BAILLIE GIFFORD | Long Term Global Growth

Reflections

Second Quarter 2022

Sailing in the Roaring Forties

Thirty degrees on either side of the equator, blue skies and gentle ocean swells prevail. Warm, easterly trade winds make for plain sailing and they've been exploited by commercial captains for centuries. For 10 of the last 12 years, equity market conditions have been similarly benign, thanks to steady economic growth, globalisation, and a limitless supply of extraordinarily cheap capital.

In such easy conditions, even poorly skippered companies made respectable progress.

But the global economy is now charting a new course, away from those benign trade winds and down into the Southern Ocean where rolling waves and strong gales – the famous "Roaring Forties" – abound. The stock market is struggling badly to calibrate this new sea state. Its staple diet of quarterly comparators, short-term earnings guidance and discount rate estimates is in disarray thanks to geopolitical travails and sudden inflation. And as a result, a yawning gap between share price movements and operational progress has emerged. This dislocation is particularly stark for rapidly growing companies. That's why, despite extremely strong operational growth, the valuation of the LTGG portfolio is back to where it was in May 2020.

In these conditions, we need to retain a resolute humility about our ability to predict near-term events.

We have no idea when the tragic situation in Ukraine may be resolved and little visibility around whether higher inflation will prove transient or prolonged. Our central premise though is that we may well be sailing in the Roaring Forties for quite some time to come.

From an LTGG perspective, these are conditions that should reinforce our structural advantage because febrile conditions tend to sort the adaptable companies from the average ones. The structural gales of technological and societal change that power the portfolio are strengthening further. Over time, they will amply overcome the headwinds of a shrinking economy. Many companies in the portfolio will be beneficiaries of deglobalisation. The portfolio is in a significantly stronger financial position than any major index.

This mid-year reflection expands upon why we're well placed to sail in the Roaring Forties, why the vessel is robust and why the crew is disciplined. It also explains why, from this starting point, we think that the upside potential for the LTGG portfolio is higher than ever before. In that sense, the recent sell-off presents a once-in-a-generation opportunity for the long-term investor.

We're used to rough weather…

…But this storm is a big one, and we want to be upfront in acknowledging that even for our commendably long-term clients, sharp performance drawdowns are neither pleasant nor comfortable. At the time of writing, we've seen a drawdown of almost 50 per cent, so it's been a precipitous period for the portfolio in share price terms – and the second largest absolute drawdown in the history of LTGG.

But following an epoch of unusually smooth returns, it's important to remember that volatility is not especially unusual, and we're used to navigating it. The 2008 drawdown remains the largest in absolute terms for LTGG: minus 55 per cent in US$ terms. But there were also occasions in 2011 and 2018 where the portfolio fell by around 20 per cent. Students of the even longer-term (predating the 2004 inception of LTGG), might be interested to learn that the Scottish Mortgage Investment Trust (Baillie Gifford's longest-standing global equity client) has fallen by over 40 per cent on six separate prior occasions.

Volatility isn't uncommon at an individual holding level either. Looking at the current LTGG holdings, we've seen over 150 individual drawdowns of over 30 per cent and around 50 separate instances of share prices halving. The strongest long-term absolute performers have tended to be among the most volatile. Our role during capricious market periods is to quietly support companies. Indeed, the high level of access to management teams that we enjoy is a direct function of our reputation for patience during tough times.

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The vessel is robust

A challenging economic backdrop will expose the weak portfolios – no matter how shiny they seem on the surface. We're confident in the seaworthiness of LTGG for five different reasons:

The portfolio is well placed to weather rising costs of capital (and possible stagflation)

Many of today's corporate leaders may consider themselves battle-hardened, in the light of a financial crisis and a pandemic over the last 15 years. But faced with the possibility of a more stagflationary environment, their primary task will now be to fight harder down in the trenches of the income statement in order to defend margins and cash flow. In this context, the LTGG portfolio is in good shape.

— More than 71 per cent of the LTGG portfolio by weight is free cash flow (FCF) positive. That's a markedly higher level than the index. Of the five holdings that are not currently FCF positive, we're confident that BeiGene and Coupang have clear roadmaps to profitability. We're less sure on Peloton, Carvana and Beyond Meat (less than 2 per cent of the portfolio between them) – and are continuing to engage in that regard.

— 28 of the portfolio holdings sit on net cash. That's almost 70 per cent by weight, compared with 30 per cent of the index. For the holdings that do sit on net debt, their ability to service that debt looks considerably more comfortable than is the case for the broader market.

— All holdings except one (Peloton) have over a year's worth of liquidity (liquidity vs cash burn) on hand. The portfolio median of 2.1 compares with 1.5 for the index.

All these numbers serve to highlight not only the aggregate seaworthiness of the LTGG portfolio, but also the importance of disciplined stock picking in the current environment.

The portfolio looks resilient in the face of inflation

Near-term inflationary forces

There's a decent chance that inflation proves more persistent than some company leadership teams expect. Wages and input bills are rising, so we've been considering the extent to which LTGG holdings will be able to pass on costs to defend their margins without affecting demand.

It's a reassuring picture at the aggregate level. We'll keep revisiting this observation, but we currently believe over 90 per cent of the holdings by weight are either relatively insulated from cost input increases and/or in a strong position to pass them on. The starting position is that the LTGG portfolio is relatively asset-light. Atoms may be inflating in cost, but bits and bytes aren't – so it is helpful that the portfolio has a skew towards holdings that are applying software to solve knotty real-world problems. The enterprise software companies are well placed, for example. Not only do Adyen, Atlassian, Salesforce, Zoom, Cloudflare and Workday have low variable costs but they're capital and labour light and their services are less discretionary in nature.

All in, we feel that only a very small number of holdings (cumulatively less than 5 per cent of the portfolio) are disproportionately exposed to inflationary considerations. Beyond Meat has a high level of exposure with little pricing power, Peloton has latent pricing power in the subscription business but a very exposed equipment business, and the volumes of used car retailer Carvana could be impacted by any deferral of big-ticket consumer spending. Affirm, the 'buy now, pay later' company (and another very small holding), is also the source of some discussion. While their commitment to underwriting every single loan (a unique and undervalued differentiator) should insulate them from rising delinquency rates, we're unsure whether they'll be able to pass on their rising cost of capital to merchants. This is an issue that won't be faced by Apple, whose new designs on the 'buy now, pay later' market are backed by a formidable balance sheet.

Longer-term inflationary forces

This quarter, the temperature in Delhi has exceeded 40°C for many days. A record-breaking heatwave has ravaged the wheat harvest and exacerbated food shortages arising from the Ukraine crisis. While the market is focused on these near-term challenges, we remain mindful of a longer-term – but linked – inflationary force. At present, roughly three quarters of global carbon emissions are priced at less than US$10/tonne. But over our investment horizon, our central case remains that both the proportion of priced emissions and the average price of those emissions will rise very markedly. The decarbonisation of the global economy will entail remarkable innovation and opportunities for companies that facilitate energy efficiency. Cloudflare and NVIDIA remain greatly underestimated in our view. We continue to reflect further on the implications for our holdings more broadly.

The portfolio can grow in a slowing economy

We've talked in the past about the manifold limitations of economic growth as a construct. We don't plan to expend any energy in trying to predict short-term macro growth rates, but we fully acknowledge the high chance of economic stagnation in years to come.

Importantly though, we believe that there is plenty of scope for LTGG to grow strongly even if the global economy shrinks. Since 2004, there's been no correlation between economic growth and operational or share price growth in the portfolio. In fact, the portfolio's top-line growth rate has gradually ticked up over time – from 15 per cent back in 2004 to 30 per cent today – despite a gradual tapering down of economic growth from 4.5 per cent in 2004 to 3 per cent, then 2 per cent in the pre-pandemic years. During the one period of economic contraction in 2008, aggregate revenue growth in the portfolio continued to accelerate.

Today's LTGG portfolio should hold up well in the face of any consumer belt-tightening. Over a quarter of the portfolio is made up of companies that provide increasingly essential infrastructure for the 21st century. Illumina, Cloudflare, Amazon, CATL, ASML and NIVIDIA provide the 'picks and shovels' that underpin genomics, cloud computing, electrification and chip technology. Their services are not as discretionary and ripping them out would require years of planning.

Another large slug of the portfolio is in companies that help companies, governments and merchants to save money and remove wastage. Companies such as Atlassian, Zoom and Salesforce fit into this cohort in the context of the enterprise, and Moderna in the sphere of healthcare. All enjoy strong recurring revenue streams. Adyen, Shopify and The Trade Desk meanwhile, offer similar benefits to merchants that are looking to trim bloat and target spending more effectively in a slowing economy. In a similar vein, the business models of Pinduoduo and Meituan are predicated on enabling customers to find better deals.

In light of the dynamics above, only a quarter or so of the portfolio holdings by weight are at the more consumer-exposed end of the spectrum. Tesla and NIO have affluent customer demographics and healthy order backlogs. Kering and Hermès meanwhile, have long track records of pricing power within the realms of high-end luxury.

Netflix and Carvana reside within the reassuringly small group of holdings at the more exposed end of the spectrum. We'll be keeping a close eye on their operational performance.

The portfolio is relatively resilient to deglobalisation – but we're monitoring it closely

Before the pandemic, goods typically took around 50 days to travel from the gates of a factory in China to the warehouse of a US distributor. With a substantial chunk of the world's container fleet currently stuck in congestion in major ports, this timescale has now more than doubled. Given the various geopolitical tensions around the world, the current bottlenecks and shortages seem unlikely to resolve themselves any time soon. Companies will need to restructure their supply chains, optimising for just-in-case rather than just-in-time scenarios.

This presents quite a conundrum for the many multinationals in the index – especially Apple, which needs to diversify its final assembly away from China. The overall ramifications for the LTGG portfolio are probably less profound, however, for a couple of reasons. First, the level of Chinese revenues derived by non-Chinese companies is low (and lower than the index). Second, for those that do get more involved in the manufacturing and distribution of physical goods (and it's a relatively small proportion), there's a tendency towards more vertical integration. Tesla, for example, stands alone among the world's car companies in not having suffered from chip shortages because it writes all its own software and can adjust its hardware to accommodate different chip suppliers. Therein lies Tesla's enduring and consistently underappreciated advantage. On the other hand, we're cognisant of challenges in the battery supply chain, and also that domestic competition from Chinese electric vehicle (EV) rivals such as NIO is intensifying.

Amazon's logistics business may be a bit more exposed to deglobalisation too. When we bought Amazon for LTGG the company had three fulfilment centres. Since then they've invested over $100bn in logistics – a scale of investment that has powered a formidable flywheel of ever-improving inventory turnover and cash flow per employee. The question now though, is whether today's network of over 360 fulfilment centres, 260,000 delivery drivers and over 100 cargo aircraft is well-suited to a new era of more localised fulfilment. Shopify – only just embarking on its own fulfilment drive – may be more able to flex to this new world, and we're closely monitoring that dynamic.

The portfolio can benefit from Chinese solipsism

A wry sage once observed that under capitalism man exploits man, while under communism it's the other way around. China's hybrid economy model has always been interesting to observe and over the past few years, the path has taken a couple more interesting turns.

The 20th party congress will be held towards the latter part of this year. President Xi Jinping will almost certainly seek a third term as China's top leader. From an investment perspective, we've been reflecting on the combined implications of 'Wolf Warrior diplomacy' and an aspiration to deliver the seemingly impossible trinity of strong economic growth, stable debt and zero Covid-19 cases. Despite some improvement in the Covid-19 numbers, the official strategy of 'micro-lockdowns' and mass testing looks like a new norm. Consumer confidence has been dented as a result.

We have also been reflecting on the shifting regulatory sands. In recent months, messages from Chinese regulators have been mixed, and at times contradictory. It has been a challenging environment for our Chinese holdings to navigate and we have been engaging with their management teams accordingly.

Acknowledging the limited extent to which we can have insight here, our overall perception is that there's been a shift of tone away from the aggressive wing clipping of any company that risked becoming bigger than the party. There's an acknowledgement from the Chinese government that online platforms are key to the successful functioning of the local economy. And Beijing needs homegrown success stories that help the party deliver on its long-term goal of achieving more technological independence. From a process perspective, this raises some interesting questions.

We're asking whether these changes translate into dimming sums for our longer-established Chinese holdings. Do Tencent and Alibaba still possess the degree of radical upside that we seek? On the one hand, it seems likely that they will now struggle to expand into other South-East Asian countries (that opens up the runway for some newer LTGG holdings in that region, such as Coupang and SEA). On the other hand, they're prodigious cash generators and even if their growth slows, their duration is hugely overlooked by the market. When it comes to the mercurial newer platforms – Pinduoduo and Meituan, both seem increasingly important enablers of the Chinese Common Prosperity agenda. Their quest is to digitalise and modernise supply chains in agriculture and retail more broadly. In our view, both are in the very early stages of delivering upon their respective missions. We're also pondering whether the tailwinds have strengthened the newer generation of Chinese companies in the portfolio. NIO (electric cars), CATL (batteries) and BeiGene (biotechnology) may see structurally higher margins for longer thanks to strong government support – and a greater degree of upside in the light of recent share price falls.

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Overall, when we balance the upside and downside risks to the Chinese LTGG holdings, the portfolio's exposure to China feels about right. Our current deliberations relate more to whether there's a case for consolidating behind a smaller number of the stocks in which we have the greatest conviction.

Disciplined seamanship

We have explained why we feel that the LTGG portfolio is robust and why it has some highly defensive characteristics. But sailing in the Roaring Forties also requires disciplined seamanship – a robust investment process. In the 18 years since the inception of LTGG, we have consistently returned to the grounding of the 10-question research framework through periods of volatility to calibrate our investment theses. This time is no different.

Revisiting the long-term opportunity sets for our stocks, we feel the contentions that are driving the portfolio seem unlikely to be knocked off course by any macro headwinds. Has healthcare become less likely to personalise? Will people go back to offline forms of media and commerce for their business and personal lives? Are we likely to be using fossil fuels 10 years from now? Is the transition of food supply chains likely to stall? For us, the answer to all these questions is 'No'. Indeed, crises often amplify trends that are already gaining momentum. Well before the recent market gyrations, the world was retooling and rewiring itself for the new era.

We have long considered the notion of 'reversion to the mean' to be a dangerous fallacy. The current average top-line growth rate of over 40 per cent across the portfolio supports this contention. There is some serious noise in the numbers now (post Covid-19 normalisation and China lockdowns) but for what it is worth, 11 holdings have posted year-over-year growth of >50 per cent, 15 have posted year-over-year growth of 20–50 per cent, 10 have posted year-over-year growth of 10–20 per cent and 2 have posted year-over-year growth of <10 per cent.

Our investment process places great emphasis on corporate culture – a vital but unmeasurable attribute that doesn't show up on a balance sheet and can't be modelled in a spreadsheet. In a volatile environment, this is particularly problematic for the stock market's ability to appropriately value companies because corporate adaptability is the main determinant of a company's ability to successfully navigate stormy seas. Over the past few months, we've been back out on the road, meeting with the management teams of many of the companies in the LTGG portfolio, and some of their competitors. This exercise has been particularly helpful for some of the younger portfolio holdings. Discussions with Adyen and Roblox have reinforced our belief that these companies are cultural outliers with management teams that won't succumb to the gravitational pull of short-termism.

At a portfolio level, we continue to place significant emphasis on a long-term approach to capital allocation. It remains the case that in aggregate, portfolio holdings are spending almost four times more on long-term investment (research and development and capital expenditure) than they are on short-term optical improvements (buybacks and dividends) – a ratio that is 2.5x higher than for the index.

Despite this reassuring aggregate picture, a couple of holdings are in the worry bag and under close review based on questions around execution and adaptability. One is Netflix where we have been discussing the ramifications of the ongoing content spend arms race with Amazon and Disney, the declining half-life of programmes, the shift back towards bundling and the payoffs of a potential shift towards an ad-supported 'freemium' model. Another is Peloton where our original contentions around connected fitness remain intact, but we harbour concerns over the company's ability to execute well. We're engaging closely with Peloton around their plan to shift focus from hardware to software with less emphasis on the bike and more emphasis on improved content management and data analytics. In each of these cases, the market response to the near-term challenges has been punishing. The behaviourally easy shortcut would be for us to respond by either adding or selling. But in each of these cases, we're resisting the instinct to hurry – carefully reviewing the investment cases and engaging with the companies before forming a definitive view.

Investing in this environment also requires discipline around the assessment of margins and returns. It's a positive overall picture with many holdings primed to benefit from stable or expanding margins as they scale. But again, we've felt that just a couple of stocks are on a less secure footing. We've moved on from the food delivery business, Delivery Hero – increasingly concerned that regular capital raisings were not translating into improved unit economics. And we've also been reflecting on Meta where structural threats to the core advertising business (not least from Tik Tok) are driving the need for ever-increasing levels of defensive capital expenditure. From here, a convincing investment case requires a high degree of confidence that they can successfully pivot via their endeavours in virtual reality – an area of some debate within the team.

In summary, then, a small handful of holdings have growing questions to answer. That should always be the case and if it's not, you should ask searching questions of us. But we're broadly very happy with the positioning of the portfolio. Aggregate operational performance continues to motor along just as we'd hoped and expected. That's why turnover remains characteristically low.

As ever, it's important that all the portfolio incumbents continue to stack up well against a strong subs bench. Competition for capital remains strong. Recent new ideas include Guardant Health (precision oncology), Veeva (cloud computing for the life sciences industry), Okta (online security), DocuSign (online contract management), Cadence (electronic systems design), JOBY (electric aviation), Sunrun (residential solar panels), Samsara (Internet of Things monitoring), Teladoc Health (Telemedicine) and LONGi (Chinese solar projects and systems). We've been following a number of these stocks for several years, but we hadn't previously invested as they seemed priced for perfection. We're reconsidering whether recent share price falls make for more compelling upside scenarios.

In this vein, it's worth flagging Ginkgo Bioworks, the synthetic biology company as a new entrant to the portfolio. We first invested in Ginkgo as a private company back in 2016 for other Baillie Gifford funds. We took a look for LTGG following the IPO last year but, from a valuation and upside perspective, we were struggling with the $25bn market valuation. Now, with the market capitalisation south of $5bn, the probability adjusted payoffs are significantly higher – so an attractive entry point has arisen by dint of current market volatility.

Beyond the discipline of the 10-question framework, we continue to place great emphasis on using different sources of information. We do not believe that plugging into fevered market speculation around the quantum and timing of rate rises or Putin's current state of mind is going to help us to calibrate the probabilities and possibilities for the portfolio holdings. Instead, we're continuing to tap our network of academics and philosophers. Recent examples include:

- **Pavel Dler:** Founder of a fast-growing Gen Z-focused media platform. He lends insights on trends in demand, different house behaviours and changing monetisation
- **Ken Basin:** Previously at Paramount Studios, and before that Amazon and Sony. Shares perspectives on the supply chain of video content, streaming and its potential disruption
- **Dr Matthew Brander:** Senior Lecturer in Carbon Accounting at Edinburgh. Helping us to develop thinking on avoided emissions (potential methodologies, inputs, and relevance to financial returns)
- **Dr Marcus Carter:** Academic at the University of Sydney. Views on the regulation of gaming outside of China, especially as it concerns children
- **Horacio Ortiz and Professor Rana Mitter:** Helpful academics on understanding Chinese development and especially Chinese platforms.

Set up for long-term outperformance

We've explained why, despite rough seas, the vessel is strong, and the crew are disciplined. But is it primed to outperform?

In the short term, we have no idea. But in the long term, we believe the answer to this question is 'yes' – and more emphatically than ever before in the history of LTGG.

How so?

One industry standard yardstick relates to the short-term earnings multiple of the LTGG portfolio which is currently less than 19 – barely higher than the index, despite years of evidence that the portfolio can and will deliver earnings growth that is multiples higher.

For a range of reasons though, we don't feel that the fetish for scrutinising multiples of near-term earnings is especially helpful. In the current environment, cash generation is king, so an examination of FCF yield is more insightful.

The FCF yield for LTGG is currently 5.6 per cent. It has only been at this level once before, during the 2008 financial crisis, and just before a huge surge in performance. Never in the history of LTGG has the gap to the index (0.5 per cent) been lower. The narrowness of the gap in FCF yield is striking given the gap in growth expectations. For a bit more context here, LTGG has delivered historic FCF growth of over 40 per cent per annum. That compares with an index level of 11.8 per cent. If those growth rates hold up (and given all the growth tailwinds cited above – we think there's a good chance of that), then the five-year forward FCF yield is around 38 for the portfolio and around 10 for the index. Even if we're bearish by suggesting that those growth rates halve for LTGG and miraculously hold up for the index, then the five-year forward FCF yield is around 15 for LTGG and around 10 for the index.

This feels like an exciting once-in-a-generation valuation anomaly where the market is incapable of attaching any value to future growth. A separate set of reflections **here** elaborates on the inefficiencies at play and provides more detailed valuation examples for a number of stocks in the portfolio.

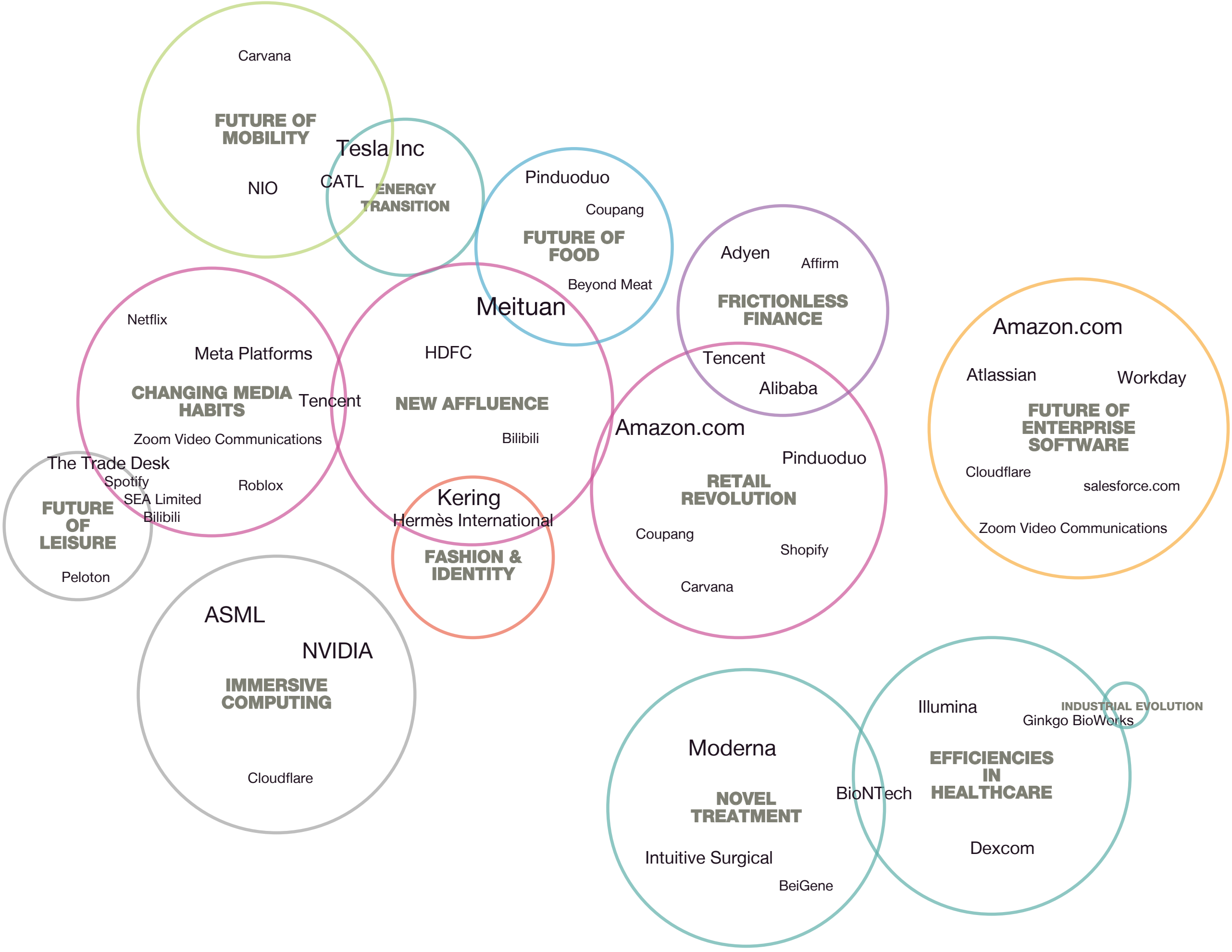
Conclusion

The global investment environment has changed. The epoché of nice smooth returns is behind us and there's a good chance that we'll be sailing in the Roaring Forties for several years to come. But that's an exciting prospect because the ship is solid, and the crew is well drilled. We're very confident that LTGG will surf the big waves and from this starting point, that it will continue to outperform the leaky index handsomely over long-term time periods. During times of economic hardship, economies become more innovative and disruption accelerates. That plays into the hands of LTGG.

Here's a taste of our current mindset. We strongly believe that we will move back to the front of the fleet in the years ahead. Given the increasing number of top-up allocations to LTGG, many others seem to agree.

The LTGG Euler Diagram

The diagram below represents our current view of stock concentrations in the LTGG model portfolio. We have identified what we believe to be the key driver(s) of each stock and have grouped stocks as appropriate. Circle sizes are based on the aggregate stock holding weights in the portfolio and some stocks are represented in more than one circle. The font size is indicative of the size of the holding in the portfolio – the larger the font the larger the position within the portfolio. We use this diagram as an input to our consideration of risk and diversification in the portfolio and we review it on an ongoing basis. The classifications are subject to change over time as our views evolve.


Carvana
FUTURE OF MOBILITY
NIO
Tesla Inc
CATL
ENERGY TRANSITION
Pinduoduo
Coupang
FUTURE OF FOOD
Beyond Meat
Adyen
Affirm
FRICTIONLESS FINANCE
Meituan
Netflix
Meta Platforms
HDFC
CHANGING MEDIA HABITS
Tencent
NEW AFFLUENCE
Zoom Video Communications
Bilibili
Tencent
Alibaba
Amazon.com
Pinduoduo
RETAIL REVOLUTION
Coupang
Shopify
Carvana
Amazon.com
Atlassian
Workday
FUTURE OF ENTERPRISE SOFTWARE
Cloudflare
salesforce.com
Zoom Video Communications
The Trade Desk
Spotify
SEA Limited
Bilibili
Roblox
FUTURE OF LEISURE
Peloton
Kering
Hermès International
FASHION & IDENTITY
ASML
NVIDIA
IMMERSIVE COMPUTING
Cloudflare
Moderna
NOVEL TREATMENT
Intuitive Surgical
BeiGene
BioNTech
Illumina
INDUSTRIAL EVOLUTION
Ginkgo BioWorks
EFFICIENCIES IN HEALTHCARE
Dexcom

As at 30 June 2022, based on a representative portfolio.

Important information and risk factors

Annual past performance to 30 June each year (net %)

	2018	2019	2020	2021	2022
LTGG Composite	37.6	0.1	56.4	61.7	-48.9
MSCI ACWI Index	11.3	6.3	2.6	39.9	-15.4

Annualised returns to 30 June 2022 (net %)

	1 Year	5 Years	10 Years
LTGG Composite	-48.9	12.2	14.7
MSCI ACWI Index	-15.4	7.5	9.3

Source: Baillie Gifford & Co and MSCI. Net of fees, USD. Changes in the investment strategies, contributions or withdrawals may materially alter the performance and results of the portfolio. All investment strategies have the potential for profit and loss.

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