but also that external environment. So, in the last year-and-a-half, there's definitely companies where we underestimated the impact of inflation or higher interest rates. Coming back to my previous comments on the financials of the business, the balance sheet, you know, those companies couldn't fund their own growth. So, I think it's a combination of really digging into the operational, but remembering that sometimes these exogenous circumstances can change the company's outlook and its prospects.

MB: I was interested in an internal research note that you wrote recently where you mentioned that you'd learned more probably during the period of the pandemic, over the last three or four years, than in your previous 20 years-plus. Why is that?

MU: Yes. There might be recency bias in writing that, but it just feels to me, first of all, we've had a lesson in black swans. Like many others I have read the Taleb book, and one thinks that you think in these terms, but this pandemic, it will be studied for multiple decades to come, in terms of something that really wasn't on anyone's radar. In terms of the whole global economy, adjusting like that, and having a global airborne disease, which could spread so rapidly. So that idea of certainty and the unexpected.

I think the second thing is, we've all been brought up in it in an era of relatively free trade, international movement, you know, the powers of government. In Scotland we had, what was it, five miles you could exercise in for one hour a day? The idea that governments could even do that, even now, seems quite shocking, thinking back from 2023.

I'm not getting political at all, but there's just that ability to close borders. I think that was a sort of reminder. And I think there are ongoing tensions, in the chip market. There are flashpoints.

My PhD is, as you referenced at the start was in nationalism, and I think there are strong pockets of nationalism, which we need to keep an eye on, and be cognisant of, but more than anything, it was the ability of companies, entrepreneurs to navigate through things. So, I'm a huge believer in entrepreneurship as the solution.



And I still don't think we've properly appreciated how extraordinary the creation of the vaccine was. If you think about that, pre-Covid, a vaccine typically took about 10 years to develop, yet we went from lab to shots into people's arms in nine to 12 months. It wasn't just the companies, the innovation there was tremendous, but the way that it was regulated, the logistics of production and getting it in, so to allow us to get back to a functioning global economy with all the attendant problems and the supply chains, etc. But we are now largely open. China being the last major economy to do that. And that gives me great succour. Looking forward, it's a reminder of that that spirit of entrepreneurship can triumph, actually.

So, when I look at the environmental crisis or the healthcare challenges, yes, governments have a role to play, but to me it will be entrepreneurs who we don't know yet who will help solve these sort of problems.

MB: And quite a discombobulating experience really, for both growth investors and the companies that we invest in, in the sense that a lot of that disruption was pulled forward quite sharply by the pandemic, which potentially created quite a difficult environment for investors.

MU: Absolutely, yeah. So, there's a sort of basket of stocks known as the 'pandemic darlings', which were effectively the stay-at-home' stocks, you know. So, whether it was Peloton in fitness, or Netflix, the things which benefited. You're always, as an investor, trying to get to what's the underlying growth here? What's the core growth? What's sustainable growth?

It's a multitude of factors which go into that. But it became difficult during the pandemic.

You definitely knew some had been pulled forward. But the degree to which that might transform society and stick, or the degree to which it might fall back, and I think we made a couple of mistakes in that.

So, something like Peloton, which did the right thing, I think the pandemic was almost the worst thing that happened to that company, bizarrely, because it was growing very nicely before it. Then all the gyms shut. People were shut in their house, they were desperate to exercise. They had to scale up to meet demand.

Had I been in the boardroom, I think I would have taken the same decision. But that then led them to big supply chain issues as society reopened. Actually, there was a community aspect to gym, which people liked. And disappointingly for me, what it's led to is the company has really drawn in its horns, because the real excitement for me in Peloton was, it was only in five or six countries when we were first buying it. And we've seen this playbook many times, where companies with that sort of brand can go into 60, 80, 100 countries and repeat what they've done. And that gets me really excited.

But in the case of Peloton, there was too much and there was some mismanagement as well, etc. So, it was it was hard for the some of the companies. Hard for investors as well. Some have adjusted much better.



So, I'd cite something like Netflix, which had a big fall in the share price, but is now back to growing, has the strongest balance sheet in its industry by a mile, but it's also doing interesting things in terms of different revenue streams.

It's closing that loophole for people with multiple logins, in different locations, can be in the same family account. So, I have a son at university and I pay extra five pounds a month for and that, to me, seems quite fair. He shouldn't be watching that much Netflix at university. But all students do that now. They're also introducing an advertising module etc.

There's a key point that you want companies which are adaptable as well. It's that kind of willingness to, 'oh well the circumstances have changed, we can change our mind and can adapt our business model.'

MB: What company are you excited about at the moment?

MU: I think it's companies that are marrying technology and healthcare that get me really excited. I think one of the lasting effects of the pandemic is this idea of, throughout my career, personalised medicine has been talked about. It's one of those terms that's often bandied around, but I feel as if we're getting closer, and we're on the cusp.

So there's a couple. I really like. Dexcom, which does the glucose monitors, which are very clever technology, fits under the wrist, a tiny chip, and it effectively gives a reading every five minutes for people with diabetes.

There's a big market in Type one diabetes, obviously, and interestingly I was reading the other day that sadly, the incidence of Type one diabetes is rising in children post-Covid. And it's a genetic mutation that scientists have noticed. They're not quite sure where that's coming from. But you've also got the societal, or the lifestyle, Type two diabetes, which I think is a well-worn story that many societies are struggling with that.

This company, it's run by people who themselves have been close, either diabetic themselves or who have had relatives, it saves lives. It will tell you when people are going high or low in their glucose range. It's very focused. It's faced competition from start-ups and from Google, but it's got the best product on the market.

And I think that idea of getting data from the body to your phone is a really interesting one in terms of that bridging of that personalisation gap. I also think we're on the, less than 1 per cent of the global population have had their genome sequenced, we're on the cusp of just a huge explosion in the use of genetic sequencing.

Ultimately the holy grail there is tackling oncology. One out of two of us will get cancer during our lifetime. It is by its very nature a disease of genetic mutation. It's actually sequencing genes and bringing down the cost of that and being able to form treatments around that.

I think that combination of technology and healthcare feels ripe for me in terms of



the timing, and it has taken a while. It's needed to advance in technology and imaging and all sorts but I think that's very exciting.

MB: And we often ask our guests on the programme about what book they're reading. Mark what are you reading at the moment?

MU: It's 1599, which is by James Shapiro, and won the Winner of Winners event for the Baillie Gifford Book Prize. And I think it's just wonderful. So, it's a year in the life of William Shakespeare, 1599 being the year when he wrote some of his greatest plays: *Julius Caesar*, *Hamlet*, etc. But it's incredibly detailed.

There aren't clearly that many records from that time, but he's done a wonderful job of recreating what it was like to live in Elizabethan London. And the challenges. And the economics of the Spanish Armada. There was war in Ireland and there was the potential of a Scottish King coming to replace the barren Elizabeth and, when you read it, you feel as if you're in the streets around the Globe Theatre in London. And I just think it's a *tour de force*, so I'd highly recommend it.

MB: Thanks for the recommendation, and we'll put all that in our show notes so listeners can find out more details about the book. Thanks very much for joining us on *Short Briefings on Long Term Thinking*, Mark.

MU: My pleasure. I really enjoyed the conversation. Thank you.

MB: And thank you for listening. And if you enjoyed the conversation, check out our article *The Changing Face of Growth*, which we've linked to in the show notes. You can also hear from some of our other fund managers at **bailliegifford.com/podcasts**. And please subscribe via Spotify, Apple Podcasts and other platforms. We'd love it if you left us a review to help spread the word. But for now, thanks for investing your time in the podcast, and I look forward to joining you again in the next episode of *Short Briefings on Long Term Thinking*.

Show notes

Resources:

The changing face of growth

Four cardinal questions for growth investors

Mark Urquhart's LinkedIn page

1599: A Year in the Life of William Shakespeare

Past podcasts



Timecodes:

- 00.00 Introduction
- 1:20 Joining Baillie Gifford in the pre-Google era
- 03:45 An evolving attitude to growth companies
- 05:20 Looking for stronger compound growth
- 06:35 Investing in Microsoft
- 08:00 The quest for companies like Hermès
- 09:55 Learning to be open-minded in Japan
- 12:10 The importance of mavericks
- 13:40 How Tesla hit its targets
- 14:40 Investing in times of crisis
- 17:35 What the Covid pandemic teaches growth investors
- 23:05 Today's most exciting growth companies
- 25:15 Book recommendation

Follow us via:

Twitter

LinkedIn

Email

Companies mentioned include:

Alphabet (Google)

Apple

ASML

Dexcom

Don Quijote

Hermès

MercadoLibre

Microsoft

Netflix

Peloton

SpaceX

Tesla

The views expressed should not be considered as advice or a recommendation to buy, sell or hold a particular investment. They reflect opinion and should not be taken as statements of fact nor should any reliance be placed on them when making investment decisions.

This communication was produced and approved in April 2023 and has not been updated subsequently. It represents views held at the time of writing and may not reflect current thinking.



Potential for Profit and Loss

All investment strategies have the potential for profit and loss, your or your clients' capital may be at risk. Past performance is not a guide to future returns.

This communication contains information on investments which does not constitute independent research. Accordingly, it is not subject to the protections afforded to independent research, but is classified as advertising under Art 68 of the Financial Services Act ('FinSA') and Baillie Gifford and its staff may have dealt in the investments concerned.

All information is sourced from Baillie Gifford & Co and is current unless otherwise stated.

The images used in this communication are for illustrative purposes only.

Important Information

Baillie Gifford & Co and Baillie Gifford & Co Limited are authorised and regulated by the Financial Conduct Authority (FCA). Baillie Gifford & Co Limited is an Authorised Corporate Director of OEICs.

Baillie Gifford Overseas Limited provides investment management and advisory services to non-UK Professional/Institutional clients only. Baillie Gifford Overseas Limited is wholly owned by Baillie Gifford & Co. Baillie Gifford & Co and Baillie Gifford Overseas Limited are authorised and regulated by the FCA in the UK.

Persons resident or domiciled outside the UK should consult with their professional advisers as to whether they require any governmental or other consents in order to enable them to invest, and with their tax advisers for advice relevant to their own particular circumstances.

Financial Intermediaries

This communication is suitable for use of financial intermediaries. Financial intermediaries are solely responsible for any further distribution and Baillie Gifford takes no responsibility for the reliance on this document by any other person who did not receive this document directly from Baillie Gifford.

Europe

Baillie Gifford Investment Management (Europe) Limited provides investment management and advisory services to European (excluding UK) clients. It was incorporated in Ireland in May 2018. Baillie Gifford Investment Management (Europe) Limited is authorised by the Central Bank of Ireland as an AIFM under the AIFM Regulations and as a UCITS management company under the UCITS Regulation. Baillie Gifford Investment Management (Europe) Limited is also authorised in accordance with Regulation 7 of the AIFM Regulations, to provide management of portfolios of investments, including Individual Portfolio Management ('IPM') and Non-Core Services. Baillie Gifford Investment Management (Europe) Limited has been appointed as UCITS management company to the following UCITS umbrella company; Baillie Gifford Worldwide Funds plc. Through passporting it has established Baillie Gifford Investment Management (Europe) Limited (Frankfurt Branch) to market its investment management and advisory services and distribute Baillie Gifford Worldwide Funds plc in Germany. Similarly, it has established Baillie Gifford Investment Management (Europe) Limited (Amsterdam Branch) to market its



investment management and advisory services and distribute Baillie Gifford Worldwide Funds plc in The Netherlands. Baillie Gifford Investment Management (Europe) Limited also has a representative office in Zurich, Switzerland pursuant to Art. 58 of the Federal Act on Financial Institutions ("FinIA"). The representative office is authorised by the Swiss Financial Market Supervisory Authority (FINMA). The representative office does not constitute a branch and therefore does not have authority to commit Baillie Gifford Investment Management (Europe) Limited. Baillie Gifford Investment Management (Europe) Limited is a wholly owned subsidiary of Baillie Gifford Overseas Limited, which is wholly owned by Baillie Gifford & Co. Baillie Gifford Overseas Limited and Baillie Gifford & Co are authorised and regulated in the UK by the Financial Conduct Authority.

China

Baillie Gifford Investment Management (Shanghai) Limited 柏基投资管理(上海)有限公司 ('BGIMS') is wholly owned by Baillie Gifford Overseas Limited and may provide investment research to the Baillie Gifford Group pursuant to applicable laws. BGIMS is incorporated in Shanghai in the People's Republic of China ('PRC') as a wholly foreign-owned limited liability company with a unified social credit code of 91310000MA1FL6KQ30. BGIMS is a registered Private Fund Manager with the Asset Management Association of China ('AMAC') and manages private security investment fund in the PRC, with a registration code of P1071226.

Baillie Gifford Overseas Investment Fund Management (Shanghai) Limited 柏基海外投资基金管理(上海)有限公司('BGQS') is a wholly owned subsidiary of BGIMS incorporated in Shanghai as a limited liability company with its unified social credit code of 91310000MA1FL7JFXQ. BGQS is a registered Private Fund Manager with AMAC with a registration code of P1071708. BGQS has been approved by Shanghai Municipal Financial Regulatory Bureau for the Qualified Domestic Limited Partners (QDLP) Pilot Program, under which it may raise funds from PRC investors for making overseas investments.

Hong Kong

Baillie Gifford Asia (Hong Kong) Limited 柏基亞洲(香港)有限公司 is wholly owned by Baillie Gifford Overseas Limited and holds a Type 1 and a Type 2 license from the Securities & Futures Commission of Hong Kong to market and distribute Baillie Gifford's range of collective investment schemes to professional investors in Hong Kong. Baillie Gifford Asia (Hong Kong) Limited 柏基亞洲(香港)有限公司 can be contacted at Suites 2713-2715, Two International Finance Centre, 8 Finance Street, Central, Hong Kong. Telephone +852 3756 5700.

South Korea

Baillie Gifford Overseas Limited is licensed with the Financial Services Commission in South Korea as a cross border Discretionary Investment Manager and Non-discretionary Investment Adviser.



Japan

Mitsubishi UFJ Baillie Gifford Asset Management Limited ('MUBGAM') is a joint venture company between Mitsubishi UFJ Trust & Banking Corporation and Baillie Gifford Overseas Limited. MUBGAM is authorised and regulated by the Financial Conduct Authority.

Australia

Baillie Gifford Overseas Limited (ARBN 118 567 178) is registered as a foreign company under the Corporations Act 2001 (Cth) and holds Foreign Australian Financial Services Licence No 528911. This material is provided to you on the basis that you are a "wholesale client" within the meaning of section 761G of the Corporations Act 2001 (Cth) ("Corporations Act"). Please advise Baillie Gifford Overseas Limited immediately if you are not a wholesale client. In no circumstances may this material be made available to a "retail client" within the meaning of section 761G of the Corporations Act.

This material contains general information only. It does not take into account any person's objectives, financial situation or needs.

South Africa

Baillie Gifford Overseas Limited is registered as a Foreign Financial Services Provider with the Financial Sector Conduct Authority in South Africa.

North America

Baillie Gifford International LLC is wholly owned by Baillie Gifford Overseas Limited; it was formed in Delaware in 2005 and is registered with the SEC. It is the legal entity through which Baillie Gifford Overseas Limited provides client service and marketing functions in North America. Baillie Gifford Overseas Limited is registered with the SEC in the United States of America.

The Manager is not resident in Canada, its head office and principal place of business is in Edinburgh, Scotland. Baillie Gifford Overseas Limited is regulated in Canada as a portfolio manager and exempt market dealer with the Ontario Securities Commission ('OSC'). Its portfolio manager licence is currently passported into Alberta, Quebec, Saskatchewan, Manitoba and Newfoundland & Labrador whereas the exempt market dealer licence is passported across all Canadian provinces and territories. Baillie Gifford International LLC is regulated by the OSC as an exempt market and its licence is passported across all Canadian provinces and territories. Baillie Gifford Investment Management (Europe) Limited ('BGE') relies on the International Investment Fund Manager Exemption in the provinces of Ontario and Quebec.

Israel

Baillie Gifford Overseas is not licensed under Israel's Regulation of Investment Advising, Investment Marketing and Portfolio Management Law, 5755-1995 (the Advice Law) and does not carry insurance pursuant to the Advice Law. This material is only intended for those categories of Israeli residents who are qualified clients listed on the First Addendum to the Advice Law.

