



July 8th, 2021

Net Investment Returns:

Year	Longriver	Benchmark	Relative Return
Since Inception – Per Annum	24.2%	13.5%	10.7%
Since Inception – Total	229.6%	100.7%	129.0%
2016	5.8%	7.9%	(2.1%)
2017	27.3%	24.0%	3.4%
2018	(7.3%)	(9.4%)	2.1%
2019	49.4%	26.6%	22.8%
2020	43.0%	16.3%	26.7%
2021 – 1 st Half	23.6%	12.6%	11.0%

Note: Longriver results are unaudited. Benchmark is the MSCI All Country World Net Total Return USD Index (Bloomberg: M1WD Index).

Dear Family,

Our investments returned 23.6% during the first half of the year, ahead of our benchmark's 13.5% gain. The broader index continues to be a tough opponent to beat though, and I note that this is the fourth of six years since we began where it is on track for double digit gains.

In many ways, it's hard to believe we're now more than halfway through 2021. With COVID-19 still a real danger in many parts of the world; and with the usual calendar of seasonal celebrations and travel still in abeyance; it feels like we are living a long 2020. But in other ways, our journey over the last twelve months from fear to hope is nothing short of remarkable, thanks primarily to the development and dissemination of vaccines at a speed and scale unprecedented in history.

I recently read Dale Yuzuki's book "COVID-19: From Chaos to Cure" and was fascinated to learn about the decades of development behind this 'overnight success'. Think for a moment that the first patient was hospitalised in Wuhan with COVID-19 on December 12, 2019. By January 11, 2020 – when 41 patients had been hospitalised – researchers in Shanghai were already able to sequence and share the virus' DNA with peers around the world. And by February 24, 2020 – just seventy-four days after the virus was first documented! – Moderna, an American pharmaceutical company, used that information to submit an mRNA vaccine for testing.

All of this was made possible by the dramatic reduction in the cost of genomic sequencing achieved over the last two decades. According to the National Human Genome Research Institute, an American government organisation, the cost of sequencing a raw megabase of DNA – a million rungs of the DNA ladder – fell from US\$0.35 in 2001 to US\$0.008 in 2020, a reduction of 99.99995%, or

51% per annum. This was made possible by an explosion of new businesses industrialising the process and taking advantage of ever cheaper computing power. And as costs fell, the technology propagated, enabling even more new businesses and innovations – amongst them, Moderna.

We were saved from a virus growing at exponential rates by exponential declines in the cost of finding a cure.

Progress like this seems to happen so slowly and then so quickly – but only because we're not looking for it. And while exponential change of this order is rare, it's certainly not uncommon. We've seen it in the consistently falling cost of semiconductors, high powered lasers, batteries, solar panels, and cloud computing capacity – just to name a few examples. We've seen it also with the Chinese economy, where GDP per capita (measured on a purchasing power basis in 2017 dollars) has compounded at an average annual rate of 8.4% per annum from 1990 to 2020, increasing 10.5 times overall. Our own investment results show too how small outperformance relative to the benchmark translates over time into large differences in outcome.

Exponential change is sustained by virtuous cycles. It's often said that winners keep on winning; or that good things happen to good people. Most of our investments are in companies built to sustain exponential change, particularly by the simple idea of always offering customers more for less – what investor Nick Sleep called 'scale economies shared'. For example, Amazon has expanded Prime from free two-day delivery to more than thirty different membership benefits; Domino's Pizza Enterprises' 'high volume mentality' drives traffic to stores by offering customers more and more value; Evolution pushes the boundaries of creativity to make casino games which are more and more fun, and which also return more to players than the industry average; and Tinkoff offers more and more benefits to its Tinkoff Black debit card holders like cashback and higher interest rates, making it a viral product with extremely low customer acquisition costs.

Exponential change can make the impossible possible, turning the economy into a kaleidoscope of new opportunities. We've also invested in companies which enable this change, another powerful business model. The scale of Amazon and Microsoft's cloud computing service has transformed the economics of starting a tech company, unleashing a wave of innovation by turning compute from a fixed to a variable expense. The scale of Facebook's social networks makes it cheap and affordable for influencers, creators and artists – as well as large and small businesses – to reach an audience of billions. And Tencent's mini-programmes – of which there are now more than a million – let businesses offer new services and content to more than a billion potential customers. By enabling others, these businesses have created a vibrant ecosystem which becomes a moving target for competitors to catch.

There's been much hubbub in the last six months over the risk of inflation, with COVID creating shortages in the real economy which were exaggerated by excess liquidity in financial markets. What should investors like us do about inflation? My thoughts are simple. Our goal is to increase our purchasing power over time. Like the famous Stanford psychology experiment, we forego a cookie today because we expect two cookies later, at least! But inflation is insidious and nibbles away at those future cookies, even before we get them. So, at a minimum, our returns need to be high enough to at least preserve our purchasing power – that is, to ensure we have at least as much cookie tomorrow as we do today.

Inflation affects the value of our investments indirectly too. To control rising prices, central banks will raise interest rates, and higher interest rates make financial assets less valuable; as Warren

Buffett says, interest rates are to asset prices what gravity is to matter. In the short-term, we could therefore hold more cash as protection from falling asset prices – that is sell now and hope to buy back later. But in the long-term, cash is the asset most vulnerable to inflation. So, unless we can time the market better than everyone else, holding cash is a poor choice for increasing our long-term purchasing power, let alone preserving it.

My preference instead is to invest in high quality businesses. At first, I thought the most natural choice was those with pricing power which can simply *raise* prices to pass on the cost of inflation to consumers – their loss of purchasing power is our gain. But again, I've realised that even more powerful are businesses which *lower* prices, thereby increasing purchasing power for everyone. Why is this model superior? Because it's so hard to compete against. And competition is a far more pernicious threat to us than inflation.

I'm going to go out on a limb now and wager that the prevailing trend in the real economy over the next few years will be deflation, not inflation. And that the right setting is for interest rates to stay low. This is simply because of the radical transformation the economy is undergoing as it becomes more digital. And a digital world is one of abundance because zero marginal costs result in virtually infinite supply. As a result, demand has grown in many areas not in spite of but *thanks to* falling prices for many important goods and services. Moreover, an abundance of capital has created another feedback loop whereby low interest rates encourage more investment in risky, innovative ventures which are in turn likely to bring prices down further if they succeed.

From a top-down perspective, I won't deny that low interest rates can create excess liquidity, encouraging greater borrowing and speculation. I also worry about technology's impact on wage growth and inequality. These certainly make the economy more fragile. But from a bottom-up perspective, I'm inclined to believe that lower prices are a feature of the current age, not a bug.

The portfolio looks quite different now from six months ago as I became more or less confident in the exceptional qualities of certain businesses and their management teams; and especially as I realised some larger companies were reaching a more mature stage of their growth runways. Volatile markets also created unplanned opportunities. The most material changes were selling out of Alibaba, Alphabet, HKTV, Mastercard, Nintendo and Wuliangye; substantially increasing our investment in Amazon; adding to Facebook, HDFC Bank and Tencent; and making new investments in TCS Group, parent company of Russia's Tinkoff Bank, and GDS Holdings, China's leading carrier-neutral data centre operator. There are a few new learning positions too, as I described I would make in my previous letter. I've written on my blog about Evolution ([here](#)), Alibaba ([here](#)), HKTV ([here](#)), Amazon ([here](#)) and Tinkoff ([here](#)) if you'd like to learn about their specific investment cases.

I'm glad to say that most of the companies in which we're invested leaned into COVID and used it as an opportunity to push forward their businesses. Amazon, for example, increased capital expenditures by 80% year-on-year in 2020 and grew its US fulfilment capacity by 50%. Microsoft is spending more to better apply machine learning to specific industry verticals like medicine. Tinkoff is investing in customer acquisition and new services to make its ecosystem even more attractive. The market may not like the pressure these investments will have on short-term margins. However, as long-term investors, the most important determinants of our future returns are how much our companies can re-invest and at what rate. So, when great companies like ours decide they can invest more, we should be very excited! Some of the best investments are to be had when a company keeps getting more and more valuable even as its stock price languishes.

I've saved the best portfolio update for last: the addition of baby Austen Arthur Rhodes (陳煒天)! I'm delighted to say that he is healthy and well, and joins a loving family and caring home. Austen is exponential change personified: we might not notice him grow day by day but suddenly, there it is! He's fifteen centimetres taller than when he was born! And four kilograms heavier too! It's all happening so fast. Though on the other hand, it isn't. I realised one day that it will take him twenty-one years to become twenty-one years old. That shook me to the core! It's such a long time! But it won't happen a day sooner, nor a day later, no matter how hard he or I might try.

I started this letter by describing a virus which swept the world overnight and the vaccine which was developed almost as fast. But think about it: if we knew about COVID-19 as early as January, why didn't we all act sooner? I suspect it's because we couldn't comprehend exponential growth. For similar reasons, I think we were in disbelief that a vaccine could be produced so quickly.

As investors, this poses two challenging questions: how do we train our minds to understand the implications of exponential change? And yet how do we simultaneously slow ourselves down to allow its power to work for us? The parallel with a growing child couldn't be more obvious: it takes a long time for long-term investments to bear fruit! But we must hold on as the outer years are crucial: exactly half the dollar profits made from a ten-bagger are made in the final doubling from five to ten. No matter how quickly the world changes, investing success will therefore require a singular discipline: patience.

Speaking of which, I thank you again for yours. Our success wouldn't be possible without it.

With my best wishes,



Graham F. Rhodes
Longriver

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