# *LONG TERM GLOBAL GROWTH Q1 INVESTMENT UPDATE*

Client Service Director Stewart Hogg and Investment Manager Michael Pye give an update on the LTGG Strategy covering Q1 2023.

As with any investment, capital is at risk. Past performance is not a guide to future returns.

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

**Stewart Hogg (SH):** Welcome to the Long Term Global Growth updates. My name is Stuart Hogg, a client director in the team. And today I'm joined by Michael Pye, an investment manager and decision maker for the strategy. Welcome, Michael.

**Michael Pye (MP):** Thanks, Stewart.

**SH:** Now, as a reminder, Long Term Global Growth is a purely stock-driven, unconstrained, global equity strategy, investing in transformational growth opportunities over the long term.

Michael, last time I had a conversation with Gemma, we talked about the market environment and the impact on holdings, it would be good to get a broad summary of how you've viewed the market environment over the past couple of years

**MP:** Sure, thanks. I think as the first comment, it would be naive to suggest to you or others that we can somehow ignore the external environment. Now, the growth rate of companies in the portfolio is on the order of 30 per cent. So that's about five times the current inflation rate. So that's very valuable in this type of environment.

However, it's not enough. So the environment that we have at present, one where, I'm going to borrow Elon Musk's very striking phrase here, where money has stopped raining on fools, one that really shines a spotlight on execution by companies, whether the companies have perhaps rested a bit too much on their laurels, or stopped investing, or got distracted, added extra complexity to their business, relied on unfettered access to capital markets, those types of businesses are going to be in for a rude awakening over the next couple of years.

And that's why it's very important, I think, in our investment process, that we place a lot of emphasis not just on growth, as clients would expect, but on financial resiliency, and crucially, adaptability from a cultural standpoint.



0423 LTGG Q1 update
37981 10019804

And what's important about those two characteristics is you can't have one without the other. It's difficult to adapt if you've not got the financial resiliency.

So, think of a company like a Moderna, where they've got this enormous cash war chest that they built up during the Covid pandemic, or think of a company like Adyen, which staunchly refused to get side-tracked by the crypto hysteria over the past two years. Those two companies now have the right to be able to adapt, to use their cash balance, in Moderna's case, to double down on the clinical pipeline. In the case of an Adyen, perhaps, to hire those engineers that were too expensive or not available a couple of years ago and really invest for the future. So, I think there's a case that for some of the companies that we hold in the portfolio, the environment actually can make them stronger.

**SH:** I think that's a great point, and you mentioned a couple of good examples there. So there's the importance of financial resilience, especially in a rising rate environment. The cost of capital is increasing. Could you maybe go into a little bit more detail into a company specifically that's benefiting from this environment, and also how they're actually putting that financial firepower to use?

**MP:** Sure. So when we talk about financial firepower, approximately two thirds of the LTGG portfolio is sat on net cash, that compares to about a quarter of the index. What that statistic disguises is that in many cases, it really is a lot of cash relative to the market cap. We talked about Moderna a moment ago. I think one stunning example of this is BioNTech, which we invested in a couple of years ago, at the outset of the pandemic.

Now for those who may not be familiar, BioNTech was founded 15 years ago, and it was founded by two academic oncologists, Ugur Sahin and Ozlem Tureci. And they started with a simple premise, which was, what new technologies becoming available over the next decade could make a meaningful difference to survivability and outcomes for cancer patients? And they concluded that the strongest answer to that question was mRNA technology. Which is how, when you got to the pandemic, they were in that, if you will, the right place at the right time, because they've been working on that technology for a decade prior.

And they also viewed it, and I think this is a really interesting comment on the culture of BioNTech, the founders viewed it as a moral imperative. The story goes that Ugur Sahin was on holiday, and he was reading, as you do on holiday, an academic journal, and he came across an article about what was then referred to as the Wuhan virus, the novel SARS-CoV-2 that was as it subsequently became, and he immediately cancelled his holiday, went back and told the board, we need to invest behind this vaccine now, because if we don't, there will be people in this company who will get very ill with this virus, and some may sadly die. So incredible foresight.

And the result of that foresight is that now BioNTech has this $13 billion cash war chest, which they're not eating into, by the way, because I think one misconception is that Covid has not gone away. It's still resulting in something like, versus flu in the US, three times the rate of hospitalisations and eight times the number of deaths last year. So we're going to still need vaccination for a period going forward. So they have a very strong core franchise now, and they have this cash.

So the question is, what can BioNTech do with that cash? And the answer is, to go back to the original point, they can invest behind their long-term mission to cure cancer, effectively.

So what does that look like? Give a concrete example, you said. So they recently bought a business here in the UK called InstaDeep. It was an acquisition of about $450 million at the time. That is, just as a side comment there, a size of acquisition that an early-stage biotechnology company could really only dream of, let alone afford.

So what is InstaDeep? And why have they paid so much for it? You can think of it as being like a ChatGPT for drug discovery. So one of the main candidates in BioNTech's cancer pipeline is this principle of a cancer vaccine, and it's very, very similar to the Covid vaccine. What you're effectively doing is using the same mechanism to direct the body's own immune system against the tumour. You're effectively vaccinating the patient against their own tumour.

But the problem with that is cancer is incredibly heterogeneous. It's very varied between patients in terms of its genetic makeup. You could have tens of thousands of characteristics of a particular cancer in a patient, which might differ radically from someone else's. And obviously, you can't put tens of thousands of characteristics in each vaccine because that wouldn't be scalable.

But what InstaDeep allows them to do is to take those, say, ten thousand characteristics, narrow it down to eight or nine, based on the data they're getting back from the tumours, so that you maximise the probability of being able to eliminate the tumour. Now what does that mean? The implications, actually, for cancer care could be really quite profound.

So you might, for example, not need to have chemotherapy after surgery. You would use a cancer vaccine to effectively mop up the residual disease. Or you might be able to have cancer vaccines for indications where there is currently no standard of treatment available. Or it does exist, but it's toxic to the patient.

So this is a hugely exciting opportunity. And to come back to your question, the financial resilience of BioNTech allows them to now double down behind that. So we've been really pleased to see them doing that.

**SH:** Great. So the future seems pretty exciting for companies like BioNTech, that you've just mentioned. Moderna also in the mRNA space. I'd be interested to know, Michael, what's the company in the portfolio right now that you're most enthused about? I think you've mentioned BioNTech already, but let's choose another. They're also a company that keeps you up at night as well.

**MP:** It's a very interesting question. My response would actually be it's the same company, and the company is Ginkgo Bioworks. It's been in the portfolio for about a year now. It's half a percent of fund, just to set the scene for listeners. And really, the way that you should think about that portion of the portfolio, where you should view it is where it's experimental holdings. It's small position sizes in companies where the range of potential outcomes is very broad.

But if they succeed, then the outcome could potentially be significantly beyond the 5x, the five times stock return hurdle that we set for ourselves. So Ginkgo fits in that category. So what does Ginkgo do? Ginkgo is a leading synthetic biology company. It programs organisms.

Now what does that mean? I think the way to conceptualise it is if you think about the physical world around us, things that we wear, that we eat, the everyday materials in our lives, they are typically produced in one of three ways. They're either synthesised from a chemical, or they're extracted from a fossil fuel, or they're harvested from nature in some way. And what we can do is we can program biology, we can genetically engineer organisms to produce those substances instead. So rather than going through fossil fuel or chemical engineering or take it from nature, we can effectively ferment or brew, if you like, these substances directly.

Now concrete example of that, because I appreciate that might sound a little futuristic. The service that Ginkgo offers is the programming part. So a customer comes to Ginkgo, and they say, we have an idea for a product that we'd like you to create using biology rather than the petrochemical process or whatever we've used before. And Ginkgo will go, and they will create that organism, effectively.

And an example is they have a partnership with Bayer, which is the leading, among other things, chemical, agricultural chemical manufacturer, to reduce fertiliser use on corn. So Ginkgo created a microbe. And when you put that microbe on corn plants, those microbes fix nitrogen. So corn can't fix its own nitrogen. Those microbes fix the nitrogen. And the result is you need less fertiliser. In fact, in the field trials they've done so far, you need half the amount of fertiliser. And just to give a sense of why that's such an enormous opportunity and so important. Fertiliser use globally produces something on the order of 2 per cent of carbon emissions. It's actually the same size, in terms of carbon emissions, as aviation. Aviation gets all the headlines about avoiding air travel, but actually fertiliser, these are really substantial problems.

So Ginkgo does the cell programming for that, and that can apply to pretty much any number of areas that you can think of, whether you want to create a fragrance, for example, for a perfume, or a synthetic meat, or a fuel, and the extension space really is absolutely enormous.

So where is Ginkgo in that journey? The answer is they're pretty early. It's $100 to $200 million of revenue from that core cell programming business. Very encouraging progress. Customer count doubled last year. They're expecting the same this year.

But, and this comes to your question of what keeps me up at night, that business is not yet profitable. They're in a very strong cash position. They raised a lot of money while the sun was shining. They've got about $1.3 billion on the balance sheet, which at current rates would give them about four, five years to get their business through to profitability, but that runway is not endless for them to expand the uses of synthetic biology and really get that technology into the mainstream.

But if they do, the extension space of synthetic biology is potentially absolutely enormous, as I've outlined. Ginkgo's criticality and the advantages that they have from the data set that they've built up with working with multiple customers should be very powerful if they can get there.

**SH:** Sounds very exciting for Ginkgo Bioworks. I think the statistic that's jumped out to me is that for the companies in the portfolio that are unprofitable, I think, on average, each company has about, on average, two to three years of cash runway. So that's obviously an important thing when we talk about financial resilience. Maybe to finish, Michael, is there any specific message you'd like to leave clients with? Just on the back of the evolution of the portfolio in the past couple of years.

**MP:** Yes. Absolutely. So in terms of the word evolution, I think what's actually more important is that we're sticking to our investment philosophy, not bending with the environment to somehow retreat to safety or invest in mundane companies. We should still be looking for the Ginkgos of the world, the BioNTechs of the world, the true blue-sky outliers.

Otherwise I don't think we'd be doing out job properly for our clients. And there's the famous Warren Buffett phrase that get bandied around, which is, the tide has gone out, and we found out who's swimming naked. Well, I'd add to that that everyone else has also left the beach. This is a really rich environment for growth investors.

Now there's going to be a lot of seaweed left behind when the tide's gone out, but there will also be gems of companies that others have discarded in their rush to safety, and hopefully we can take advantage of that situation for our clients.

**SH:** Thanks, Michael. So the main takeaways for today, I would highlight, probably, it's growth and financial resiliency are equally important in the current environment, and I think one of the main messages is that the portfolio is very well placed to benefit from that. The second is that we remain excited about companies in the portfolio, but competition for capital is always intense, and there's lots of new ideas coming from discussion. And then maybe the final point, the philosophy remains very much unchanged. We're looking for transformational growth opportunities that drive returns for our clients way into the future. Thanks, Michael.

**MP:** Very welcome.

**Annual Past Performance to 31 March Each Year (Net %)**

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| Long Term Global Composite | 8.4 | 10.7 | 104.4 | -18.1 | -18.1 |
| MSCI ACWI Index | 3.2 | -10.8 | 55.3 | 7.7 | -7.0 |

**Annualised returns to 31 March 2023 (Net %)**

| | 1 Year | 5 Years | 10 Years |
|---|---|---|---|
| Long Term Global Composite | -18.1 | 10.5 | 15.2 |
| MSCI ACWI Index | -7.0 | 7.5 | 8.6 |

Source: Baillie Gifford & Co and underlying index provider. USD. Net of fees returns have been calculated by reducing the gross return by the highest annual management fee for the composite.

**Past performance is not a guide to future returns.**

**Risk Factors**
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.

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

BAILLIE GIFFORD

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.

**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.



0423 LTGG Q1 update
37981 10019804

**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.