The Ruffer Review 2021

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> **“IT’S ALWAYS PRETTIER TO THINK SO, IN LOVE AND IN BUSINESS.”**

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Jurassic risk

“It will take bravery, imagination, and an uncomfortable portfolio journey to get through the drama.”

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In God we trust

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Thinking beyond the summit

“The risks do not decrease as you become more experienced. If anything, the opposite is true.”

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Water scarcity

The other liquidity crisis

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RUFFER

ruffer.co.uk

“ Accusations of fraud simmered, and City lawyers sharpened their quills… the swindle was foiled.”

Rory McIvor

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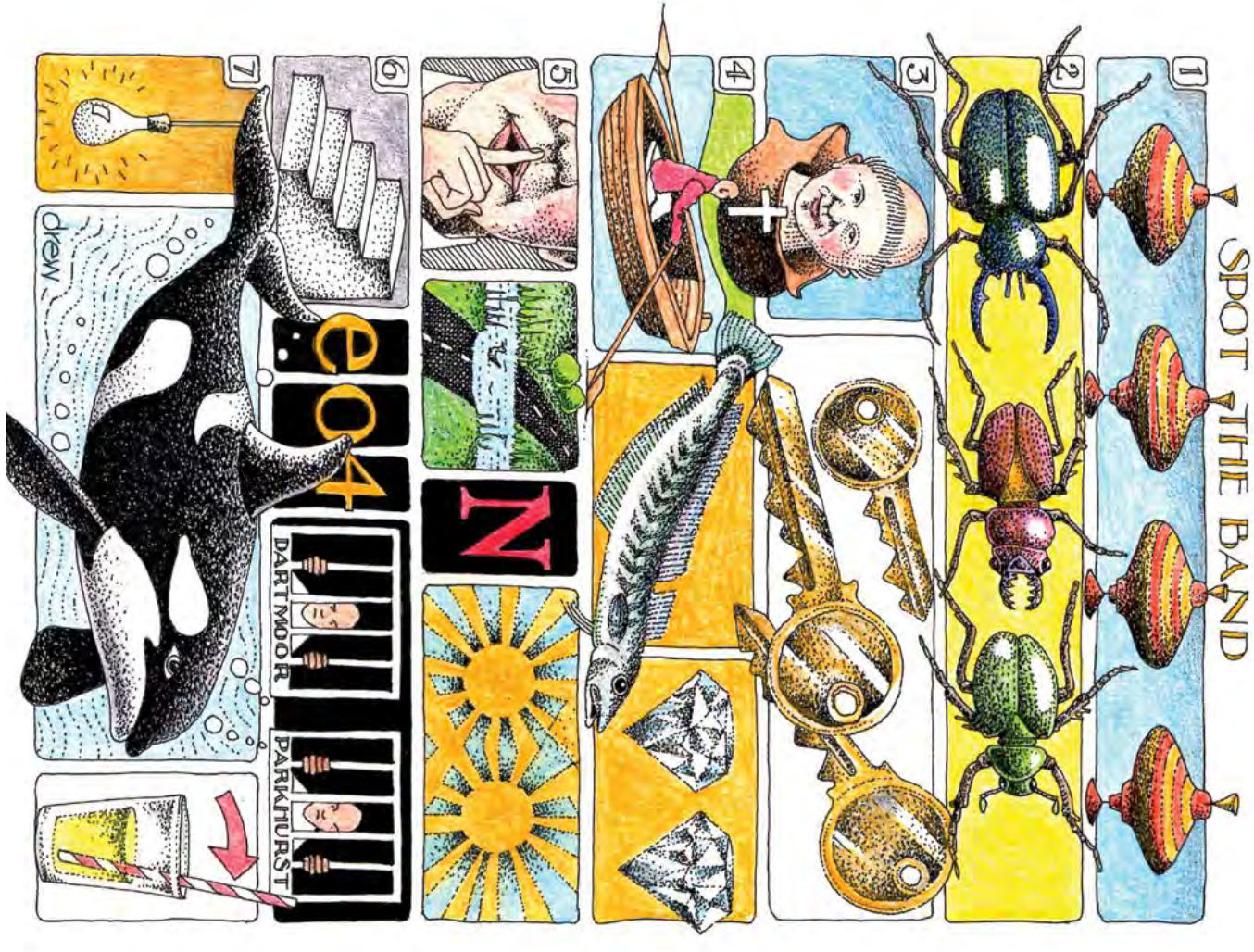
This little quiz from Simon Drew (simondrew.co.uk) is for entertainment purposes only. It contains no hidden investment advice and it is not a solicitation to buy or sell securities that rhyme with any of the bands listed here. Answers can be found inside the back cover.



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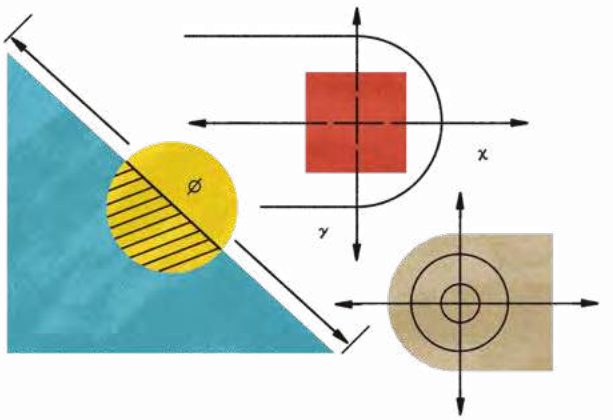

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Foreword

JONATHAN RUFFER
Chairman

THIS YEAR'S RUFFER REVIEW features the supremely fraudulent Gregor MacGregor, a man who invented an El Dorado and got the British to invest in the dream. How did he do it? We have two of his bond certificates hanging on the walls of our office in London, and it is noticeable that the quality of the printing is exceptional. It's a basic lesson in investment – the more comfortable one feels with an investment idea, the more danger there is likely to be.

And there's no shortage of comfort and danger to go around. After the tumult of the past year, even the rhymes of history seem too faint to send out a signal. But central to our investment thesis is the certainty that it is possible to discern the future, something I am proud of when I read the gallimaufry of thought expressed in this Review: from Jamie Dannhauser on deflation, to Bethany McLean and Duncan MacInnes on what can be trusted, to Felicity Hall on water scarcity and Alexander Chartres's take on the changing world order.

Adding more meat than gravy, Henry Maxey's piece is an authoritative overview of the looming threats to traditional balanced portfolios. Under Henry's investment leadership, Ruffer has now survived its third market crisis – the halving of the stockmarket in 2000 to 2002, the 2008 crash, and that of March 2020.

In a world that seems to lack solid ground, we're aiming to build portfolios that will both endure and advance – as an aspiration, that's noble; as a promise, it's not one to trust.


Visionary
Fraudster

A BIAS TO BELIEF

IN A CONVENTIONAL WORLDVIEW, THE VISIONARY AND THE FRAUDSTER OCCUPY OPPOSITE ENDS OF A SPECTRUM. One is all greed and perfidy, devoid of reality; the other is honest, trustworthy to a T, even altruistic. But history shows that many visionaries have traces of the fraudster, and many fraudsters have traces of the visionary. These often-transformational characters live where the supposed ends of the spectrum meet in a circle. What you see depends on where you sit or, maybe, the point in time at which you are looking.

BETHANY MCLEAN
Journalist, and co-author of several books on business gone wrong

"INCANDESCENTLY INTELLIGENT."

People who knew Jeff Skilling, the former CEO of Enron, who ended up serving 12 years in jail for his role in the fraud that ended with Enron's spectacular bankruptcy in 2001, used to describe him in those terms. We all know intelligent people. But the ones whose intelligence can light up the room? They're the uncommon ones.

Skilling had another, more prosaic, strategy, or maybe it wasn't so much a strategy as just the way he was. The greatest compliment he could give you was that you got it. The worst insult, of course, was that you didn't get it. Everyone, but everyone, wanted to be included in the group who got it. Those who got it were the cool kids, it seemed, and the need to belong was powerful – particularly among those who had everything else.

In late 2019, almost two decades after the fall of Enron, I read a Wall Street Journal piece about WeWork CEO Adam Neumann. "For startup investors, the 6-foot-5 Mr Neumann has always had the qualities they crave… He is intensely ambitious and a masterful storyteller with a magnetic personality who can inspire and sell." Nothing in that description spoke to his ability to run a real business. I thought, it's been two decades, but nothing has changed.

BEYOND THE GREY

Before I encountered Jeff Skilling, I'd thought of the business world as being populated mainly by men who existed in varying shades of grey, both clothing and personality-wise. Wasn't business by the book, bland and, well, business-like? And if business was primarily an analytical exercise, meaning that either the numbers were solid or they weren't, then charlatans never should have a competitive advantage.

In the ensuing years, I've written about and seen dozens of ultra-charismatic – yes, even incandescent – leaders who also led their enterprises to doom. From Aubrey McClendon, the former CEO of Chesapeake, to Mike Pearson, the former CEO of Valeant to Elizabeth Holmes of Theranos and more. The stories they spun made believers out of everyone who came close to their webs, and the collapses were spectacular.

So it's tempting to say there should be a pretty simple rule when you encounter that visionary leader, that person whose presence scares away all sceptical thought: run! Well-known short-seller Jim Chanos talks about pattern recognition, and some of the patterns are crystal clear. An outsized belief in oneself. An inability to hear no. A desire to change the world that can border on the grandiose.

A willingness to thread the needle of the literal truth in order to further one's ambitions.

And yet, in a 2009 piece, Wired magazine described one famous entrepreneur this way. He was "leveraging profits from one invention to finance the next, announcing a product well before it's completed, dodging and defending intellectual-property disputes, missing a big deadline, working his development staff feverishly, unveiling a prototype in a splashy and impressive event, and still needing more time before it was actually available to end users — in select markets, of course."

The subject was no modern fraudster. It was Thomas Edison, who also announced he had come up with a long-lasting incandescent bulb (and filed a patent for it) before he'd actually pulled it off.

For every one of these figures who goes down in history as a fraud, there are others who leave the world-changing legacy they (and their investors) wanted, from Edison to Walt Disney to Steve Jobs to (maybe) Elon Musk.

If you're going to do great things, perhaps you can't allow yourself to get bogged down in the negatives, the risks, the might-go-wrongs, or you'll never try. But the very traits

> "The same qualities that helped fuel his company's breakneck growth in the private market are piling up as potential liabilities…"

that enable your rise may also cause your crash. "His combination of entrepreneurial vision, personal charisma and brash risk-taking helped the company surpass $2 billion in annual revenue, and made it the country's most valuable startup," wrote the Journal about WeWork's Neumann. "Now many of the same qualities that helped fuel his company's breakneck growth in the private market are piling up as potential liabilities…"

FINDING THE NEGATIVES

At the end of Ernest Hemingway's *The Sun Also Rises*, when Brett is mourning the relationship that might have been, Jake says to her, "Isn't it pretty to think so?" Well, yes. It's always prettier to think so, in love and in business.

There are intersecting and overlapping reasons as to why the business world is biased towards belief.

When I first became a journalist, one of the things that struck me was how hard it was to find the negative side of a story. For an endeavour that is innately competitive, there's an odd veneer of clubby politeness. It's rare to have one CEO criticise another, or for an investor to speak their doubts about a leader, at least not on the record. There's always negative information, but it tends to circulate in a small and often closed loop.

For instance, there was lots of scepticism about Enron in the short selling community, and among debt investors. That's because the former talked to each other, and the latter saw private placement documents

that illuminated some of Enron's financial shenanigans. But that information never made it into the public domain, the domain of equity investors. The same was true of Theranos. Other blood-testing companies were sceptical, as was much of the medical community. But they didn't raise the alarm loudly. Politeness prevailed, at least in public.

The purported gatekeepers usually don't raise the alarm either. You might think, as I once did, that accountants would account, lawyers would be sticklers for the letter and the spirit of the law, and bankers wouldn't lend money to those who are going to lose it. But no, in practice, it doesn't work that way. Arthur Anderson went down with Enron. Ernst & Young didn't look too closely at WireCard's multi-billion dollar cash hole. Banks raised the funds cash-haemorrhaging Chesapeake needed to stay in business, and sold the risk to others. Short-term fees seem to outweigh the long-term losses.

Jamie Dimon, the CEO who steered JPMorgan Chase to survival during the financial crisis, was personally a big supporter of Neumann, and his bank was a major lender to WeWork. Neumann was young and cool, and the big New York banks were (and are) terrified of being left behind in the money bonanza that is modern Silicon Valley. We all get suckered because on some level we're willing to be suckered.

THE PULL OF THE TIDE

A company's board of directors isn't influenced by money so much as it is held hostage to an even more intense version of that polite clubbiness that pervades the business world, the bias towards belief is reinforced by the very act of joining a board. Most people are willing to serve in that role because they admire the company, or the management. The person who joins a board because they think a company is a fraud, or because they distrust management, is pretty rare!

> "It's hard to know for sure until there's the 20/20 vision that only comes with hindsight."

And yet, board members are supposed to be able to hold the possibility in their mind that, even as it's all going swimmingly and the stock is soaring and the leaders are being admired, everything they're hearing could be a lie. "The test of a first rate intelligence is the ability to hold two opposed ideas in the mind at the same time and still retain the ability to function," wrote F Scott Fitzgerald.

Few of us have that kind of intelligence. Investors, from the biggest to the smallest, want to believe too. After all, we all want to get rich and the way we do that is through success: a stock going up, a private company going public, a merger.

When I was working on my book *Saudi America*, which is about the lack of cash flow in the fracking industry, I spoke with an analyst at an investment firm. He was one of many who were sceptical about Chesapeake during its glory days. When discussing Chesapeake's CEO, Aubrey McClendon, he told me, "I never let [him] in here for a meeting, because I know we would have bought a ton of stock, and it wouldn't have ended well." He was right: it didn't end well. McClendon was indicted by

a US federal grand jury for rigging bids. He died in a single-vehicle car crash the next day. Chesapeake went bankrupt. But this analyst knew that McClendon's salesmanship, combined with that deep gut desire to get rich, would have swayed the day, and his firm would have overcome its analytical reservations and bought shares on emotion.

CONFIRMATION AND BELONGING

Once we're in, it's hard to get out. That's not just because of the financial commitment. It's also because of the phenomenon of confirmation bias. It's highly unpleasant to admit you've made a mistake. It's much more satisfying, at least in the short term, to extrapolate from the available information that which you want to hear, and dismiss that which contradicts your prior beliefs.

We also don't want to be excommunicated from the group of those who get it. "It would be so terrible to see that other man's face—that genial, confidential, delightfully sophisticated face—turn suddenly cold and contemptuous, to know that you had been tried for the Inner Ring and rejected," wrote C S Lewis in his memorable essay, *The Inner Ring*, which remains the best explanation of why it is we go along with others – and why those who seemingly have everything are even more afraid than the rest of us to be cast out.

ON DESIGNERS AND DIGGERS

So, if ultra-charismatic leaders with big dreams and a tinge (or more) of megalomania all create a reality distortion field, how do you tell which one is the visionary, and which one is the fraudster? How do you know if Enron's broadband business, which had Netflix's core idea before Netflix was even born, is going to be Netflix – or Enron? How do you know when these characteristics are productive, rather than pernicious?

It's hard to know for sure until there's the 20/20 vision that only comes with hindsight. But there might be some clues along the way. One is respect for execution, for the actual work. A source described Jeff Skilling to me as a designer of ditches, not a digger of ditches. This person went on to say, and perhaps this was the real clue, that Skilling only valued other designers of ditches. He had no respect for the diggers.

That couldn't be more different than Edison. The myth is that he was an independent genius. He was not. He had a team of men, called his 'muckers', who relentlessly dug the ditches. Edison didn't conjure the design for his light bulb out of thin air. Rather, "he had teams of experimenters rigorously testing sample after sample to figure out what material worked best for the filament," as a 2020 essay in the magazine Ponderwall put it. Even more, the essay notes that Edison failed frequently. Edison viewed figuring out what didn't work as a necessary precondition to ultimate success. Refusing to acknowledge failure, and making failure part of the process, are two very different things.

WHERE VISION IS OVER-RATED

Maybe another clue is that the productive megalomaniac should be trying to solve a giant, difficult, real world problem – one where the idea itself represents a breakthrough. If they aren't – if their idea is something straightforward, even mundane, something requiring great hands-on execution – maybe you don't need the visionary in the first place. Think about WeWork through that lens. All the company

was doing was sub-leasing office space, and losing a ton of money while doing it. Do you need someone who, like Neumann, wanted to "elevate the world's consciousness"? Or do you need a nitty-gritty money-minded real estate maven who could crunch the numbers and negotiate good deals – that grey, boring businessperson, in other words?

Of course, for everything that looks like a rule, there's an exception – like Elizabeth Holmes. She was unquestionably trying to do something grand, something world-changing. So maybe the corollary question is this: apart from the leader's charisma, do they have any of the skills that make them equipped to succeed? Building a machine that can run hundreds of blood-based tests from a single droplet, a finger prick of blood, is a feat that eluded engineers and medical professionals for decades. That's different from founding Facebook, or even Apple. The former requires skill, real knowledge. The other, at its core, requires an idea.

If ideas are the province of visionaries, execution is the province of realists.

A few final clues might be if the visionary has their hands on the levers of the financial statements, or stands to benefit by feigning success via an inflated stock price or other forms of self-dealing. Incentive compensation encourages the leader to succeed. But if success is a matter of perception, of stock price, then the appearance may be more important than the reality. Why do you need real success if the faked kind pays just as well?

OPENING THE BOX

Sometimes I wonder if there's a Schrödinger's cat-like aspect to success in business. You may see an alive cat or a dead one, a visionary or a fraudster. Both are possibilities and only the outcome dictates the reality. In the modern world, that reality might be determined by just one thing: investors' belief.

If Enron hadn't lost investors' faith, and had been able to maintain access to capital, Skilling might have made it to the other side. Enron Broadband would be Netflix, Enron Energy Services would be making the green world efficient, and Enron's trading operation – well, it might not be making the world a better place, but it would be making a lot of money.

This is why I'd never bet against Elon Musk. He uses his position to enrich himself; the flags glow red. His merger of Solar City and Tesla allowed, among other things, Musk to have Tesla pay back the personal loans he'd made to Solar City. But that deal also accomplished something else. A bankruptcy of Solar City would have dented Musk's myth. It would have made it more difficult for believers to believe, and might have made it more difficult for Musk to keep raising capital. There's no question in my mind that, if you froze Musk at a moment in time, maybe even now, an aggressive prosecutor could find evidence of fraud. But if he can keep raising billions?

By the time the history books are written, Musk's companies will be very alive cats.

If I could wave a magic wand, I'd change the twisted incentives that bias people towards short-term gain. But I'm not sure how much I'd meddle with our willingness to believe. After all, without it, we might still lack the real incandescence of Edison's light bulb. ●


“Sometimes I wonder if there’s a Schrödinger’s cat-like aspect to success in business.”

Jurassic risk

AND THE CHOMPING OF THE TRADITIONAL BALANCED PORTFOLIO

THE DEATH OF INFLATION HAS BEEN GREATLY EXAGGERATED. Its return – perhaps as 1970s-style T-Rex or 2020s genetically-mutated velociraptor – will first scare, then maim, then ruin the traditional balanced portfolios that have served investors well for a generation. Investors need to prepare for a world of greater inflation volatility. And with it a Jurassic risk – bonds and equities falling in tandem.

HENRY MAXEY
Chief Investment Officer

A GREAT FEAR STALKS THE LAND OF ASSET MANAGEMENT – the return of inflation. And, with it, the death of an investing paradigm: the dominance of a traditional balanced portfolio of 60% equities, 40% bonds. These 60:40 portfolios have been structured to provide a good level of long-term returns, but with a smooth ride. They have been a successful construct, as Figure 1 shows.

Today, with bond yields now so low and inflation fears creeping in, investors are confronting the obvious concern. It is

Figure 1

NOMINAL AND REAL RETURNS FROM A 60:40 PORTFOLIO IN THE US SINCE 1979

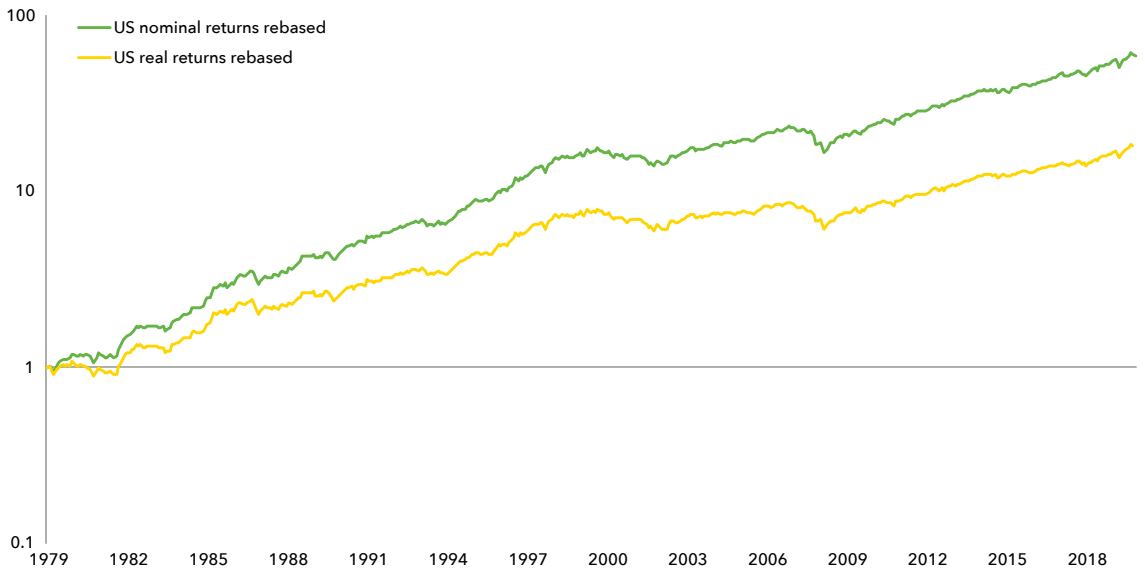


Figure 1: Global Financial Data, Ruffer. Based on a logarithmic scale

summed up well in this quote from Eric Peters of One River Asset Management: "The unprecedented policy response to the pandemic has forced investors to now build portfolios of risk assets without being able to rely on Treasury bonds to materially offset the negative convexity. Consequently, the industry now faces an acute shortage of portfolio diversifiers at a time when it must take ever more risk to achieve its return targets. And the unintended consequences are as profound as they are not yet fully appreciated, let alone understood."
In short, are bonds still the low-risk, diversifying assets which their historical statistical characteristics suggest they are? And, if you're feeling really jolly, you should re-examine the role of equities too. Shareholders are benefiting from receiving a historically-high proportion of stakeholders' return. What's more, that return to shareholders is being capitalised on very low interest rates.[1] Both of these supports would probably be tested in an era of higher inflation. They will be further tested if, as seems likely, the political economy is tilted towards redistribution of wealth and income (resulting in lower margins).

As we saw in the 1970s, inflation is the beast that will eat your 60:40 portfolio (and eviscerate your risk-parity portfolio too). Anyone running a traditional asset allocation for their clients should rightly fear it. Yet, as Jamie Dannhauser covers later in this year's Review, inflation itself has felt such an unrealistic prospect because of the structural disinflationary forces that have surrounded us for the past 40 years.
We can all imagine the terror of facing a T-Rex. But the thought doesn't linger for more than a microsecond because, well, they're extinct. So too, apparently, inflation.

ENTER THE PLAYBOOK

My piece in last year's Ruffer Review was to inflation what the Jurassic Park story was to palaeontology: a hypothesis about why the rebirth of inflation is not just possible, but actually quite likely, and would have some catastrophic results. I argued a financial crisis would precipitate the regime change – and covid-19 gave us that crisis. The policy response to it – the cooperation of monetary and fiscal policy to support nominal demand – has followed the playbook. In fact, the nature of the crisis ("it was no one's fault") has allowed for a full-throated expression of monetary-financing – the 'no one left behind' bailout.

In 2020, the Rubicon of macro policy regimes was definitively crossed. Governments are unlikely to be able to repeat their post-2008 efforts at austerity, particularly while the scarring effects of covid remain evident in unemployment. 'Balancing the books for the next generation' is losing its traction to a combination of Modern Monetary Theory and 'greening the economy for the next generation'.

In short, austerity is out. If fiscal policymakers are able to soften blows for Main Street without any adverse inflationary consequences, they will be expected to play this role in the future. It is no longer just Wall Street that gets the bailouts. This will change the inflationary bias of macro policy for some time: we are now firmly on the road to inflation, and central bankers are lining the road to cheer us on our way.

FROM FIGHTING TO STOKING

Last August, the US Federal Reserve published its monetary policy review. The conclusion in not-so-many words: after a period of below-average inflation, we will let

1 The stock market is expensively rated. But, if today's interest rates and credit spreads are here to stay, then it is possible to argue the market is fairly valued.

> “Do we have the wit and the wisdom to restore an environment of price stability without impairing economic stability? Should we fail, I fear the distortions and uncertainty generated by inflation itself will greatly extend and exaggerate the sense of malaise and caution... Should we succeed, I believe the stage will have been set for a new long period of prosperity.”
>
> Paul Volcker,
> Chairman of the US Federal Reserve, October 1979

inflation overshoot to the upside, to ensure our employment mandate is met. Or, more simply: we will run the economy hot because we don’t think inflation is an issue, and we want to get back to full employment.

The Fed, and most other central banks in the developed economies, have come to fear deflation more than inflation. They are more confident in their inflation-fighting capabilities than they are in their deflation-beating ones. They all fear Japan’s experience over recent decades.

Beginning in the 1980s, monetary policymakers such as the Fed’s Paul Volcker have made strenuous efforts to establish their inflation-fighting credibility. We have now reached the point where policymakers want to establish their inflation-stoking credibility. And they have changed tack just as the political and structural forces are also biasing back to inflation.

As if to illustrate the point, Goldman Sachs are forecasting US GDP growth of 6% in 2021,[2] while modelling the first interest-rate hike as coming only in 2025.

IS THE FIRST CHOMP ON ITS WAY?

We know the inflationary beast is now on the loose. We just don’t know when the predator will strike.

Consider Paul Volcker’s experience. He made his inflation-fighting statement of intent in October 1979. It took two years for the markets to begin reflecting the credibility of that intent.

Interest rates first had to rise – from around 9% to around 16% – over this two-year period before they began their multi-decade decline to where they are today. So, even if you had correctly predicted that

Volcker was serious, a long-bond investment wouldn't have started working for two years.

How long will it take to build the inflation-stoking credibility of policymakers in this reverse Volcker manoeuvre? Could it be two years, and further falls in yields, before the Fed's inflation overshooting framework is credible? The answer will depend on two inter-related things. First, political will: whether both the monetary and fiscal authorities have the courage to run the economy hot. Second, the transmission mechanism: what, exactly, will bring inflation about?

POLITICAL WILL IS NEEDED

Volcker's experience shows that, when a regime is deep-rooted, it takes courage and political savvy to pull off a regime change.

Central banks today certainly seem committed to running the economy hot, but the heat is likely to be generated by the fiscal policy in the monetary-fiscal combination. So, if the politics of prudence gets in the way of the political will to reflate economies – as it could in the frugal northern economies in the EU, or with Rishi Sunak's "sacred duty" to balance the books in the UK – then we could end up with more of a stop-start cycle.

This is what has happened in Japan. The fiscally austere Japanese Ministry of Finance is an incredibly powerful bureaucracy, ideologically-wedded to balancing the books. As such, it has a bias to being fiscally tight, even surreptitiously so, when monetary policy has been loose. The result of this bureaucratic reticence is that inflation in Japan has been unable to sustain itself much above 1% for any length of time.

So if politics in the West prevents sustained fiscal cooperation with monetary policy, then it will be hard to raise the level of inflation much. Stop-start stimulus will be the result.

THE TRANSMISSION MECHANISM

Ever since we started talking about the inflationary endgame at Ruffer, the most common question we've been asked has been: how will inflation be generated? Or, as the investment geeks put it: what is the transmission mechanism?

Everyone can understand the argument that inflation is the more palatable form of default for an indebted government. But most struggle to foresee how inflation could actually be generated, given the structural headwinds to inflation and the dominance of monetary policy in the macro policy mix.

"It's one thing wanting inflation; I want to be 6 foot 2 inches tall" was the retort. "It's another getting it; I'm 5 foot, 8 inches".

Of course, inflation can always be generated in a fiat-money system if there is the political will to do so. The issue is how it can be generated in a healthy fashion. As Nick Carn of Carn Macro Advisors puts it, if your home central heating breaks down, it's not particularly reassuring when the heating engineer arrives with a jerrycan of petrol and a flaming rag and says, "Don't worry, we can get this place warmed up in no time."

The transmission mechanism matters when it comes to policymaking. Yet the language here is unhelpful: it conjures up mechanical images of inputs and outputs, which can be controlled

> “Japan’s deflation problem is real and serious; but, in my view, political constraints, rather than a lack of policy instruments, explain why its deflation has persisted for as long as it has. Thus, I do not view the Japanese experience as evidence against the general conclusion that US policymakers have the tools they need to prevent, and, if necessary, to cure a deflationary recession in the United States.”
>
> Ben Bernanke, November 2002

by the operators. This leads to a focus on conventional explanations for inflation – for example, the monetarist view that changes in the quantity, velocity, or, even, impulse of money supply cause inflation.

What history shows is that inflation is often a collective behavioural phenomenon – with all the non-linear dynamics that implies. If we think of it in this way, we may be drawn to the lesser-discussed fiscal theory of inflation. This holds that a loss of confidence in a government’s ability to service and repay its debt results in a repudiation of the country’s bonds and an inflation caused by currency weakness. A confidence crisis like this occurs suddenly, rather than in a predictable, mechanistic manner. Think tipping points.

Takeaway: the causal explanation of inflation may not be obvious until after the event, so it’s not helpful to tie an investment strategy to a transmission mechanism. It’s an investor’s conviction on the inevitability of the outcome that matters most.

MEET THE FOUR

And yet it is worth considering what sort of inflationary beast will eat the 60:40 portfolio. Should we fear the Raanessaw? Will we be Fed to the repressor? What about the 1970s T-Rex? Or could it be a new genetically-mutated velociraptor for the 2020s?

First beast

THE RAANESSAW

What's a Raanessaw? It's a reverse Wassenaar, obviously. So what's a Wassenaar?

In 1982, Europe's Volcker moment came with the Wassenaar Agreement.[3] Named after the quiet suburb of The Hague where it was signed, it was a ground-breaking agreement between employers' organisations and labour unions. A consensus had emerged in the early 1980s that, to sustain employment, the burden of taming rampant inflation should be shared by employers and the employed. Unions needed to stop demanding ever-greater wage rises, and employers needed to respond by employing more people again. As it set the tone for later social pacts elsewhere in Europe, the agreement has been credited with ending the wage-price spiral of the 1970s.

Today, with income inequality a hot political issue, and shareholder capitalism seemingly giving ground to stakeholder capitalism, is it possible we could see the same consensus emerge, just in reverse? This would involve governments, major industries and organised labour working together to increase wages and bonuses.

In 2013, Prime Minister Shinzō Abe of Japan attempted to instigate exactly this as part of Abenomics. He wanted the link between corporate profitability and wages restored so that the stimulus didn't just get 'stuck' in higher corporate profits and the financial system. Although nominal wages in Japan did rise, real wage growth has been muted. Japan's deflationary mindset has made it very difficult to start a wage-price spiral with enough oomph to reach the 2% inflation target.

While the rest of the world doesn't yet suffer the same deflationary mindset as Japan, I still think it would be hard to kickstart a wage-price spiral in the West. The unions have far less influence now than they did in the 1970s. Governments may push minimum wages higher but are not inclined to impose themselves more broadly in wage-setting. And, while companies may lean-in to the idea of stakeholder capitalism by paying employees more, they won't unilaterally create a spiral which undermines their profit margins.

So the Raanessaw doesn't seem like an imminent inflationary threat.

Second beast

FED THE REPRESSOR

The US ended the Second World War with debt running at nearly 120% of GDP, while the UK's ratio stood at 250%. By the early 1970s, the US debt-to-GDP ratio had fallen to around 25% and the UK's was down below 50%. How was this achieved?

A lot of the heavy lifting was done by repressing the interest rate paid on government debt to a rate below the level of

3 Not to be confused with the Wassenaar Arrangement

inflation. For example, the rate of interest on US long bonds was fixed at 2.5% in June 1941 and remained at that level until the Treasury-Fed Accord in February 1951. Inflation, meanwhile, averaged 5.9% over that period.[4] As a result, real interest rates were deeply negative, which meant nominal GDP grew faster than nominal debt, thereby reducing the debt-to-GDP ratio to more manageable levels.

One of the attractive things about this period is that the government's deficit, having been enormous during the war, fell back to near balance in the years after it. As a result, US gross debt levels flatlined.

The post-war context was perfect for financial repression. The necessary reconstruction created demand, and supply was still impacted by the war. Background inflation remained elevated while interest rates were controlled. It is difficult to say, therefore, that financial repression drove inflation; rather, financial repression was effective because inflation was already the mood music.

A similar repression has taken place since 2008. Real US overnight interest rates have been negative for most of the past 12 years. Although interest rates beyond the overnight rate have not been formally fixed as they were in the 1940s, they have been heavily managed through a combination of quantitative easing and forward guidance by the Fed. This has stimulated asset price inflation, but not consumer price inflation.

In our current environment, interest rate repression alone is not enough to stimulate higher consumer prices. So, if we're imagining how the future might be more inflationary, the post-war period is only part of the story. When most people think about inflation, they tend to think about the 1970s. Does this period hold the key?

Box 1

NEGATIVE INTEREST RATES

Financial repression since 2008 has been a support – rather than a threat – to the traditional 60:40 portfolio. In fact, were the Fed to push harder by experimenting with negative nominal interest rates, then the 60:40 portfolio would continue to thrive.

As I argued in last year's Review, I don't believe negative nominal interest rates will be seriously attempted in the US unless fiscal policy abandons monetary policy in the stimulus mix. This now looks a lot less likely in a post-covid world.

Why? Because the baton of policy stimulus has passed to fiscal policy (with accommodation from monetary policy). This baton pass is needed to drive demand directly, rather than hoping that asset markets will transmit monetary stimulus to the real economy through higher asset prices.

4 US Bureau of Labor Statistics

Third beast

THE 1970S T-REX

The inflationary cycle of the 1970s is largely associated with the supply-side shock from oil prices allied to the labour market frictions of high union power. Fiscal largesse, blind to actual output gaps, provided the fuel of excess demand.

Lesser appreciated is that, in the US, this cycle had its origins in the 1960s. President Lyndon Johnson's government overestimated the amount of slack in the economy – and sought to utilise it. Beginning with the Kennedy-Johnson tax cuts in 1964, the US began stimulating growth with fiscal policy while pressuring the Fed to keep monetary policy loose. The result was a series of inflationary waves in the 1960s which were amplified by the events of the 1970s.

There are some parallels with today. Take the supply side, the capacity of the economy to produce goods and services. This has undoubtedly been damaged by the covid crisis. Unusually, in the West it has been the dominant service sector which has been hardest hit (think, hotels and restaurants that will struggle to reopen). The crisis has also reminded business leaders that there are benefits in having some redundancy (think, holding a little more just-in-case inventory). Covid-19 compounds two other structural supply side shocks that are covered by my colleague Alexander Chartres elsewhere in this Review: supply chains shifting as US-China relations deteriorate; and the attempt to price in some of the cost of environmental, social, and governance externalities into the costs of business.

Collectively, these shocks will act against the structural disinflationary trends that have prevailed in recent decades. But will they make the Western economies inflation-prone, 1970s- style? It's unlikely; the oil shocks were very extreme cost-push events. That said, we need to consider the emerging macro context. If these supply-side changes are allied to macro policy, which assumes both an unchanged disinflationary backdrop and a greater degree of slack in the economy than actually exists, then we could have the set-up for a very similar policy mistake to that made in the 1960s. Stick a high voltage across a copper wire and it will get hot; stick the same voltage across a thinner wire and it will get hotter.

The US Federal Reserve, for example, has been explicit in its view that monetary policy should remain accommodative until unemployment is back to, or below, the low levels of 2019. The Fed assumes inflation will not be an issue between now and then, because it wasn't previously. So much so, in fact, that it has adjusted its monetary policy framework to include the idea of inflation make-up, or inflation overshooting – the Fed will allow inflation to remain higher for a period to compensate for a past period in which it ran lower than the 2% target.

And fiscal policy is now active alongside monetary policy. This is direct stimulation of demand. It does not rely on transmission via the financial markets, as it has since 2008. Stimulus via monetary policy alone has tended to get trapped in financial markets – with share buybacks and financial engineering, rather than new factories and higher real wages. Monetary-fiscal coordination is stimulus via Main Street, not Wall Street. It stimulates consumer price inflation rather than asset price inflation.

Adding it all up… we have demand stimulus (which is more directly inflationary) hitting a post-covid economy (which is structurally more inflationary

biased). That combined with policymakers who will both cheer inflation on and who have promised to let the economy run hotter for longer. All against a backdrop of financial markets that have wired themselves to the proposition that low interest rates are here to stay.

Fourth beast

A NEW, GENETICALLY-MUTATED VELOCIRAPTOR

While the 1960s and 1970s provide the textbook roadmap for inflation in the developed economies, we need to think more creatively about what unique genetic mutations the next inflation might have. One avenue that interests me is the idea of a run on fiat currencies.

In developed economies, we are used to relative stability in foreign-currency exchange markets because of the credibility of the institutions that manage the economy. This means most people haven't spent a lot of time asking themselves, "what is money?" or "is my money safe?"

That has started changing in the post-2008 world of extremely low, sometimes negative, interest rates. Faced with a safe pathway to retirement that is torturously slow, savers have been forced to take substantially more risk to find return. For some, particularly the young, this has incubated a 'speculate to accumulate' mentality. And one of the popular speculations has been on digital currencies.

Irrespective of the merits of these digital assets, their emergence has led a generation of young people (and quite a few older ones too) to consider some of the existential questions about money. Even if it is simply to justify a speculation, they have had to consider characteristics such as: fiat money's potentially unlimited supply; how much money is being 'printed' to bail out the latest victim(s); how inflation typically eats away at money's purchasing power; how a real asset like gold can – and did – act as a monetary anchor; and how new technology offers the potential of 'money over IP'.

Large numbers of people outside finance are interested in what money is and, more importantly, what its failings are. They are also getting equipped with tech tools that allow them to move out of fiat and into alternatives such as gold or bitcoin. The website of the mobile bank Revolut yells out: "Go from cash to crypto, in seconds."

In the nineteenth century, once people got the hang of the signals that indicated banks might be in trouble, they would seek to withdraw their bank deposits on the back of the rumour, rather than waiting for the facts. The banking panic run of 1893 was a spectacular example of this learned 'panic early' behaviour.[5]

So the psychological tinder of confidence in fiat money is drying, and the technology providing alternatives is becoming available to everyone. This greases the wheels of another route to inflation: a sharp fall in and run on the currency, something we normally only associate with emerging market economies. As with fiscally-driven inflation, this too would have tipping point characteristics.

Could this happen today? Potentially, yes, but I doubt the tinder is dry enough yet. I think further development is needed on three axes –

- A sharp pick-up in actual inflation, which central banks seek to look through.
- Sustained use of fiscal policy and continued academic endorsement for it.[6]
- A further acceptance of, and widening access to, digital assets (the things depositors would run to) by institutional investors, regulators, and commentators.

All of these feel like very live dynamics for the next 12 months.

DRAWING ON THE FOUR BEASTS

Box 2 shows an example sequence of events from here, drawing on the thoughts set out so far.

The key point to take away is that it is inflation volatility, not necessarily sustained higher inflation, which ignites the psychological tinder. We might only need 1960s inflation volatility to get 1970s inflation rates.

This would give us a kind of inflation unexpected by the conventional analysis. It is one which favours the intuition of our Chairman, Jonathan Ruffer: the transmission mechanism is something to marvel at in hindsight, rather than seeking to time with foresight.

By putting the focus on inflation volatility, this also accommodates the possibility that the still-powerful disinflationary forces in the world will continue to make sustained inflation hard to come by.

FIRST FRIGHT, THEN MAIMING, THEN DEATH

Investors' generic fear for portfolios today is that bond prices can't rise much more and so they won't be a good hedge in portfolios. This is overly simplistic.

First, it ignores the possibility of negative nominal interest rates, something we see as unlikely but not impossible. More important, it ignores the key question: what drives the bond-equity correlation, and what conditions will turn it positive again? Put simply: when will bonds stop providing an offset to equities in a portfolio?

On the Jurassic theme, true to Hollywood form, it seems most likely that we get some inflation frights before the final demise of the 60:40 portfolio. By inflation fright, I mean inflation volatility, which

5 federalreservehistory.org/essays/banking-panics-of-the-gilded-age

6 For a recent example of such an endorsement, see this piece by prominent US economists: brookings.edu/wp-content uploads/2020/11/furman-summers-fiscal-reconsideration-discussion-draft.pdf

Box 2

AN EXAMPLE SEQUENCE OF EVENTS

1. Dramatic covid policy stimulus into supply side shocks gives us an initial burst of inflation and growth in the second and third quarters of 2021.

2. Central banks are willing to look through this and, if required, stop long-term interest rates from rising too much. Fiscal policymakers, feeling the need to appear prudent, use it as an opportunity to reduce some of the fiscal stimulus.

3. This negative fiscal impulse quickly takes the heat out of the economy. Inflation and growth fall sharply again at the end of 2021 or early in 2022, and the secular stagnation headlines reappear: 'Inflation only transitory.'

4. Fiscal policymakers are compelled to return to stimulus, which they now feel is an effective tool alongside accommodative monetary policy. Central banks continue to signal their approval. Chatter around Modern Monetary Theory grows louder.

5. The overall effect is much higher inflation and growth volatility, which central bank policy prevents from being priced into much steeper yield curves.

6. Suddenly, on the back of another wave of stimulus and a pick-up in inflation, there is run on a major G7 currency. Domestic depositors and investors seek to escape the financial repression of low rates and resurgent inflation.

7. Inflation in that economy moves decisively higher, justifying the pre-emptive move by depositors and investors. Perhaps, more interesting, what happens if – given today's technologies – society itself is able to function better with higher levels of inflation than it has in the past? Would this make over-indebted governments more tolerant of inflation? The losers would be the older generation of savers and pensioners. But perhaps this too is more tolerated because this is also the generation which has accumulated the wealth.

8. Seeing this, depositors in other G7 countries, are primed for exactly the same behaviour in their own currencies. The pattern becomes contagious.

implies inflation rising sharply, scaring people, and then disappearing back into the undergrowth. The conditions for starting this in 2021 are perfect thanks to the vaccine-led reopening of the world economy, supported by enormous monetary and fiscal stimulus. No doubt, as soon as it looks like the world is reflating, policymakers will seek to remove their extraordinary fiscal support measures. This will quickly puncture any inflationary exuberance – and down inflation will go again.

For 60:40 portfolios, the first of three phases will be fright. Inflation volatility rises. Bond prices no longer trend higher, but they do remain negatively correlated with equities. In this phase, bond prices are likely to fall as nominal growth and expected inflation rise (and vice versa). Equities are likely to do the reverse. So bonds remain an offset, but bond prices are probably beginning to trend downwards. The 60:40 portfolio has both dampened return and dampened volatility.

The second phase will be maiming. This moment comes when the bond-equity correlation switches back to being positive. The purpose of bonds in a portfolio is lost.

Phase three will be death. The deadly chomp arrives when inflation drives interest rates higher and this causes a de-rating of equities (investors are willing to pay less for the same level of future earnings). Bond and equity prices, being positively correlated, both trend lower together.

Figure 2

THE US BOND-EQUITY CORRELATION SINCE 1902

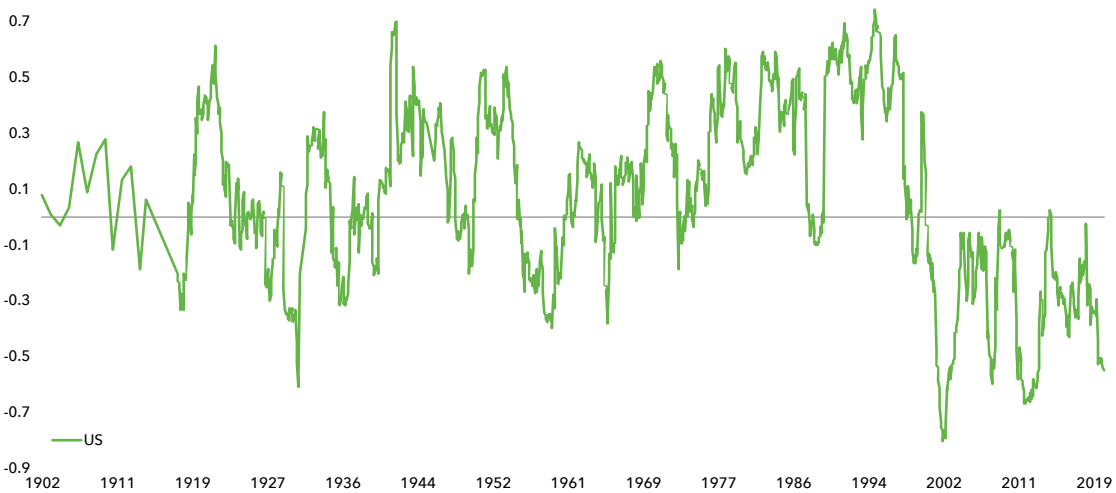


Figure 2: Global Financial Data, Ruffer

Figure 3

TERM PREMIA – ACMTP10 INDEX

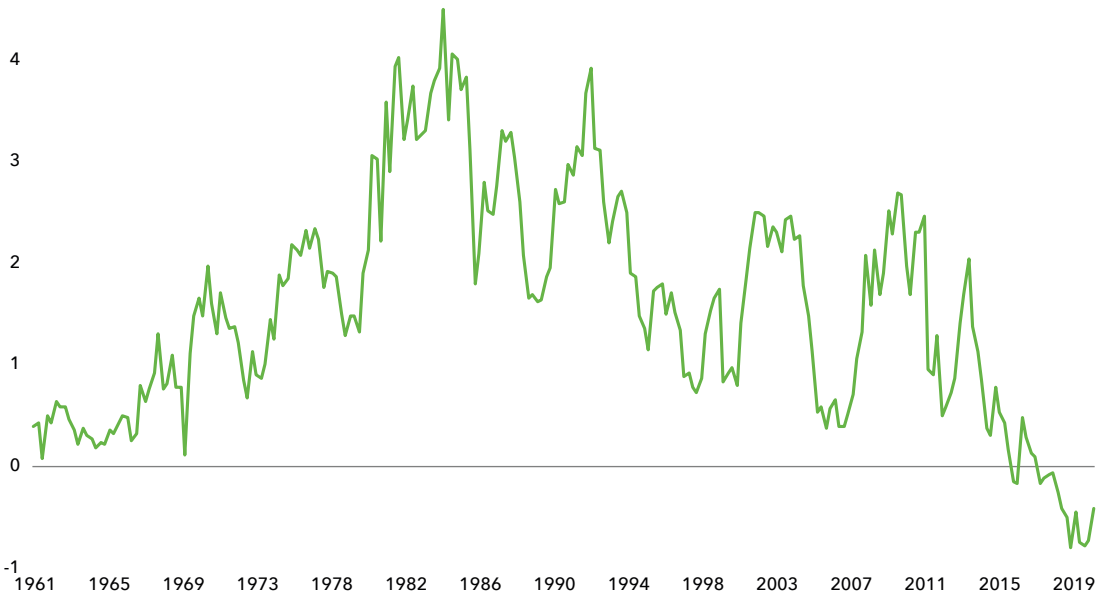


Figure 3: Adrian, Crump, and Moench model, via Bloomberg

THE BOND-EQUITY CORRELATION

The negative correlation between bond prices and equity prices has been a key driver of the success of 60:40 portfolios. With bond prices rising as equities are falling, portfolios enjoy a smoother journey. Yet, as Figure 2 illustrates, the bond-equity correlation shows different patterns over time.

In our research on the bond-equity correlation, we have identified three main factors behind the shift in correlation from positive to negative since 1997: the spectre of deflationary busts; the central banking paradigm in a low-growth world; and the counter-cyclical need for high-quality, risk-free collateral in modern financial markets. The second of those, on the central bank paradigm, has been shaped by a fear of repeating the experience of Japan: very low or negative inflation is a terrible thing, so monetary policy is biased towards avoiding busts rather than worrying pre-emptively about booms. On the need for collateral, this simply means that, when asset prices fall, the demand for collateral rises (usually as margin in derivatives exposures) and therefore demand for 'risk free' government bonds also rises.

The existence of this negative correlation, and the expectation that it would remain in place, has shaped the bond markets. The term premium – the extra yield you get as compensation for the uncertainty that comes with lending for longer periods – has progressively fallen. This premium is now considered to be negative, as Figure 3 shows. Paying a premium, rather than receiving one, for owning longer-duration bonds can only be logical if the following holds: the drawbacks of uncertainty must be more than outweighed by the benefits to the portfolio's risk-return character that come from owning the long bonds.

This introduces a reflexive dynamic into bond yields. Disinflation has both caused yields to fall and the bond-equity correlation to turn negative. In turn, this caused the term premium to become a term discount, because of the added attractiveness of bonds in a portfolio. This has been a double-headed force for bonds; the trend has been self-reinforcing and will be hard to break.

Higher inflation volatility is unlikely to be enough to break this trend, especially when the Fed is expected to look through any initial move above its 2% inflation target. What will be required is a belief that the underlying level of inflation has risen sufficiently and sustainably, so that central bankers once again begin to fear inflation more than deflation. This might involve a sustained move upwards in the inflationary trend (as in the US 1960s example) or a sudden jump to a much higher level of inflation (say, accompanying a currency crisis).

When the double-headed trend for bonds does reverse, it will work just as powerfully in the opposite direction. Bond prices will both trend lower and be positively correlated with equities. At this point, bonds will be about as useful to portfolios as a chocolate teapot is to tea at the Ritz. The 60:40 portfolio is better off being a 60:0 portfolio.

WHAT ABOUT EQUITIES?

If it takes a sustained shift in the level of inflation to break the negative bond-equity correlation, then the accompanying rise in nominal interest rates may also cause a de-rating of equity markets. This is the Jurassic risk – equity and bond prices fall together.

The most damaging phase for investors is likely to come after the reversal of the bond-equity correlation, when inflation moves sustainably above the Fed's target.

Figure 4 comes from Gerard Minack at Minack Advisors. It shows the level of inflation (measured by core CPI) against the multiples investors place on equity earnings in the US. For equities, the best level of inflation is around 2%. If inflation were to rise above 4%, then there is a high probability that the equity market would de-rate. Given the high starting multiple (the orange dot), this could be a very painful process.

Jonathan Ruffer calls this environment the 'airless valley'. Both equities and bonds would be trending lower and their prices would be positively correlated. The 0:0 portfolio (cash) would outperform traditional 60:40 portfolios. When it comes, this environment will destroy wealth on a level not seen in a generation.[7]

After decades of investing in financial markets for wealth creation, wealth preservation will be the priority.

7 Between 1972 and 1974, the average 60:40 portfolio in the UK lost 70% of its real value

Figure 4

US EQUITY TRAILING PRICE-EARNINGS RATIO (PE) AND CORE INFLATION

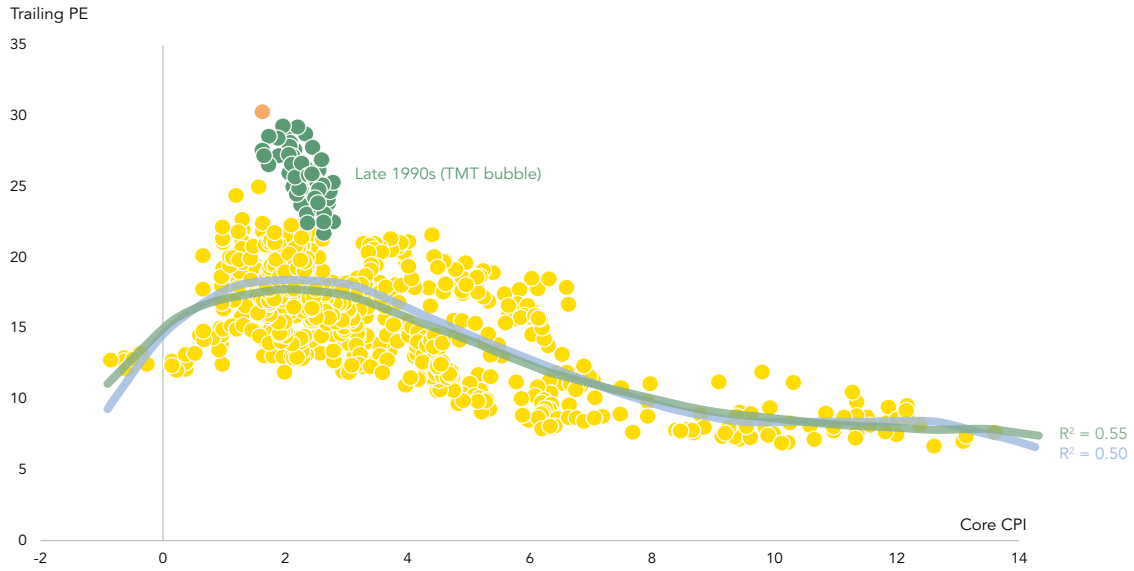


Figure 4: Minack Advisers. Operational earnings from 1988, monthly data from 1955. This chart shows two lines of best fit. R^2 at 0.55 excludes the TMT bubble.

THE DRAMA UNFOLDS

The dramatic events of 2020 have tipped us into a new, more-inflationary, regime. The demise of the 60:40 portfolio may not be imminent; the full drama may take years to play out. Rather than using the time to escape, I suspect most investors will just extend their stay in traditional balanced portfolios.

As with the visitors at Jurassic Park who know the velociraptors have broken loose, but who can't emotionally connect with the danger until they see stampeding crowds, it will take some portfolio bloodshed to cause panic. Perhaps we had a glimpse of the future in March 2020 when traditional portfolio diversification failed.

Regulation focused on protecting investors (using, for example, backward-looking risk measures that present bonds as low risk) will inadvertently make it even harder for investors to avoid the Jurassic catastrophe. "Rest assured, ma'am, the security cordon is impenetrable. There's absolutely no way for the dinosaurs to get out…"

It will take bravery, imagination, and an uncomfortable portfolio journey to get through the drama.

In the scenes immediately ahead of us, inflation volatility will rise in 2021 as economies reopen. Some of the inflation prints this year could be startling, elevated by the recovery and the low base for year-on-year comparisons. It is unlikely that high levels of inflation will be sustained. In the new macro policy regime, fiscal policy is the accelerator and monetary policy will (eventually) be the brake. So it is the fiscal impulse – positive or negative – that will be

> “I believe inflation, when it emerges in earnest, will be a tipping-point phenomenon…”

the primary driver of inflation and growth, while central banks (initially at least) will look through inflation overshooting their targets.

Having played second fiddle to monetary policy for the past 40 years, fiscal policymakers are out of practice. Hence, we can probably expect the sort of stop-go driving of an old Land Rover going off-road, where the driver is scared both of driving too fast and of stalling the vehicle in a muddy ditch. This is the bumpy journey towards a policy regime which looks more like Modern Monetary Theory or helicopter money – the explicit and enduring coordination of monetary and fiscal policy.

As inflation volatility rises, we will discover how inflation-prone economies are. This will be the first test of structural disinflationary forces clashing against more recent supply side shocks.

If the structural disinflationary forces still dominate, then inflation volatility will remain high while the underlying level of inflation will rise only slowly. In this scenario, I think it is currencies that become brittle – there is a higher likelihood of an eventual ‘jump to inflation’ via a run on the currency.

If, on the other hand, the economy is more inflation-prone than expected, we are more likely to see the underlying level of inflation rise steadily as inflation volatility persists. Here, the level of inflation rises through 2% inflation targets and keeps rising above 4%. This could also happen quite quickly, and currency weakness may well be a part of this story too, just not the abrupt weakness of a currency crisis. This would look more like the 1960s-1970s playbook.

Of course, different economies will have different characteristics, and may have wildly different experiences. In particular, the US, with the dollar as the world’s reserve currency, will matter enormously to what happens globally.

THE CONFIDENCE GAME

I believe inflation, when it emerges in earnest, will be a tipping-point phenomenon – of the genetically-mutated variety – rather than a more linear input-output mechanical phenomenon. Policymakers will be focused on labour markets and

output gaps, not on the growing fragility of confidence in fiat money.

They see the firelighter of their policy as sitting in the Arctic: the conditions are cold and icy (even if some supply-side pressures are warming the landscape a little). To worry about wildfires in this context seems perverse.

Thanks to Volcker, policymakers also have a prevailing confidence that inflation can be controlled if it does end up burning a little too brightly.

From this, a paradox emerges. Policymakers may observe an objective truth that the inflationary potential of the system is low at a given point in time.

Yet the inflation volatility they encourage and tolerate – shaped by their confidence in that objective truth – may alter the subjective beliefs of the spectating public. Armed with partial truths and partial information, and powered by social media, the collective action of the public may reveal the greater truth about money and inflation: it is a confidence game.

What happens if enough of the crowd start to believe that sharp bursts of inflation (even if not sustained) are proof of the authorities' efforts to undermine the value of their savings? It matters not whether this is actually the correct assessment. If the crowd takes a tech-enabled exit to other perceived stores of value, in that very instant the objective truth will have changed.[8] The firelighter will have teleported from the Arctic to the African savannah, and – whoosh – we have inflation.

In physics, this is would be called a phase transition: certain properties of the medium change, often discontinuously, as a result of a change in external conditions.

THE CHALLENGE BEFORE US

It is our job at Ruffer to create portfolios for clients that are resilient to the different pathways to the inflationary endgame but that don't rely on precision timing.

Our approach thrived in the Spielberg drama of 2020. We are prepared for the sequels, and to dodge the chomps coming for the 60:40 portfolios. ●

8 I doubt this drying of the psychological tinder will be picked up by survey measures of inflation expectations. I believe it is the confidence in the expectation that matters, rather than the expectation itself; this is unlikely to be captured in the surveys.

In God we trust
All others pay cash

DUNCAN MACINNES
Investment Director

THE SHAPE OF TRUST IS CHANGING. Technology and bad actors have chipped away at long-standing hierarchies of trust. A new trust architecture is growing in its place – emerging organically, dominated by technology platforms, where people place faith in strangers, and in computer code. The nature of trust has shifted before. What is really different today? And what might it mean for money – a system that has rightly been called both "portable power" and "trust inscribed"? Here we present eight voices on the theme of trust and money. Which voices to listen to? What to believe?

[redacted] **"It is [redacted] a slow process which we call [redacted] either [redacted] ideological [redacted] subversion [redacted] or active measures. [redacted] What it means [redacted] is to change the [redacted] perception [redacted] of [redacted] reality of every American [redacted] to such extent [redacted] that [redacted] despite [redacted] the abundance [redacted] [redacted] of [redacted] information, [redacted] no-one is able to come to [redacted] sensible conclusions [redacted] [redacted] in the interests [redacted] of [redacted] defending themselves, [redacted] their families, [redacted] their [redacted] community or their country."** [redacted]

Yuri Bezmenov, KGB defector.

THE VOICE OF DESTABILISED PERCEPTIONS

In his 2016 film HyperNormalisation, Adam Curtis features Russian politician Vladislav Surkov. An adviser to President Vladimir Putin, Surkov stated his goal is to undermine people's perception of the world, so they never know what is really happening.

In Curtis's words, Surkov wanted to turn politics into a "bewildering, constantly changing piece of theatre". Every group could be sponsored and supported – from neo-Nazi skinheads to liberal human rights groups. The key thing for Surkov was that he made it known that this was what he was doing, so that "nobody was sure what is real or what is fake."

This is a world of destabilised perception. The concept of truth becomes more ephemeral.

Trust structures anchored around 'the establishment' and those with credentials – government, academia, the professions, religion, and the media – are crumbling, undermined by visible scandals – from Deepwater Horizon to bankers rigging LIBOR, #MeToo to Abu Ghraib.

Before the rise of the internet, who was saying something, and who they were representing, influenced both what we heard and how we interpreted it. Today, social media platforms have democratised access to an audience of billions. Here, your impact is determined by the virality and sensationalism of your content, rather than its veracity.

Of course, fake news is not new, nor is misinformation in politics – in ancient Rome, Octavian spread rumours about his rival Mark Anthony via commissioned poems and slogans printed on silver coins. What's new is how cheap and easy it has become to misinform people, and on a large scale.

A ONE-WAY CONVERSATION

Can we at least, please, agree on the facts? Or do you have your facts, and I have mine?

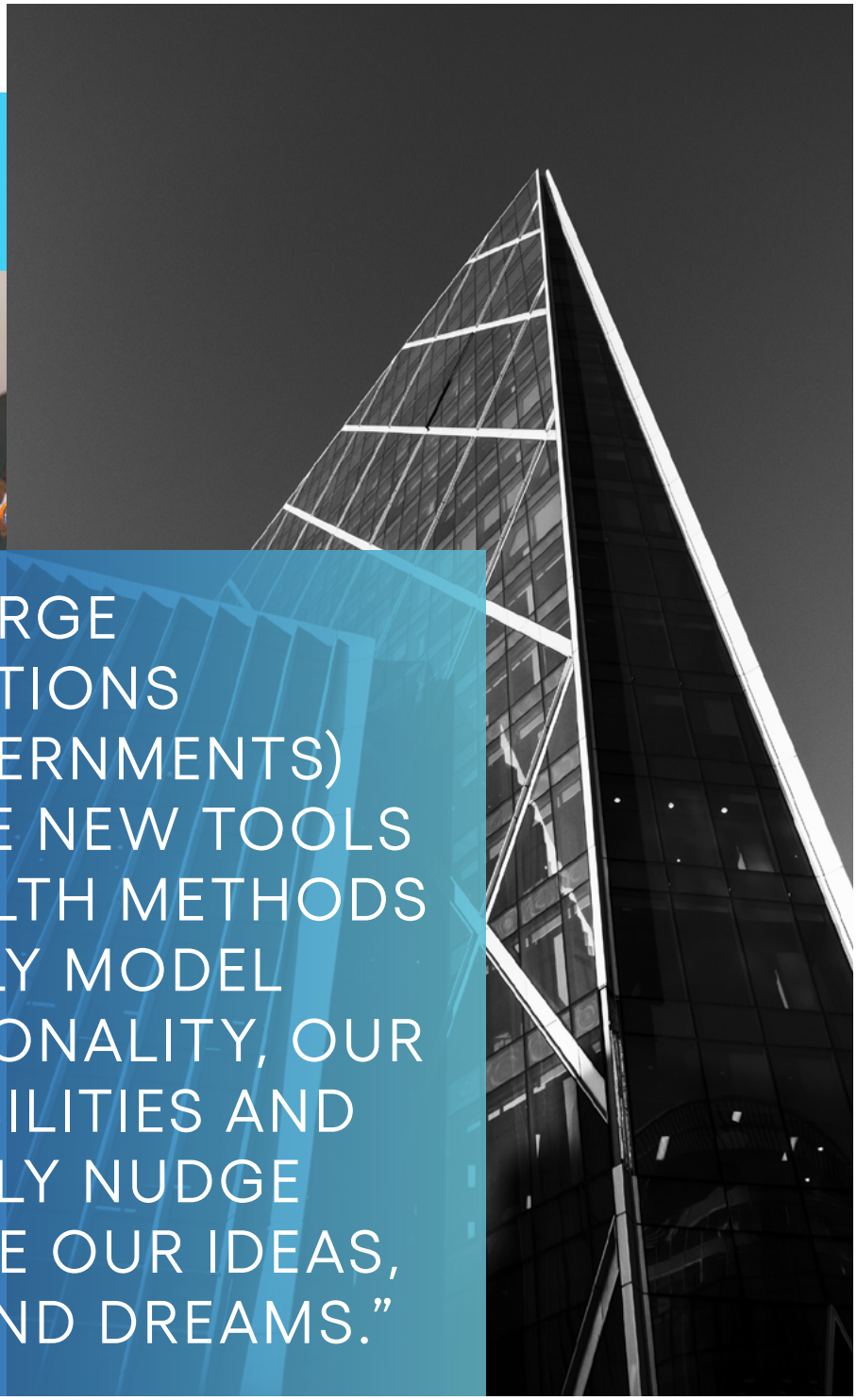
Take a look at this survey. A big company polled people across nearly two dozen countries, not long ago. You'll have to trust me on the source, and on this result – 81% of people find it hard to know who or what to trust, due to contradictory information.

Which links to a paradox: a world that has grown interdependent, globalised, and interconnected; yet also more individualised, full of personally-curated experiences. My Twitter feed is unique to me – to foster engagement, keep me scrolling, scrolling, scrolling. Your feed is unique too, but within your own filter bubble. We're in different echo chambers – and we can't hear each other.

Family, history, morality, truth – do you and I agree on what these words mean? If we don't, we have no collective consensus on key cultural foundations. If we all have our own truthiness, what does it mean for our collective expressions of trust, like the money we use?

WITH SO MUCH PROPAGANDA, IT IS HARD TO CALM DOWN ENOUGH TO LISTEN.

NAOMI WOLF



"THESE LARGE CORPORATIONS (AND GOVERNMENTS) NOW HAVE NEW TOOLS AND STEALTH METHODS TO QUIETLY MODEL OUR PERSONALITY, OUR VULNERABILITIES AND EFFECTIVELY NUDGE AND SHAPE OUR IDEAS, DESIRES AND DREAMS."

ZEYNEP TUFECKI

ENTER THE ALGORITHMS

We trust Google's search bar with all our secrets and desires. Smart speakers, including Amazon's Alexa, sit in nearly 200 million homes[1] around the world listening, recording, and learning from us. Wikipedia is a remarkable source of reference, yet it is free to be edited by anyone and verified by nothing more than the collective wisdom of the anonymous crowd.

Meanwhile, the 'sharing economy' enables people to do what was once unthinkable. Getting into cars with strangers, via Uber and Lyft. Or arranging to sleep in a stranger's house – as around two million people do every evening – via Airbnb.

These are remarkable exercises of trust. Collectively, we have sleepwalked into outsourcing important parts of our lives to lines of code. Why? Expediency and convenience. We trust the algorithms, but few of us have any real conception of how these digital systems work.

1 Canalys/Strategy Analytics, estimate (December 2019)

THE FIVE CHARACTERISTICS OF MONEY

DIVISIBLE
Can be scaled for transactions large and small

DURABLE
A store of value; so spending can be deferred

RECOGNISABLE
Must be easily verified by people who don't trust each other

PORTABLE
Easy to move

SCARCE
To avoid debasement or dilution in value

ANYTHING CAN BE MONEY

Jorge Luis Borges called money "a panoply of possible futures". Dostoevsky called it "minted freedom", Niall Ferguson described money as "trust inscribed" and "portable power". But what is it?

Money is a token of distilled labour; we receive it in return for our efforts and can spend it in the future. This requires delayed gratification and implicit trust that money will retain its value. Money is also a technology allowing us to exchange goods and services with third parties whom we have no basis for trusting.

What constitutes money has changed dramatically over centuries. Seashells, salt, beads, stone and silver have all acted as money at different times and places. In American prisons, currency has changed from cigarettes to noodle cups, as smoking has declined.

All money is to some extent a virtual construct. Money can be anything so long as it is recognised as a unit of economic value within the system in which you are transacting.

“Myth and unquestioned belief is important in monetary matters. How many of us have literal direct assurance of the existence of most items we regard as constituting our wealth?”

Milton Friedman

IN TRUTH, THE GOLD STANDARD IS ALREADY A BARBAROUS RELIC.

JOHN MAYNARD KEYNES, 1924.

FROM GOLD TO DIGITS

Over centuries, the world settled on gold as a dominant form of money. This was an organic, free-market decision. No central body ordained it: independent economic actors gravitated towards gold as the medium they trusted most to hold value and to be accepted by others.

However, gold has weaknesses as a monetary medium: it is expensive and risky to transport, and not easy to divide. So the technology of paper (fiat) money was invented; originally, the paper was fully backed and redeemable in gold.

Most developed nations operated currencies tethered to gold until the 1930s, with this gold standard, for the most part, broken only in times of war. It wasn't until 1971 that all the world's currencies became completely detached from gold when US President Richard Nixon ended the convertibility of the dollar.

The severing of this link transformed the world from a gold-backed monetary system to a system based on faith in the authority and durability of the issuing government. Since then, we have operated a 'pure fiat' monetary system, no longer bounded by scarcity.

Fast forward to today and the value of money rests on a collective belief in its value and a faith in the authority and durability of the issuing government.

Money has become even further de-materialised and intangible as it has digitised. More than 90% of total money is not money in any physical sense. Modern money is nothing more than an entry in a ledger, a digital footprint. Numbers on your bank balance or pension statement, the electronic records of debits and credits. When we say we spend money, what we are really doing is trusting someone else to make and keep entries on digital registers.

A WARNING OF WEAKNESS

Never-ending deficit spending, quantitative easing, ballooning burdens of debt and the increasing likelihood of outright monetary financing or Modern Monetary Theory – governments and central banks are pushing their credibility to the limit.

The Cantillon effect observes that the creation of money is different from the creation of wealth, but how different it is depends on how far away you are from the money creation. Printing money stokes the fires of populism, inequality and inflation.

The Romans shaved silver from their coins to fund foreign campaigns and soldiers' pensions. To meet war reparations, the German Reichsmark was printed in such quantities it in effect became worthless. In our day, those in Egypt, Argentina, Russia, Turkey, Syria and Venezuela have learned that economic, social and political factors can wreak monetary chaos.

Perhaps the surprise is that trust in our monetary system remains robust. We may have grown too familiar and too comfortable to conceive of calamity.

Or, with many asset prices near all-time highs, could we be suffering from a collective optical illusion? Rather than see asset prices booming, maybe it is simply that the denominator – fiat currency – is diminishing.

BEN BERNANKE

Former Chairman of the
US Federal Reserve

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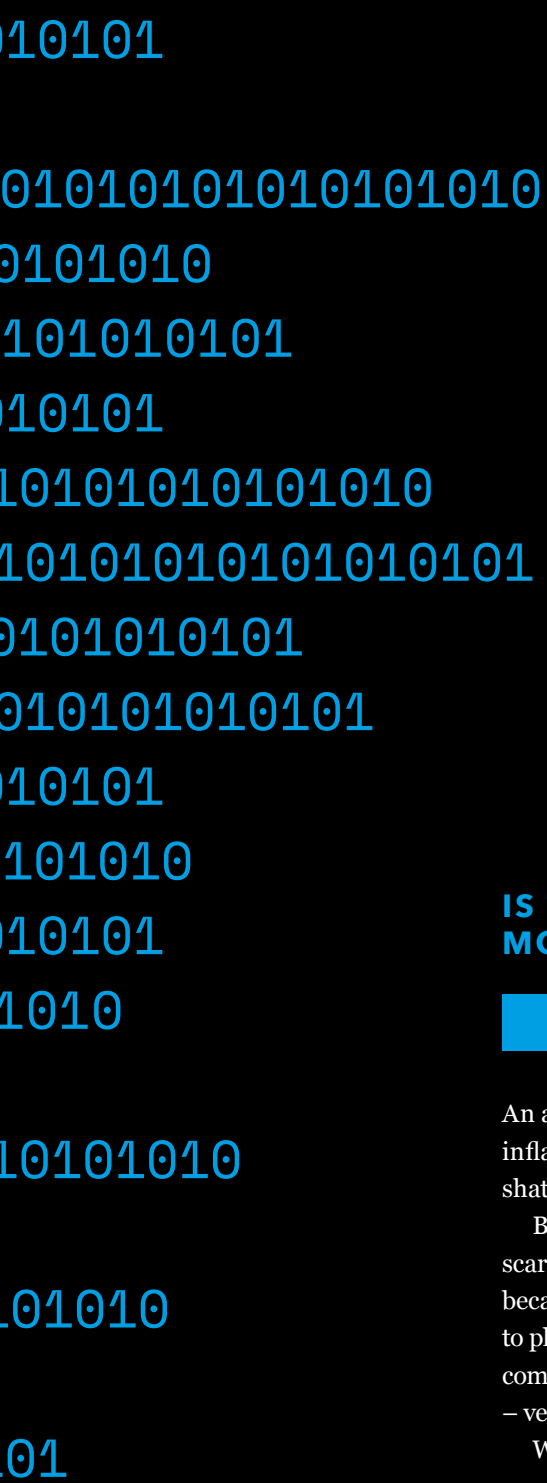


IS THIS NEW MONEY'S MOMENT?

An asset with a wild reputation, bitcoin sits at the intersection of populism, inflation, trust, and money. It was born in a storm, created during the trust-shattering events of the global financial crisis in 2008.

Bitcoin and its distributed ledger technology represent the invention of digital scarcity. At its core, this removes the need for trust in economic transactions, because the network itself provides verification. Rather than requiring the user to place faith in the issuer, this new monetary asset creates reliability from a combination of mathematics, cryptography, and the collective incentives of crowds – verified and supported by a powerful computer network.

What is this asset worth? Bitcoins are valuable because of the inviolable trust-machine that mints them like digital gold. Its price could soar if it gains widespread adoption as a store of value. Or its price could collapse, for any of a large number of reasons, sending bitcoin the way of the Angolan kwanza or the Yugoslavian dinar.


IT IS TRUST, MORE THAN MONEY, WHICH MAKES THE WORLD GO ROUND.
IT IS TRUST, MORE THAN MONEY, WHICH MAKES THE WORLD GO ROUND.
IT IS TRUST, MORE THAN MONEY, WHICH MAKES THE WORLD GO ROUND.
Joseph Stiglitz

PUTTING A NUMBER ON TRUST

A concluding question – how should investors think about this?

In financial terms, trust is a risk premium. The less we trust, the more we should expect a higher return or a larger discount to compensate us for the risk.

Investors today seem complacent about trust. They are therefore embedding a low or zero trust premium in their valuation models.

What investment portfolios need to be braced for is a sudden, jarring, re-appraisal – a collective awakening to money's fragility. Money has become untethered from scarcity, productivity, and economic value. Through centralisation and digitisation, it can be created at will by people with an incentive to do so.

Money faces the same degradation of trust as other traditional institutions. In a landscape of shifting trust, there may be much less of a role for money backed only by promises.

WATER SCARCITY

THE OTHER LIQUIDITY CRISIS

Water, in many ways, is a proxy for life itself. Civilisations have sprung from fertile river valleys and along the trading routes of the seas. For NASA, when searching for extra-terrestrial life, the guiding principle has been to 'follow the water'.

FELICITY HALL
Investment Associate

WHAT IS WATER SCARCITY?

Quite simply, it is when available freshwater supplies fail to meet demand. But water scarcity is not confined to regions of low annual rainfall. It can arise from poor infrastructure or mismanagement.
As populations soar, freshwater supplies are failing to keep pace. Almost half of the human race now live in water-scarce regions.

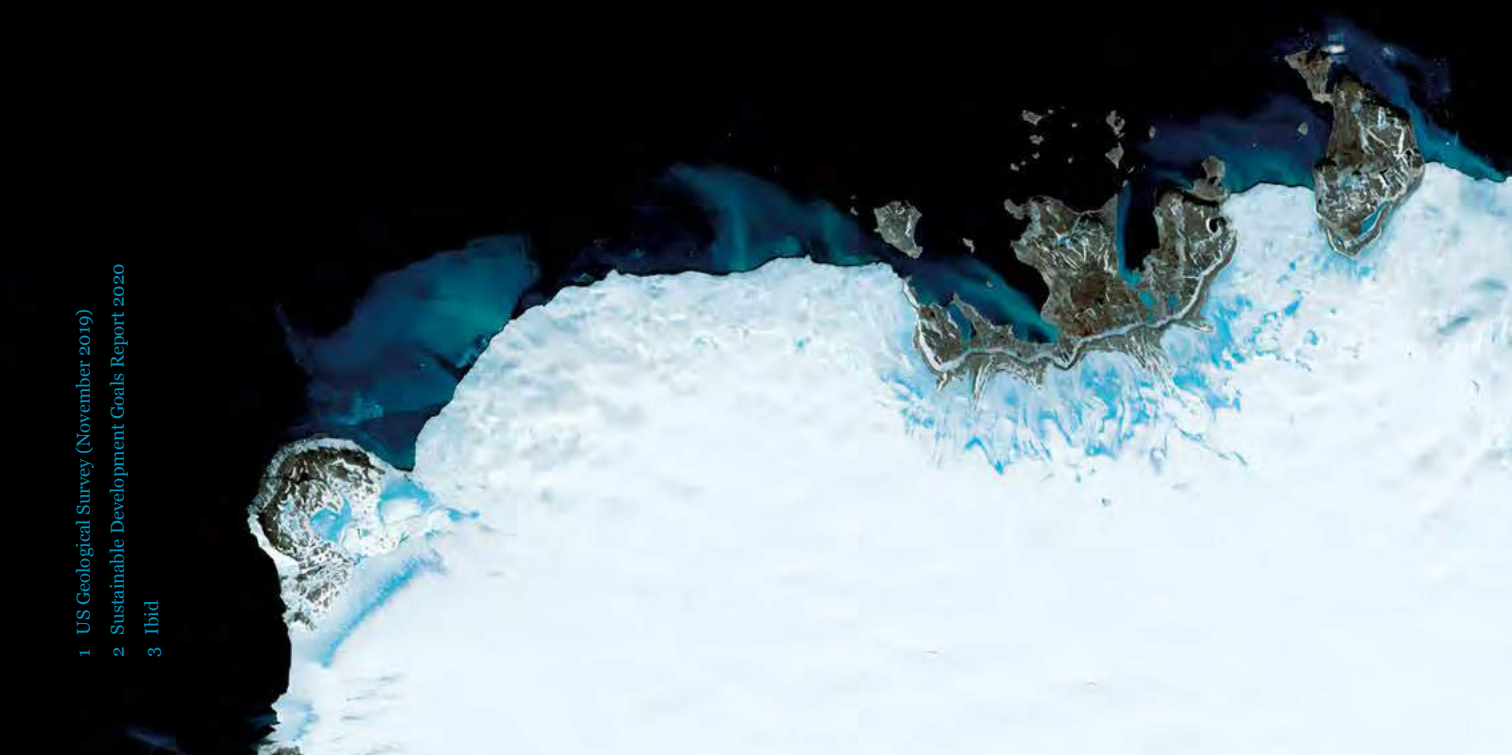
WATER SCARCITY AND CLIMATE CHANGE

Disruption to weather patterns and an increase in extreme events have played havoc with the water cycle. If climate change is a shark, then water resources are the teeth. The freshwater crisis is alarming not only because of our dependence on water, but also because of the speed at which the crisis is approaching.

A LOW-WATER MARK

Only 3% of water in the world is freshwater. Of that, two thirds is locked in ice. The majority of the remaining 1% is subterranean, difficult to access and hard to replenish.[1] The tiny fraction of water that we can access should be enough to sustain a growing population. Yet our starting point for water security is worrisome: 2.2 billion people still lack access to drinking water that is managed safely.[2]

Covid-19 has exposed years of underinvestment in water and sanitation. Only around 60% of people have facilities to wash their hands at home.[3] This makes simple virus prevention measures impossible. The United Nations' sixth Sustainable Development Goal calls for "the availability and sustainable management of water and sanitation for all", yet in July 2020 the UN itself said that the pursuit of this goal is "alarmingly off track".



1 US Geological Survey (November 2019)
2 Sustainable Development Goals Report 2020
3 Ibid

CONSEQUENCE CONFLICT

Competition for water has been a source of human conflict throughout history. We may have exchanged the water mills of old for the Three Gorges Dam, but the relationship between mankind and water remains unchanged. As water becomes scarcer, conflict seems inevitable. Of the 500 water-related conflicts since 1900, half have occurred in the last 10 years.[4]

In Kashmir and Delhi, recent droughts have sparked violent demonstrations against the government, and similar stories are unfolding in Iran and Iraq. In Yemen, water is not so much a cause but a casualty of conflict in the ongoing civil war, with essential water sources targeted as a tactic for weakening the opposition. Trouble is also brewing with the Grand Ethiopian Renaissance Dam (GERD) on the Nile, where in 2020, Egypt threatened military action.

CONSEQUENCE MIGRATION

In the driest regions in the world, freshwater supplies have already reached the point of exhaustion. It is estimated that water scarcity could displace 700 million people by 2030.[5]

Five years of drought in the Central American dry corridor forced farmers into the US in search of work. In Syria, the civil war was pre-dated by the harshest national drought on record between 2006 and 2011.[6] Water scarcity led to widespread crop failure and consecutive poor harvests, driving rural families into cities to seek employment. The strain on food resources and infrastructure led to outbreaks of violence.

4 Wallace-Wells (2019), The Uninhabitable Earth
5 Sustainable Development Goals Report 2020
6 Cook et al (2016), Journal of Geophysical Research: Atmospheres

DAY ZERO

Day zero is the first day the taps run dry. It has already dawned on several cities, most famously Cape Town in early 2018. Water was restricted to 60 litres per person per day in the South African city, around one sixth of what the average American uses every day at home.[7] The crisis exposed the delusion that our drinking water supply is unlimited. Cape Town is not the only city to have come so close to disaster: São Paulo in 2015, Barcelona in 2008, and the Indian city of Shimla in 2018 have all faced the ticking clock of day zero.[8]

SOLUTIONS TECHNOLOGIES AND ECONOMIC TOOLS

Improvements in efficiency and the use of new technologies can help minimise demand while maximising supply. The Goreangab waste treatment plant in Namibia offers an example of how water reuse technology has eased the scarcity crisis for one of the most arid countries in the world. Established in the 1960s to recycle wastewater, the plant now supplies around a quarter of the freshwater required by Namibia's capital, Windhoek. Other new technologies are emerging, from the desalination of seawater to new sensors for detecting leaks, all of which should help us use and reuse water more efficiently. Economic tools, such as thoughtfully constructed pricing mechanisms and the reduction of harmful subsidies, can ensure that the true value and scarcity of water is reflected in its price.

SOLUTIONS LEGAL AND PUBLIC POLICY

For many, the fundamental problem of water scarcity lies not so much in the available volume of freshwater but in its management. This means that legal and policy-based tools are a crucial part of the solution. These tools must ensure that human rights are protected and water-sharing agreements are fair and enforced both sub-nationally and across borders: 60% of global freshwater flow comes from basins which cross national borders.[9]

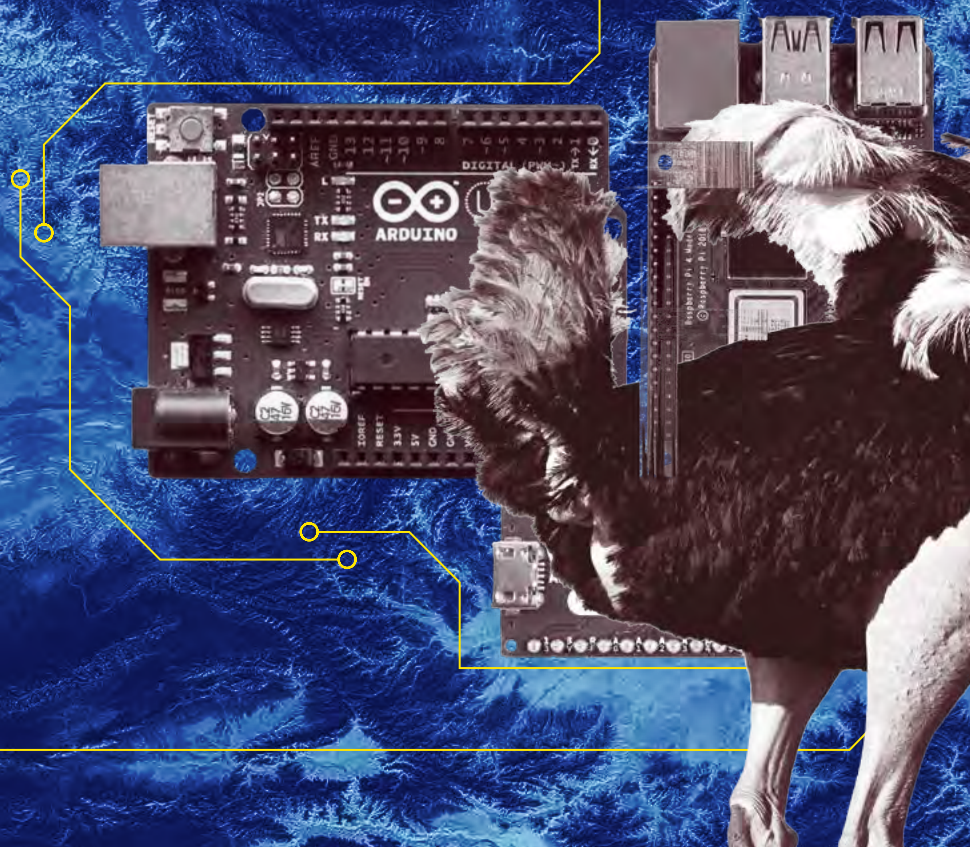
THE WAY FORWARD?

The answer most probably lies in employing a combination of approaches. Focus solely on efficiency, and the livelihood of remote farmers growing alfalfa in the desert is untenable. Put too high a price on water, and you risk exacerbating inequality and hindering emerging economies.

The value of water, unlike gold, does not depend on its scarcity. Its value lies in its necessity.

7 US Environmental Protection Agency
8 Wallace-Wells (2019), The Uninhabitable Earth
9 Sustainable Development Goals Report 2020

THE GREAT ACCELERATION



THE CORONAVIRUS CRISIS HAS ACCELERATED PRE-EXISTING TECTONIC SHIFTS THAT ARE CHANGING WORLD ORDER.

Four interlinked areas deserve the attention of long-term investors: greater geopolitical instability; the digital revolution; domestic political changes in the advanced economies; and the rise of environmental, social and governance (ESG) considerations. Together, these make for a more volatile and inflation-prone regime, one that is less favourable to capital. In short, we're moving from a world where profit trumped politics, to one where politics trump profit.

ALEXANDER CHARTRES
Investment Director

THE OSTRICH EFFECT DESCRIBES A REFUSAL TO ENGAGE WITH NEGATIVE INFORMATION. Pre-pandemic, much of the investment world was in denial about the reality of Cold War II and the geopolitical regime change it entails.

Little wonder. Several decades of Great Power peace supercharged globalisation and the integration of cheap Chinese workers with the world economy. Both have been key drivers of the falling inflation, interest rates and volatility which have underwritten a Golden Age for capital. But unfettered Sino-Western entanglement only made sense if history had died with the first Cold War. It hadn't, and a new East-West schism guarantees at least a partial unravelling of this profitable settlement.

With covid-19 fallout sending US-China relations to their lowest ebb since formal ties were established in 1979, a fundamental change in world order is now harder to ignore. Trade tensions quickly became a footnote as the tech war escalated, morphing into outright hostility and nakedly ideological competition.

Rhetoric and reality began to elide. US firms have been encouraged to de-couple their supply chains from China, especially those involving advanced technology. Or consider the pressure on Thrift, America's largest public-pension scheme, not to use investment benchmarks incorporating Chinese or Russian stocks. Or the ban on US entities holding shares in Chinese firms linked to the People's Liberation Army. These are merely amuse-bouches for greater capital conflict to come.

Von Clausewitz's oft-misunderstood formulation that "war is simply the continuation of policy… with other means" reflects an eternal truth about conflict: it is a dial, not a switch. This is truer today than ever before thanks to the proliferation of capital markets, cyberspace and globalised businesses. These novel battlefields place investors in the firing line. So the historic challenge of a twenty-first century Cold War – and the return of Great Power politics more broadly – is that there are well over 50 shades of grey between (hot) war and peace.

BAYONETS AND MUSH

So where next? In Joe Biden, there's a new sheriff in town. The style has already changed materially, of course – less tweeting from the hip – but the substance is unlikely to. Democrats' traditionally tougher line on human rights and deep Sino-scepticism across the political spectrum will limit room for manoeuvre. Indeed, Biden may be able to exert more sustained pressure by refocusing on US alliances.

For Beijing's perspective, recall first that the 2008 financial crisis emboldened China's elite. It was the moment that many no longer assumed convergence with a Western model was inevitable. The events of 2020 reinforced this idea, with Xi Jinping declaring that "the pandemic once again proves the supremacy of the socialist system with Chinese characteristics."

Seen from Zhongnanhai – China's White House – America's botched pandemic response, civil unrest and turbulent election fallout provide further evidence of inexorable US decline whilst affirming China's gradual restoration to the pinnacle of world order as 'first under heaven'.

President Xi has already used covid-19 chaos as cover to advance China's interests in its near-abroad, from Hong Kong to the Himalayas. Lenin once opined that "you probe with bayonets: if you find mush, you push. If you find steel, you withdraw." To date, Xi has found only mush in his periphery, and perceived US weakness may encourage Beijing to test the new administration sooner rather than later.

On Taiwan, for example, the 40-year-old status quo is crumbling fast and Xi has said that reunification issues "cannot be passed on from generation to generation." Markets should take him at his word. Beyond the obvious risk of direct conflict between the world's two largest economies, the global economy is extraordinarily dependent on Taiwan for the most advanced semiconductors. Any crisis there or over other disputed territories in the South China Sea threatens the significant proportion of global maritime trade sailing through it whilst potentially catalysing broader-based economic de-coupling.

BALKANISATION ADVANCES

Cratered relations have accelerated China's efforts to wean itself off American tech, dollars and foreign oil. Beijing's renewed push on 'dual circulation' – a more autarkic

domestic economy – runs alongside efforts to expand its sphere of influence using the Belt and Road Initiative and its newly-minted South and East Asian regional trade deal (RCEP). Meanwhile, the Sino-EU trade deal – purposefully consummated just before Biden beds in – aims to keep the West divided, and politics subservient to profits.

Geo-economic blocs with different trade, regulatory and currency ecosystems centred on China, America and the EU – where enthusiasm for 'strategic autonomy' has grown in parallel to US-China tensions – will be a defining feature of the new landscape. So will a more interventionist industrial policy in the West, as it tries to re-build its domestic production capacity.

So the impetus for further de-coupling is clear. It will become harder to run supply chains through strategic adversaries. Separate China and non-China supply chains will increase the cost of doing business. Market access will become more restrictive. And the more decisive the schism, the lower the bar to Chinese adventurism.

Taken together, tectonic geopolitical shifts will drive greater volatility, higher inflation and will privilege politics over profit.

BLACK SWANS, GRAY RHINOS

In the zoological pantheon of market dangers, coronavirus was less a black swan – something impossible to predict – and more a 'gray rhino'. Coined by Michele Wucker, gray rhinos are "highly obvious, highly probable, but still neglected" risks. Think of a black swan crossed with the elephant in the room.

Climate change is a classic gray rhino. A warmer world promises more frequent and extreme weather events. With that comes crop failures, commodity price volatility and mass migration alongside wars over water and other resources. Geopolitics and economics become less stable. Compounded with existing weather super-cycles such as La Niña, the disruption will put more emphasis on security of supply, not simply the cost of supply. Again, higher prices are likely.

A, B, C, D, E, S, G...

In recent years, growing climate consciousness has brought a greater focus on environmental, social and governance considerations within the investment and business communities. Known by the abbreviation ESG, these criteria aim to consider the wider impact of companies, looking beyond profitability. Considering greenhouse gas emissions, for example, or the treatment of workers.

Investors like to talk figuratively about the 'investable universe' of ideas. The reality, of course, is that there's only one investable planet open to us, so long-term stewardship of capital must ensure that economic activity is sustainable.

For investors (including Ruffer), ESG criteria are invaluable when considering extra dimensions of risk and opportunity. But they

are also inherently more subjective than pure financial metrics: one man's terrorist is another's freedom fighter, yet both would recognise a profit.

Consequently, the greater long-term significance for markets of ESG measures may be to accelerate the dominance of politics over profit.

Take carbon border-adjustment taxes. In theory, these are designed to adjust for the climate impact of goods – so that, for example, a lower-emission domestic producer of steel is not disadvantaged against steel imported from a high-emission mill overseas. In practice, these taxes can also be a disguised form of protectionism for domestic industry. This may be politically, socially or environmentally desirable, but costs are going up whatever happens.

At the same time, geopolitical tension will draw more attention to the social and governance factors, the S and the G of ESG. Relative to carbon emissions, say, investors have focused little on China's human rights abuses, in Xinjiang and elsewhere. Running long supply chains through dubious regimes will become harder to justify, bringing reputational and financial risk. This will further encourage the post-credit crunch trend of de-globalisation in favour of regionalisation.

In time, governance considerations may come to include national security objectives. Stressed about the lack of truly independent non-executive directors on the board of a Western firm? Try investing in the corporate outriders of a one-party dictatorship.

THE POLITICISATION OF EVERYTHING

Geopolitics aside, the West is undergoing a broader cultural revolution towards the 'politicisation of everything'. The investment world is no exception. Beyond its considerable practical benefits, ESG will prove sticky both because it helps satisfy the deep human quest for meaning, and because it can be used to establish political preferences. Operating in concert with indexation and passive tracker funds – both financial superpowers of the twenty-first century – ESG judgement will be a force to be reckoned with.

All told, the growing focus on environmental risk and ESG issues will compound the effects of Cold War II and create huge new opportunities. But, relative to the benign settlement of recent decades, investors and businesses face more constrained choice over where to deploy capital. Expect increasing costs, new dimensions of risk, and the privileging of the political over the profitable.

THE SECOND MACHINE AGE

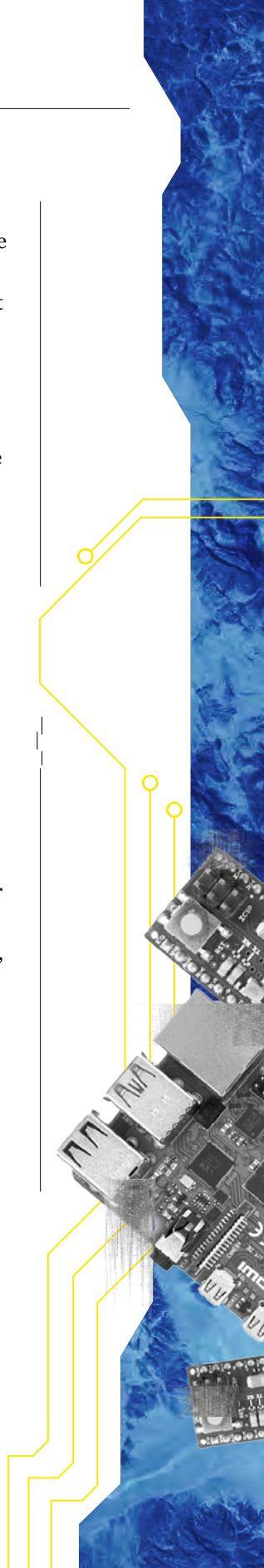
The relentless march of technology is another defining feature of our time. If the Industrial Revolution kick-started the first machine age, digital technology has birthed the second.

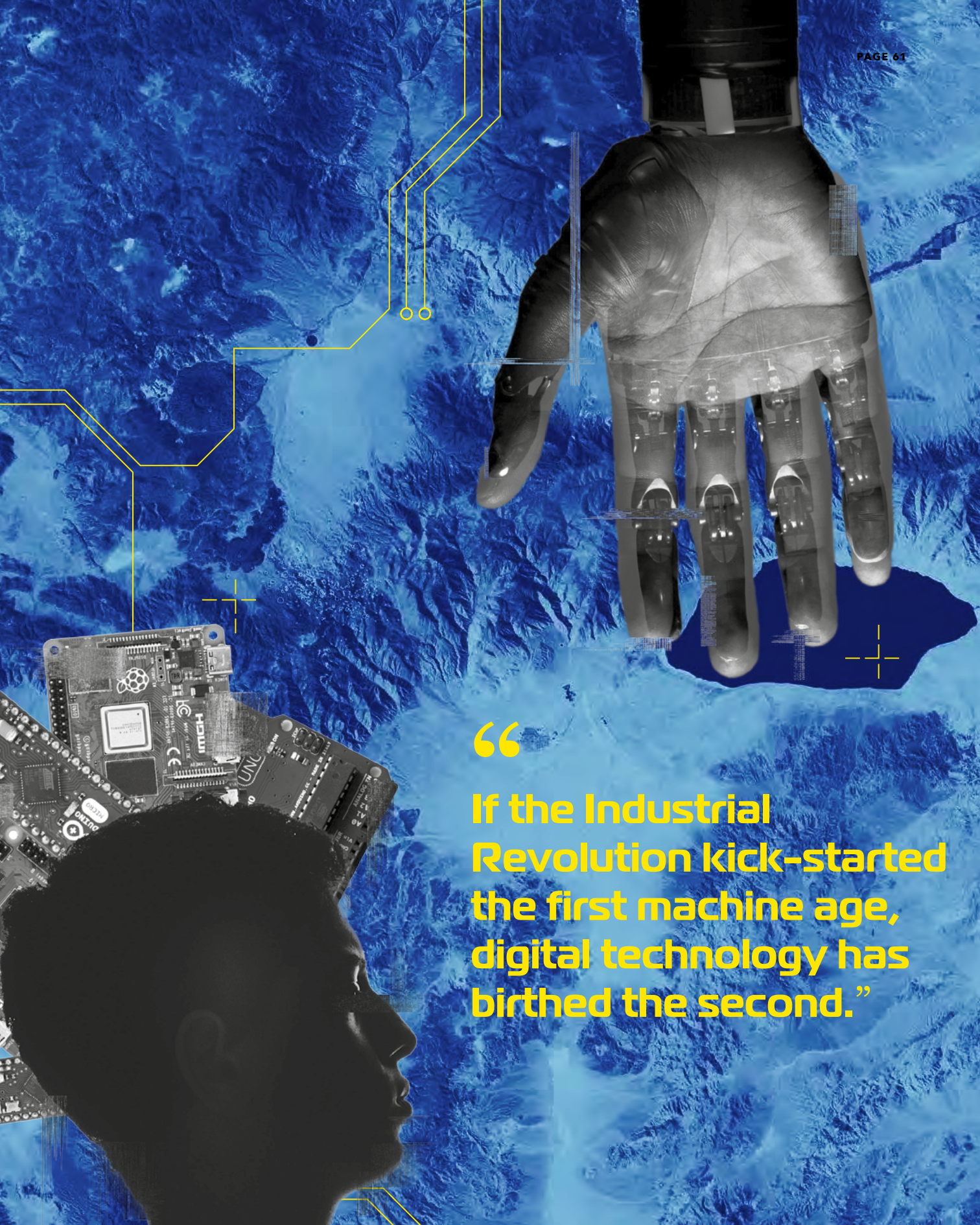
Andrew McAfee and Erik Brynjolfsson of the Massachusetts Institute of Technology observe that the digital revolution is doing for mankind's mental capacity what James Watt's steam revolution did for our physical capacity: side-lining it.

And, as with the first machine age, we can expect similarly dramatic political, economic and social dislocation this time.

By supercharging global digitisation, covid-19 just laid even more of the world economy at the feet of the tech titans, accelerating our advance into the age of data-driven 'surveillance capitalism'.

Networks create positive feedback loops: the bigger the network, the more useful it is,





“If the Industrial Revolution kick-started the first machine age, digital technology has birthed the second.”

which draws more users, and so on. In this way, the digital era brings a winner-takes-all effect, favouring fewer, larger companies. The tendency is towards monopoly.

BIG TECH, BIGGER QUESTIONS

Digital technology's naturally disruptive and monopolistic tendencies will encourage greater government intervention in the economy: 'anti-trust' counter-monopoly measures are set to be a hardy perennial. Politicians are also stirring because of Big Tech's colossal political power, exemplified by Twitter's de-platforming of Trump. In China, the humbling of Alibaba founder Jack Ma sent its own pointed message: nothing is bigger than the Chinese Communist Party. But governments the world over are in a bind.

On the one hand, they need to stop the digital revolution fatally undermining political and social order as well as hobbling economic competition. On the other, they also need to harness the power of Big Tech to compete geopolitically. As in every previous era, superiority in next-generation technology and industry are essential foundations for global supremacy. Quantum computing, advanced semiconductors and space weapons are just a few of the battlegrounds. All have the potential to be world-altering technologies: in 2019, for example, Google claimed that its Sycamore quantum processor had performed in 200 seconds a calculation which a modern supercomputer would take 10,000 years to complete. Not to be outdone, China claimed in late 2020 to possess a quantum computer which performed, in just over three minutes, what would have taken the fastest conventional computer 600 million years to achieve.

The ultimate prize lies in the combining of advanced processing, artificial intelligence and big data. China has a natural advantage in the data economy. Sitting atop the world's greatest natural information mine – a 1.4 billion-strong population without a privacy tradition – it aims to be for data what Saudi Arabia is for oil. Since big data is a competitive advantage, however, states – or geo-economic blocs – will guard it jealously. Unsurprisingly, who gets to set the global (or regional) standards on data and technology is a key axis of twenty-first century realpolitik.

> "With the rise of digital money, how the world pays is firmly in play."

And sitting at the intersection of digitisation, economic blocs and realpolitik is control of money itself. King dollar still reigns supreme in the realm of conventional currencies, but China hopes its novel digital yuan – the DCEP (Digital Currency Electronic Payment) - will help establish a financial sphere of influence free from dependence on the greenback. It marks China's attempt to revolutionise global finance in its favour. Is it only a matter of time before US tech titans provide the foundation for a rival to the DCEP? Like the guns of Singapore, those focused on threats to dollar hegemony may have been looking the wrong way, towards conventional rather than digital currencies. With the rise of digital money, how the world pays is firmly in play.

Digital mastery is central to Cold War II then, and will help decide the victor. But digitisation also poses a viral threat not unlike covid-19: a cyber Pearl Harbor – a crippling attack on critical national infrastructure that could make pandemic shutdowns look benign. This is another gray rhino, and it is surely only a matter of time before such an attack occurs.

Computer viruses embody one of the core features of (most) digital goods and services: infinite replication at virtually nil cost. This winner-takes-all dynamic creates extraordinary abundance – but also widens the jaws between the 'have yachts' and the 'have nots'. They are contributing to what Joel Kotkin has called 'neo-feudalism': a twenty-first century version of the Middle Ages with a handful of (tech) barons and a superfluity of serfs.

Bringing these themes together, the digital revolution is exacerbating geopolitical instability and bloc formation, breeding gray rhinos and, through disruption and wealth inequality, fuelling demand for more active government.

BIG GOVERNMENT'S BIG COMEBACK

The pandemic itself has also accelerated the return of more interventionist governments in the West. Covid-19-induced shutdowns pushed government deficit spending to levels last seen in the Second World War. Powers assumed by government in wartime (or crisis) tend to be relinquished grudgingly, if ever. Financial repression - where interest rates are forcibly held beneath the level of inflation - and increased state intervention remained hallmarks of the UK long after 1945. Expect a similar lingering for the decade ahead. More broadly, the Overton window of what is accepted – and expected – in terms of state involvement in everyday life has widened considerably. Post-covid, saying 'no' to switching on the printing presses and turning on the spending taps will be far harder. A more inflation-prone fiscal dominance has replaced monetarist orthodoxy. It is here to stay.

Appetite for more activist government had been growing for some years anyway. Recent decades may have been a Golden Age for capital on account of globalisation, technology and laissez-faire economic policy, but the gains accruing to China and the Western economic elite have come in part at the expense of Western working classes. Median wages, for example, have been stagnant since the 1970s despite significant gains in productivity.

In both the last UK and US general elections, the working class vote was a decisive demographic, from the Northern 'Red Wall' of England to the US rust belt. This influence is likely to increase demands for economic protectionism, not reduce it, and send the pendulum back from capital towards labour. This will probably include higher minimum wages and increased capital taxes.

And, in a digital world, demands for economic protection are likely to expand from blue collar to white. "Beware the Greeks even when bearing gifts" wrote Virgil in the Aeneid – perhaps today's professional classes need an updated warning: beware the geeks bearing gifts. If you can do your job remotely, so can someone else. For many in the service sector, working from home is a Trojan horse, concealing the kind of disruption the working classes experienced with the offshoring of manufacturing 40 years ago.

More immediately, the pandemic has widened the already considerable gap

between beneficiaries of the new knowledge economy, and those whose fortunes are tied to the old, leading to a 'K-shaped' recovery.

This is a risk. Wealth is ultimately built and secured on stable political foundations, themselves established in a broader culture. The challenge of extreme wealth inequality to those stable foundations is as old as civilisation. Plutarch supposedly mused that "an imbalance between rich and poor is the oldest and most fatal ailment of all republics." Wucker – who we met earlier – cites wealth inequality as another gray rhino of our time. The political classes will conclude that the 'K' is not OK, and investors should expect measures to narrow the gap.

The domestic political settlement within Western economies is thus under considerable pressure. Assumptions in favour of globalisation, de-regulation and laissez-faire policies are reversing, whilst geopolitical and environmental instability encourage governments to bring critical capacities closer to home.

As a result, a new age of government activism is upon us. From fiscal splurges funded by magic money trees to rebooted industrial policy, and higher corporate and capital taxes. It will not be so kind to the owners and managers of capital.

THE HEDGEHOG AND THE FOX

For investors, the key to success in this new era is resilience through genuine diversification. What may have diversified portfolios within a particular regime, may well not diversify them across others.

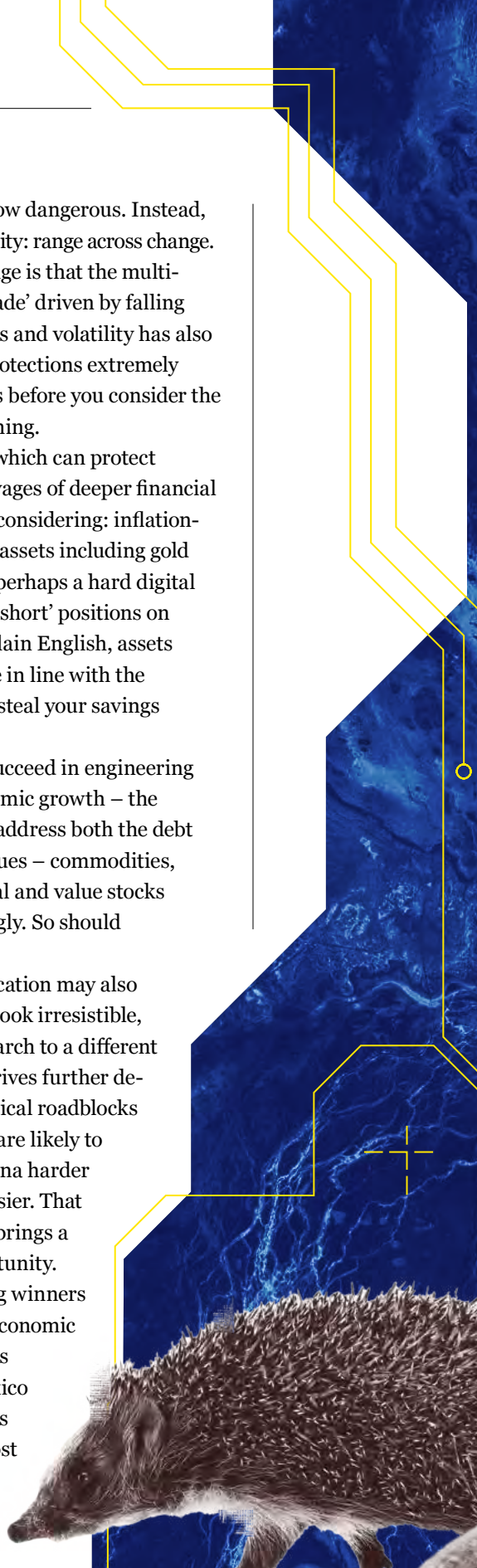
Archilochus's "fox [knew] many things, but the hedgehog one big thing." That one big thing? Knowledge of what has worked so well in capital's Golden Age. But relying on the hedgehog's single back-tested strategy in a changing world is now dangerous. Instead, adopt a fox-like mentality: range across change.

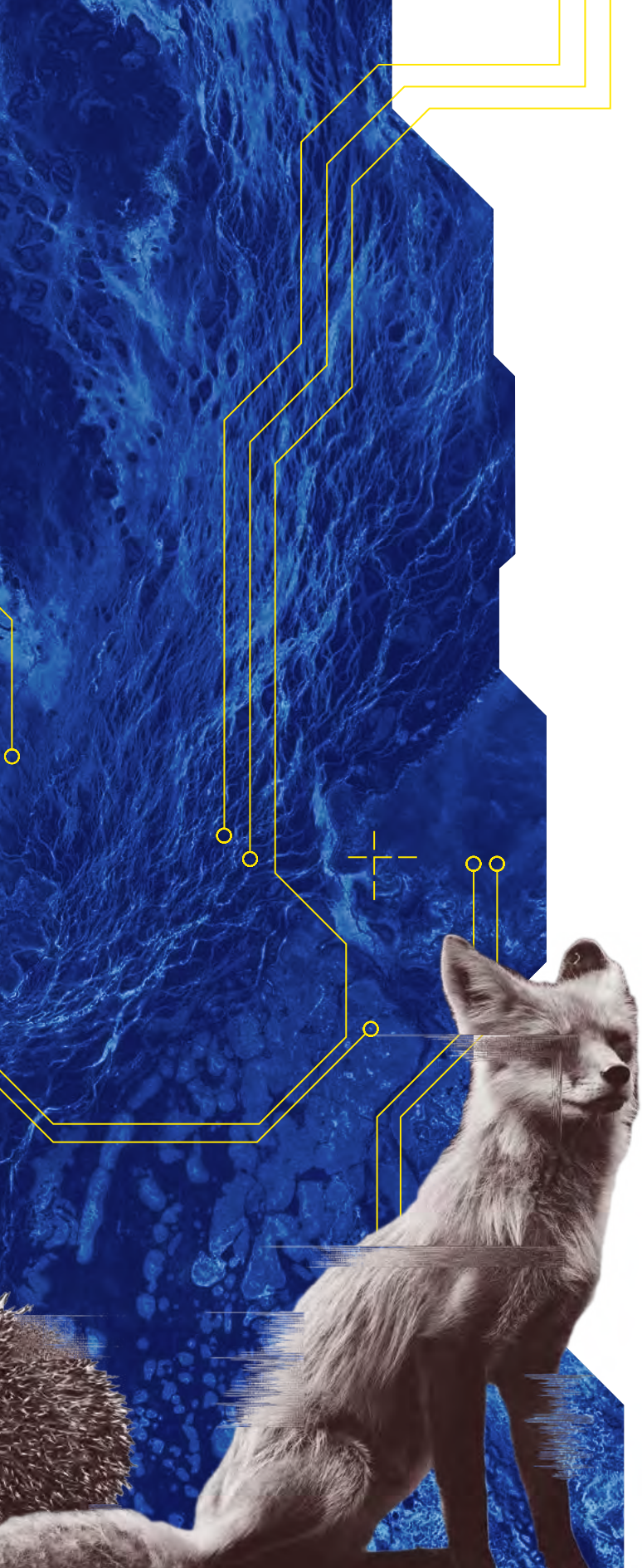
The central challenge is that the multi-decade 'everything trade' driven by falling inflation, interest rates and volatility has also made conventional protections extremely expensive – and that's before you consider the risk of inflation returning.

Instead, anything which can protect investors from the ravages of deeper financial repression are worth considering: inflation-protected bonds, real assets including gold and precious metals, perhaps a hard digital currency, too. All are 'short' positions on paper currency – in plain English, assets whose values increase in line with the authorities' efforts to steal your savings by stealth.

If the authorities succeed in engineering higher nominal economic growth – the only plausible way to address both the debt and the inequality issues – commodities, infrastructure, cyclical and value stocks should perform strongly. So should emerging markets.

Desire for diversification may also make Chinese assets look irresistible, particularly if they march to a different beat as Cold War II drives further de-coupling. But geopolitical roadblocks and ESG restrictions are likely to make investing in China harder – and riskier – not easier. That said, every challenge brings a commensurate opportunity. Cold War II is creating winners every day, including economic spill-over beneficiaries such as Vietnam, Mexico and India. Japan looks interesting from almost every angle.





Lastly, emergent economic-regulatory blocs centred on the US, China and probably the EU will shrink the available market for some global companies in high technology and will make it generally harder to access Eastern growth with Western stocks. National or bloc champions stand to benefit, both from reduced global competition and from more activist states championing their cause.

A NEW MAXIM NEEDED

For a generation of investors, a guiding principle has been "Don't fight the Fed" – in other words, go with the direction set by the world's major central banks. In the new, more-politicised era before us, central banks and commercial banking systems will be increasingly co-opted by governments. "Don't fight the government" may become the new maxim.

The 2008 financial crisis and the 2020 covid crisis delivered a 'one-two' blow to the post-Cold War I order. That profitable regime rested in large part on 'end of history' assumptions, from geopolitics and human nature to inflation. But history hadn't ended at all. It was just sleeping. The covid punch accelerated the return of great power competition, the rise of ESG, the digital revolution, domestic political shifts, the growth of debt, and the return of fiscal dominance. In turn, this has accelerated regime change for world order and markets.

Our New World Disorder will be characterised by greater volatility, higher inflation and deeper financial repression. This world privileges politics over profit, and favours the nimble, forward-looking fox over the backward-looking hedgehog who only knows 'one big thing' from an era that is ending.


THE
DEFLATION
MACHINE
A SECOND COMING?

CONVENTIONAL WISDOM SAYS THE PANDEMIC HAS GIVEN DEFLATIONARY FORCES A NEW LEASE OF LIFE.

Forecasters expect inflation to remain low for several years. Investors believe that central bankers will do all they can to ward off the deflationary bogeyman.

THE CONVENTIONAL WISDOM IS WRONG.

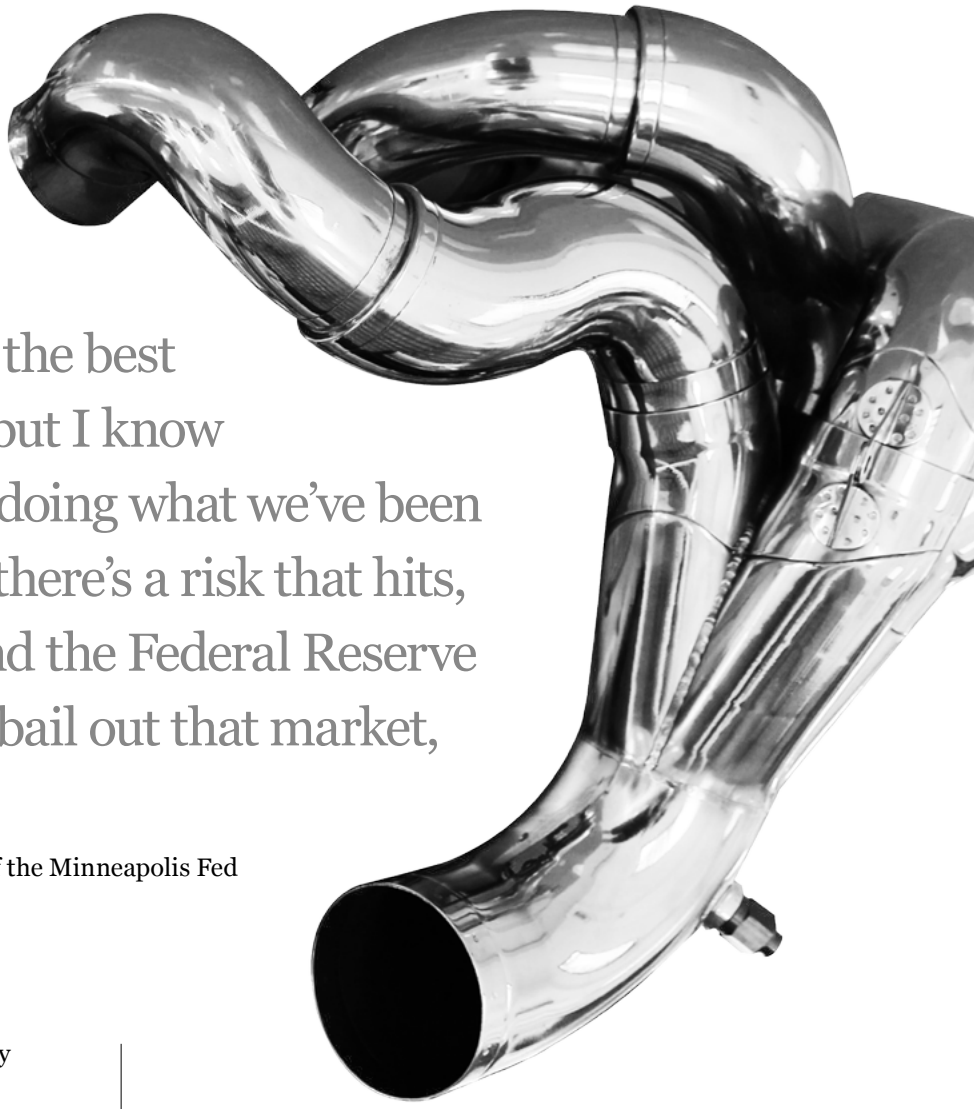
We are in the final throes of the inflation-targeting regime that emerged from the ashes of monetary chaos in the 1970s. Central bankers are changing the way they achieve their goals. Far from reinvigorating the deflation machine, the coronavirus crisis will be its undoing.

JAMIE DANNHAUSER
Economist

THE COVID CRISIS HAS BROUGHT THE INFLATIONARY ENDGAME INTO VIEW.

A belief that the current disinflationary regime would eventually break down has informed the Ruffer portfolio for many years. Regime breakdown's most obvious consequences – inflation and institutional upheaval – are the dangers we fear most for our clients. What has always been uncertain is when the inflationary endgame would come into view.

Before the pandemic, it was possible that the next economic downturn would be a run-of-the-mill recession and that central bankers, despite already-low interest rates, would have enough ammo to engineer a politically acceptable recovery.



> “I don’t know what the best policy solution is, but I know we can’t just keep doing what we’ve been doing. As soon as there’s a risk that hits, everybody flees and the Federal Reserve has to step in and bail out that market, and that’s crazy.”
>
> Neel Kashkari, current president of the Minneapolis Fed and voting member of the FOMC

The pandemic has removed that key source of uncertainty.

Our long-held expectation of painful wealth destruction triggered by a shift to a more volatile and inflationary macro environment and the emergence of money-financed fiscal expansion (aka helicopter money) is now matched by our confidence that the inflationary endgame is at hand.

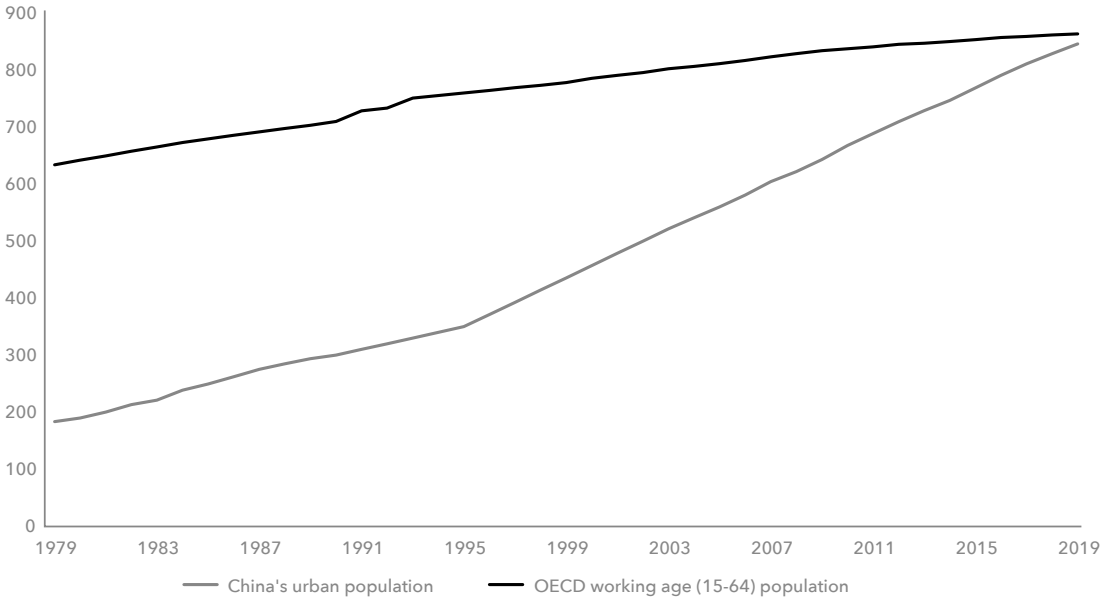
IT’S WHAT YOU KNOW FOR SURE THAT JUST AIN’T SO…

The covid crisis has revealed two key pieces of information. The first is what would kill off the post-2008 bull market: a lethal pandemic – about as exogenous a tail risk as one can conceive. The second is that policymakers would be prepared to deploy unprecedented stimulus during the next recession. Any lingering fears that conservative sound money orthodoxy might constrain policymakers have now been dispelled.

To explain why the covid crisis has made the demise of the deflation machine inevitable, I will recap the root cause of low inflation over the last three decades.

Figure 1

CHINA'S URBAN POPULATION (M) VERSUS OECD WORKING-AGE POPULATION, 1969-2019



Amongst central bankers, there is an accepted narrative. The decline in inflation was primarily a function of improved monetary policy credibility. The elevation of price stability within central banks' mandates, and the shift to operationally independent monetary policy, helped to anchor inflation expectations. As wage and price setters came to expect inflation near central banks' targets, actual inflation was dragged lower. By the 2000s, inflation expectations were well anchored.

Since the global financial crisis (GFC), inflation expectations have dropped below 2%, one reason central banks have been unable to drive up inflation. In addition, aggregate demand has run persistently below the world's supply capacity, restraining inflationary pressures, despite the supposed damage from the financial crisis.[1]

There is some truth in these arguments; but this diagnosis is incomplete. It ignores the far more potent disinflationary forces at work. Those forces emanate from the supply side – slow-moving structural developments that have increased the world economy's speed limit. They fall broadly into three categories – the demographic, the technological and the political. These forces have created a powerful, mutually reinforcing disinflationary dynamic.

THE EASY MONEY ERA

The numerous demographic trends together fostered a massive expansion of the global effective labour force. This is the central observation in Charles Goodhart and Manoj Pradhan's insightful new book, *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival.*[2] In recent decades, the ratio of

1 Before the 2008/2009 financial crisis, this shortfall in global demand is linked to what has become known as the global savings glut

2 Based on their original 2017 analysis in BIS Working Paper No. 656

Figure 1: Datastream

Figure 2
UNDERLYING RATE OF PER CAPITA GROWTH IN GLOBAL ECONOMY SINCE 1830

workers to non-workers, and to the capital stock, has increased significantly, as many who, for political and historical reasons had been shut out of the formal jobs market, joined the global workforce.

Relevant technological developments fall into two broad buckets: those that made possible our increasingly hyper-globalised world;[3] and those, notably in information and communications technology (ICT), that have propelled productivity growth at the economic frontier and fostered the emergence of superstar firms.

It might seem odd talking about rapid technological change when everyone else appears focused on secular stagnation. But these technological developments, viewed globally, have clearly translated into robust productivity growth. It's just that the main beneficiaries have been the emerging economies, China most obviously. Global per capita growth accelerated noticeably during the 1990s and 2000s and, despite the damage from the GFC, has remained elevated in recent years (Figure 2). That this happened in the context of low inflation suggests the underlying forces at work were some combination of increased resource availability and faster innovation – not lower inflation expectations or depressed demand.

Rapid globalisation has been a pervasive feature of this period. It is no coincidence that its high-water mark coincided with the political mainstream's acceptance of free-market economic orthodoxy. Positive technological and demographic changes are the outward expression of the liberal, internationalist, technocratic world order; but its foundation was the political reaction

3 Subramanian & Kessler (2013), Peterson Institute of International Economics Working Paper 13-6
Figure 2: Conference Board alternatives China GDP and ICT-adjusted series, Maddison dataset before 1950, IMF forecasts 2018-2020. PPP-adjusted where possible. Ten-year moving average of per capita real growth

to the breakdown of the post-war economic settlement. Over the last three decades, the central organising principle of economic policy has been the maximisation of *aggregate* economic welfare. Other worthy political goals have been subordinated to that end. Without these supportive political foundations, demographic and technological forces would still have been influential, but far less dominant and long-lasting.

JAY POWELL: REVOLUTIONARY OR CONFORMIST?

Since at least the early 1990s, politics, technology and demographics have combined to raise the global economy's speed limit. They made possible rapid growth with low inflation.[4] But this presents a thorny analytical problem for central bankers who believe that "inflation is always and everywhere a monetary phenomenon". How can forces emanating from the real economy be responsible for three decades of inflation dynamics?

A generation of policymakers struggle to accept this conclusion. We are all taught that only monetary forces, anchored to monetary policy, influence nominal variables, such as inflation. Equally, only real forces impact macroeconomic aggregates, such as output and employment. Only in the short run can the real economy drive inflation dynamics, via the impact of monetary policy on aggregate demand.

Since the GFC, central banking has been in a state of flux. Under luminaries such as Ben Bernanke, Mario Draghi and Janet Yellen, the tools and goals of monetary policy have been progressively tweaked. How the economy functions has been incrementally reimagined.

In this sense the Federal Reserve's review of monetary policy strategy is evolutionary, not revolutionary, but it goes further than others have been prepared to go.[5] The signalled strategic shift does not herald the end of the inflation targeting regime; indeed, to its authors, it is the best way to ensure the regime's survival. But the review may come to be seen as a watershed moment, a public expression of a radical but unnoticed transition in how central bankers achieve their goals and what risks they will take.

For central bankers, two critical changes have occurred since the GFC. Inflation has been stubbornly weak, despite historically low interest rates. And the neutral interest rate – the reference point against which (real) interest rates must be set to determine whether policy is boosting or retarding growth – has fallen materially.

This latter development means central bankers have far less ammo to combat economic downturns: they can't push market interest rates as far below neutral as before. But it also has another pernicious consequence. Because policy is less effective, firms and households come to expect that inflation will run below the 2% target. This drift down in inflation expectations in turn reduces the slow-moving, trend component of inflation.

In response, they have landed on a strategy with two core elements. The first is a clear bias towards too much monetary

4 bis.org
5 federalreserve.gov

accommodation while the economy is operating below normal: keeping interest rates lower for longer than they would have done historically, and convincing financial markets of that intention.

The second is a deliberate effort to drive aggregate demand above potential and keep it there, once the economy is back to normal, so that inflation will run consistently above its target for some time. The explicit aim is to re-anchor inflation expectations that have drifted down since the GFC.

THE PHILLIPS CURVE IS DEAD, LONG LIVE THE PHILLIPS CURVE

To many economists, these changes will enhance price stability. But underneath this strategic shift is a more radical policy re-think. Milton Friedman observed that monetary policy operates "with long and variable lags".[6] So interest rates need to be normalised before the economy is back to full health and inflation is at target.

While Powell's Fed is not the first to chip away at this idea, the recent review formally consigns Friedman's dictum to the dustbin of history. FOMC policy will not look to restrain the economy when unemployment drops below its normal non-inflationary level, until there is clear evidence of unacceptable price pressures. The key word here is "unacceptable". But wouldn't this be already too late, if it takes another two to three years before monetary policy has its full impact on inflation?

The Fed does not believe so, because, in its view, the Phillips Curve – the link between unemployment and inflation – has all but disappeared. Since inflation is so unresponsive to unemployment, it sees little danger in letting the economy run hot; and there is the added benefit that a period of inflation above 2% will help re-anchor inflation expectations.

There's only one, rather large, problem with this argument. It misdiagnoses the disinflationary bias in our economic system. Empirically, the link between unemployment and inflation appears to have weakened tremendously. Declining inflation expectations, monetary forces, are required to explain our current economic predicament.

But this gets things backwards. Supply-side developments, real forces, have been the main downward pressure on inflation. These are the numerous overlapping improvements in the world's productive capacity mentioned earlier.

Yet these supply-side developments are absent from Phillips curve models. To the extent that inflation expectations have a role, they are backward-looking: households and firms extrapolate inflation from the recent past. They amplify developments happening elsewhere.

6 Friedman (1968), American Economic Review

The optimising, rational representative agent that inhabits modern models is a figment of economists' imagination. A bad model tells the wrong story. In this case, it is about the disappearance of the unemployment-inflation trade-off.[7]

SUPPLY-SIDE TAILWINDS NO MORE

If the demise of the Phillips curve is more imagined than real, the shift in monetary policy strategy could be a fatal mistake. As we exit the covid recession, central banks are looking to run the economy hot because they believe the background environment remains disinflationary. A stint of above-target inflation is considered low risk and the benefits meaningful.

We see the world differently. Those structural shifts, so beneficial for robust non-inflationary global growth, are now coming to an end and, in some cases, reversing. China cannot emerge again. Eastern Europe can't be liberated from the USSR a second time. The long upward march of female labour force participation looks to be over. And the liberal world order is teetering on the brink.

Tectonic shifts in the political regime, the Sino-US battle over tech supremacy and the balkanisation of finance all suggest that the explosive growth of global supply chains is over. In fact, the increased dynamism and efficiency made possible by globalisation may already have stalled.[8] The covid crisis adds an important dynamic: the need to sacrifice efficiency for increased robustness, a shift from just-in-time production networks to just-in-case.

Tech-optimists will argue this is all too Malthusian, that we are on the cusp of radical leaps forward in artificial intelligence, machine learning and robotics. No doubt there is some truth in these claims. But the belief in inevitable scientific advancement has always been dubious. Invention and discovery may be indifferent to the politics of the day; but innovation, technological diffusion and economy-wide productivity gains are not. Politics matters.

Technology and politics most obviously clash over how to control dominant superstar firms. Whether they are agents of benign or malign economic change is hotly debated; but the politics is clear-cut. They are seen as corrupters of the political system, drivers of inequality and havens for what Theresa May called "citizens of nowhere". They are in the firing line of populists everywhere – and soon of centrist politicians too.

It is enticing to believe that we are about to enter a golden-age of productivity-enhancing innovation. But this ignores both the inequality-driving winner-takes-all-dynamic at today's technological frontier and the politics of rage that has dominated recent Western elections. The tech-optimists may be right in the long run, but, to quote Keynes, "this long run is a misleading guide to current affairs… In the long run we are all dead."

THIS TIME REALLY IS DIFFERENT

The morphing of structural disinflationary tailwinds into inflationary headwinds pre-dates the covid crisis. The question is whether the

7 Nalewaik (2016), Finance & Economics Discussion Paper 2016-078 and Hooper et al (2019), Research in Economics 74-1

8 Akcigit & Ates (2020), Slowing business dynamism and productivity growth in the United States

Figure 3
SHARE OF AGGREGATE CORPORATE BORROWING BY US FIRMS WITH CASH FLOW PROBLEMS, %

pandemic accelerates, weakens or even stops this process. Most believe that the economic damage is so substantial, and cyclical disinflationary pressures so powerful, that it makes little difference whether these tectonic shifts are happening or not. Central bankers will apply the usual medicine in an even larger dose. Only, this time, they will keep going until inflation is above 2% and rising.

Markets have got one thing right: intellectually and politically, there is no alternative. What markets fail to see is that it opens the door to an inflationary future that might otherwise have remained some distance over the horizon.

Why? Because this recession is unique. First, it was triggered by a global health emergency and will end through virus progression and scientific advances, not economics. Second, the damage is not broad-based across sectors, but highly concentrated in services that depend on face-to-face social interaction; activity in other industries has quickly risen above its pre-recession level. Third, the fiscal and regulatory response has been unprecedented in scale and scope. Finally, the post-recession politics will be radically different. Not since the emergence of mass participatory politics have two major economic crises happened so close together; and, because this downturn was caused by covid, there will be no obvious interest group to blame – it is the 'nobody's fault' crisis.

Investors cannot follow the old rulebook. This was not a traditional aggregate demand shock, and it does not follow that elevated unemployment will translate into low inflation. 'Stagflation', the great evil of the

Figure 3: Absolute Strategy Research. Largest 3,000 US listed firms, interest coverage ratio of less than 1

1970s, may return. Because of the virus, this downturn has been catastrophic for consumer service sectors. State-backed emergency liquidity has kept this part of the economy on life support. But much of its operational capacity has been made redundant and may remain that way for far longer than firms' financing will last (Figure 3).

Other sectors are booming. The obvious, but largely ignored, implication is that capital and labour resources need to be reallocated on a significant scale. No doubt some of this will be temporary, but it could be some time before the virus threat dissipates. In any event, some behavioural changes triggered by the pandemic will persist over the longer term. How much office space in high-density urban centres will be left vacant? How much will the gradual shift from in-store to e-commerce spending have been accelerated? To what extent will demand for residential space in cities be undermined? The list goes on.

A useful historical analogue comes from the various supply shocks of the 1970s, especially the 1973 OPEC oil embargo. The dynamics today aren't the same: the oil shock crimped the supply of a critical production input, while the pandemic's impact is less acute but has done more widespread damage to productive capacity at the other end of supply chains. Still, the recession of 2020 is more similar to the nasty supply-driven downturn of 1974 than to any in the era of inflation targeting.

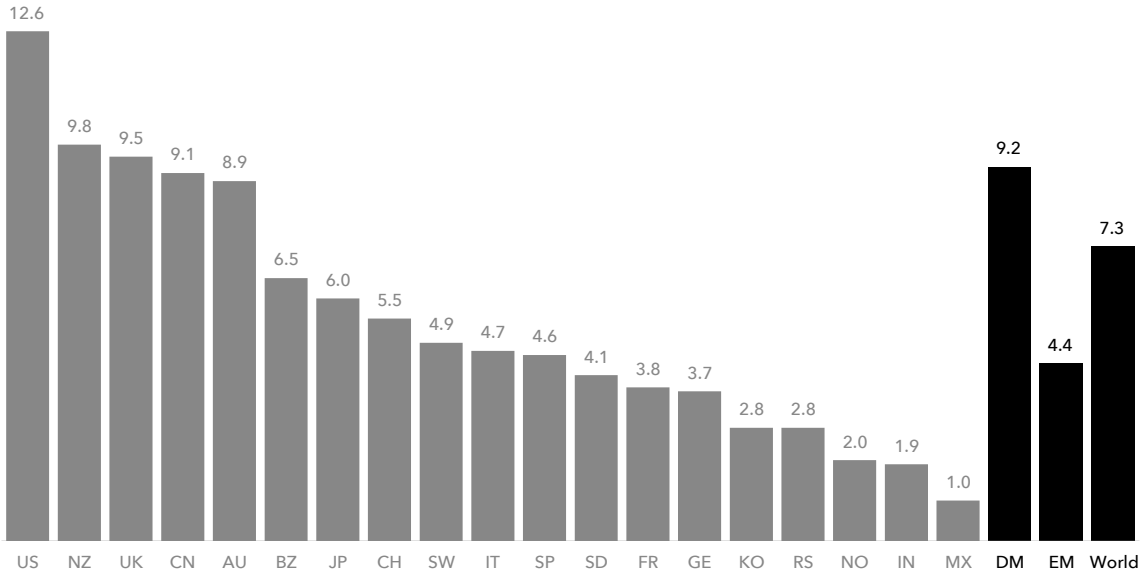
An important difference today is that the Fed seems hell-bent on pursuing its new run-it-hot strategy despite truly unprecedented fiscal expansion (Figure 4). The US has never gone this far to support growth during peacetime, and the same is true of many developed economies.

THE 'NOBODY'S FAULT' CRISIS

Calibrating stimulus is hard enough in normal recessions. Since the pandemic took hold no government has given much thought to the dose they plan to administer: the guiding principle has been 'as much as is financially and politically feasible'.

The longer one's time horizon, the more the 'right-tail' inflationary scenario comes into play. The reason is simple – politics. This is the 'nobody's fault' crisis.

Figure 4
2020 DISCRETIONARY FISCAL STIMULUS BY COUNTRY, % OF GDP



Every vested interest can claim, with some justification, that they are not to blame and that they should not pay to clean-up the fiscal mess.

Post-recession politics does not normally work this way. Society generally has to suffer a hangover because of the party it enjoyed during the boom.

Post-covid, things will be different. Such political arguments will fail because this time nobody is to blame. Instead, the case for Big Government has been radically strengthened. Unprecedented stimulus has prevented an economic calamity, without creating the inflationary disaster that sound-money conservatives feared.

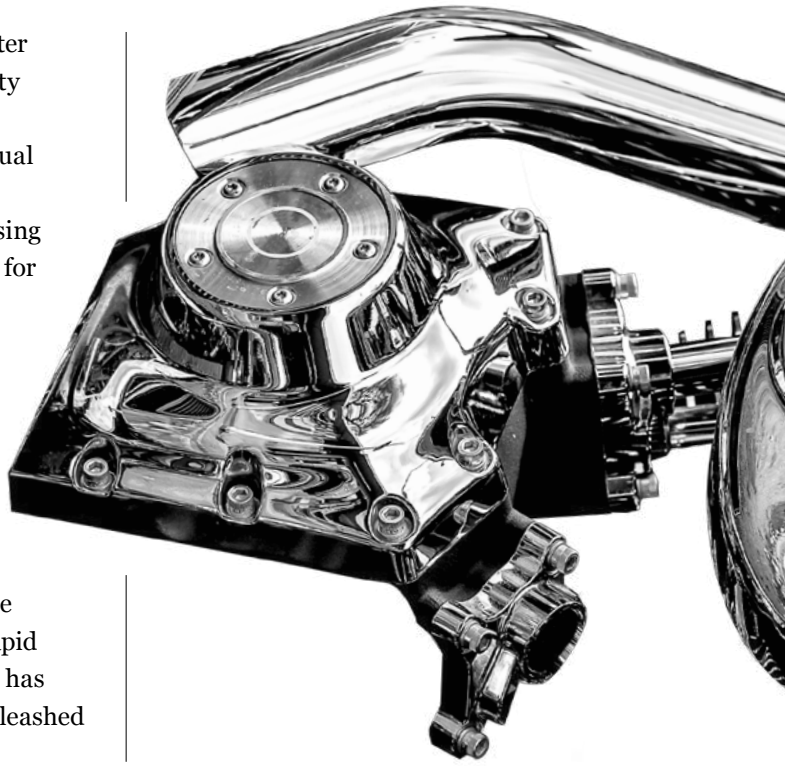
At the same time, a political gulf has opened up between the young and low-skilled, who have suffered their second debilitating economic crisis in just over a decade, and the well-educated white-collar workers, for whom this crisis has been little more than a social irritant.

This will make it exceptionally hard to unwind covid-related fiscal stimulus. If the pandemic escalates once more, these forces will ensure a major expansion of stimulus measures. This is the quid pro quo society demands for accepting lockdown's constraints on personal freedom and social interaction.

As in the 1970s, the over-arching political battle will be about how to distribute society's resources: between rich and poor, between workers and retirees, between homeowners and renters and between borrowers and asset owners. The Sino-US dispute has a geopolitical dimension, but it too is a zero-sum squabble over who gets what. Those battles 50 years ago were economically divisive, with pernicious inflationary consequences.

Figure 4: Goldman Sachs Research. 2020 measures that increase spending or lower taxes, excludes automatic stabilisers and government loan guarantees

Strikingly, however, they occurred after a prolonged period of falling inequality (Figure 5) and rapid gains in living standards. Western society was as equal as it has ever been. Today's fight is happening after several decades of rising inequality and stagnant real incomes for the average household.



JUSTIFYING THE POLITICALLY INEVITABLE

Politics shapes every economic regime; and every economic regime shapes financial market dynamics. The covid crisis is not the reason the post-1980 regime of low inflation, robust growth and rapid globalisation is breaking down; but it has accelerated the political dynamics unleashed after the GFC.

Figure 5

SHARE OF US PERSONAL SECTOR WEALTH HELD BY TOP 1% OF HOUSEHOLDS

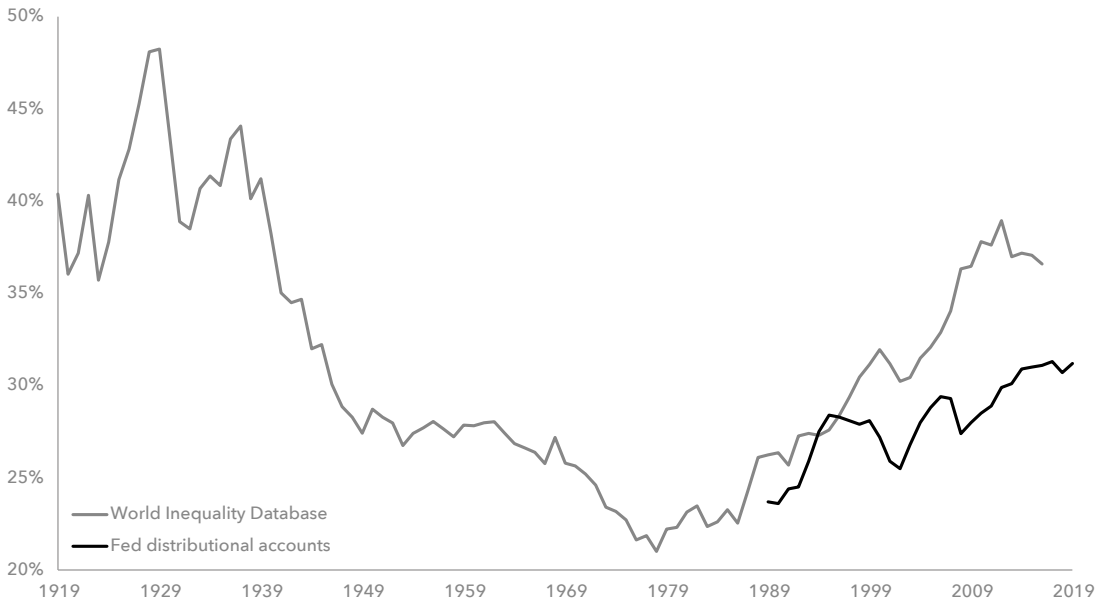


Figure 5: World Inequality Database, US Federal Reserve

> “Politics shapes every economic regime; and every economic regime shapes financial market dynamics”

Structural disinflationary tailwinds are morphing into persistent inflationary headwinds. Equally important, the political revolt against liberal overreach is at boiling point. Against this backdrop, the monetary accelerator is flat to the metal. All major central banks have effectively committed to keeping it that way for several years and to emptying the monetary arsenal fully if economic conditions deteriorate.

What happens once the recession is behind us? Soon after the GFC, the interests of central bankers and politicians diverged. Governments shifted quickly to austerity, leaving monetary policy as the only game in town. Central bankers had no option but to cut interest rates every time bad economic news arrived, something investors took note of.

Such a divergence looks unlikely in the years ahead. Central bankers and governments have their eyes on the same prize: Main Street’s return to full health. Practically, intellectually and politically, they are bound together. Central bankers’ political survival will depend on their implicit collusion with their legislative overlords. Mainstream politicians, having donned populist colours, will conclude that their grip on power depends on Main Street’s recuperation. In the economic realm, monetary-fiscal co-ordination will become the new norm – in practice, helicopter money.

This is why the Fed’s new strategy is so consequential: it provides the intellectual justification for the politically inevitable. Those at the top of institutions have always fought tenaciously to ensure their survival. Central bankers are no different. The demise of the dominant liberal paradigm threatens their independence. None will be prepared

9 Additional sources and further reading available at ruffer.co.uk/2021-references

to sacrifice themselves on the altar of 2% inflation. Expect them to accommodate politicians' strenuous efforts to return Main Street to full health, a move that in their eyes comes with limited risks and valuable rewards.

But the dangers are considerable. The background environment is more hostile to robust non-inflationary growth than for decades. This crisis has potentially profound consequences for spending patterns and the economy's productive capacity. And policy levers have been pulled harder than ever.

Financial markets – wired to the inevitability of low inflation, depressed nominal interest rates and limited macro volatility – face significant upheaval. We have feared that upheaval for some time, but accepted that we could not predict exactly when it would materialise. For some years, this uncertainty has conditioned the Ruffer portfolio, but the covid crisis has changed how we must think. Inflationary upheaval is now a clear and present danger to client portfolios.[9] ●

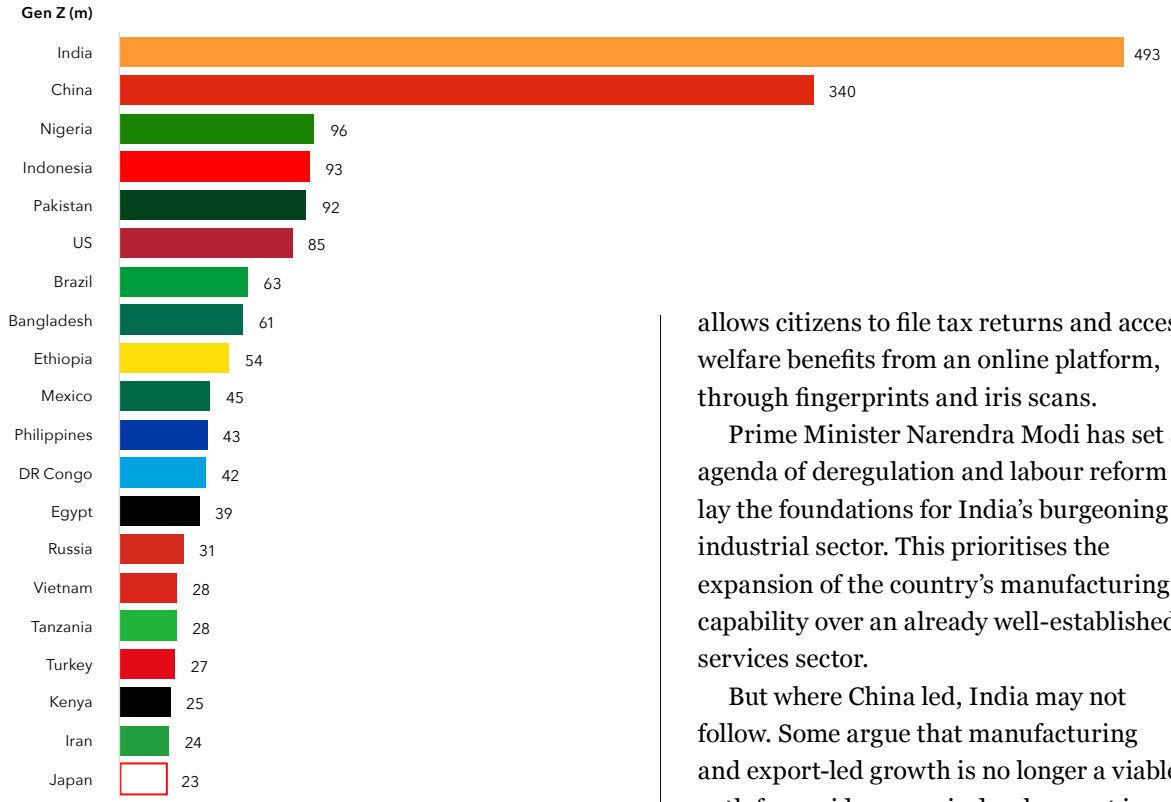
A market miscellany

CHARALEE HOELZL
Investment Manager

JASMINE YEO
Senior Investment Associate

India's demographic dividend

NUMBER OF PEOPLE BORN BETWEEN 1996 AND 2015



Source: United Nations, Ruffer, data to July 2019

INDIA IS HOME TO ONE-FIFTH OF ALL THE WORLD'S 'GENERATION ZS'. Almost half a billion in total, more than in the US and China combined.

They are growing up in a rapidly digitalising nation. The Indian government's biometric database, Aadhaar, already captures over 90% of the population and allows citizens to file tax returns and access welfare benefits from an online platform, through fingerprints and iris scans.

Prime Minister Narendra Modi has set an agenda of deregulation and labour reform to lay the foundations for India's burgeoning industrial sector. This prioritises the expansion of the country's manufacturing capability over an already well-established services sector.

But where China led, India may not follow. Some argue that manufacturing and export-led growth is no longer a viable path for rapid economic development in a more digital and service-focused world. As Generation Z comes of age, identity conflict and social tensions will need to be managed, particularly if job creation fails to meet the demands of such a young population.

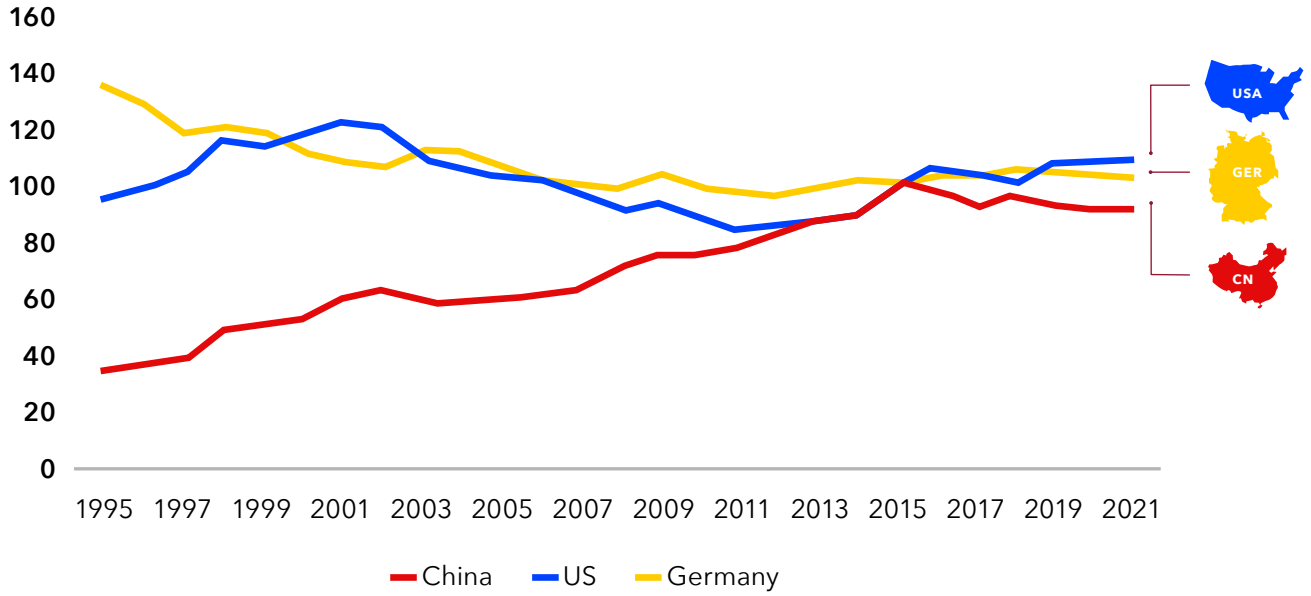
However, historically, a youthful population has been a driver of consumption – this is a persistent trend, and one which India is unlikely to break.

India will take its own path, and it will be carved out by Gen Z.

Made in China no more?

OECD UNIT LABOUR COST COMPETITIVENESS

LABOUR COST COMPETITIVENESS IN GERMANY, THE US AND CHINA



CHINA HAS BEEN A POWERFUL DEFLATIONARY FORCE OVER THE PAST 40 YEARS. One billion workers entered the global labour market, driving down manufacturing costs and incentivising Western businesses to offshore production. But this trend may be coming to an end.

This chart shows the relative competitiveness of labour costs in China, the US and Germany over the past 25 years, as measured by the OECD competitiveness index.

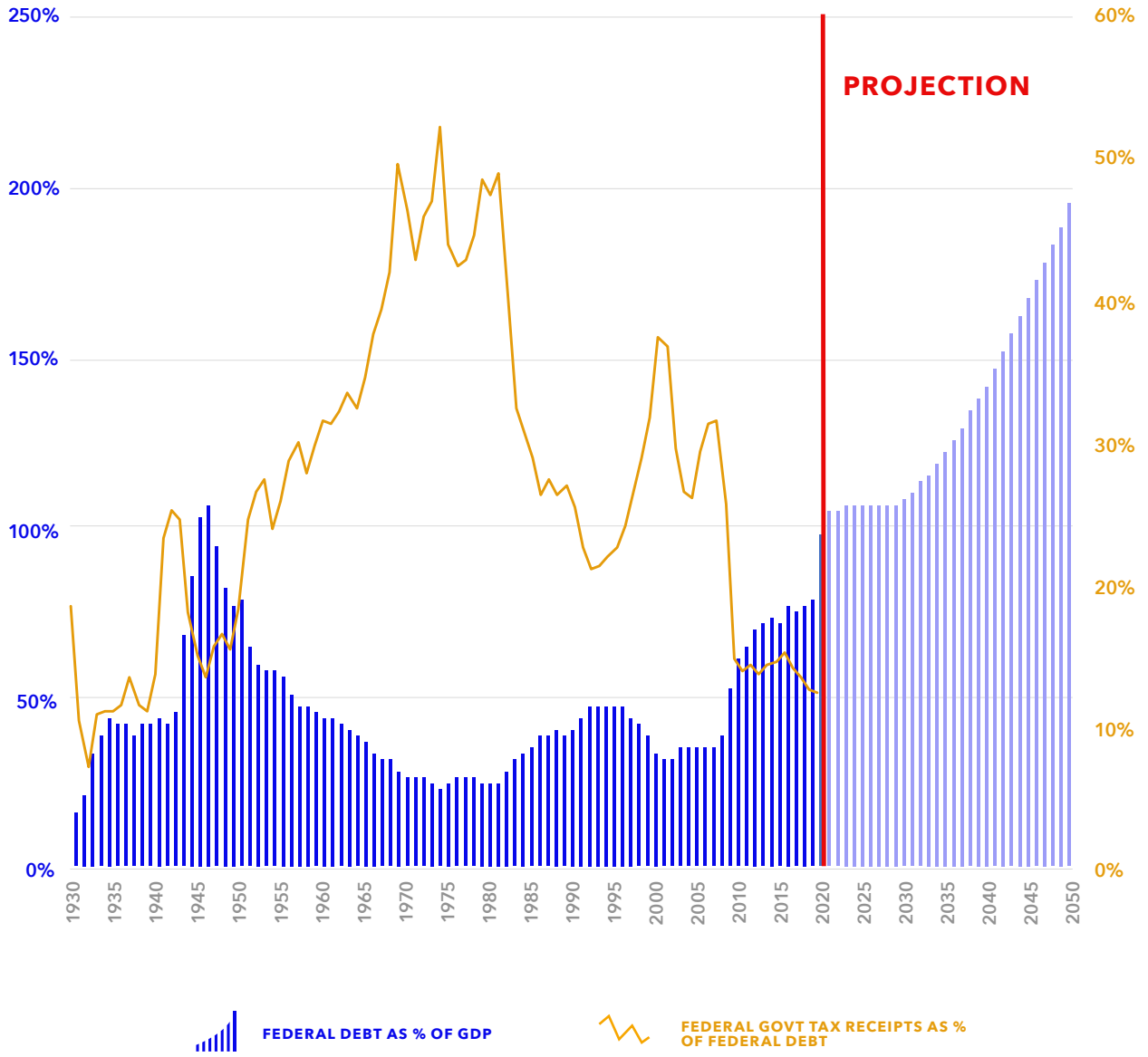
Labour costs have risen more rapidly in China than in either Germany or the US. Compared with the late 1990s, China has lost its low-cost advantage.

Several factors have contributed to this: rising transportation costs, the rapid expansion of US oil production and the Sino-US trade war.

The narrowing gap between China and Western manufacturers may not spell the end of the 'Made in China' era, but if China is no longer cheaper, then a once-powerful driver of disinflation may now push prices higher.

Source: OECD, Ruffer, data to 2020

THE FEDERAL BALANCE SHEET: DEBT VERSUS TAX RECEIPTS IN THE UNITED STATES



You can't tax your way out of this.

Source: US Congressional Budget Office, Federal Reserve Bank of St Louis, Ruffer calculations, data as at September 2020

THE COVID-19 PANDEMIC HIT PUBLIC FINANCES LIKE A WAR. The columns on this chart reveal the enormous rise in public spending.

With interest rates close to zero, the debt mountain may be tomorrow's problem. But tomorrow always comes.

So, how will governments reduce the debt burden to manageable levels?

Austerity is one option. In Britain, for example, government spending fell by 75% after the First World War. But unemployment soared and the country suffered a deep depression. The medicine worked, but it almost killed the patient.

Significantly higher taxation, and another period of austerity, is politically unacceptable in today's world.

The Second World War may hold some clues for today's policymakers. A combination of rapid post-war economic growth plus a healthy dose of inflation saw deficits fall rapidly. In the 30 years immediately after 1945, nominal growth in the US averaged 7.3%, made up of 3.5% real GDP growth and 3.8% inflation.

This time, such levels of economic growth are unlikely to be achieved. There is no post-war rebuilding boom to come, no 'peace dividend'. Instead, it looks like inflation – not growth, austerity or taxation – will have to do the heavy lifting.

URBANISATION IS ON THE RISE. AT THE START OF 2015, FOR THE FIRST TIME IN HISTORY, MORE THAN HALF THE WORLD'S POPULATION WAS LIVING IN CITIES.

Are cities disinflationary?

ON THE SILICON-BASED INTEGRATED CIRCUIT OF A SEMICONDUCTOR CHIP, closer proximity of diodes and a higher number of transistors improves the flow of electrical current. This improves the chip's productivity.

Over the last half a century, technological advancements in compound semiconductors have made these chips denser, faster and more efficient.

The same principle can also be applied to cities. This chart shows the rate of urbanisation in the world's population since 1950, and projections of this change to 2050.

Cities are a spatial concentration of human and economic activity.

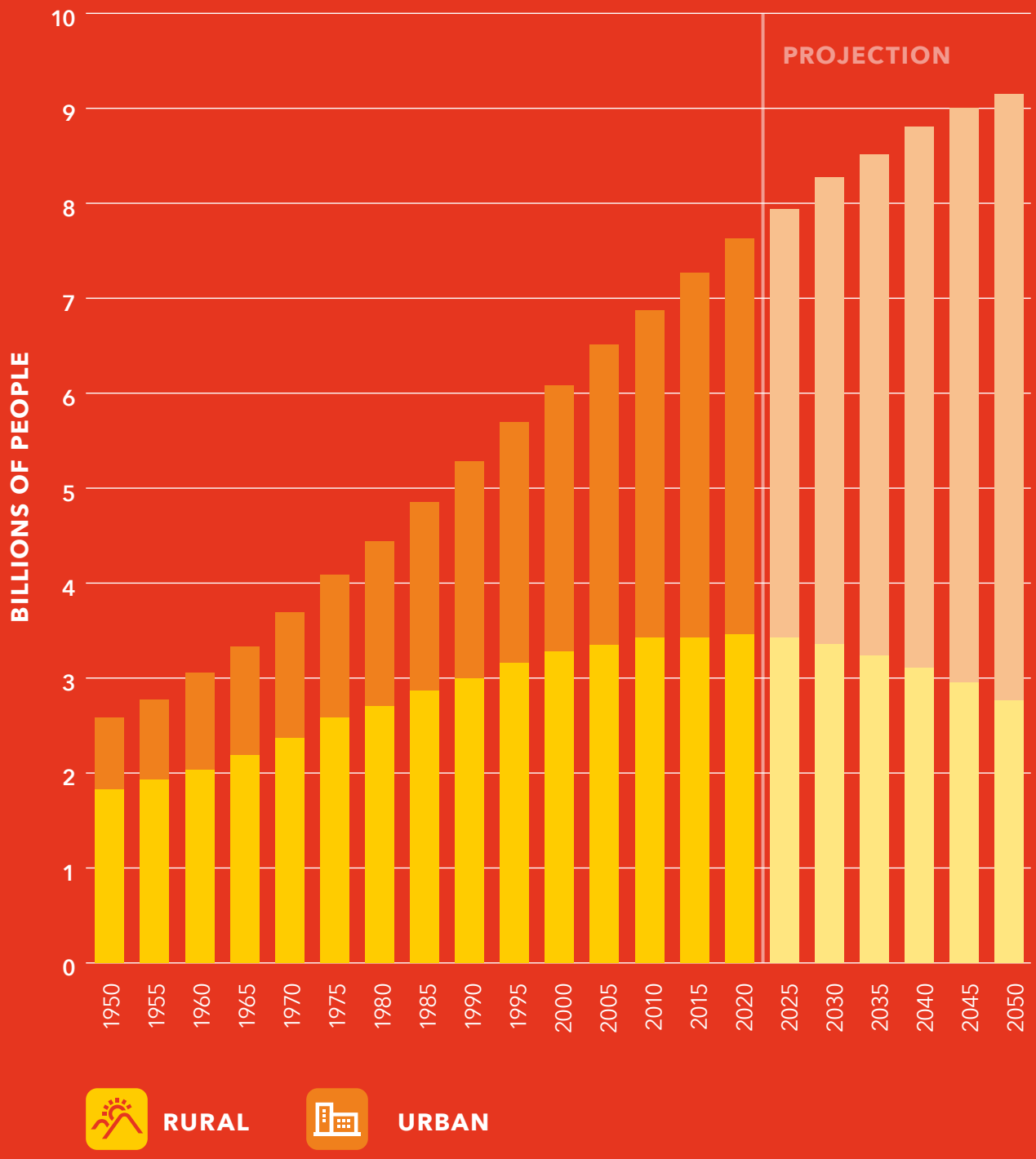
Increases in a city's population density improve economies of scale in production. A denser city brings about better matching between jobs and workers' skills, greater specialisation, and fruitful network effects.

For centuries, cities have been plagued by periodic crises when those who could afford to leave, fled for the rural idyll.

Looking ahead, will technology enable people to recreate the intensity of a city's network effects, at distance? Or will urbanisation power on through the century, a trend as powerful as the acceleration of technology itself?

Source: United Nations, data to 2020

PERCENTAGE OF WORLD POPULATION LIVING IN RURAL AND URBAN AREAS



From Sifnos to Ru

A JOURNEY IN INVESTING

"IN MY DAY, A LOT IN THE FINANCE FIELD WERE MORE LIKE ENGINEERS.
They were so chastened by the Great Depression and all the wretched failure that they really tried to make everything super safe. And it was a very different plotting place. The people weren't trying to be rich, they were trying to be safe."
Charlie Munger, February 2020

ALEX GRISPOS
Research Director

ffer

"OUR FINDINGS SUGGEST that individual investors' willingness to bear risk depends on personal history." So wrote economists Ulrike Malmendier and Stefan Nagel, from the National Bureau of Economic Research, after analysing 40 years of the Survey of Consumer Finances – a detailed look at what Americans do with their money, as noted by Morgan Housel in *The Psychology of Money*.

My 'personal history' has greatly influenced my character as an investor, and my willingness to bear risk. Brought up in Athens in the 1980s, I have been shaped by the history of my family and my country, my training as an engineer, and an early professional mentor.

A FAMILY IN A NATION

Between 1939 and 1949, Greece experienced a full decade of war. No sooner had the Second World War ended than the Greek Civil War began. This decimated productive infrastructure and output and triggered hyperinflation.

Amid this turmoil, my great grandfather, Yannis Prezanis, was financially ruined. In the early nineteenth century, his family had moved to the mainland from the Aegean island of Sifnos. Yannis became a very wealthy stockbroker and fund manager but, in the late 1940s, his wealth was destroyed. This economic devastation shattered my family. Yannis's children were thrown from riches to rags. My great uncle Agis, and my grandmother Aliki (who was central to my upbringing) had to turn to the support of relatives to survive.

They exhibited resilience but the path they, and the next generation of my family, took was deliberately stable and secure. The spectre of irretrievable financial loss had become part of the family DNA.

HISTORY IN BRIEF

The historical evolution of Europe in the nineteenth and twentieth centuries, being a continuum of wars, includes major economic crises. For example, Spain, Portugal, and Germany have all defaulted on their debt. My country has faced more than its fair share of economic turmoil – the threat of financial loss is arguably part of Greece's DNA.

Since the formation of modern Greece in 1828, the country has experienced a series of booms and busts, creating and destroying the fortunes of many families like mine. There have been at least half a dozen major crises in this period, and the Athens Stock Exchange has been forced to cease trading on more than a dozen occasions. The causes have included financial panic, war, invasion, coups and natural disasters.

One of the earliest crises of modern Greece, in 1843, has striking parallels with the debt crisis that began in 2008 (and which remains unresolved today). Under the rule of King Otto I, Greece was unable to service its external debt. In desperation, austerity was imposed. These measures were deeply resented by citizens and yet still did not go far enough to tackle the crisis. The King was then forced by the Great Powers to submit to humiliating terms; a portion of the country's future tax revenues would be paid directly to foreign agents.

The next notable crisis, in the winter of 1893, is famously marked by Prime Minister Charilaos Trikoupis standing up in the Greek parliament to announce: "Regretfully we are bankrupt." As a newly-independent nation, Greece had invested heavily in both infrastructure and the armed forces, all on borrowed capital. By mid-1893, more than half of the Greek government budget was needed to service its debt.

In 1932, another crisis came with the mismanagement of the fallout of the 1929 global stockmarket crash. In the words of Roderick Beaton in *Greece: Biography of a Modern Nation*, the country had "at first been let off relatively lightly" in 1929, as the great depression swept across the globe. However, the Greek drachma continued to be pegged to gold and to the British pound. It was this decision that became the trigger for yet another Greek bankruptcy. When

> "Greece had invested heavily in both infrastructure and the armed forces, all on borrowed capital."

Britain abruptly left the gold standard in 1931, and the value of the pound plummeted, Greece could no longer service its debt.

That was followed by the 1940s crisis that ruined my great grandfather's fortune, then the oil shock of the 1970s, when inflation leapt above 25% (and Greek inflation remained above 10% for the next 20 years). Finally, in the most recent debt crisis, Greece's real GDP fell by almost one third (between 2008 and 2016) while the Athens Stock Exchange fell by 90% in a decade (between the third quarters of 2007 and 2017).

ON GREECE AND AMERICA

Warren Buffett, reflecting on his success as an investor, talks about winning an 'ovarian lottery'. In his own eyes, Buffett won this lottery by being born in the US instead of "in some other country where my chances would have been way different."

Buffett asks us all to imagine two identical twins in the womb. A genie presents the twins with a question. One of the twins will be born in the US, the other in Bangladesh, where he or she will pay no taxes – "what percentage of your income would you bid to be the one that is born in the United States?"

His point is that few people are truly self-made; a person's innate qualities are not to be judged in isolation. The ovarian lottery that decides the country we are born in is a major factor in how our lives play out.

It is most probable that if I had been born and raised in America rather than Greece – with a different family background and different national history – I would be less cautious as an investor. And yet this caution acts as a solid foundation for stock analysis. Why? Because most businesses go through significant change over time; many successful enterprises fail, even in America.

To illustrate this, consider a study by Hendrik Bessembinder of the Arizona State University. Looking at 90 years' worth of data beginning in 1926, the study concludes that, while the US stockmarket overall has handily outperformed short-term government paper (T-bills) in the long run, most individual stocks have not. Of the nearly 26,000 stocks in the sample, fewer than half generated a positive buy-and-hold return over their lifetime that was

greater than the one-month T-bill's. The strong performance of the overall market is attributable to the substantial returns generated by relatively few stocks.

Or consider work done by JPMorgan Asset Management (*The Agony and the Ecstasy, the Risks and Rewards of a Concentrated Stock Position*), on the distribution of returns for the Russell 3000 index – a broad collection of US public companies. The data covers the period since 1980, a long boom period for the economy. Yet, of all these stocks, 40% lost at least 70% of their value and have never (or not yet) recovered. Even for utilities, often seen as among the safest equity investments, the failure rate is more than one in ten.

In a world that is inherently uncertain, caution is warranted, and not just in Greece.

A CALLING

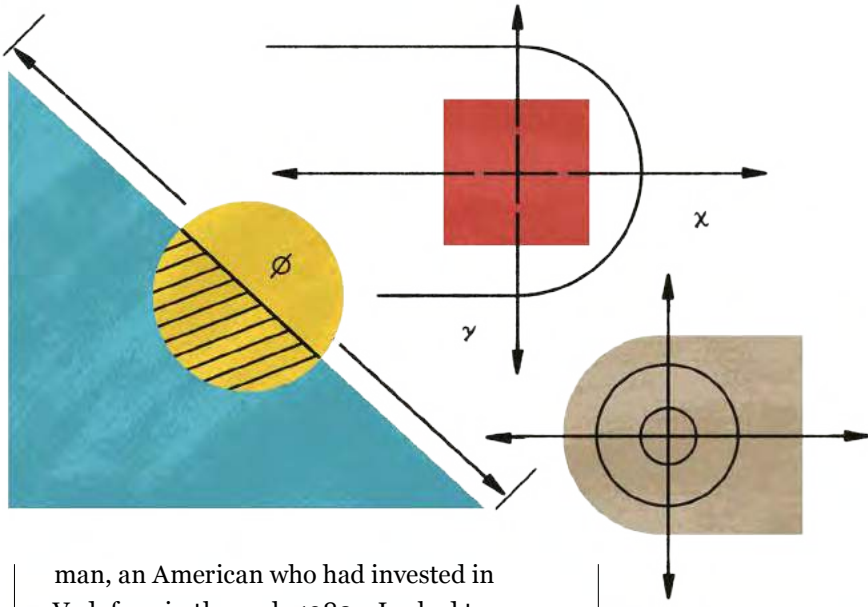
On finishing school, I moved to the UK to study engineering. I wanted to understand how the laws of physics are applied, to the real world, to make things work. At the same time, I had long been fascinated by the financial markets. But how would my family feel about me following in my great grandfather's footsteps? I vividly recall my grandmother Aliki's anxious questioning: "Why do you want to go into a profession that caused our family so much despair?"

The answer to that now, more than two decades later, might run something like this: having a passion is a gift. It gives you a purpose. And the process of investing – trying to understand people, analysing businesses and the markets, aiming to allocate capital successfully – has felt like a calling since my student years.

For my apprenticeship, I have Harry Fitzgibbons to thank. Harry was a special man, an American who had invested in Vodafone in the early 1980s. I asked to work for him, initially unpaid. He became my 'undervalued MBA', and I worked under his direction in London and St Petersburg, focusing on investing in early-stage companies.

Investing is a craft and Harry was my mentor – he offered me the best practical course of international investing via the direct lens of how business really works, across various countries. Most importantly, he taught me the significance of people in business. Who to marry is probably the most important decision in life, given the positive or negative compounding effect on your happiness over the years. Similarly, as

> "I wanted to understand how the laws of physics are applied, to the real world, to make things work."

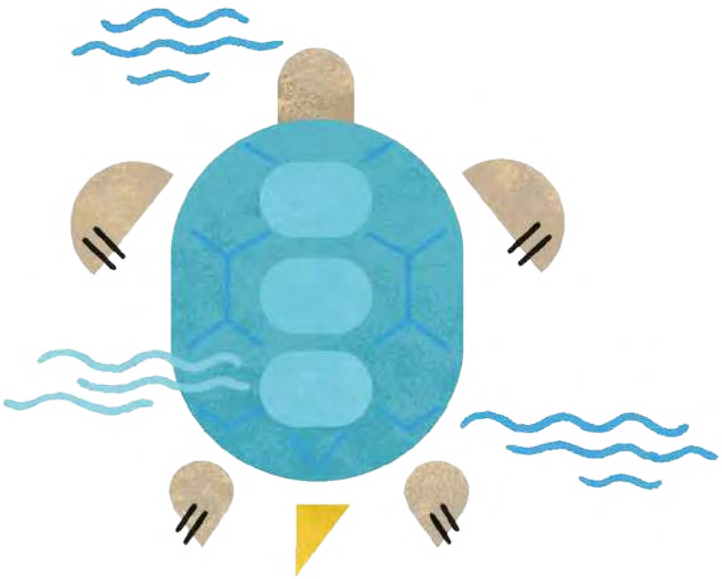


an investor, I believe great CEOs, typically with significant stakes in the businesses they run, can make a huge difference over the long term.

COMPOUNDING CAPITAL AS AN ENGINEER

I joined Ruffer in 2005 and it has been a harbour for developing my investment craftsmanship: this involves applying private-equity principles to the public markets; focusing on the intense analysis of businesses and on the pursuit of balance, of a measured approach.

As Warren Buffett's business partner, Charlie Munger, notes, the first rule of compounding is never to interrupt it unnecessarily. Many books are dedicated to how Warren Buffett built his fortune. The real key to his success is that he has survived long and has been investing successfully for more than 70 years. In 2006, when Buffett announced a search for his eventual replacement, he said he needed someone "genetically programmed to recognise and avoid serious risks, including those never before encountered."



My approach to survival in investing is shaped by my engineering education. An engineer designs a bridge with an adequate cushion to withstand extreme conditions. Benjamin Graham, the father of value investing, is known for the concept of a 'margin of safety', an engineering-like concept that allows room for error or redundancy. For Graham, the purpose of the margin of safety is to make forecasting unnecessary. It is likely the right approach for those seeking to protect and grow their capital in a world that is governed by probabilities, not certainties.

A FINAL REFLECTION

The dramatic narratives of the shifts in fortune, of both my family and my country, taught me early in life a lesson from Heraclitus – everything changes and nothing stands still.

I admire the intensity of exceptional CEOs and entrepreneurs, the ones who are embracing change and are combining operational acumen with a focus on capital allocation.

We allocate capital when the risk reward is asymmetric, aiming for businesses with longevity, the long-term survivors. Having a capacity to suffer is an important part of the investment process. This is easy to talk about, but hard to go through patiently.

The journey from Sifnos to Ruffer during the last 100 years is about investing in a measured, well-balanced manner: being tortoise-like, seeking to preserve and steadily enhance capital, always applying the necessary cushion in building and managing an investment portfolio. ●

Navigating information

ANDREW VAN BILJON

Research Director

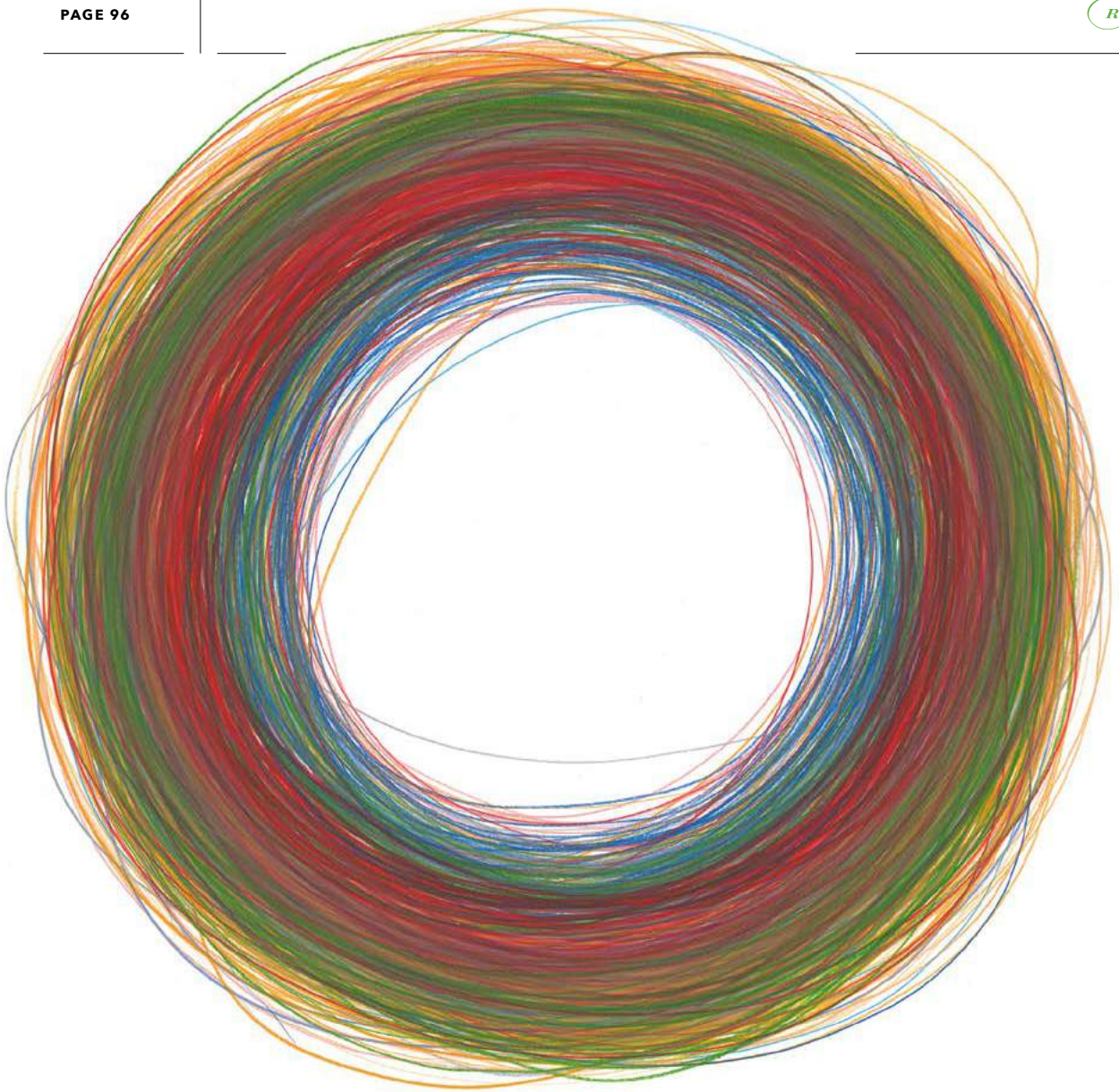
IT'S EASY TO BE OVERWHELMED BY THE VOLUME OF INFORMATION AIMED AT US. Inundated by a daily torrent of headlines, images, messages and data, we can be left feeling unable to process it to a satisfying degree. For investors, navigating information is central to being effective. Insights from information theory and gauge theory can help.

FEAR OF THE DARK IS, AT ITS CORE, A FEAR OF THE UNKNOWN. It may have been a longing for the unknown that drove Sam Winston, an artist, to embrace darkness for weeks on end.

First, he covered his studio windows with canvas and holed up for a few days with no outside communication. Later, he would spend a month in the dark in a cottage in the Lake District.

Winston's art from the sessions was a series of overlapping pencil scribbles and drawings: captivating in their effect, monochrome in their appearance. His mental experience, however, was vividly kaleidoscopic. Science has long recorded a heightening in the other senses when one or more becomes impaired. Brain plasticity, the boffins call it. It left Winston extremely sensitive to touch, smell, taste and hearing – and appreciative of just how much our faculties are dulled by the rush of modern life. Time became difficult to track. It would slip in a way that became impossible to shake – a parallel timeline moving at two-thirds speed.

After emerging from the darkness, Winston found himself pining for it again.



Could there be an addictiveness to the blackout, to the world of visions rather than vision?

The notion of unplugging has become popular in countless camping trips, silent retreats, and wilderness breaks. Frazzled urbanites seek to escape a constant barrage of news and social media. The issue is partly linked to the magnitude of information before us. Equally important, though, is information's relevance, or 'noisiness'. The vast majority of media washing over us daily are of no great use to us. The information has no direct impact on our lives. Nevertheless, we reflexively try to analyse, compartmentalise and digest it, struggling against the flowing tide. Exhausted, we wash up on the beach of forced withdrawal, only to wade back in once we have recovered.

INFORMATION THEORY

Claude Shannon was a genius of the twentieth century, the sort of person whose intellect bridged multiple fields

> “Shannon’s ideas touch us whenever we use a telephone or computer.”

of inquiry. Today, he is best known for his work on information theory and his seminal work *The Mathematical Theory of Communication*,[1] published in the late 1940s during his time working at Bell Labs in America.

Shannon’s ideas touch us whenever we use a telephone or computer. His key insight was to change the conception of what information is and how it is transferred. He realised that, when thinking about the engineering behind communication, semantics were not so important, but the information content of a message was vital. Shannon showed that, when sending information over a ‘noisy’ channel (one that introduces errors) it is always possible to transmit virtually error-free, provided the rate of transmission doesn’t exceed the capacity of the channel.

Let’s bring that back to the befuddled Twitter user, looking at both the rate of transmission, and the noisiness of the channel. The rate of transmission (about two billion tweets a month from the top 10% of users[2]) is extremely high in the daily media flood. So too is the noise, as facts (are there still such things?) are ‘interpreted’ by any number of media outlets, politicians, and so on. Yet the channel capacity of our busy daily lives is rather restricted. Perhaps we should not therefore be surprised when the result is ineffectual information transmission with little to gain, other than elevated stress levels.

APPLICATION DU JOUR

For much of 2020, covid-19 case counts were a dominant variable.

Government policies are set by them. The media reports them. And people’s behaviours, livelihoods and health depend on them. Case counts are widely compared and contrasted between regions and countries. They are seen as a measure of relative success and failure.

Yet, as the pandemic began to spread, it became obvious that case count numbers were complex. The degree of testing being undertaken played a huge role in the numbers of cases reported – a country with a substantial testing programme will find more cases than a similar country with little testing. This was also true of changing testing rates through time.

What about the quality of the information? Are the test types comparable and similarly reliable? What is the false positive and negative rate? Are asymptomatic people being tested, as well as those with symptoms? Are positive antibody tests being counted? Is the presence of live versus dead virus being accounted for?

Even in countries with similar disease incidence and testing rates, genetic, cultural, demographic and environmental factors may make a positive case far more dangerous and consequential in one place than another.

To make sound policy decisions, governments need to be skilled at navigating information.

1 Shannon & Weaver (1949), The mathematical theory of communication

2 Cooper (2020), 25 Twitter stats all marketers need to know in 2020, hootsuite.com

MOVING TO FINANCE

The bridge to the world of finance is not a long one at this point.

Markets are distillers of information, representing clearing prices for securities given the current state of information. There are layers too. Information about a factory's widget production affects the company's revenue, which affects the share price, which conveys a kind of short-hand to investors. Noisiness has ready analogues as well, from uncertainty about the company's operations, to varied and conflicting reports by analysts and the media, to volatility in the share price.

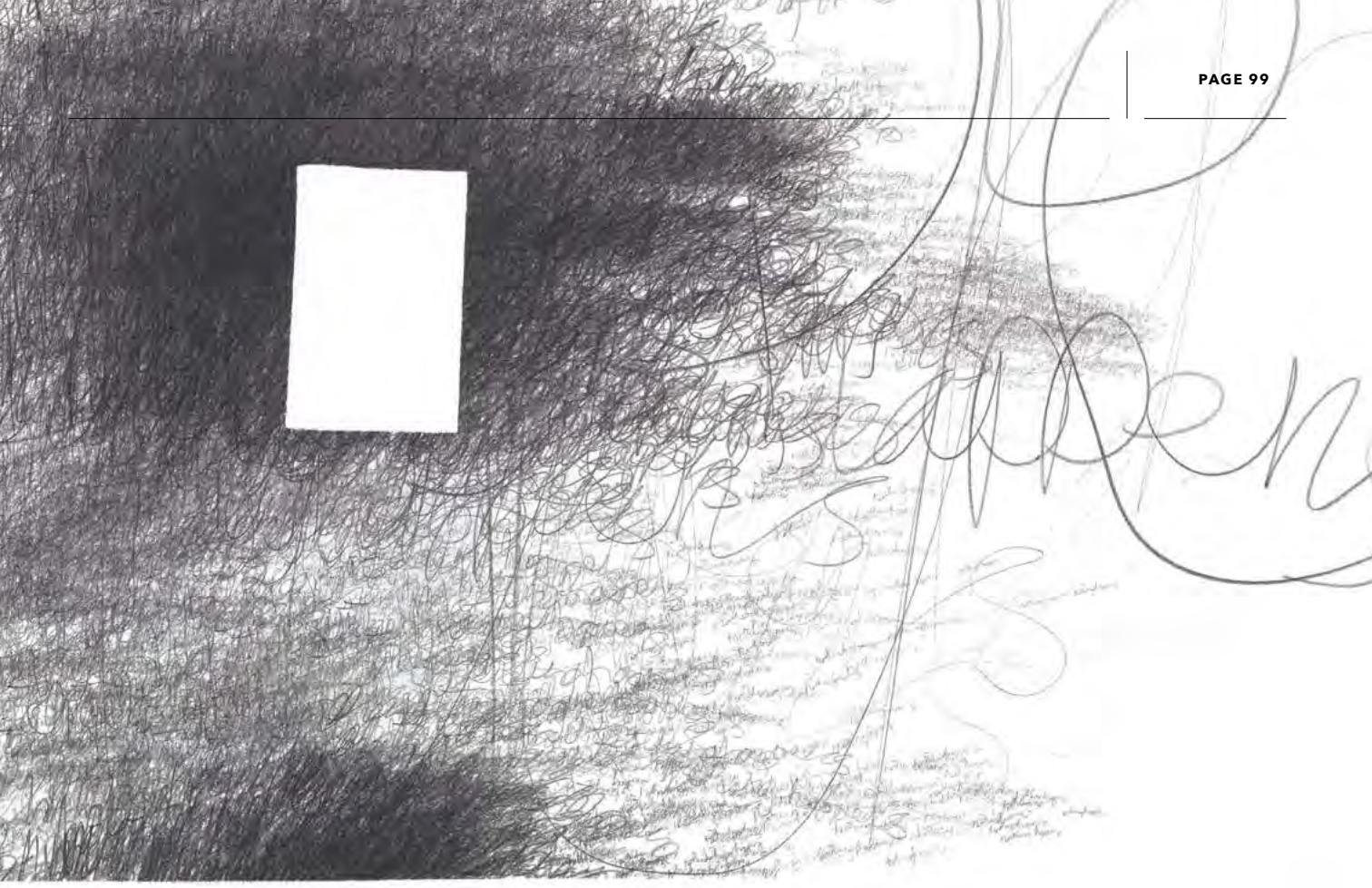
The share-price-as-a-signal is a primary way that finance borrows from information theory: return is weighed against risk (proxied by volatility) in determining which assets are most attractive. The relationship of assets to each other is brought in to create the mean-variance framework – a flawed but still dominant paradigm for investment analysis and decision making. Some of the flaws arise because return (especially prospectively) is a poor proxy for information and because the variance of returns is an insufficient description of the noise and true risk facing investments.

While information theory doesn't quite give us a cheat-sheet for choosing investments, it does provide a way to think about how information is processed. The trend in investment in recent years has definitively been towards the more information, the better. Countless data sets are created, sold and subscribed to, from retail sales to surveys of manufacturers, to satellite data showing occupancy rates of car parks. Yet what should by now be abundantly clear is that, when investing, quality trumps quantity. An information source is only as useful as the returns it can potentially generate. There is far too much low-quality information being paid for.

> "The more unlikely a message is, the more information content it has."

THINKING PROBABILISTICALLY

As the response to the pandemic has shown us (see box on 'Application du jour'), information quality depends in part on an understanding, even a curation, of the underlying data. This in turn determines



its usefulness. Again, Shannon can help investors. In his reframing of the information problem, he realised it would be more useful to think of information content probabilistically. That is, the more unlikely a message is, the more information content it has. This sounds cryptic, but, if we consider a message that makes us think "That's obvious", then that message can be said not to contain much information. But a message that makes us think "Wait, what?!" is likely to be far more informative and, before the fact, seen as more unlikely.

There are investors who have shown that a command of information quality can be hugely valuable, most notably the hedge fund Renaissance Technologies. Various near-insiders have revealed enough over the years to suggest that one ingredient in their success has been an incredibly detailed, comprehensive and clean set of market information.[3] This is then scoured for unusual and unlikely – but repetitive enough – patterns that are exploited to produce stellar returns on average. There is a beauty in the notion that they have abstracted from the usual investment information channels – such as company earnings and central bank announcements – and looked directly at price movements. In a way, they have dulled some of their investment senses to evolve a hyper-tuned feel for prices, those shorthand distillations of information in finance. Indeed, some have postulated that Renaissance Technologies have somehow 'solved' markets – surely a ludicrous notion?

DEGREES OF FREEDOM

When we talk about solving something, we implicitly mean with reference to degrees of freedom, or the idea that we pin down different aspects of a problem until a

3 Zuckerman (2019), The Man Who Solved the Market

solution is possible. Consider a rugby team. The coach needs to put each of the 15 players in a position for a match. At first, there are 15 degrees of freedom, as each player can be placed in any position. But as the coach progresses, the number of players and available positions declines, until 14 players take up 14 positions. At this point, the coach has no choice, no degrees of freedom – the final player is placed in the only remaining position. The team is 'solved'. While this example is trivial, degrees of freedom prove vital when considering higher-order problems, such as investing across thousands of markets, or working with quantum physics.

GAUGE THEORY

A gauge or measure is an important means of standardisation that gives us a language to convey information. When we shift between gauges, such as travelling from a country using the metric system to one using imperial, it's useful to know how to translate our measure. This translation is a very basic form of what we might call a gauge theory, and this becomes indispensable when thinking about the weird world of quantum physics.

In different areas of quantum enquiry, various properties are useful when seeking to make sense of the often-strange behaviour of particles. These properties don't always play nicely together, however. Sometimes, they become almost contradictory.[4] Here, introducing a gauge theory comes to the rescue – by giving us some redundancy. By explaining how we should think about the relationship between properties, we can continue to analyse the different areas without worrying about local differences and contradictions. In effect, what we have

done is allow enough degrees of freedom to unify our approaches, without sacrificing tractability in any one case. The tension between finding a local solution and understanding the global system is key.

The application of gauge theories has led to amazing progress in complex problems, such as understanding the brain. For example, researchers realised that, if we had an overarching theory for how neurons in the brain respond to external stimulus, then we would be able to model anything from a single neuron to overall brain activity.[5] This would give us insight into how the brain works at every scale and inform our understanding of phenomena such as action and perception.

THE FREE ENERGY PRINCIPLE

One emerging idea in this field – the free energy principle, developed by neuroscientist Karl Friston[6] – offers utility for our task at hand: navigating information. The essence is that systems (and potentially, people) attempt to minimise surprise. It sounds simple, but the implications are not.

People have a model or idea of what the world is like. We constantly update this, incrementally, according to what we perceive. If we are met with something that doesn't fit with our model, that counts as surprise; we minimise the effect by updating the model, and also through action. This is a complementary insight to Shannon's on the unlikelihood of a message, but Friston gives us a model by which systems (and people) cope with surprising information. Free energy as a gauge theory looks to be a promising way forward in complex fields, having already proved useful in several areas – most recently in modelling the covid epidemic.[7]

SOME PRACTICAL APPLICATION

What is an investor to take from this world of physics, gauges and free energy? From Shannon, it is to ensure our information sources don't introduce too much noise. More is certainly not always better, lest our processing capacity be overwhelmed and lead to bad investment decisions. If our information sources are set to reduce noise to an appropriate level then unexpected messages provide us with the most useful information: unusual price movements, or relationships changing.

From gauge theory and neuroscience, the takeaway is that understanding the unifying fabric of a system can yield powerful results. By design, Friston's principle works on many levels. Markets generally act to minimise the surprise of new information, driven by the wants and needs of buyers and sellers. But, as individuals, we have a call to action, either to update our views of the world or to adjust our portfolios. With the right gauge to help us navigate, we can make vast strides in understanding markets, if not quite in solving them.

And, finally, what to take from the artist Sam Winston? Is it time to turn out the lights and meditate on the nature of darkness, to heighten our other investment senses? Fund managers have certainly resorted to stranger things.[8] ●

4 Tong (2018), Gauge Theory
5 Sengupta et al (2016), Towards a neuronal gauge theory
6 Friston (2010), The free energy principle: a unified brain theory?
7 Friston et al, (2020), Dynamic causal modelling of covid-19
8 Additional sources and further reading available at ruffer.co.uk/2021-references

"There are few more impressive sights than a Scotsman on the make."
— JM Barrie

The Cazique The conman

RORY MCIVOR
Senior Associate

ONCE UPON A TIME, there lived a prince. A handsome man, a decorated soldier and a swashbuckling adventurer.

That, I'm afraid, is where the resemblance to gallant fairy-tale characters ends.

The Prince in this tale is one General Sir Gregor MacGregor. Or, as he came to style himself, His Highness Gregor, Cazique of Poyais.[1] MacGregor orchestrated one of the most audacious scams in history – marvellous in its ambition and catastrophic in its consequences.

A GREAT DEAL OF INTEREST

In the early years of the nineteenth century, British investors had enjoyed a period of reliable returns. To finance its war efforts on the Continent, the government had borrowed vast sums, with the national debt reaching 230% of GDP by the late 1810s. On this debt, investors could expect a 'risk free' return of around 5%.

The end of the Napoleonic Wars delivered a regime change in financial markets. The City of London emerged as a safe haven for European capital, supplanting Amsterdam as the world's most important financial centre.

Waterloo brought an end to the debt binge. With government borrowing retreating towards peacetime levels, the government no longer needed to pay the high rates of interest to encourage investors to lend.

1 Cazique or *cacique* derives from the Taíno word *kasike* meaning 'king or 'prince of an indigenous tribe in the pre-Columbian era

In 1822, the Bank of England cut interest rates by 1%, the first reduction in over a century.

A PERFECT MATRIMONY

Peace brought prosperity and optimism. Investors' confidence soared. As did their appetite for risk.

An ocean away from the City, newly-independent states in Latin America sought to finance their fledgling nations by issuing debt. The result was a perfect marriage between borrower and investor. Income-hungry investors were keen to put their money to work. And where better to do so than in a continent brimming with natural resources, now free from the shackles of Spanish colonial rule?

It was in this early period of financial globalisation, and with the birth of new markets for debt, that our Cazique, Gregor MacGregor, spotted his opportunity.

COMETH THE MAN

Born in Stirlingshire in 1786, Gregor MacGregor claimed descent from Rob Roy. Formerly a soldier in the British army, MacGregor sailed to Caracas in 1810 to join the Venezuelan revolutionary army.

He was soon promoted to Brigadier-General and tasked with the defence and expansion of his new homeland. MacGregor was generally commended for his service, although several of his escapades resulted in perilously close shaves. For instance, during an attempt to seize Porto Belo, in modern-day Panama, the Scotsman's forces were ambushed in the night. MacGregor, awoken by the noise of gunfire in the town, threw his bed clothes from the window onto the beach below and jumped out after them. He then scrambled to the water's edge and plunged into the sea. He was eventually recovered, barely conscious, by the Venezuelan navy.

> "We'll a' gang to Poyais thegither,
> We'll a' gang ower the seas thegither,
> To fairer lands and brighter skies,
> Nor sigh again for Hieland heather."

In 1821, after a colourful career in the Americas, MacGregor returned to Britain. And he returned with a plan.

THE VISION

By this time, London society was enthralled by Latin American affairs, especially the newly formed state of Gran Colombia and its first president, Simón Bolívar. It helped then, that MacGregor's wife, Princess Josefa, was a cousin of the great liberator himself, and the MacGregors quickly became coveted adornments to London dining tables. But a question remained – princess of where exactly?

MacGregor had answered that just a few months earlier, in a proclamation to the inhabitants of the territory of Poyais. It read:

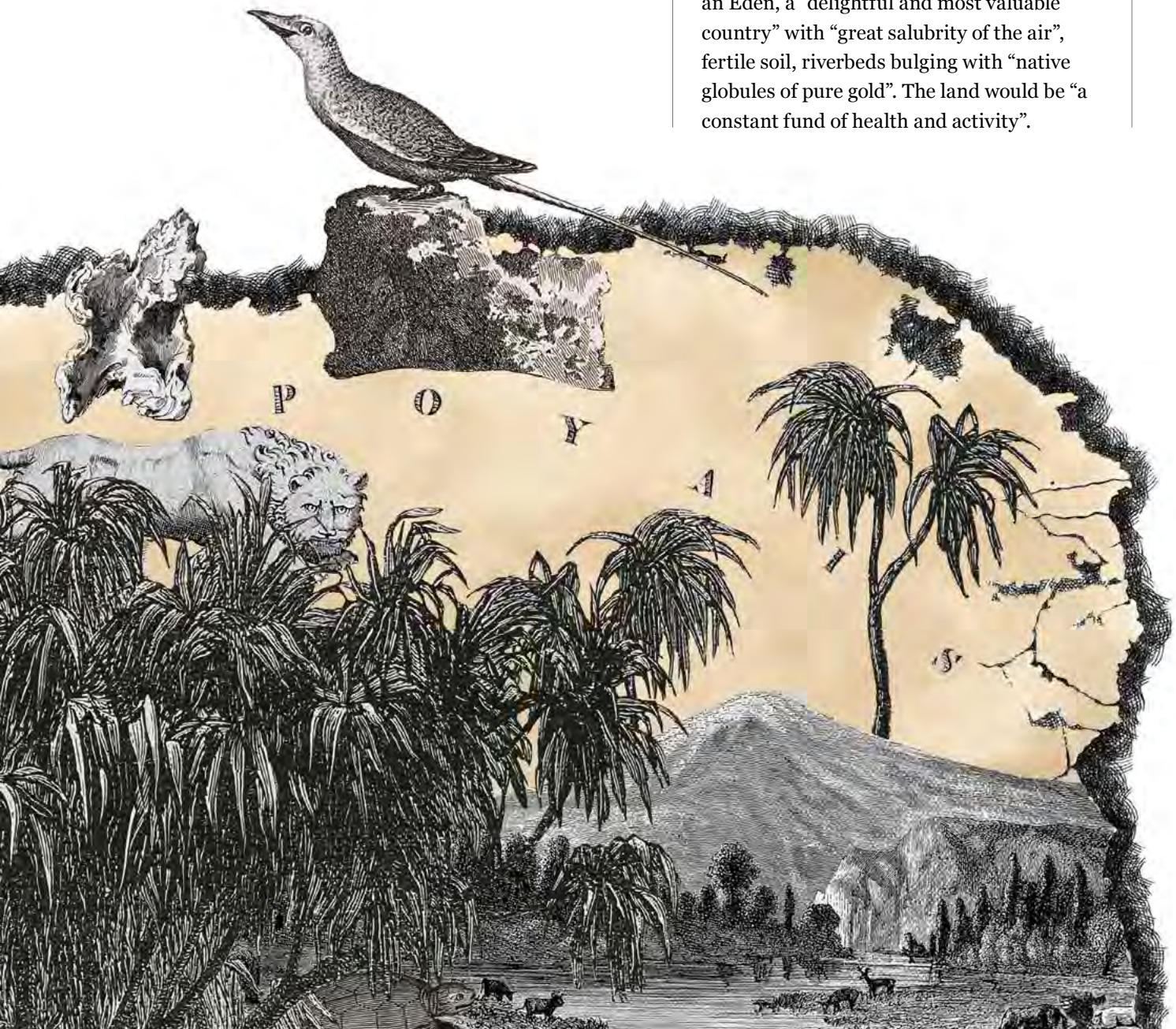
POYERS!
On the 29th April 1820, the King of the Mosquito Shore and Nation, by a deed executed at Cape Gracias a Dios, granted to me and my heirs for ever, the Territory of Poyais.
The Territory of Poyais shall be an asylum only for the industrious and honest, none others shall be admitted amongst us; and THOSE, I trust, you will receive with open arms, as brothers and fellow citizens.

He concluded:
POYERS!
I now bid you farewell for a while…I shall again be enabled to return amongst you, and that then it will be my pleasing duty to hail you as affectionate friends, and yours to receive me as your faithful Cazique and Father.

His Highness Gregor, the Cazique, intended to establish a new kingdom on the Mosquito Coast, over an area of shoreline extending across present day Nicaragua and Honduras. The kingdom would be named Poyais.

UTOPIA

The Cazique claimed to have discovered an Eden, a "delightful and most valuable country" with "great salubrity of the air", fertile soil, riverbeds bulging with "native globules of pure gold". The land would be "a constant fund of health and activity".



All that was required to uncover Poyais's great wonders were willing settlers and an injection of capital.

MacGregor set about alerting potential investors and colonists to his scheme. He published an exhaustive guidebook, endorsed by Thomas Strangeways, the Cazique's supposed "Aide-de-camp and Captain of the 1st Native Poyer Regiment".

The guidebook was a verbose, at times bizarre, exposition of the new territory. The narrative frequently descended into technical discussions of subjects ranging from plant husbandry to means of protection from the native quadrupeds (including Mexican cats, gibeonites and nine-banded Armadillos).

Whilst lacking the candour of "Guinness is good for you", it proved to be effective marketing.

RICH BEYOND DOUBT

MacGregor capitalised on the unquestioning trust people often grant those from their own religious or ethnic group. This trick – known as an affinity crime – is used by conmen the world over. He persuaded almost 300 Scots to make the inaugural passage to Poyais. Doctors, lawyers and blacksmiths were furnished with the tools they would need to colonise the exotic and verdant land. Eager to arrive prepared, the settlers exchanged their gold and savings for Poyais dollars, which MacGregor had had printed at the Bank of Scotland's press.

That the settlers would become rich seemed beyond doubt. These first dollars were a taste of the bounty that lay in wait in the Cazique's utopia.

With the colonists taken care of, MacGregor set about financing the creation of the new settlements. His requirement was just £200,000, a modest amount to raise in London's sovereign debt markets in 1822.

"That they would become rich seemed beyond doubt. These first dollars were a taste of the bounty that lay in wait in the Cazique's utopia."

It was agreed with the respectable City banking firm of Sir John Perring, Shaw, Berber & Co. that Poyais would underwrite its bold project by means of long-term debt. This took the form of bonds with good rates of annual interest, guaranteed by the revenues of the Poyais national government.

A BLIND BET

South American loans were a great attraction for international investors at the time. But news from Latin America was scarce, and investors often could not tell which nations' obligations were the better credits. Pricing was more a factor of size, the interest rate on the bonds, and the prestige of the arranging firm than it was a reflection of the investment's true risk.

The loans appeared to represent fresh opportunity. In this wave of financial globalisation, investors feared missing out on the latest fashion. MacGregor observed the mania and, with it, his chance to make a fortune.

Stock prices are supposed to reflect all the information available to the market. That's the basis of the Efficient Market Hypothesis. Something can be overpriced or underpriced only when there is asymmetry

Poyais Loan

No. 112.

100

ONE HUNDRED POUNDS.

Loan of Two Hundred Thousand Pounds Sterling,

for the Service of the State & Government of Poyais,

Divided into SPECIAL BONDS *of* £100 *each, and secured by a*

GENERAL MORTGAGE BOND,

Of which the following is a Copy.

Know all Men by these Presents, That WE, GREGOR THE FIRST, Sovereign Prince of the Independent State of *Poyais* and its Dependencies, Cacique of the Poyer Nation, &c. &c. &c. have, for the purpose of consolidating the said State, defraying the Expenses of the same, and promoting the general development of the natural Advantages of the Country, negociated and raised a Loan of **Two Hundred Thousand Pounds** Sterling, for the Service of the said State, and which has been placed at the Disposal of the said State.

Now therefore WE do hereby declare, for and in behalf and in the name of the said GOVERNMENT OF POYAIS, that the Terms and Conditions upon which the said Loan has been so raised are as follows:

FIRST.—That the said Loan has been raised on Security of this present Instrument, or GENERAL BOND, which shall be divided into SPECIAL BONDS of *One Hundred Pounds Sterling* each, to be [illegible], payable to Bearer, with Interest at the rate of Five Pounds per Cent. per Annum; which Interest shall commence from the 1st day of May, 1823, and shall be paid half yearly in London, without any Deduction, on the 1st day of November and the 1st day of May in every Year, the first Payment of which shall be made on the 1st day of November, 1823.

SECOND.—[illegible]

THIRD.—[illegible]

FOURTH.—[illegible]

FIFTH.—[illegible]

SIXTH.—[illegible]

SEVENTH.—[illegible]

EIGHTH.—That this present Instrument, or General Bond, shall be deposited and remain in the Banking House of the said Sir John Perring and Company, until the final Redemption of the said Loan.

And WE, GREGOR, for and in the name of the said *Government of Poyais*, DECLARE that, in raising the said Loan, it was stipulated and agreed, and *WE do, as Sovereign Prince of the said State of Poyais*, hereby engage and agree, for ourselves, and our Heirs and Successors, that WE will not raise or contract for any new Loan in Europe, unless one-eighth part of the present Loan shall have been previously redeemed; or unless, in the Contract for such new Loan, it is stipulated that the first proceeds of and from such new Loan, or a competent part of such proceeds, shall be applied in or towards the discharge of the debt then remaining unpaid upon the present Loan at par, within Twelve Months from the date of such Contract.

And WE do, as such Sovereign Prince of the said State of POYAIS, and as fully representing the same, hereby bind ourselves, our Heirs, and Successors, together with the Government and all the Public Authorities thereof, which now do or may hereafter exist, to perform and fulfil faithfully and truly all the foregoing Engagements and Conditions; and for no reason and on no pretence whatsoever, at any time, or under any circumstances, to refuse, evade, or delay, or attempt to evade or delay, the full and ample performance and fulfilment, so far as in us may lie and be practicable, of the aforesaid Engagements and Conditions on the part and behalf of the said State, or any of them.

And WE do, by these Presents, declare the said Government responsible and legally and solemnly bound to all the Persons collectively interested in the said Loan of TWO HUNDRED THOUSAND POUNDS STERLING, and individually to each of them, for the Amount of the Special Bonds and Interest, for which, for the time being, they may be the Holders.

IN FAITH WHEREOF WE, the said GREGOR, as such Sovereign Prince, of and for and on behalf of the said GOVERNMENT OF POYAIS, have signed the present General Bond, and have affixed thereto the Seal of State, this Fifteenth Day of September, 1823.

Signed, Sealed, and Delivered, in the Presence of

AC. DUTERTRE, *Notary Public, Boulogne.*
GEORGE CLARKE, *of London.*

Gregor Mac Gregor, P.

I, WILLIAM JOHN RICHARDSON, Knight, Commander of the Order of the Green Cross, Major of the Regiment of Horse Guards, and his Poyaisian Highness's Chargé d'Affaires in London, in virtue of a Power of Attorney, dated the Twenty-first Day of September, 1823, hereby certify, that the Bearer hereof is entitled to the Sum of One Hundred Pounds Sterling, part of the Loan of Two Hundred Thousand Pounds Sterling, and Interest secured by the General Bond, of which the foregoing is a Copy; and I hereby declare this to be a Special Bond for One Hundred Pounds Sterling, granted in conformity to the Engagements contained in the said General Bond, and bearing an Interest of Five Pounds per Centum per Annum, payable Half-Yearly, on Sixty Dividend Warrants hereto annexed. Signed and Sealed with the Seal of Legation on the Sixth Day of October, 1823.

[illegible signature]

I hereby Certify, that the General Bond, of which the above is a Copy, [illegible] by his Serene Highness GREGOR, Prince of Poyais, &c. &c. &c. [illegible] been deposited in the Banking House of Sir John Perring and Company, [illegible] in the said General Bond.

Hall Court, Cornhill, 6th October, 1823.

WITNESS, [signature]

[signature] NOTARY.

POYAIS LOAN for £200,000 STERLING.
[illegible] DIVIDEND of £2. 10s. 0. STERLING, payable at Sir John Perring & Co.'s, London, being 6 Months' Interest from the 1st May to the 1st November, 1824, on a Special Bond for £100 Sterling.
No. 112 F Entd.

POYAIS LOAN for £200,000 STERLING.
[illegible] DIVIDEND of £2. 10s. 0. STERLING, payable at Sir John Perring & Co.'s, London, being 6 Months' Interest from the 1st November, 1824, to the 1st May, 1825, on a Special Bond for £100 Sterling.
No. 112 F Entd.

POYAIS LOAN for £200,000 STERLING.
[illegible] DIVIDEND of £2. 10s. 0. STERLING, payable at Sir John Perring & Co.'s, London, being 6 Months' Interest from the 1st May to the 1st November, 1825, on a Special Bond for £100 Sterling.
No. 112 F Entd.

POYAIS LOAN for £200,000 STERLING.
[illegible] DIVIDEND of £2. 10s. 0. STERLING, payable at Sir John Perring & Co.'s, London, being 6 Months' Interest from the 1st November, 1825, to the 1st May, 1826, on a Special Bond for £100 Sterling.
No. 112 F Entd.

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of information – when one party knows more than the other.

The Poyais debt issue was a perfect case of information asymmetry. Investors couldn't know much about the country, because the land of Poyais existed only in MacGregor's imagination.

LURING IN INVESTORS

The scrip for the Poyais loan was offered for sale on Wednesday 23 October 1822, in the amounts of £100, £200 and £500. The discounted purchase price was 80, with the bonds issued below par, and payments made in instalments, to allow speculators to make substantial profits.

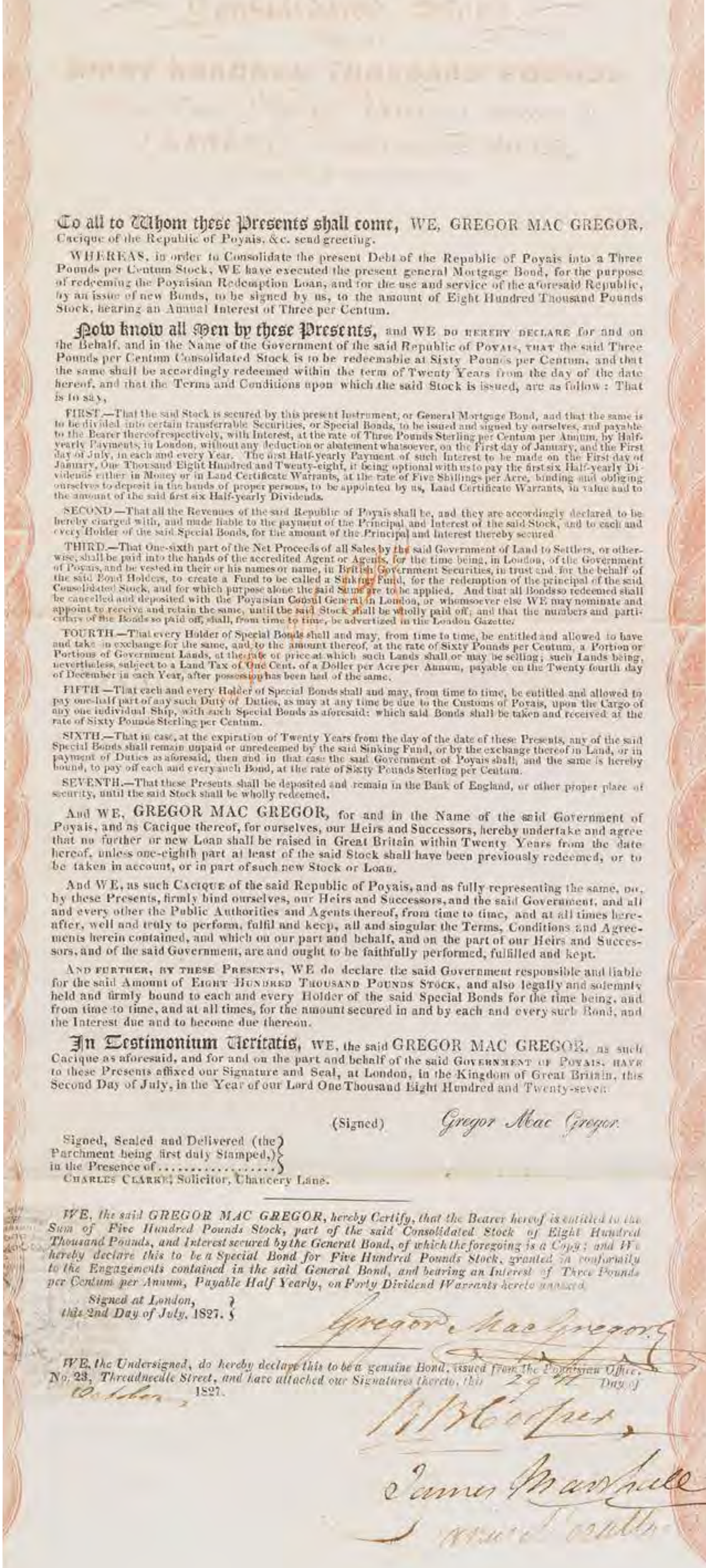
A deposit of 15% secured the certificate, with the remainder due in two instalments on 17 January and 14 February 1823. The bonds were to mature in 30 years and the annual interest rate was 6%, secured on all the revenues of the government of Poyais.

The walls of Ruffer's London offices are replete with reminders of when investments go bad. On one such wall hang two of these very scrips – Poyais bonds.

FROM FASHION TO FRENZY

Fashion is a powerful force in financial markets. But, as Oscar Wilde observed, "fashion is a form of ugliness so intolerable that we have to alter it every six months." The fashion for Poyais debt barely lasted six weeks.

In the winter of 1822, sentiment began to turn against investments in South America after an outbreak of political disorder across the continent. The Times of London warned investors against Poyais debt: "Why should they abandon the certainty of the British funds to dabble in others, the value of which, as it appears, so entirely depends



To all to Whom these Presents shall come, WE, GREGOR MAC GREGOR, Cacique of the Republic of Poyais, &c. send greeting.

WHEREAS, in order to Consolidate the present Debt of the Republic of Poyais into a Three Pounds per Centum Stock, WE have executed the present general Mortgage Bond, for the purpose of redeeming the Poyaisian Redemption Loan, and for the use and service of the aforesaid Republic, by an issue of new Bonds, to be signed by us, to the amount of Eight Hundred Thousand Pounds Stock, bearing an Annual Interest of Three per Centum.

Now know all Men by these Presents, and WE DO HEREBY DECLARE for and on the Behalf, and in the Name of the Government of the said Republic of POYAIS, THAT the said Three Pounds per Centum Consolidated Stock is to be redeemable at Sixty Pounds per Centum, and that the same shall be accordingly redeemed within the term of Twenty Years from the day of the date hereof, and that the Terms and Conditions upon which the said Stock is issued, are as follow: That is to say,

FIRST.—That the said Stock is secured by this present Instrument, or General Mortgage Bond, and that the same is to be divided into certain transferrable Securities, or Special Bonds, to be issued and signed by ourselves, and payable to the Bearer thereof respectively, with Interest, at the rate of Three Pounds Sterling per Centum per Annum, by Half-yearly Payments, in London, without any deduction or abatement whatsoever, on the First day of January, and the First day of July, in each and every Year. The first Half-yearly Payment of such Interest to be made on the First day of January, One Thousand Eight Hundred and Twenty-eight, it being optional with us to pay the first six Half-yearly Dividends either in Money or in Land Certificate Warrants, at the rate of Five Shillings per Acre, binding and obliging ourselves to deposit in the hands of proper persons, to be appointed by us, Land Certificate Warrants, in value and to the amount of the said first six Half-yearly Dividends.

SECOND.—That all the Revenues of the said Republic of Poyais shall be, and they are accordingly declared to be hereby charged with, and made liable to the payment of the Principal and Interest of the said Stock, and to each and every Holder of the said Special Bonds, for the amount of the Principal and Interest thereby secured.

THIRD.—That One-sixth part of the Net Proceeds of all Sales by the said Government of Land to Settlers, or otherwise, shall be paid into the hands of the accredited Agent or Agents, for the time being, in London, of the Government of Poyais, and be vested in their or his names or name, in British Government Securities, in trust and for the behalf of the said Bond Holders, to create a Fund to be called a Sinking Fund, for the redemption of the principal of the said Consolidated Stock, and for which purpose alone the said Sums are to be applied. And that all Bonds so redeemed shall be cancelled and deposited with the Poyaisian Consul General in London, or whomsoever else WE may nominate and appoint to receive and retain the same, until the said Stock shall be wholly paid off; and that the numbers and particulars of the Bonds so paid off, shall, from time to time, be advertized in the London Gazette.

FOURTH.—That every Holder of Special Bonds shall and may, from time to time, be entitled and allowed to have and take in exchange for the same, and to the amount thereof, at the rate of Sixty Pounds per Centum, a Portion or Portions of Government Lands, at the rate or price at which such Lands shall or may be selling; such Lands being, nevertheless, subject to a Land Tax of One Cent. of a Dollar per Acre per Annum, payable on the Twenty fourth day of December in each Year, after possession has been had of the same.

FIFTH.—That each and every Holder of Special Bonds shall and may, from time to time, be entitled and allowed to pay one-half part of any such Duty or Duties, as may at any time be due to the Customs of Poyais, upon the Cargo of any one individual Ship, with such Special Bonds as aforesaid: which said Bonds shall be taken and received at the rate of Sixty Pounds Sterling per Centum.

SIXTH.—That in case, at the expiration of Twenty Years from the day of the date of these Presents, any of the said Special Bonds shall remain unpaid or unredeemed by the said Sinking Fund, or by the exchange thereof in Land, or in payment of Duties as aforesaid, then and in that case the said Government of Poyais shall, and the same is hereby bound, to pay off each and every such Bond, at the rate of Sixty Pounds Sterling per Centum.

SEVENTH.—That these Presents shall be deposited and remain in the Bank of England, or other proper place of security, until the said Stock shall be wholly redeemed.

And WE, GREGOR MAC GREGOR, for and in the Name of the said Government of Poyais, and as Cacique thereof, for ourselves, our Heirs and Successors, hereby undertake and agree that no further or new Loan shall be raised in Great Britain within Twenty Years from the date hereof, unless one-eighth part at least of the said Stock shall have been previously redeemed, or to be taken in account, or in part of such new Stock or Loan.

And WE, as such CACIQUE of the said Republic of Poyais, and as fully representing the same, do, by these Presents, firmly bind ourselves, our Heirs and Successors, and the said Government, and all and every other the Public Authorities and Agents thereof, from time to time, and at all times hereafter, well and truly to perform, fulfil and keep, all and singular the Terms, Conditions and Agreements herein contained, and which on our part and behalf, and on the part of our Heirs and Successors, and of the said Government, are and ought to be faithfully performed, fulfilled and kept.

AND FURTHER, BY THESE PRESENTS, WE do declare the said Government responsible and liable for the said Amount of EIGHT HUNDRED THOUSAND POUNDS STOCK, and also legally and solemnly held and firmly bound to each and every Holder of the said Special Bonds for the time being, and from time to time, and at all times, for the amount secured in and by each and every such Bond, and the Interest due and to become due thereon.

In Testimonium Veritatis, WE, the said GREGOR MAC GREGOR, as such Cacique as aforesaid, and for and on the part and behalf of the said GOVERNMENT OF POYAIS, HAVE to these Presents affixed our Signature and Seal, at London, in the Kingdom of Great Britain, this Second Day of July, in the Year of our Lord One Thousand Eight Hundred and Twenty-seven.

(Signed) Gregor Mac Gregor.

Signed, Sealed and Delivered (the Parchment being first duly Stamped,) in the Presence of ....
CHARLES CLARKE, Solicitor, Chancery Lane.

WE, the said GREGOR MAC GREGOR, hereby Certify, that the Bearer hereof is entitled to the Sum of Five Hundred Pounds Stock, part of the said Consolidated Stock of Eight Hundred Thousand Pounds, and Interest secured by the General Bond, of which the foregoing is a Copy; and We hereby declare this to be a Special Bond for Five Hundred Pounds Stock, granted in conformity to the Engagements contained in the said General Bond, and bearing an Interest of Three Pounds per Centum per Annum, Payable Half Yearly, on Forty Dividend Warrants hereto annexed.

Signed at London, this 2nd Day of July, 1827.

Gregor Mac Gregor

WE, the Undersigned, do hereby declare this to be a genuine Bond, issued from the Poyaisian Office, No. 23, Threadneedle Street, and have attached our Signatures thereto, this 29th *Day of* October, 1827.

> “The Poyais debt issue was a perfect case of information asymmetry. Investors couldn’t know much about the country, because the land of Poyais existed only in MacGregor’s imagination.”

upon the unaccredited chargé d’affaires of an unacknowledged republic?”

Unease turned to distrust and Poyais bonds were soon caught up in the hectic selling typical of financial panic. Nervous investors attempted to limit their losses; the price of the scrip plummeted. Trust in the ability of governments in the New World all but evaporated – the fictitious Poyais was no exception.

Without the steady stream of cash from the loan, the Poyais scheme quickly unravelled. Unpaid bills from MacGregor’s extensive advertising efforts stacked up, and reports of disquiet began to filter through from the Mosquito Coast, where the settlers had just made landfall.

Accusations of fraud simmered, and City lawyers sharpened their quills. The Poyais swindle was foiled, MacGregor exposed as a scoundrel.

THE VICTIMS

It was the prevailing financial weather of the early 1820s that allowed MacGregor’s grand Poyais fabrication to get as far as it did. Excitement about burgeoning new markets led to speculation, and a bubble was born.

In the history of financial crime, the pain is typically borne by the investors who throw caution to the wind in the hope of making a quick buck. With Poyais, investors were not the only victims. The settlers who had voyaged to the Mosquito Coast found an inhospitable wasteland. Within months, the hardy Scots were left destitute, disease-ridden and abandoned. Some escaped to Belize, around 50 made it back to Britain. The majority died.

MacGregor’s scheme was cunning and deceitful like most financial skulduggery. Tragically, it was also lethal.

THE BUBBLE BURST

At their core, financial bubbles are imbalances of information.

The Latin American bond bubble was no different. Investors were sold new and exciting propositions but had very little information about them. There was no way to determine which investments could generate the greatest return – and which might be a racket. Investors owned Latin American debt not because of what it was (they couldn’t know) but because they believed in a story.

MacGregor exploited this information asymmetry. He tapped into investors’ willingness to take a risk on something they knew little about. In the case of Poyais, the financing of an imaginary country.

Today, with a growing volume of information at our fingertips, we can expect more asymmetries, and more bubbles. The challenge for investors remains the same. It is to identify these imbalances and avoid ending up on the wrong side of them.

So long as there are bubbles – and with them, opportunities to make money fast – there will be conmen, like the Cazique, seeking to exploit them. ●

Further reading:
Sinclair (2014), The Land That Never Was: Sir Gregor MacGregor and the Most Audacious Fraud in History

Book Corner

Takes on three books, by three people at Ruffer. A mix of personal favourites and topical insight, with some utility for investors.

ENGAGE THE ENEMY MORE CLOSELY
Correlli Barnett
PAGE 111

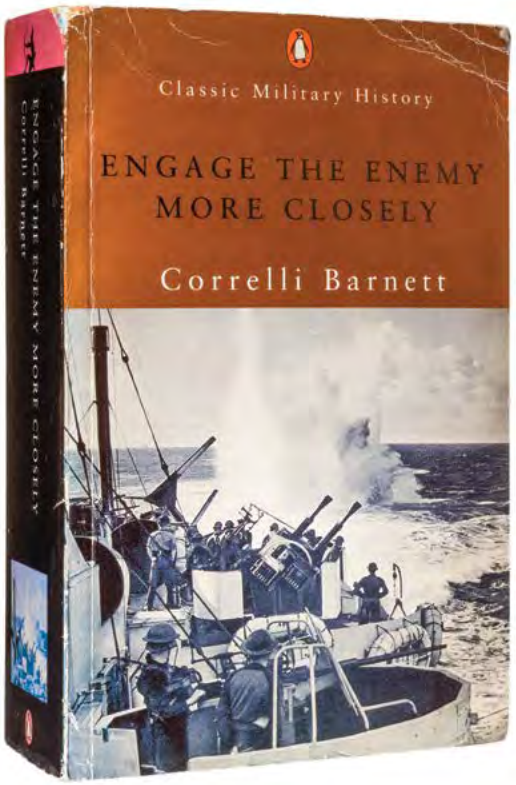
INTO THIN AIR
Jon Krakauer
PAGE 114

THE SHOCK OF THE OLD
David Edgerton
PAGE 117

ENGAGE THE ENEMY MORE CLOSELY
Correlli Barnett

HODDER AND STOUGHTON

Looking under the stones



WHAT'S THE DIFFERENCE BETWEEN KNOWLEDGE AND WISDOM? Writing as an arrogant nearly-70 year old, my answer is 'about 40 years'. And which is the more important for investment insight?

The answer is that these two elements need to fuse in a chemical reaction to produce an effective investment strategy – covet wisdom, and you have time on your side; covet knowledge, and you have facts on your side. It is, of course, the luck of the draw as to which one is the winner on Wednesday.

These thoughts make me think of the redoubtable historian Correlli Barnett. It is perhaps stretching a point to turn to the blowing up of HMS Hood to get a handle on Tesla. But the best investment call I've ever heard about was from an old stockbroker with whom I worked in the early 1970s, who bought Marks and Spencer in June 1940. As he was headed back from the Dunkirk beaches with stukas offering a fond farewell - he worked out that, if Britain won the war, then he'd make a good amount of money, and, if it lost, then he wouldn't be worrying too much about his investments.

Barnett is always an interesting read – I have recommended to a number of Rufferians his *Audit of War* which I came across, cut-price, in Cape Town. It was utterly compelling – unread (because unheard of) in the City, yet the cult-read of every ambitious civil

> “It is the ability to see those things which are going to matter that gives a cruelly unfair advantage to the wise practitioner.”

servant in the 1980s. It, too, is a book for this moment, explaining that the US injections into Europe to help recapitalise its industry via the Marshall Plan were not so used in the UK, for fear of inflation – UK industry could not cope with the extra demand.

THE CURRENCY OF ANSWERS

Every decade, I re-read *Engage the Enemy More Closely,* to remind myself how the pivotal decisions in history are made parenthetically, randomly, without any sense that they are the forks in the road which determine which way history moves.

What the book does, quite brilliantly, and without ever quite meaning to (therein lies its power), is to show that knowledge is the currency of answers to questions which turn out not to matter. It is the ability to see those things which are going to matter that gives a cruelly unfair advantage to the wise practitioner.

A LION NOT A CENTIPEDE

Here is the nutshell overview of the narrative. In 1918, Britain had the biggest navy in the world, and, despite the ritual humiliation of leading the German Grand Fleet into Scapa Flow, began to prepare for the next war. It had, literally, ruled the world, but, in the words of Lord Morley of Blackburn, “the British lion is not a centipede – it cannot put its foot down everywhere.” So the decision was made that, come the next conflict, the Pacific was a pond too far, and the Mediterranean, despite its proximity and prestige, was essentially irrelevant to British interests. Britain’s naval power would be needed to keep its interests in world trade afloat.

Thrice wise! By 1941, the Royal Navy was stretched thin, the United States came, in the event, to control the Pacific against the Japanese, and the U-boat campaign came within a single battle of winning the war against Britain. It seemed to make sense in 1922 to snub Japan by not renewing the naval treaty which had just expired; Mussolini’s invasion of Abyssinia in 1935 caused the UK government to humiliate Mussolini, and his newly-created modern navy. These random decisions, which offended the deep policy settled at the end of the First World War, resulted in a centipedic dispersal of the

Navy's strength. They left its Atlantic, African and Arctic routes perilously exposed.

DECISIONS THAT APPEAR UNIMPORTANT

Naval Intelligence lacked the imagination, too, to see that the battleship was not the *ne plus ultra* of maritime fighting power – it was superseded by aircraft over the high seas, and submarines beneath them. The decision, in 1918, to split the air force into the RAF and the Royal Naval Air Force meant that, when the RAF were bombing Germany, they had no time to repair a 300 mile vacuum where no aerial cover could be given to the convoys.

Barnett's book is a thundering good read, of course – but the fascination is in the unannounced significance of the pivotal decisions. They almost never looked important – we signed away alliances with the two powers which could have preserved the strategic gameplan. The RAF bombed Germany to show Uncle Joe Stalin that we were doing what we could to help. The County-class cruisers sat high in the water, silhouetted against a skyline in battle, because the Labour government, when the rules were laid down in 1929, thought that no able-seaman should have to stoop on deck.

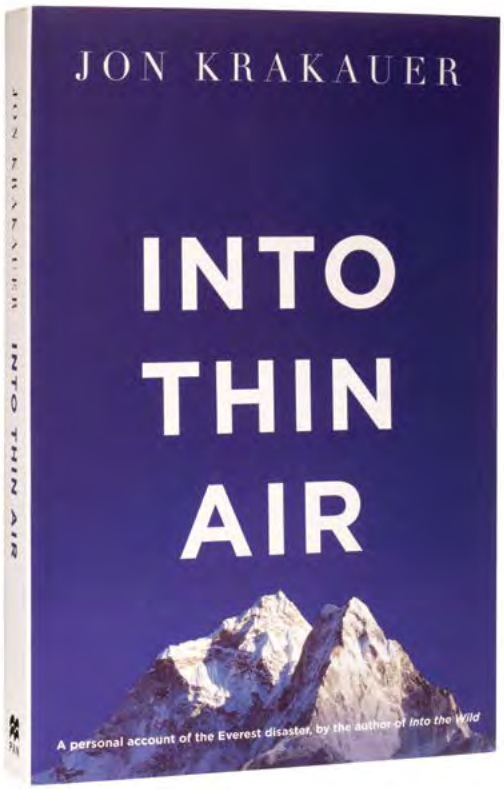
The decisions today are as impossible to assess as they were then – and, of course, we have no more idea than they did as to which ones are sound and fury, and which ones simply sound. Is China imploding a big worry? Or is it not imploding a greater worry? Can England survive a break-up with Scotland, or is it a good thing? What about the EU?

Wisdom looks under the stones, and at the precedents. It wonders about the amalgam, in Edward Wilson's words, of "stone-age emotions, medieval institutions and God-like technology."

The knowledgeable are boned up on the set speeches of the central bankers, the presidential addresses, the PMI figures (if you don't know what they are, you might, in the twilight, be mistaken for wise). My money is on the dipsomaniac barrister F E Smith, whose arguments to Lord Justice Darling failed to impress. "Mr Smith, having listened to your views, I am none the wiser." "No, my Lord, but better informed."

JONATHAN RUFFER
Chairman

> "We have no more idea than they did as to which ones are sound and fury, and which ones simply sound."



INTO THIN AIR
Jon Krakauer

PAN MACMILLAN

Thinking beyond the summit

THERE ARE PLENTY OF EXCELLENT BOOKS ABOUT INVESTING. But sometimes the best advice can be found in unlikely places.

Into Thin Air tells the story of an ill-fated assault on Everest in 1996. The American climber-writer Jon Krakauer was invited to join a high-profile expedition, to describe the growing commercialisation of the mountain.

His team (and two others) set out for the summit in perfect conditions. The mountain was crowded: there were queues. 19 of the group reached the top, but only 12 made it back down again. Of the six in Krakauer's party, just two survived. In all, a dozen climbers perished that year – the worst death toll since Hillary and Tenzing first reached the peak in the 1950s.

THE NEGLECTED LESSON

Krakauer's book is a brilliant, pulse-racing read. And it carries many neglected lessons.

Perhaps the most powerful – the top of the mountain is only halfway there. As Rob Hall, the leader of Krakauer's expedition, put it: "Any bloody idiot can get up this hill. The trick is to get back down."

High mountains are wonderful when the sun shines and the summit seems within easy reach. But it only takes a small change in the weather to obscure both the way ahead *and* the way down. Crucially, the risks do not decrease as you become more experienced. If anything, the opposite is true. In Krakauer's words: "To succeed you must be exceedingly driven, but if you're too driven you are likely to die… When presented with a chance to reach the planet's highest summit, people are surprisingly quick to abandon good judgement."

That is why Everest is so dangerous. The parallel with the financial markets almost paints itself. The way up is fun; the way down can be lethal. And experience is no guarantor of survival. This lesson is all the more important after a near 40-year bull market – many investors have only known a market that trends ever-higher, one that, when it goes down, does so only briefly.

ENTER THE AMATEURS

For some time, Everest was for elite climbers only. Then bottled oxygen and improved equipment allowed a broader range of people to have a go. Things really changed in 1985 when Dick Bass, a wealthy Texan with limited climbing ability, was pretty much carried to the top by a renowned guide. Suddenly, Everest was becoming nothing more than a top notch life experience.

This led to a rush of interest. But the mountain had not been tamed. There was still a 'death zone' above 25,000 feet, where the air holds one-third of the oxygen a human needs. Lung collapse, hypothermia, frostbite and a host of other dangers are only an accident away.

EUPHORIC DANGERS

To re-present the analogy: the summit is the short-term goal, but the long-term objective – getting both up and down safely – matters more. For climbers, the moment of euphoria on reaching the top contains grave dangers. In Krakauer's case, he had used nearly all his oxygen; he barely had time to take in the view. Yet others were determined to relish the moment, unfurling flags and snapping photographs, using up time they could no longer afford. None imagined what was about to befall them. It sounds like a moment of market euphoria.

In the inquest, people questioned how expert guides could have led inexperienced amateurs – each of whom had paid up to $65,000 to be taken safely up Everest – into such a disaster. The answer lay in the question itself. Rob Hall, the most knowledgeable guide on the mountain, was worried all along about overcrowding. Hall feared that his own ascent might be put at risk by the need to rescue some of the unqualified groups he saw setting off. He thought it "pretty unlikely" that they would get through the season without "something bad" happening up there.

No-one was more respected than Hall. He ran "the tightest, safest operation on the mountain, bar none." So what happened?

Much of it came down to the commercial pressures of running a prestigious operation. On this occasion, it led Hall to break his own

"It sounds like a moment of market euphoria."

> “One of the biggest factors in Hall’s success was also the simplest”

rules. He always emphasised the importance of having a predetermined turn-around time on summit day, even if the summit had not been reached. He was emphatic enough that five of his clients turned themselves back when they realised they would not make it by his deadline. But on this occasion, Hall was still struggling to get some clients to the top hours after the deadline had passed.

His fears were not groundless. Clients tended to believe they were paying to get to the top – in effect, buying a summit. Guides on previous expeditions had been sued when their clients had not made it to the summit. And, since Hall had turned his whole group back the previous season, failing to reach the summit again would have hurt his reputation. There was another experienced guide on the mountain with a large fee-paying group – neither man wanted to fail while the other succeeded.

THE PERILS OF LUCK

In Krakauer’s account, one of the biggest factors in Hall’s success was also the simplest: luck. As one of the climbers said: “Season after season, Rob had brilliant weather on summit day. He’d never been caught by a storm.” Years of good luck had given him a sense of security that tempted him to take excessive risk.

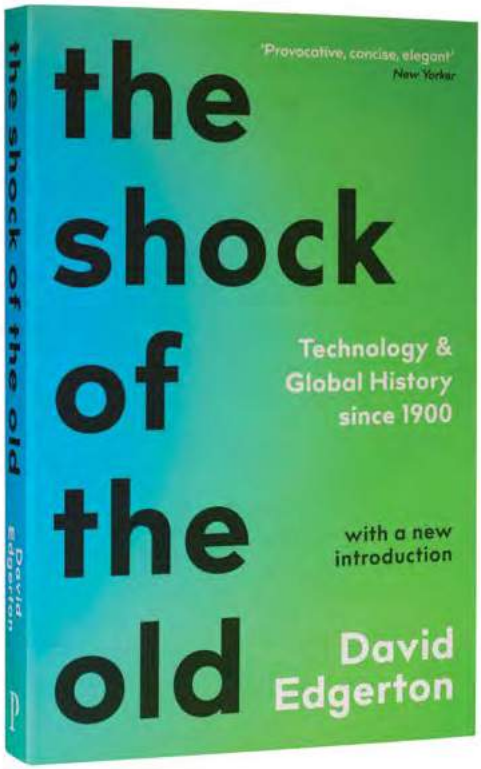
It is the kind of observation that an investment guru might make. As Howard Marks put it: “While it might seem counterintuitive, the best decision-maker isn’t necessarily the person with the most successes, but rather the one with the best process and judgement… You have to avoid the risk of ruin, and this requires solid discipline.”

It is always tempting to trust to one’s lucky star – indeed, this is almost a textbook definition of irrational exuberance. You *might* get lucky. Nine times out of ten, the thing you fear won’t happen. But the tenth time? Disaster.

I myself once climbed not Everest, but Mont Blanc. It was a two day ascent. On the second morning, we rose at 3.00am, climbing a steep slope in darkness. Two hours from the top, it started to snow. Our guide insisted we had to turn back. No ifs, no buts. The snow would cover our track, making the descent impossible.

Of course we were disappointed. We did not make the summit. We never saw dawn breaking over the Alpine chain. But we did live to tell the tale.

HERMIONE DAVIES
Investment Director



THE SHOCK OF THE OLD
David Edgerton

PROFILE BOOKS

New things, old things

AT THE HEART of historical enquiry are two simple questions: 'What has changed?' and 'What has stayed the same?' For investors, concerned with the future value of assets, these questions can be reframed: 'What will change?' and 'What will stay the same?'

In uncertain times, we have a tendency to construct neat and orderly narratives of the past to help us understand the present. But these narratives can omit important details. A more nuanced understanding of history can help us identify what will change when everyone else expects continuity. Perhaps even more usefully, it can suggest what might stay the same when everyone else expects change.

A NOSTALGIC FUTURE

Technology is a particularly fine example. Since the eighteenth century, we have been taught to expect near constant change as a result of ever-improving science and technology. Each generation has reheated breathless futurology; our current age is no exception. The assumption of perpetual technological progress is employed to support both utopian and dystopian visions of the future. The coming of artificial intelligence is said to bring either a leisure-filled, post-scarcity future or the extinction of the human race.

So our idea of the future is quite old-fashioned. Physical space, nations, distances, manufacturing and objects, so the argument goes, become less important. Replacing them is a world defined by ideas, brands and services that can be transmitted instantaneously and at no cost between increasingly identical parts of the world. But the knowledge economy has existed for hundreds of years. We still live in a world in which huge amounts of raw materials are shipped around the globe, where nations and

national identity still matter. This future has never arrived, yet the vision is still with us.

CONTINUOUS INVENTION?

David Edgerton's book teaches us to be sceptical. We tend to focus far too much on novel things and the process of creating novelty. Invention and innovation trump continuity and resilience. Yet many of the fundamentally transformative impacts of technology have been diffusions of technology to new regions, classes or uses – decades or centuries after their invention. Both the motor vehicle and the bicycle remain transformative technologies. When we think about engineers, we think about people building (or coding) new things. Yet most engineers are engaged in maintaining things that already exist.

There is a tendency amongst public policy experts to associate innovation and invention with economic success: Germany and America were inventive nations in the twentieth century and therefore grew quickly. Spending sizeable proportions of GDP on research and development (3% rather than 1%) is encouraged; failure to do so causes hand-wringing. Yet it is not true to say that countries that innovate more, grow more. In 1900, Great Britain had a much higher output per head of population than Italy. Throughout the twentieth century, Great Britain spent considerably more on research and development. Yet, by the 1980s, both countries were shocked by *il sorpasso* – when Italy overtook Great Britain in output per head.

IMPERIAL TECHNOLOGY

Historically, technology has been considered as an indicator of civilisation, and has been used to fuel the narrative of western supremacy. Institutions of the British Empire – the merchant navy and the Indian railways, for instance – brought European technology to new places and put white technicians in charge. Non-whites were judged, explicitly, to lack both inventive and technical ability; they were carefully excluded. These arguments have been remarkably persistent.

The technological progress which emerged from East Asia in the 1980s drew accusations of imitation and plagiarism. The implication was that non-white nations lacked some fundamental spark of ideation.

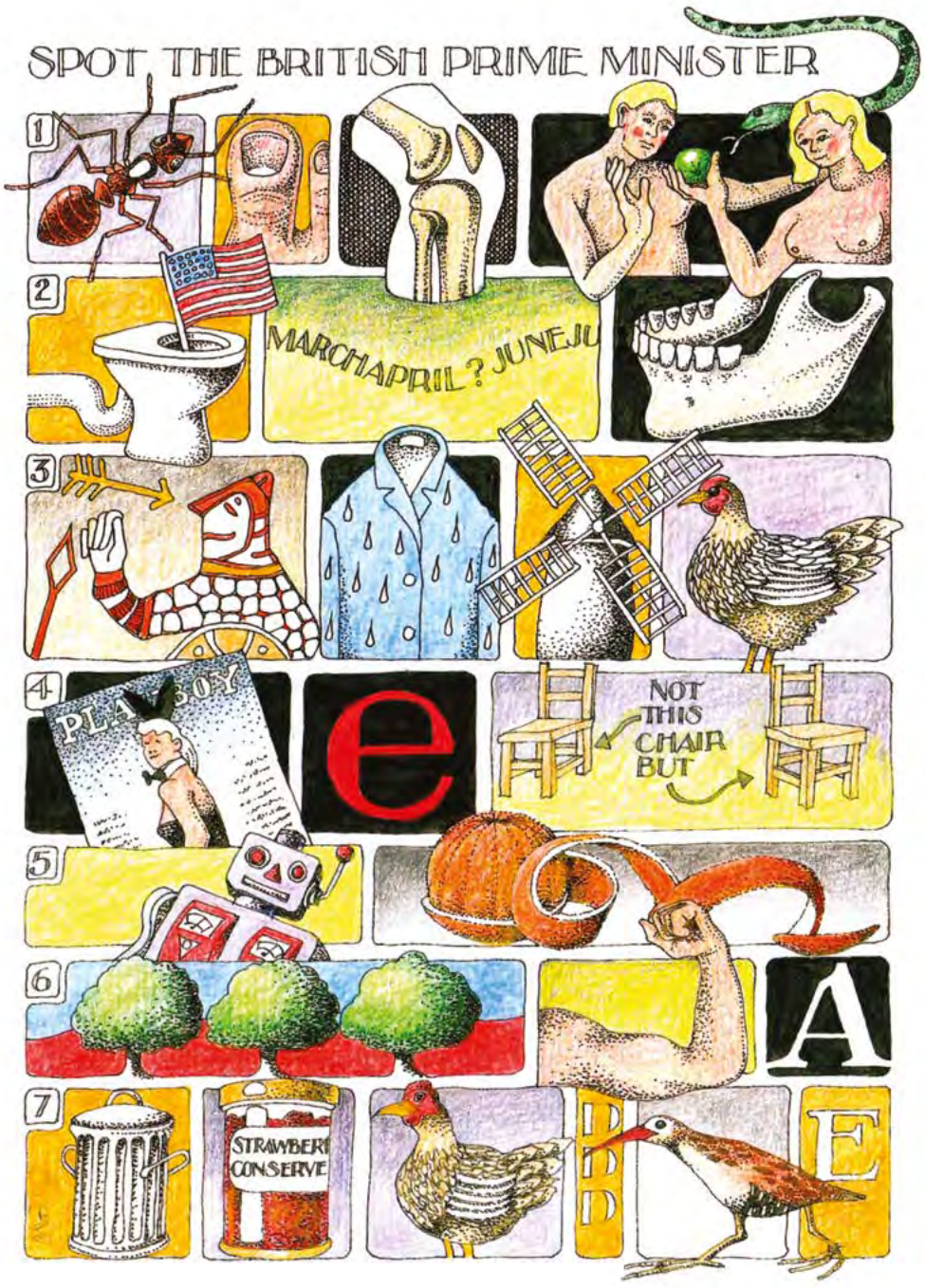
A NOVEL PAST

In many ways, Edgerton prefigured a modern turn in this book. It is easier to imagine today, 14 years after publication, that older technologies may have benefits, and new technologies may have costs. In a world increasingly concerned with the climate emergency and where governments are more willing to implement drastic policies to deal with it, the idea that an old-fashioned technology might come back into use is conceivable again. Think of the shifting significance of wind power. Fracking, invented in the 1940s, has also re-emerged.

In a world that has seen steel, coal, cement and motor vehicle production reach new highs as China has risen to power, the transformative power of old technologies should not be underestimated.

The inconvenient characteristics of the material world – nationhood, manufacturing, physical distance – are fast reasserting themselves.

TOBY BARKLEM
Business Development Director



Answers can be found inside the back cover.

Last word

CLEMMIE VAUGHAN
Chief Executive

IN EARLY 2020, we were among the many millions around the world forced into a massive experiment at short notice – shutting our offices, moving everything online, asking everyone to work from home.

Much has gone well. We've been able to deliver good investment performance through another crisis. Our client service has adapted, and we've found opportunities to serve and communicate with clients in new ways. And this year's Ruffer Review has been almost exclusively a working-from-home production – written, edited, designed and illustrated in attics, spare bedrooms and on kitchen tables, from Cardiff to Chicago.

Our offices are not the only thing missing from this edition of the Ruffer Review. Another thing that's absent is the strong dissenting voice. Last year, Stephanie Kelton provided that voice, making the case for Modern Monetary Theory. This year, our editorial team have taken a different path. This is not because we've entered an echo chamber, where Zoom conversations simply amplify – rather than challenge – our existing beliefs.

Instead, it's an editorial nod to our high level of conviction. Much that the team wrote about 12 months ago has started to play out in markets. The covid crisis has been the accelerator, bringing on, among other things, a shift in the role of governments in the economy, a shift that may define the decade from here.

We're strongly of the view that investors need to be prepared for the regime change in markets that's now under way. Ruffer portfolios stand ready, seeking to deliver good all-weather returns, whatever this new era brings.

About Ruffer

Ruffer looks after investments for private clients, financial planners, institutions and charities, in the UK and internationally.

Our aim is to deliver positive returns, whatever happens in the financial markets.

For more on what we do and how we do it, please visit ruffer.co.uk

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If you've found The Ruffer Review at least moderately interesting, or have a suggestion or two for the next edition, please drop us a line review@ruffer.co.uk

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RUFFER

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"Knowledge is the currency of answers to questions which turn out not to matter."
Jonathan Ruffer PAGE 112