Quarterly Perspectives

Q1 2022

Dear clients, partners and friends,

One thing we often highlight is the superior long-term performance of the (mostly US) university endowments versus the private banks. Within the endowment peer group, the top quartile have comfortably exceeded 10% annual returns on a 10 year (and indeed multi-decade) basis, versus closer to 5-6% on average for conventional wealth management portfolios over the same period. The key reasons for this superior performance are a long-term approach to investing, a high exposure to private investments, and access to the best managers.

What do these leading endowments have in common? One key factor is that they have steadily increased their private investment allocations to an average of some 40%. Does more private equity translate into greater risk? Those with higher allocations to private investments have exhibited better returns in most major downturns – the volatility is not apparent. Fundamentally, though, the risk of permanent capital loss has also been very low (less than 1%) in a diversified PE portfolio. The other risk is miscalculating liquidity needs. Our experience however is that individual investors (of a certain size) generally *overestimate* their true liquidity needs and consequently forego the potential for higher returns in this area.

Access to talent is key here because of the high return dispersion among private investment funds. This aspect is where long-term endowment type investors also have an advantage because they are viewed as stable partners for capacity constrained investment managers who can hand pick their investors.

We have designed Eighteen48 to have the capability to offer this 'endowment model' of investing. We have built our internal team accordingly with specific expertise in private investments both for funds and direct co-investments. We are also privileged to have an Advisory Investment Committee which comprises experienced CIOs of leading endowments and foundations in the US and UK. This forum allows for an exchange of views and ideas with peers who 'do what we do' and which greatly enriches the opportunity set. We are delighted this quarter to welcome Kathleen Jacobs, CIO of New York University Endowment and Robert Durden, CEO/CIO of the University of Virginia Investment Management Company to our Investment Committee.

As ever, we express our deepest gratitude to our clients for their confidence and loyalty, and to our partners, colleagues and advisors for your thoughtful contribution and unwavering commitment.

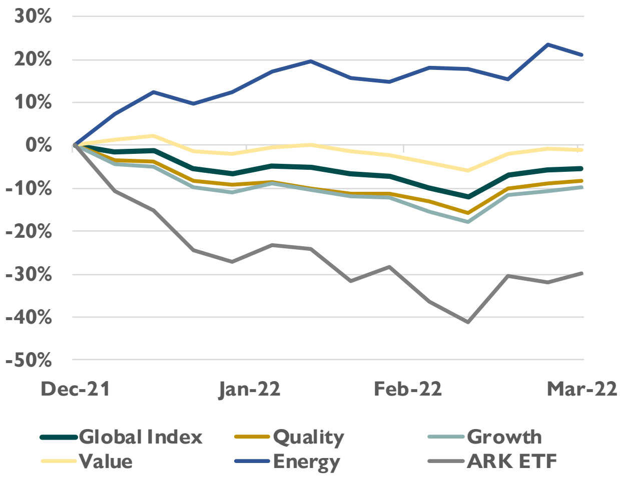
Julien Sevaux
Tarek AbuZayyad
14 April 2022

CIO Review

Maximum dispersion

Given the twin spectres of war and still elevated inflation, combined with ongoing risks to supply chains from China's zero-COVID policy, it is remarkable that global equities ended the first quarter down just 5.3% in US dollar terms and closer to down 2.5% in weaker Euro and Sterling. This relative surface calm however masked some **challenging intra-month volatility combined with substantial drawdowns in a number of high growth / low profitability areas**; the poster child of speculative excess, Cathie Wood's ARK Innovation ETF, finished the quarter down 30% and some 60% off its February 2021 peak. Especially notable (and unusual) was the outperformance of 'value' equities – predominantly in the Energy, Materials and Financials sectors – during a period of broad market weakness. Energy stocks in particular surged on the back of the Russian supply shock and the global Energy sector generated a positive return of 21% during the quarter, with the next best performing sector (Materials) returning just 3%.

Figure 1: Global equity indices and 'Spec-Tech'



Source: Bloomberg, 31 March 2022

This backdrop provided a testing environment for our portfolios, which finished the quarter down by single digit percentages (depending on risk level, currency and allocation to private investments). As we discussed in our letter to clients in late February (when risk assets had already traced the majority of their decline) the **prospect of higher interest rates had an outsized impact on high quality, growth stocks** of the type which we prefer to own, given that these are considered 'long duration' assets – in other words, given their growth and the consistency of that growth relative to the market overall, a greater proportion of their present value lies further in the future. This means that higher interest rates, which increase the rate at which these companies' future cash flows are discounted by investors, have a proportionately larger initial impact on the prices of such stocks. High quality, growth stocks (as opposed to the speculative, high growth equities referenced above) fell by some 10-15% during the first quarter, underperforming the broad market quite materially.

On the plus side of the ledger, we held **no exposure to Russian or Ukrainian securities in portfolios** as the situation in Ukraine intensified in February. Nor did we own (or indeed have we owned for many years) full duration corporate or government bonds, during a quarter in which the Bloomberg Global Aggregate (a benchmark for government and corporate debt returns, with interest rate duration of some seven years) fell by over 6%. Now 11% off its January 2021 peak, this represents its largest peak-to-trough decline since data began in 1990. Holders of long-dated bonds have fared even worse, with long US Treasury Bonds (represented by the ICE US Treasury 20+ Year Bond Index) down more than 20% from their Q3 2020 peak.

Modest positive contributions to performance came from gold, merger arbitrage, and lastly – illustrating the value of having managers who do something genuinely different – the specialist Industrials manager we highlighted in our Q3 2021 *Perspectives* who returned 10% during the quarter as a number of idiosyncratic, stock-specific investment theses played out.

During the quarter we adhered to our endowment-style investment process which does not attempt to time markets by reducing exposure on a 'protective' basis. We selectively took advantage of lower prices and higher expected returns to **rebalance portfolio exposures with discipline where they had fallen below target**, focusing on those areas where we saw the greatest upside: in particular, large cap quality growth and our specialist managers in Chinese consumer stocks and global biotech.

Gathering clouds?

The macro backdrop feels hardly less perilous than a quarter ago, with all three risk factors identified above still well entrenched.

China's zero-COVID policy continues to present risks for globalised supply chains, with the spread of highly contagious Omicron BA.2 variant causing stop-start lockdowns in key financial and manufacturing centres such as Shanghai, Shenzhen and Changchun (the country's largest automotive design and manufacturing hub).

It is encouraging that **policy language from China has become increasingly supportive**, both from an economic perspective ('Shenzhen will ensure the security and stability of industrial supply chains', it was announced as the city ended its lockdown on 21st March) and also for markets. Since the financial policy committee chaired by Vice Premier Liu He announced on 16th March that the government would 'actively roll out policies that benefit the markets', the MSCI China Index has risen by some 20% and US listed Chinese stocks by almost 30%. Moreover, there is a good chance that lockdown risks will be mitigated once China has the pharmacological wherewithal to do so: this could come as soon as the second half of 2022 as production of Pfizer's Paxlovid ramps up, which is reportedly highly effective at preventing hospitalisation if taken within five days of the onset of symptoms. In the meantime, the situation certainly presents a temporary overhang to markets – and perhaps also an early salvo in the longer-term slowing (or even reversal) of globalisation in a more multi-polar world.

The war and appalling humanitarian crisis in Ukraine could drag on for months or even years in some form or another. **First order effects are likely to be limited from an economic perspective**: Russia and Ukraine together account for under 2% of global GDP in US dollar terms, and exports to the two countries account for only 0.2% of G7 GDP. Meanwhile the risk and consequences of a nuclear engagement are impossible to price (as the head of research at well-known investment strategist BCA Research bluntly put it in early March: 'If an ICBM [Inter-Continental Ballistic Missile] is heading your way, the size and composition of your portfolio becomes irrelevant. Thus, from a purely financial perspective, you should largely ignore existential risk').

The second order effects however are more wide-reaching. Russia is the world's second largest oil producer, just behind the US. It is the largest exporter of natural gas. Russia and Ukraine together account for some 25% of global wheat exports. Higher input prices continue to put pressure on economic growth, especially in Europe; the OECD estimates that a continuation of the war in Ukraine could directly and indirectly reduce global GDP by approximately 1%, and almost 1.5% in the Euro Area. While **not sufficient in itself to tip the world into a recession** (reducing the OECD's prior 2022 GDP growth projection from 4.5% to a still healthy 3.5%) this does increase sensitivity to policy tightening moves and associated economic pressures.

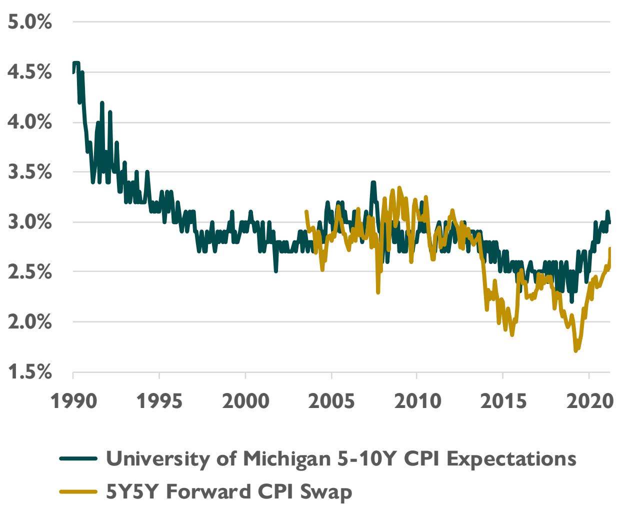
Which brings us to the Fed and other major central banks. Policymakers generally look to disregard 'transitory' supply-side shocks such as the shutdown-related issues which had already resulted in core US CPI inflation – which excludes the impact of food and energy – rising to 6.4% by February. (This is logical as raising interest rates can reduce aggregate demand but cannot increase aggregate supply.) However, the sharply rising commodity prices caused by the war in Ukraine have exacerbated the situation and led to **concerns that these combined issues risk dislodging long-term inflation expectations** and potentially causing a painful wage-price spiral.

As nearer-term inflation and interest rate expectations have risen, so the 'yield curve' inverted at the start of April (i.e. the yield on the 2 year US Treasury bond rose above the yield on the 10 year Treasury bond), indicating a fear that the Fed will be forced to tighten monetary policy so sharply as to cause a growth shock ahead. From a markets perspective there is an expectation (which we consider to be well founded) that **central banks in tightening mode are unlikely to be as quick to provide support as they were in Q1 2020**. There are even uncomfortable suspicions that the Fed may actually be happy to engineer a mild slowdown in order to take the sting out of inflation.

While we consider that the risks around inflation have increased, we draw some reassurance from the following factors. At the same time, we note that in line with these higher risks, markets have already repriced somewhat to levels which we consider to be quite attractive in absolute terms and relative to fixed income yields.

First of all, both market and consumer-derived **long-term inflation expectations remain quite well anchored**. Market expectations for inflation between 5 and 10 years in the future (the '5Y5Y Forward CPI Swap Rate') remain around 2.7%, while the University of Michigan's consumer survey of expected inflation over the same period was 3.0% in March – broadly in line with its average from 1995-15 and well below its levels of the 1980s (where it peaked at 9.7% in 1980) and early 1990s.

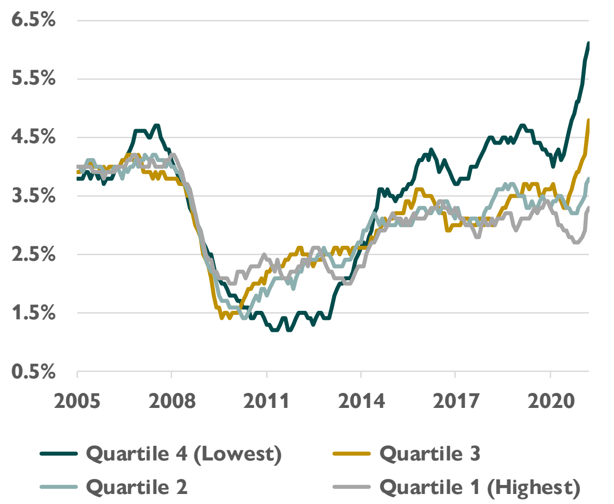
Figure 2: Long-term inflation expectations remain anchored



Source: Bloomberg, 14 April 2022

Secondly, the highest US wage growth by some margin has been evident at lower levels of incomes. While high and middle income employees have largely returned to work (i.e. the relevant employment ratios have returned to their pre-COVID levels), some 5% of low income employees have not yet done so. It seems probable to us that a combination of the end of enhanced unemployment benefits, the running down of excess savings accumulated during the pandemic, and the higher wages now on offer will result in a gradual **return to work of these lower paid employees and a reduction of wage pressures overall**.

Figure 3: Wage pressures are concentrated at lower levels of income

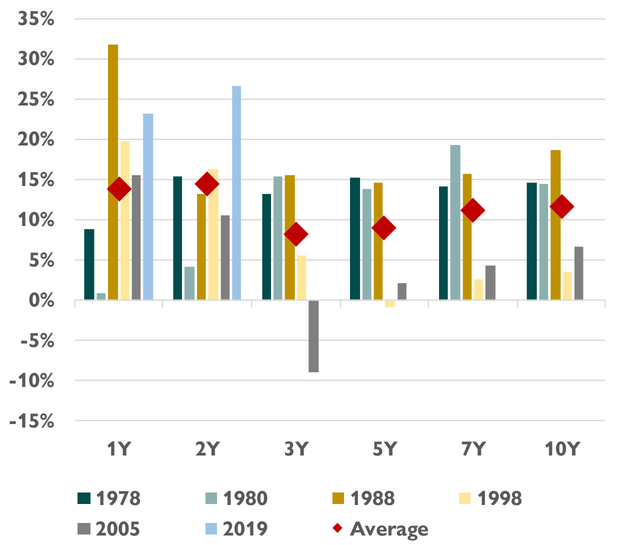


Source: Federal Reserve Bank of Atlanta, Bloomberg, 14 April 2022

Thirdly, the inverted yield curve, which caused widespread concern in the financial press, rarely sends a clearly actionable message. (Commentators love a harbinger of doom. One of our favourites is the Hindenburg Omen, which drifts gloomily into view every few years – and which according to Wall Street Journal analysis has a success rate of around 30%.) Signals such as an inverted yield curve should certainly give us pause for thought, as the implication is not a cheerful one. However as ever it is important not to **confuse correlation with causation**. All we can usefully surmise from this incident is that long term rates were quite low relative to short term rates and that this was probably signalling one of the following three things: (a) longer term growth may be somewhat lower than today; (b) longer term inflation may be somewhat lower than today (no bad thing); and (c) **10 year Treasury bond yields may be artificially low thanks to the Fed's still massive government bond purchases**. In fact, analysis by Richard Bernstein Advisors suggests that without QE (which is of course now winding down) the US 10 year yield would be some 1.5 percentage points higher and the yield curve would not be close to inverting.

It is true that a yield curve inversion has occurred before each of the eight US recessions of the last 50 years. However – and leaving aside for a moment the probable distortion from QE – the signal has not always been helpful from an investment perspective. Firstly, it can occur several years before a recession begins, making timing extremely difficult. Secondly, the market impact is also hard to gauge. As the chart below indicates, performance in the one or two years following an inversion can actually be higher than average! **Over a 7+ year timeframe global equities have returned more than 10% per annum on average following yield curve inversions** (as measured from the first day of inversion before each recession). The two occasions where index returns were lower – albeit still positive – were around the 2001 TMT crash (where global equity valuations were extremely high and NASDAQ valuations were stratospheric) and the 2008 global financial crisis (which was preceded by calamitous household and banking sector imbalances which we don't have today). For both long and short-term investors, the yield curve appears to be more of a hindrance than a help.

Figure 4: Annualised global equity returns following yield curve inversion



Source: Bloomberg, 14 April 2022. Performance is measured from the first day of yield curve inversion before each recession.

One thing for sure is that the rate hiking cycle can no longer be a surprise to anyone, given the increasingly hawkish commentary from the Fed, the sharpest recorded upwards move in the 'dot plot' of Fed members' future rate expectations, investment banks competing to raise their interest rate forecasts ever higher, and fund manager survey respondents overwhelmingly concerned about inflation, interest rates and now stagflation. It was instructive that on the day (21st March) that Jerome Powell unleashed his inner hawk, indicating that the Fed might raise rates more aggressively including in 0.50% rather than 0.25% increments, US equities immediately sold off by 1% but had regained their prior level by the following morning. **A lot of tightening activity appears to be priced in to risk assets** and the greatest surprise – as recently posited by one of our external fund managers – might be to find that Treasury yields are actually lower in 12 months than they are today.

Back to basics

In turbulent times, our investment principles can help to anchor us in the discipline of our long-term, 'endowment' investment approach. Three of those principles feel particularly apposite today:

1. *Long Term Horizon: 'Market timing' generally reduces investment returns over time. 'Time in the market' allows wealth to compound over the long term.*

   Many investors – and indeed investment advisors – we spoke to were inclined to reduce equity exposure as markets fell in February, in order to 'protect' portfolios from further price declines. As we have discussed before, the problem with such actions is that the **timing, depth and duration of market drawdowns are impossible to predict with any consistency**. Price and value are two very different things and the opportunity costs of these market timing moves can be very significant over time.

2. *Focus on Quality: High quality, growth businesses have the potential to compound returns above market benchmarks over the long term.*

   Energy and several other 'value' areas are currently going through a period of dramatic outperformance. However, the **long-term returns from these structurally lower (and far less consistent) return on capital sectors have generally been disappointing**. Energy stocks returned just 17% (or 1.6% annualised) over the decade to 31 March – even including their stellar recent performance – while broad global equities returned 174% (10.6% annualised) and high quality equities returned 234% (12.8% annualised).

   Banks meanwhile (which have returned a relatively meagre 6.9% annualised over the last decade) caught a bid coming into the year, outperforming global equities by 15% as the economy healed and investors priced in the prospect of higher long-term rates. However, as short rates caught up (squeezing lending margins) and the growth outlook clouded, bank stocks rapidly turned tail and underperformed global equities by 8% from there to the end of the quarter.

   We prefer to focus on businesses which we consider have a high *probability* of generating **superior long-term returns without the need for market timing**, even if that means foregoing the *possibility* of short-term gains in certain less fundamentally attractive sectors.

3. *Micro before Macro: Focus on the fundamental opportunity set rather than predictions of interest rates, fund flows or other short-term macro or technical factors.*

   It is important to be 'macro aware' and cognisant of the various risks that portfolios face. It is equally important to recognise what we cannot know, and to focus our attention on what we can. A **deep understanding of the long-term fundamentals** of the businesses which we own either directly or through our external fund managers provides considerable reassurance and the ability to remain invested – and indeed rebalance into portfolio exposures – during turbulent times.

In the spirit of the timeless, we returned to Philip Fisher's classic 1958 work *Common Stocks and Uncommon Profits* – regularly described by Warren Buffett as one of the best books on investment – in which he writes:

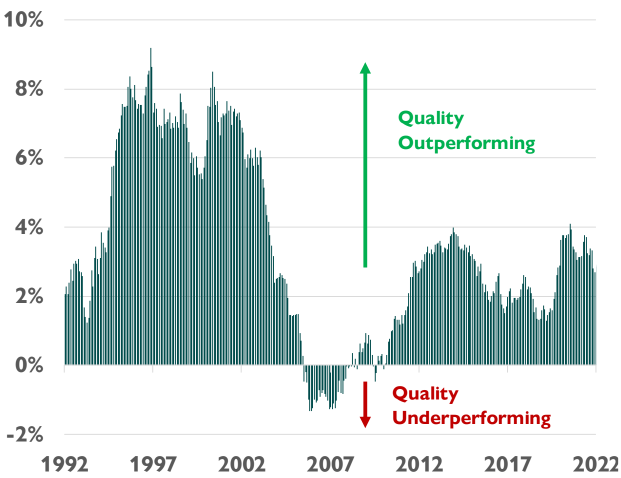
The amount of mental effort the financial community puts into this constant attempt to guess the economic future from a random and probably incomplete series of facts make one wonder what might have been accomplished if only a fraction of such mental effort had been applied to something with a better chance of proving useful.

- *Philip Fisher, Common Stocks and Uncommon Profits*

It is hard to argue that much has changed in the intervening 64 years, when even the chairman of the Federal Reserve admits to policy watchers that: 'It is not possible to predict with much confidence exactly what path for our policy rate is going to prove appropriate … I stress again that we'll be humble and nimble … We're going to be led by the incoming data and the evolving outlook' (Jerome Powell, 26 January). In other words: both the data and the Fed's reaction to that data are simply not possible to forecast.

There are very few free lunches in investing – a long time horizon being among the foremost. If volatility is the price we pay for equity returns, then periods of *relative* volatility are perhaps the price we pay for owning those high quality businesses which generate structurally higher returns on capital then the index and exhibit markedly superior gross margins and pricing power. History has clearly indicated that these lunch bills represent outstanding value to the long-term investor as **high quality, growth equities have proven the best way to preserve and compound wealth over any meaningful time horizon**. For an investor reviewing their last seven year performance on a monthly basis, the global 'high quality' equity index has outperformed broad global equities approximately 90% of the time over the last three decades (and cumulatively by a factor of 2.6 *times*).

Figure 5: Outperformance of MSCI World Quality Index vs. MSCI World Index (both including dividends), 7Y rolling annualised



Source: Bloomberg, 14 April 2022

Looking ahead

The paradox for allocators with an eye to the long term is that the category of stocks which best protects against inflation over the long term has underperformed as inflation expectations have risen; pushing investors towards equities with apparently nearer term upside rather than those which can provide a steady and growing stream of cash earnings well into the future.

As we wrote in February, we do not believe that this condition is likely to be sustained over any reasonable investing time horizon. First, such stocks generally achieve much higher growth over the long term than the market expects. Second, interest rates generally rise in conjunction with long-term nominal growth expectations, which all else equal provide a countervailing increase in the present value. Third, in a more inflationary environment (albeit one in which we expect that US inflation is likely to settle closer to 2-4% than the 1-3% of the last decade) the **pricing power of such stocks puts them at a significant advantage in maintaining and even growing their margins**. Lastly, the valuation premium of these businesses over the broad market has halved since the end of last year and is now much closer to its historic average level.

A number of our specialist exposures in areas such as biotech, technology and Chinese small/mid cap consumer stocks have also become increasingly attractive for a variety of generally idiosyncratic reasons. We believe that the **outlook for the focused number of outstanding fund managers we partner with in these areas is extremely attractive**. Our biotech managers for example consider their opportunity set to be its most attractive for at least five years, both in terms of absolute valuations and also relative to the purchasing power of 'big pharma' acquirors. The portfolio valuation of our Chinese small/mid cap consumer manager is currently close to its trough 12x P/E level reached during the depths of the COVID crisis in March 2020, with projected earnings growth in excess of 30%.

While markets are currently focusing on the risks that we discussed above, there are also some causes for optimism. We continue to believe that **central banks will proceed to tighten with a degree of caution** given relatively stable long-term inflation expectations, slack in the employment rate, and the implications of a flattening yield curve. Moreover, with published estimates of the 'neutral interest rate' – at which monetary policy is neither supportive nor restrictive – ranging from some 2-4%, a projected increase in the base rate to 2-3% should not be disastrous (and is in any case not set in stone).

One categorically encouraging factor to watch is US corporate capital spending. The average age of non-residential capital stock is at its highest level since 1965; with core durable goods orders moving sharply higher after going nowhere for 20 years and corporate capital spending intentions touching 15 year highs, the **start of a new capex cycle could be a major positive surprise** in the coming months and years.

More broadly – and following the powerful post-COVID recovery during which leading economic indicators reached multi-decade highs, corporate earnings surpassed analysts' estimates by record margins, and equities exhibited extreme volatility of conventional valuation metrics – we actually seem to be **entering a more normalised investing environment in a number of ways**. Global purchasing manager indices (PMIs) remain at positive, but no longer extreme levels. S&P 500 earnings beats are back near long-term average levels. Global equity market valuations too are close to their long-term averages. Is this an environment in which market participants might be able to focus more on long-term 'micro' factors rather than the growth backdrop, discount rates and the prospects for the next quarterly earnings season?

As Philip Fisher later wrote – following an investment career spanning over five decades – of his early experiments in market timing:

I had seen enough of in and out trading, including some done by extremely brilliant people, that I knew that being successful three times in a row only made it that much more likely that the fourth time I would end in disaster. The risks were considerably more than those involved in purchasing … shares in companies I considered promising enough to want to hold them for many years of growth.

- *Philip Fisher, Developing an Investment Philosophy*

Further volatility in the coming months should come as no surprise given the variety of 'macro' risks which markets continue to digest. Our goal as ever is to identify and diligence those investments which we want to hold for many years, and to avoid the siren songs of clever timing or a quick profit.

Edward Clive

Chief Investment Officer

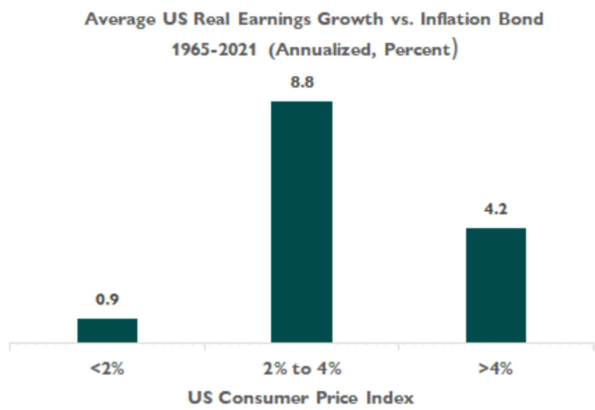
Sixteen02 Global Equities

Form is Temporary, Class is Permanent!

The current and rightful concern of Mr. Market is stagflation — simply put slowing growth and rising input costs. So, what could be a potential mitigant to this scenario? We contend that enterprises with secular tailwinds to grow their revenues and pricing power to negate costs are such mitigants — i.e., businesses that can grow in spite of the macro not only because of it! Some inflation may even boost revenues as equities are ultimately a call on Nominal GDP.

While inflation often boosts revenues, a company's nominal profits must grow fast to stay ahead of rising input costs. At moderate inflation levels, earnings tend to outpace prices. Research shows when inflation was between 2% and 4% per year, US companies delivered real earnings growth of about 8.8% per year since 1965.

Figure 6: Pricing power: If you can't beat them, join them



Source: ABI

Enterprises that can increase prices because they want to, and know the market will bear it, are in the ultimate power position. These companies have products or services so ubiquitous that they're an irreplaceable must-have and they aren't propping up inflation-ravaged margins.

One example of this in your portfolio is **Microsoft**. Its Office 365 web-based software rules its category, and the company has added more than 150 functions over the past decade, but prices have remained static while usage has soared. Its first-ever price increase this March added only a dollar or two per month above current levels—but that's an increase of between 8.5% and 25% depending on the subscription type. We reckon that should largely buttress the bottom line.

Another holding of yours that benefits from the supply-chain led inflation is **ASML**. Recent supply-chain snarls have reminded us that virtually everything manufactured needs a semiconductor, from self-driving electric vehicles to toasters. A lack of semiconductors has created cascading effects.

Semiconductor equipment maker ASML sells to the three largest semiconductor makers. Given semiconductor manufacturers are under pressure and desperate for higher production capacity, ASML is selling its existing technology at premium prices while also building a backlog for its newest, and more expensive, solutions.

When all is said and done, what matters most for us as equity investors is our companies' ability to grow earnings which we view as the best predictor of share price performance. We believe that most of your portfolio is well positioned to pass through potential inflationary pressures.

Equites: Claim on Nominal GDP!

Over the last 18 months, we have seen multiple mood swings with Mr. Market, first COVID vaccine was approved, lifting Mr. Market's mood – he swiftly favoured reflation trades at the expense of work from home beneficiaries. This petered out as new variants emerged, and growth again became his favourite. This year, with the onset of the Ukraine war and the US Consumer Price Index (CPI) hitting a 40-year high rate of 7.9% in February – Mr Market is fervently shouting that the three horsemen (inflation, rising interest rates and recession) of investor's apocalypse are breathing down our necks.

However, let's take a step back and "peel the onion" in term of your portfolio. Rising interest rates are, by common wisdom, bad for "growth equities" as the discount rate increases. That observation is correct but let's review and understand what transpires in the numerator of certain companies as inflation goes up?

Given that consumers' inflation expectations have been anchored higher, almost any firm can raise prices without concern for losing business. However, this windfall could soon be cancelled out as input costs rise and offset the benefit.

As a long-term investor, what pricing power truly means is the ability to pass prices on sustainably, while creating value for all the stakeholders involved. Most importantly, this power must not mortgage the firm's 'moat' (i.e., doesn't detract from its competitive position in the long term). This phenomenon only happens when a firm's products & services are a critical input, and the value-to-cost ratio remains high even after a price hike.

As Warren Buffet once pointed out,

"The single-most important decision in evaluating a business is pricing power. If you've got the power to raise prices without losing business to a competitor, you've got a very good business. And if you have to have a prayer session before raising the price by a tenth of a cent, then you've got a terrible business. I've been in both, and I know the difference."

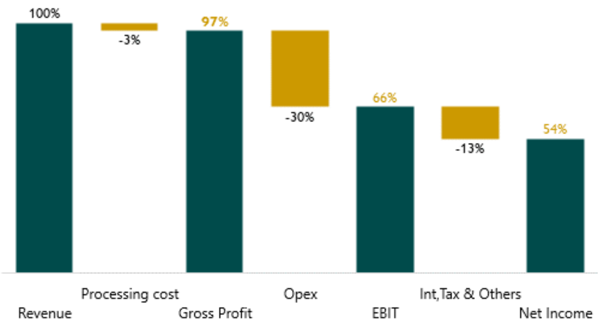
Let's take two of your portfolio constituents **Visa (V)** and **Mastercard (MA) -**

They are the two leading payment networks. As part of their revenue streams both firms charge a "cut" of the underlying payment volumes. As inflation pushes up the value of Visa and MasterCard's throughput, so too will their own revenues rise commensurately.

These "pipes" play a critical role in clearing electronic payments globally and hence are deeply entrenched within payment products offered by global enterprises as well as rising disruptors too. The cost[1] of using them is far outweighed by the value generated (including quick authorization and checkout which greatly improves conversion rates for the merchant, enhances security, and reduces chargebacks). Therefore, they have sustainable pricing power.

[1] *Refers to the actual fee charged by V & MA and not the interchange fee. Majority of interchange fee goes to the card issuers, usually the banks and V&MA on average earn 15-20bps of the transaction value.*

Figure 7: As of FY2021, Visa generated 97% in gross margin and 54% in net margin



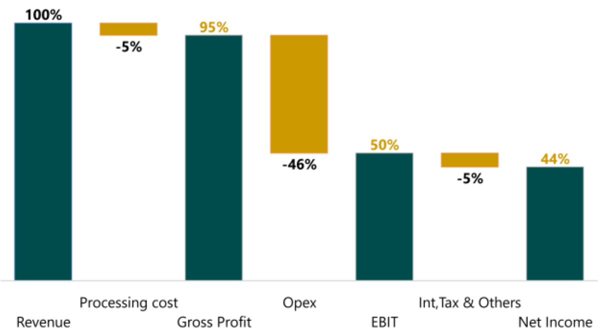
Source: Annual reports, Sixteen02

To generate this revenue, V and MA incur 3-5% of revenue in data processing costs, which even if we assume increases in line with inflation are highly unlikely to cause significant damage to their P&L. **This high gross margin profile and the ability to maintain it over time is a strong indication of the pricing power of these firms and, in general, any firm that has such gross margin characteristics.**

On the operating cost (Opex) side, the wage cost is indeed likely to inflate but we believe V & MA are less impacted as they employ highly skilled workers (data & software engineers, etc). Compensation of many of these employees has a significant portion tied to stock-based options and/or are paid an above average wage. Furthermore, V & MA's share prices have held up better than most in recent months and hence the stock-based options are still likely to be 'in-the-money' helping to retain these employees.

In addition, since overall Opex represents c.30% and c.46% of revenue for V & MA, respectively, we believe that they can manage the inflationary pressure better than their competitors can, and certainly better than an average firm.

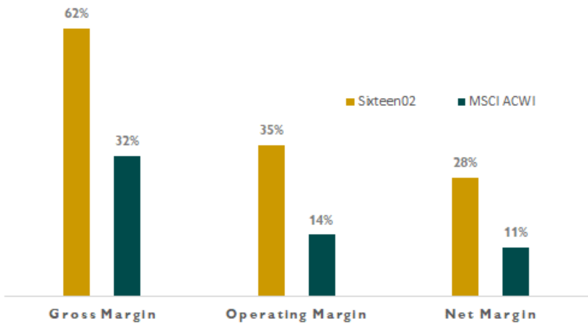
Figure 8: As of FY2021, Mastercard generated 95% in gross margin and 44% in net margin



Source: Annual reports, Sixteen02

Extending this thought, the average gross margin of the Sixteen02 portfolio is c.1.9x that of the index average, while the operating margin and net margins are c2.4x that of the index average. This dynamic implies that the companies we own exhibit real pricing power and have enough "cushion" at the Opex level to manage potentially adverse impacts of an inflationary environment.

Figure 9: Portfolio Margin Structure implies sustainable pricing power



Source: Annual reports, Sixteen02, Bloomberg

Another benefit of high gross margins is that these firms have ample room to re-invest, whether be it via Opex (R&D, sales & marketing) or via capital expenditures (tangible and intangible Capex or even working capital).

In an inflationary environment a tangible asset heavy industry (e.g., airlines) tends to benefit "optically" as the books reflects the original cost of the equipment and hence runs a lower depreciation cost via its P&L potentially inflating the profits.

However, the replacement cost of these assets has increased significantly, due to inflation and the real cost of capex will become evident, only at the point of asset replacement.

Comparatively, intangible heavy business models such as software, platforms with network effects and/or switching cost and even brands can scale their earnings power with limited incremental capex. Hence, in an inflationary environment, we believe these business models are likely to do well over long periods of time.

Adyen, one of the new generation of cloud native merchant acquirers, has a "single code base" that powers payment processing for a multitude of e-commerce platforms. It is expected to process EUR750bn in payment volumes in 2022 and grow that at 30%+ rate over the next few years as it strives to increase the penetration within the electronic payment industry.

While it has similar margin structure (an EBIT margin of c.60%) to that of V & MA, it is also a big beneficiary of an inflationary environment as the payment volumes passing through its e-comm platform customers such as Netflix, Booking.Com, Alibaba, e-Bay etc naturally increase correspondingly.

That said, if you are looking at its balance sheet you would not find any significant values for operating assets that are needed to sustain and grow the above-mentioned growth – rather, cash is the major asset!

Figure 10: Adyen Balance sheet – where are the operating assets?

FY2021	Eur M	*% of Inv Cap*
Cash	4,628	*225%*
Working Capital	-21	*-1%*
Net PP&E	201	*10%*
Intangibles	10	*0%*
Other assets & liabilities	-2,761	*-134%*
Invested Capital	**2,057**	*100%*
LT Liabilities	104	*5%*
Debt	143	*7%*
Equity	1,810	*88%*
Invested Capital	**2,057**	*100%*

Source: Annual reports, Sixteen02; Other assets & liabilities are primarily merchant funds and exist due to time lag between collection and settlement.

It is estimated that since inception, Adyen has spent over a multiple hundreds of millions of Euros to build the platform from scratch so that it can serve the omnichannel needs of an e-com player at scale. The bulk of this cost would have been expensed away via the P&L as it mostly comprised salaries paid to the engineers. The rest would have been capitalised as intangibles on the balance sheet amortised away over time.

As a result, you only find c. Eur10m of intangibles on the balance sheet as of Dec 2021. Going forward, Adyen thinks that it needs to spend up to a maximum of 5% of its revenue to maintain and improve this platform.

Assuming Adyen manages to maintain its margin stable and together with a limited incremental investment in capex, it should continue to sustain or even generate a better incremental return on its investments.

If this inflationary period persists, we believe that the companies that do not have similar "real" pricing power will try to soften the impact by digitizing their operations that can significantly improve the productivity and reduce costs.

For example, moving from onsite server to cloud can be a substantial cost saving exercise for both SMBs and enterprises as they do not have to employ expensive personnel, buy & maintain servers, etc. Secondly, the businesses can scale or de-scale their operations as per the business demands. AWS (**Amazon**), Azure (**Microsoft**) and GCP (**Alphabet**) are the top three suppliers of cloud.

Secondly, by implementing the workflow automation offered by **Service Now** or sales, marketing, & e-com automation solutions offered by **Salesforce** or even accounting software offered by **Intuit,** a firm can improve the productivity of its employees while having lower headcount to run operations.

These SaaS (Software-as-a-Service) players have similar financial characteristics to that of V, MA & Adyen with an added degree of predictability as they operate subscription-based business models. They generate significant value as they are cloud native, perform a critical organisational function, and represent a fraction of the overall Opex of its customers.

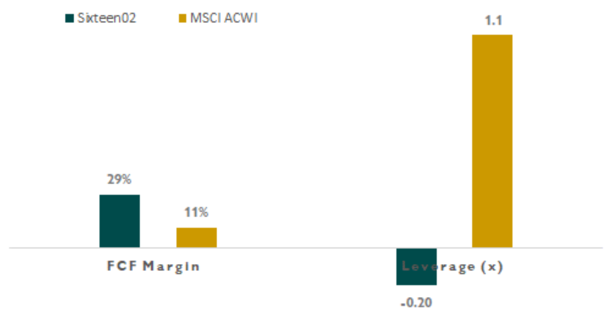
Furthermore, why go through the trouble and cost of changing software if it functions perfectly – all of these are hallmarks of sustainable pricing power; not to mention that global digitization and the shift to cloud are strong secular trends still in their infancy.

High margins and low capex mean these businesses already generate significant amount of free cash flow (FCF) and will continue to grow it at a double-digit rate well into the future.

At the portfolio level, the average FCF margin (FCF/Sales) is c.2.5x that of the index average. It is also notable that your portfolio converts c.100% of its net income to FCF as net income and FCF margins are identical.

The portfolio companies have strong balance sheet as they are generally sitting on net cash positions or have manageable leverage. The average leverage ratio (net debt / EBITDA) of the portfolio is -0.20x (ie, in net cash position).

Figure 11: **Portfolio generates significant FCF and had an average net cash position**



Source: Annual reports, Sixteen02, Bloomberg

So, in conclusion, we believe the fundamentals of the companies you own are solid, and they will continue to surf the secular growth wave of their respective industries while expanding market share and business model efficiencies.

We do not expect macro factors such as inflation and interest rates to erode away either their moats or their earnings capacity over the longer term. As such, we are confident that your portfolio companies will continue to compound capital at an attractive rate.

From time to time, Mr Market will have his darlings, but we will remain patient and stalwart as the battle-hardened management teams of these firms navigate difficult times to their favour and in time expect to see justified reward.

"In the short-run, the stock market is a voting machine. Yet, in the long-run, it is a weighing machine"

- Benjamin Graham

Chandan Khanna

Portfolio Manager, Sixteen02 Global Equity

Nineteen01 Private Investments

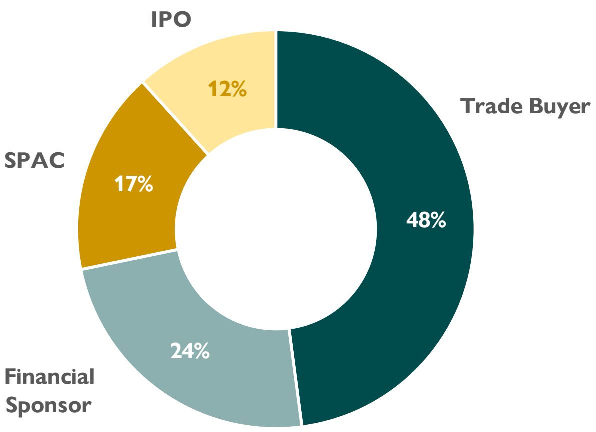
Nineteen01 – Private Funds

Two years on from our world being disrupted by a microscopic virus, and just as the combination of human ingenuity and resilience seemed to have largely conquered COVID, a new and in some ways more terrifying threat emerged. The delay in obtaining data for the private equity asset class means that from a data perspective we are always somewhat backward looking, so we are fortunate that both Bain and McKinsey have recently produced their excellent summaries of what happened in Private Equity in 2021. And **by all measures it was a blockbuster year across the industry**. Bain opens their report with the title *A Year for the Record Books* while McKinsey's equivalent is *Private Markets Rally to New Heights*. To what degree this will be impacted in 2022 by events in Ukraine remains to be seen although, as long as the conflict remains self-contained and non-nuclear, we suspect that the Alternatives juggernaut will keep on rolling.

Some highlights of 2021:

- Global buyout deal value broke the trillion dollar mark for the first time, exceeding the previous record set way back in 2006;
- The average deal size increased by 57% to $1.1 billion, also the highest ever;
- $1.2 trillion of fresh capital was raised, driving dry powder (the amount of capital committed to funds but not yet called) to a record $3.4 trillion - yet the average buyout fund remains relatively small at just $790 million;
- A sharp increase in public-to-private deals saw take-private transactions reach $469 billion in deal value – at an average EV/EBITDA multiple of 19.3x;
- Buyout firms' share of global M&A activity reached 19%, also its highest level since 2006;
- The Asia-Pacific region now represents 30% of all private equity capital, with half of global growth and venture capital focused on the region; and
- Exit markets were equally strong with buyout funds selling a record $957 billion of assets achieving liquidity from a mix of strategic acquirers, other financial sponsors, IPOs and SPACs, as shown in the following chart:

Figure 12: 2021 Global Buyout-backed Exit Route: Trade Buyers were the most important exit route

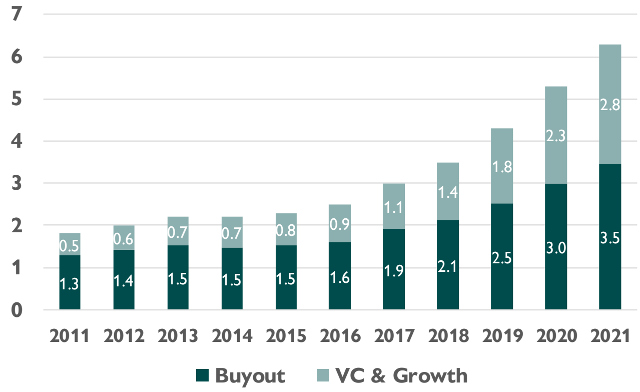


Source: Bain & Company Global Private Equity Report 2022

But perhaps the most interesting trend, and one which has been a major driver of both average valuations and the number of public-to-private transactions, is the **relentless rise of 'Tech'**. This is not the small number of big tech names that we have been accustomed to dominating our lives – and also our public indices – but rather the smaller, fast-growing tech companies, often in software, that now comprise one in every three buyout deals.

This push for growth and the next big thing is illustrated well by the following chart which shows the rapid increase in assets under management (AUM) in growth and venture capital deals over the last decade – the vast majority of which are likely to have a Tech component – relative to traditional buyouts. Following significant increases in each of the last five years, **growth and venture now represent 45% of total AUM across buyout, growth and venture**. While this is principally due to a recognition that disruptive technologies can drive long-term transformational growth and outperformance, it is also a result of companies staying private for longer; late stage venture and growth rounds are growing in size, allowing more capital to be put to work before a company ultimately seeks a listing.

Figure 13: 2021 Global Buyout, Growth and Venture Assets under Management (USD trillions)



Source: Bain & Company Global Private Equity Report 2022

So what does 2022 hold in store for private equity? The threats of inflation, rising rates, ongoing supply chain disruption, a correction in public market (particularly for 'high growth' stocks), and the background instability created by the war in Ukraine all lead to a somewhat more volatile environment: one in which it will be no easier to run companies than it has been over the last two years, and in which it will probably become more difficult to price deals. We can be fairly certain that the records set in 2021 will not be broken in 2022.

Regardless of the environment, we continue to commit capital to the high quality managers that we are close to and continue to identify: managers who can navigate this uncertain environment and have the toolkit to find and nurture high quality companies with motivated founders and management teams who, together with the expertise and resources of their private equity owner, are well positioned to flourish on a five year time horizon. We are still seeing **plenty of high quality, experienced groups to whom we are happy to entrust capital to be put to work over the coming three to five years**.

We closed one new investment during the quarter, our second investment with HgCapital – this time in their latest large cap fund Hg Saturn 3 which has a target size of $8.5bn. Hg is the **leading investor in European software and services businesses** with a portfolio of 43 companies worth over $90bn. Its team of 250 is focused on investing in companies operating in eight target sectors across northern Europe. Hg has a strong and consistent track record having returned $14 billion of proceeds from software and services investments at a

2.9x gross multiple and 32% gross IRR. This is the third example of a ‘re-up’ within our relatively young portfolio and we are optimistic that it will be a strong performer in Nineteen01.

Nineteen01 – Direct Co-Investments

During the first quarter, we approved a co-investment alongside Level 5 Capital Partners, whose Level 5 Fund I we are an investor in. The business, Level5 Swim (L5 Swim), is a children’s swimming school franchisee. The franchisor Big Blue was founded in 2009 by two competitive swimmers and provides a measurable curriculum for students learning to swim. L5 Swim is Big Blue’s largest franchisee. It has built five pools, has licenses over an additional 43 pools and plans to open seven in 2022 and eight in 2023.

This investment was made alongside Level 5 Fund I, as the lead, and the capital is entirely to fund capex through 2023. The investment is scheduled to complete in April 2021. The Level 5 team has been very successful at driving its franchise concepts in part due to their Accelerations Services Team which supports portfolio companies in areas like real estate, marketing and new store openings.

We remain pleased with the progress of our portfolio overall. None of the companies has been materially impacted by the war in Ukraine and related sanctions.

At present, two further transactions are in process and due to complete in April 2022: one in the education sector and the other in financial services technology.

Charles Magnay

Head of Private Fund Investments

Oliver Mayer

Head of Direct Private Equity

What we have been reading …

The Power of Geography *by Tim Marshall*

What do Australia, Iran, Saudi Arabia, the UK, Greece, Turkey, the Sahel, Ethiopia, Spain and Space have in common? Following on from Tim Marshall’s earlier book *Prisoners of Geography* (reviewed above), *The Power of Geography* turns to those smaller or less scrutinised areas which by virtue of their physical situation have the potential to play a major – and in some cases unexpected – part in the history of the twenty first century.

While ‘geographic determinism’ is a phrase often used pejoratively, Marshall argues convincingly that it is impossible to view each country separately from its geographical setting. ‘Politicians are important, but geography is more so.’ Australia for example is defined both by its location in Asia and also by its relative isolation. Is it a part of ‘Asia’ or ‘the West’ – whatever those labels now mean? The Five Eyes intelligence alliance and recent AUKUS security deal indicate at the very least a straddling of the two. How Australia balances the competing demands of the US and China will have a major impact both on itself and also on the two lead protagonists of the decades ahead. (As an aside, it is remarkable for those brought up on the Mercator map to learn that Beijing is as close to Warsaw as it is to Canberra.)

Iran has benefitted through history from being a mountain fortress protected by the Zagros Mountains to the west, the Elburz Mountains to the north and east, and the Central Makran range to the south. Its control over the Strait of Hormuz (through which pass one fifth of global oil and one third of liquified natural gas supply) give it significant leverage in its fractious relationships with the United States and its Arab neighbours. Meanwhile Turkey sits firmly at the crossroads of East and West, gatekeeper to a flow of immigrants into Europe and showing signs of ‘neo-Ottomanism’ in the ‘Blue Homeland’ dream of controlling large parts of the surrounding Black Sea, the Aegean and the eastern Mediterranean.

Many of those immigrants will arrive from the Sahel, the arid corridor stretching 6,000km across Africa to the south of the Sahara. Wracked with bloodshed (of which the endless conflict in Mali is the most widely reported), oppressed by climate change, and a training ground for terrorism, the future of a population which is expected to double in the next 30 years will be of more than academic or even humanitarian interest for the inhabitants of Europe in the decades ahead.

Marshall also provides a thoughtful interrogation of the UK's place in the world post-Brexit. After four decades as the 'geopolitical knot tying together the American-led NATO and the EU', Britain is now in the process of finding a new role in the world, perhaps as a 'leading second-tier power' with 'political and economic ties around the world'. Setting Britain's departure in the context of her (physically) semi-detached status from Continental Europe and De Gaulle's early vetoes (alive particularly to the economic culture clash between Anglo-Saxon private enterprise and French dirigisme) Marshall notes that fortunately 'the EU is not Europe and Europe is not the EU'. Despite much-publicised differences, Britain retains strong bilateral relationships with France (in defence), France and Germany (the 'E3') and the Eastern European nations in particular, and remains a key political and military ally of the US (albeit, in an astute chess analogy, 'as a knight, capable of making its own moves', but where major decisions must still be referred to the king and queen of the US and US foreign policy; the knight sacrifice over Suez in 1956 still reverberates). The UK remains for now a major global economy and a 'leader in soft power' with a permanent seat on the UN Security Council, outstanding intelligence capability, and no less than three of the world's top 10 universities. The greatest risk – measured geographically in terms of 11,000 miles of Scottish coastline, 32% of UK landmass, and the potential loss of the country's only feasible nuclear submarine base, at Faslane – could be yet to come.

Written in a brisk and accessible style (Australia, which suffers the ravages of climate change while at the same time being a major producer of fossil fuels, is described as 'being caught between an Ayers Rock and a hard place') the book wears its breadth of geography, history and politics lightly. For the non-specialist reader who is interested in the rise and fall of countries, empires and alliances – and the geopolitical battlegrounds and flashpoints of the future, such as landgrabs already underway in space – this is a gripping read, even if it perhaps necessarily provides more questions than it does answers. 'For the moment, the kaleidoscope is still being shaken and the pieces have not yet settled'.

Edward Clive

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