
RATHBONES
DRIVE TO SURVIVE

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BACK IN THE DRIVING SEAT

After three long years, the lingering shadow of COVID-19 appears to have lifted. The world has settled down to a sense of normality, albeit not quite the same as it was before. But then, nothing ever is. Time ticks on, the world spins, society changes. It's just rare for so much change to rush through all at once.

With all this in mind – and not a little cabin fever – we felt we were overdue a trip Stateside to see first-hand how the world's biggest economy is faring. We focus on the US a lot because it really is the engine room for the world. Global booms and busts are determined by what is happening in America. And America's fortunes are determined not just by the glitzier destinations of the affluent coasts, but by what's happening on countless main streets in between.

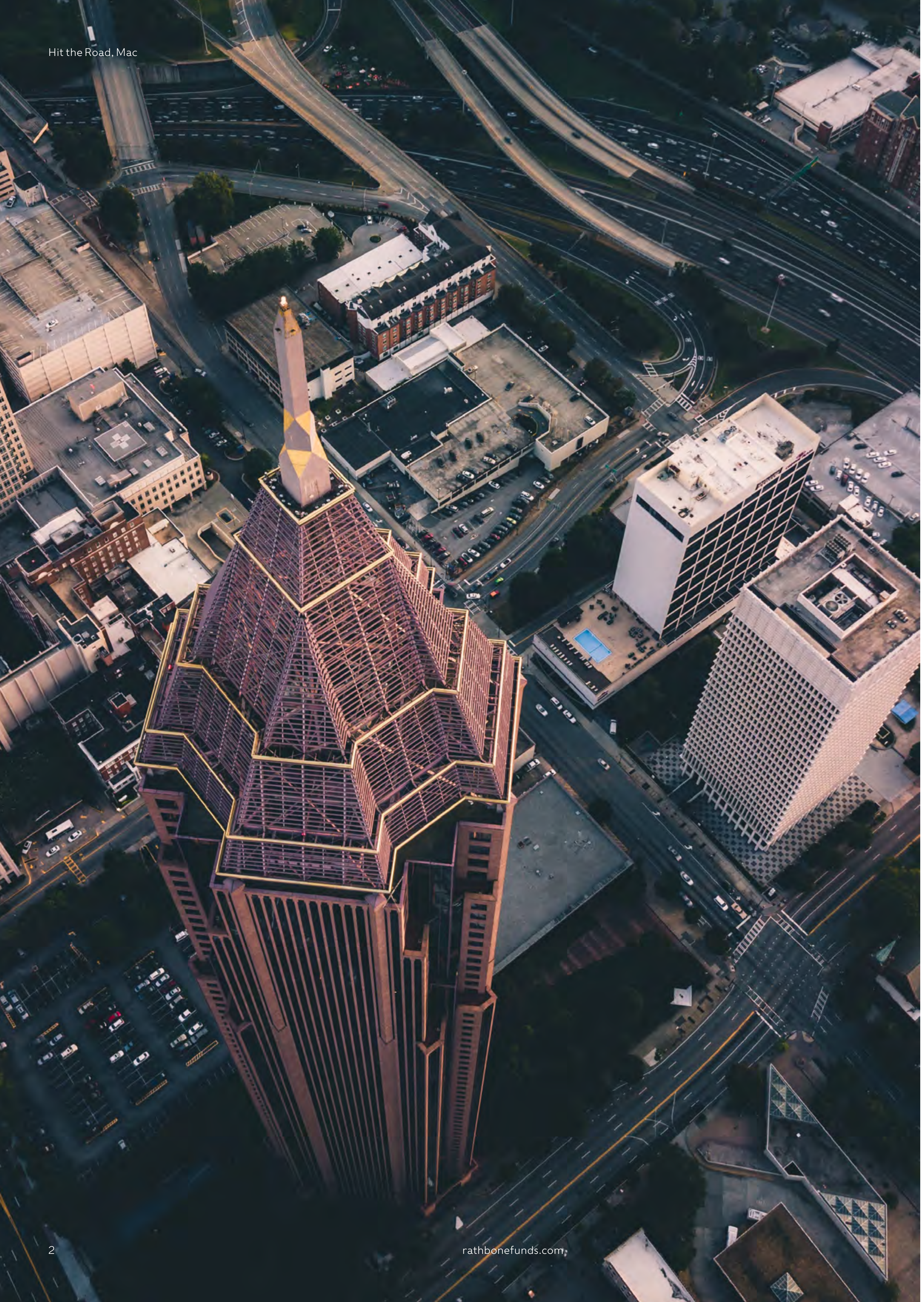
In past trips, fellow fund managers David Coombs and David Harrison spread their time between the tech and financial powerhouses of the West Coast and New York, with time in manufacturing hubs like Minnesota and Georgia. This time round, Harrison and I spent our time solely in the South and the Midwest: Georgia, Wisconsin and Illinois. Less glitz, more grit. We lined up a raft of businesses that we either already invest in or which were on our watchlist – a cross-section of American industry, from housebuilders and fast-food outlets to industrial automation companies. We wanted to see them on their home turf and to get a first-hand look at how their businesses are faring, and gain some insights into the wider economy.

Since declaring its independence almost 250 years ago, the US has had a strangely enduring energy that draws in the ambitious, the hungry and the crazy. The results haven't always been good, but they are always on a scale in keeping with the size of the nation itself (just like the meals). America is nothing if not a Frankenstein of contradictions, but it is unarguably the shining city on the hill where strivers want to go to make their dreams happen. This drives a dynamic culture that keeps evolving and throwing out new tools and technologies that people are quick to pick up and bend to their own uses. AI is just the latest in a conveyor belt of innovation. America's strength, breadth, depth and resilience are reiterated to us on each and every trip. This time was no exception.

One thing that struck us on our travels was how many US companies in pretty traditional – perhaps boring, if you were going to be unkind – lines of business were starting to use new technology in really exciting ways.

Technology increasingly seeps through to how people actually live and work, and companies are figuring out how to use this stuff to improve efficiency and make their own products better or more helpful to customers. It seems like digital technology is approaching general adoption across all sorts of industries – which we've been expecting for a good few years. The shake-up of the pandemic and its lockdowns, and the flexibility and digital investment that it necessitated, fired the starting gun on something. The rapid increase in interest rates and higher costs for virtually everything that followed have only reinforced the need for companies to rethink supply chains, adopt better ways of working and embrace new tools. The rubber really seems to be hitting the road.

Planes, trains and automobiles: navigating the American heartlands



HIT THE ROAD, MAC

As I head out the door, my other half tells me to make sure I don't lose too much money – always good advice for a fund manager. Safe in the knowledge that I wasn't spending time in casino-rich Atlantic City but instead in Atlanta – famous for its airport (the busiest in the world) and thriving hip-hop scene (Outkast, Ludacris, and Kris Kross for us 80s kids) – I hit the road. And what a road it is. I have been to the US a few times now, but the sheer scale of American roads always shocks me. Most nations revolve around the car, but heartland America really takes it to the limit, with huge, sprawling neighbourhoods, and the cars to match. There is no alternative to driving here.

Car is King: Americans drive more miles per capita than any other nation

I've always found walking a city is the best way to explore it, yet my early attempts in Atlanta led me to taking a very long walk on dangerous busy roads, with no shops, cafes or indeed anything of note at all along the way. And through some neighbourhoods where the economic recovery has clearly waned – if it ever arrived. Atlanta immediately had an industrial feel to it. From the size of the airport to the monster highway into town which, at times, spanned seven lanes, it felt like a concrete jungle. You *need* to drive to survive here, so we leaned heavily on Uber to get around throughout our trip. The US will need almighty investment in infrastructure if it is to reduce carbon emissions from transportation, whether in electric car charging points, commuter rail or bus networks. Given the culture and the distances involved, it seems a fair bet that electric vehicles (EVs) will need to be the mainstay for most of the country.

The White House aims for EVs to account for half of all vehicle sales by 2030, so the top brass appears to concur. For the sake of the environment, I hope the US can meet this goal, but I think it will prove overambitious. That's a whole bunch of scarce minerals and a massive increase in the load of the already creaking electricity system. Passenger EV sales were up 55% in the US last year, accounting for 7% of the total. Yet, from what I saw on our trip, I certainly couldn't spot many electric vehicles. The car fleet looked relatively old and beaten up – the exception being a gleaming fleet of unmistakably American trucks and an Uber driver we used in Chicago who had splashed out on a new $80,000 petrol car after scoring a new job at telco giant AT&T. He'd toyed with electric, but didn't feel like the infrastructure was there yet. I'm sure he is not alone. Americans notoriously like a road trip, so range anxiety is likely to add to the headwinds facing mass EV adoption across the American heartlands.

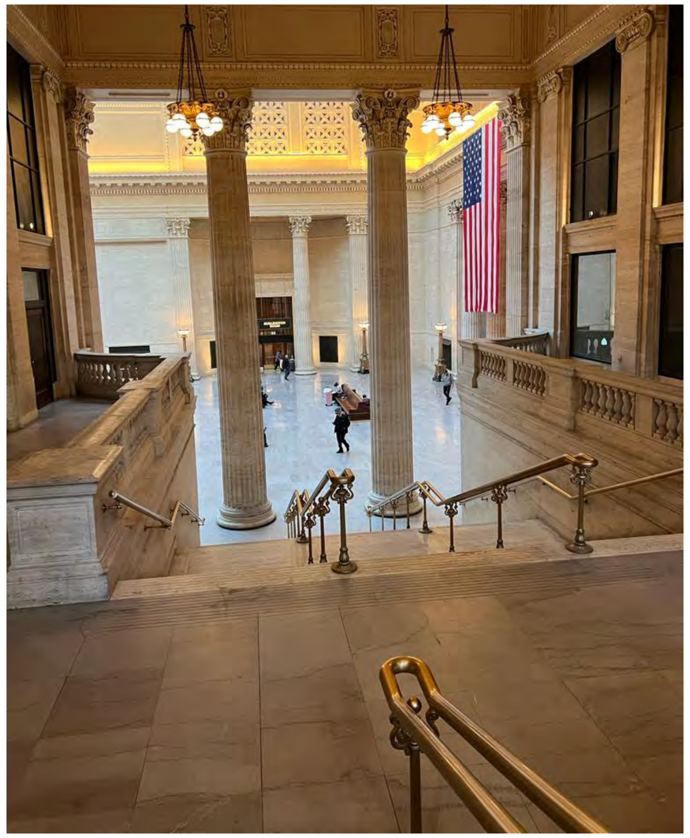
Greater use of electricity is the direction of travel, even if the pace can be overhyped at times. We visited **Wisconsin Energy**, which is investing heavily in its electricity network and battery storage. Wisconsin Energy, which we own, is focused on reliability of supply, which is, of course, vital for an electricity and gas company. It's also becoming increasingly difficult as power loads become more erratic due to greater use of renewable energy. On windy, sunny days, the amount of electricity generated spikes, putting pressure on the system. Similarly, becalmed, overcast days can lead to a deficit of electricity, threatening blackouts. Wisconsin is working on all sorts of improvements to make power systems smarter, so unneeded power can be stored rather than lost and current can flow to where it's needed more efficiently, helping decarbonisation efforts. Better batteries that can store more electricity for longer are particularly high on the agenda. There's a lot of potential for increasing electricity generation, too, which will be needed if EVs are to really take off. Atlanta was peppered with flat-top industrial buildings, but little sign of solar panels making their way on to what felt like obvious real estate in a pretty sunny clime. Now that the Inflation Reduction Act (American English for 'infrastructure splurge') offers tasty tax breaks on new renewable electricity generation, this should be a growth area for US power generators.

We also own **Aptiv**, which supplies EV makers with the hardware, software and sensors that make up modern cars. New cars are filled with more electronics, doing all manner of jobs, from optimising the drivetrain to alerting the driver to problems with the tyres. These sorts of components tend to be sticky, as they are factored into new car designs and they need to be ultra-reliable. One oft-overlooked feature of EVs is that they tend to be much heavier than petrol and diesel-powered vehicles. That's because the lithium-ion batteries weigh half a tonne, literally (450 kilograms) and will likely only get heavier as they store more power. Solid-state batteries, which dispense with liquid electrolytes, could offer a lighter and faster charging alternative. However, they are still in development and are much more costly and difficult to manufacture.

This has led us to ponder more prosaic automotive parts businesses: those selling brake pads, tyres, and other nuts and bolts that receive more wear and tear from heavier cars and lorries. While the number of electric vehicles on the roads will grow substantially in coming years, we think it will be twinned with a hearty market for a steadily ageing fleet of second-hand internal combustion engine vehicles, which would mean greater sales of autoparts. Replacement parts is an area that carmakers have neglected, which offers opportunities to third-party parts businesses. Whether because of practicality, value, nostalgia or a bit of all three, it will take longer for these vehicles to disappear completely, in our view. Some remote areas don't lend themselves to electric vehicles, and the rugged reliability of petrol and diesel engines, along with greater ease of DIY repair and maintenance, will compel people to retain them. We experienced just this sort of decision in miniature towards the end of our trip. Facing a drive from Milwaukee to Chicago in blizzard conditions, we upgraded our car to a Duster 4x4, as it felt more robust. (I was still a little dubious having managed to get stranded in the same model on an off-road excursion in Iceland a few years back, but it certainly felt trustier than a Nissan Leaf!)

With this in mind, we went to see Genuine Parts Company, which we don't own, in Atlanta. Its headquarters was a cross between the set of Days of Thunder and I Am Legend – a real-life NASCAR racer in the reception, yet a post-apocalyptic lack of workers because of flexible working! Thankfully, the chief operating officer was there to update us on one of the leading global distributors of auto and industrial parts for maintenance and repair markets. Genuine has been simplifying its business, jettisoning its low-profit-margin office supplies operations, cutting costs significantly and focusing on those markets where it feels it can be a clear leader. It provides a high-quality service and wide array of parts, mostly to other businesses. About 60% of its sales are autoparts, sold both through its own stores and to independent retailers. In America, it owns the NAPA retail store chain; here in Europe, it traditionally sold wholesale only through Alliance Automotive, although in 2019 it started to roll out its NAPA retail stores in the UK and on the Continent. About 85% of parts sold in its NAPA stores are Genuine's own manufactures sold under white-labelled brands (like Ford or GM), which helps boost profits.

Genuine's industrial business is also interesting, and offers some helpful industry diversification (albeit this part of the business tends to be more cyclical than autos, varying with business investment). Again, it's providing replacement and maintenance parts for machines, yet it serves a wide range of industries, including power transmission, safety supplies, hydraulics, seals and pumps, production lines and electrical. It also offers technical expertise, inventory management and delivery – the sort of wraparound services that dissuade cost-focused supplier switches. This business should also benefit from the burgeoning 'reshoring' trend in US manufacturing.
Genuine is shifting from a decentralised business to one where it takes more control, beginning at the manufacturing process right through to delivery to the customer. It's starting to leverage its scale, simplify its business model, optimise the sales process and make more use of digital tools. In a huge industry made up of lots of smaller players, there seems to be plenty of growth on offer.

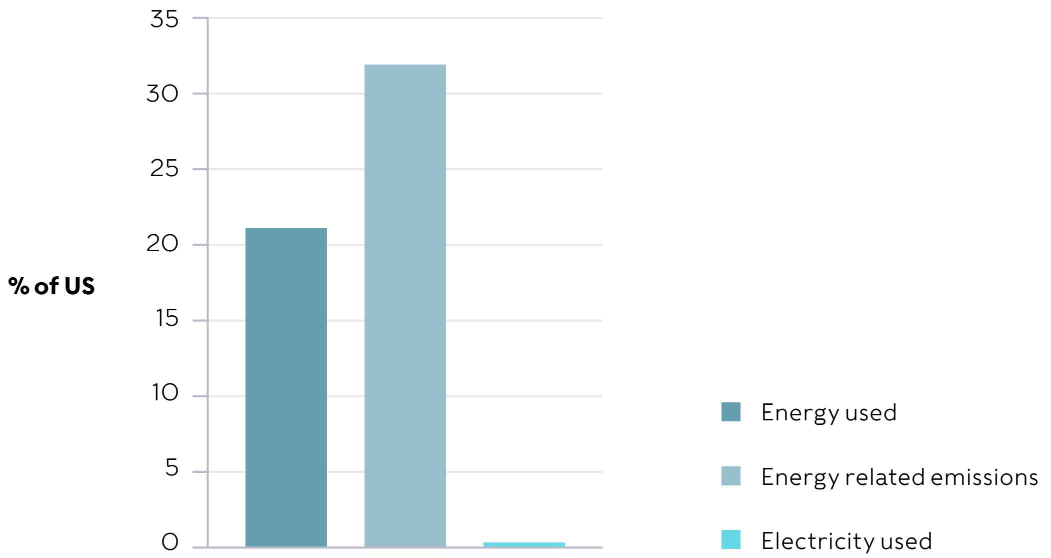


"RUSH HOUR AT THE ICONIC CHICAGO UNION STATION, WHICH APPEARED IN DAVID HARRISON'S FAVOURITE MOVIE THE UNTOUCHABLES (HE WAS CLEARLY A LITTLE STAR STRUCK). TRAINS SNAKING ACROSS THE NATION WERE A DEFINING FEATURE OF 19TH CENTURY AMERICA. IF THEY CAN COME BACK INTO FASHION IT WILL TAKE MORE OF THE STRAIN FROM CARS AND TRUCKS, HELPING THE US TO REDUCE ITS CARBON EMISSIONS AND DECLOG ITS ROADS."

Despite the helpful dynamics that appear ready to propel EVs, carmakers and autopart suppliers in the coming years, we're trying to keep the dangerous hype out of our analysis, and are highly sceptical of some of the EV growth predictions from some parts of the market. We passed a gold-standard warning for hubris on the edge of Atlanta: one of Carvana's infamous multi-storey car vending machines – a gleaming monument to overexuberance about the prospects for the second-hand car market. Started just in 2012, this used car company was added to the Fortune 500 list in 2021 – one of the youngest companies ever to be added. Its peak market cap that year was almost $60 billion – today it trades below $10bn. It got pumped up by dreams of breakneck growth during the pandemic, overinvested, bought millions of cars at peak prices and ran out of cash. Sobering stuff.

NAPA rally: Nascar winning racecar sits unappreciated in Genuine Parts Company's deserted reception

Cars and lorries make up a big chunk of US energy usage and it's all petrol and diesel, not electricity



Source: US Energy Information Administration and Barclays Research

Hit the Road, Mac

DRIVE THRU

When David Coombs last went to the US on a research trip, his first meal out was in a restaurant dining next to Jay-Z (not that he knew who that was). This time round, as I waited for David Harrison to arrive, I had to make peace with the hotel restaurant and the semi-finals of the American Cornhole League on ESPN. It's a hard knock life.

As I watched a distinctly unathletic sport, my attempts to be healthy with Cajun salmon and seasonal veg were undermined by deep-fried brussels sprouts with cheese. The addition of cheese to everything was to become something of a theme, much to Harrison's chagrin when he finally arrived. It felt like the Hamburglar was shadowing him for the six days we were there, throwing plastic calories on everything he ordered just before it left the kitchen. Loathe as I am to criticise another culture, it was exceptionally difficult to find healthy food, especially on the go. Given half of Americans eat out three or more times a week (much more than in the UK), it seems they have a long way to go to successfully tackle an already concerning obesity crisis. At one point I ordered a 'chicken Dutch baby', which I can only describe as a giant Yorkshire pudding filled with fried chicken and maple syrup. I think I'm still digesting it now.

With all the time spent in cars, you can see how the extremely generous portions can quickly build up to excess pounds and serious illness. Atlanta is home to **Coca-Cola** (which we own in our multi-asset portfolios) and Chicago hosts **McDonald's** (which we bought after the trip). Both these companies have some culpability for the obesity epidemics worldwide – as do the people who overindulge and the policymakers who don't regulate with care.

This is a tough issue, as fatty and sugary products are patently bad for many people. However, they are also an affordable treat for lots more, so an outright ban is simplistic and unfair on others. To me, the obesity problem is compounded in societies dominated by sprawling neighbourhoods where people are in and out of cars and find it harder to exercise and keep their steps up. Many towns and cities in the US heartland are exactly these sorts of places. At one point, guilt-ridden and carrying a Dutch baby inside me I raided a Wholefoods for a bag of cashews, a few tangerines and some kale crisps (don't judge me). This cost $20 (£16 at the time). Enough to feed a family at McDonald's. You see the issue.

We had planned to visit Coca-Cola, but they cancelled our meeting at short notice, so instead I did some due diligence at the World of Coca-Cola a block away from its HQ. A slightly dystopian experience, it seems to be the go-to tourist attraction in the city. I left slightly underwhelmed, having made myself sick tasting various Coca-Cola sodas from around the world. But I was left in continued awe at the strength of the brand, attracting visitors from across America and the world to a dedicated tourist spot for a soft drinks company! Not sure Britvic World would have the same pull.

Brand monster: over one million people visit The World of Coca-Cola every year

Top Secret: Coke's original formula is stored deep in the vault

Putting aside the sugar-fuelled tourist trap, Coca-Cola has actually diversified from fizzy drinks and continues to do so, increasing sales of water, sports drinks, juice and coffee (it's now the proud owner of Costa in the UK). Interestingly, Coke leans heavily on other sparkling drink brands in Asia and the Pacific, and to a slightly lesser extent in Europe, the Middle East and Africa. This adept flexibility to cater for local tastes is helped by its franchise model, which pushes marketing and product development decisions to the locals on the ground. We are big fans of this sort of devolved management style, particularly in emerging markets.

Top drawer: household names abound in Coke's portfolio

Image source: Coca-Cola

In Chicago, we met McDonald's. Like Coca-Cola, McDonald's has had huge success with franchising its business (selling the right to operate restaurants to independent operators). It still runs about 2,700 centrally, but 35,000 are franchised and there has been a clear move over the last few years to increase this number further. Adding franchises increases the company's profit margins, as it's virtually pure profit: the new restaurant is developed and maintained by the new franchisee and McDonald's takes a cut of the profits. This is likely to continue, but management must be careful not to allow oversaturation, which reduces the value of individual franchises, frustrates its independent partners and puts pressure on royalty receipts.

Back in the 1960s, McDonald's late founder Ray Kroc told franchisees, "When a growing thing ripens and ceases to grow, in that moment, it starts to rot." He urged them and his staff to ensure they and the whole company remained youthful in character and vibrant in action. He would have been happy with what we found at HQ. As you might expect with a customer-facing business, the office was busy, and felt full of energy. Although the franchise business model is more complicated than a typical business, the secret to its almost 70 years of success is actually simplicity. McDonald's has dominated the world through supreme efficiency, a laser focus on costs and cashflow, and the golden arches themselves: a brand instantly recognisable anywhere in the world.

The bright idea that first launched McDonald's was to focus on a small menu to deliver food quicker and cheaper than anyone else. Over the years, McDonald's has widened its menu considerably, partially as a reaction to nutritional criticism, partially to attract a wider array of taste buds. The company is now slimming down its menus once more after the COVID jolt. They also pivoted aggressively to delivery during the pandemic, which has enabled some stores to boost revenues by 70%. Interestingly, the company narrowed its menu because of supply chain problems, yet found it improved productivity. Accidentally relearning the old lesson, perhaps.

Deep dive research: whenever you can, put a company in your mouth!

This doesn't mean regression, however. McDonald's is arguably known for its beefburgers, but chicken is rapidly taking share and is now twice the size of the burger market. The launch of the McCrispy and the McSpicy are part of an ongoing strategy to focus on this lucrative market – and fight back against Chick-fil-A in the States. While relatively unknown outside the US, Chick-fil-A is a privately held competitor that has been a favourite fast-food chain in America for the better part of a decade. Certainly, the McDonald's menu consolidation seems to have been at a cost to the healthier options, although I have always thought most people aren't going there for a salad. There is something slightly surreal about being in front of besuited managers asking how well the Filet-O-Fish is selling. Interestingly the McPlant (the main meat-free option) was referred to as being rolled out "when customers are ready". Briefly trialled in the US, that moment is yet to come.

Cowspiracy: chicken is taking share from beef in the fast food world

The company is currently rolling out its 'Accelerating the Arches' strategy, focusing on its core: burgers, chicken and coffee (it's the second-biggest seller of coffee in the US); and doubling down on the 4Ds: drive-through (this remains the biggest channel in the US), development of sites, delivery, and digital.

Digital is perhaps the most interesting area, perhaps surprising for a fast-food restaurant. The company is looking to put convenience and technology at its heart (again, a founding principle). It's building on instore self-order kiosks by shifting people to the My McDonald's app, making it easier for people to order and capturing more data at the same time. By its own admission, 60 million people visit McDonald's every day but "we don't know who they are". This is changing, and they now have 30 million rewards members and are focusing on driving more frequent visits and higher spending from these customers through personalised marketing and in-app offers.

It's also trying to improve its social media marketing, using celebrity endorsements in the US for quasi off-menu meals. You can order the 'Travis Scott' (a quarter pounder with bacon and cheese, fries, barbecue sauce and a Sprite, favoured by the Texan rapper). Or the 'Cardi B' (a cheeseburger with BBQ sauce and a Coke). Seemingly gimmicky, it's something that has worked since the McJordan Special in 1992, and combining this with in-app concerts can only continue to drive usage. For the record the 'McIntosh-Whyte' (best had after a few after-work drinks) consists of a cheeseburger and nine chicken nuggets – hold the sauce.

The business doesn't come cheap (at the time of our visit its price was 26 times next year's expected profits), and it's definitely not one for our sustainable Greenbank Multi-Asset range. But it was firmly on our watchlist. Recently, after its price fell to roughly 23x earnings, we bought a stake in it, believing it to be a quality compounding long-term business.

French fried: adapting to local tastes is a key part of the strategy

SPARE PARTS

A lot has changed in the last few years. An uncontrolled boom in hybrid working took companies by surprise, with many still grappling with the impacts on creativity, productivity, employee development and morale. The boom in weekday golfers working on their drives on both sides of the pond is certainly likely to give management teams pause! Even Craig (our senior multi-asset investment specialist) has been talking about the length of his drive lately… In the UK the headlines have been full of how US investment banks are demanding a return to five days in the office, so it was a good chance to see if this ethic was mirrored across the Atlantic.

As well as disrupting traditional working practices, the pandemic also exposed supply chain fragilities, triggering a rethink among manufacturers, especially in the West. For decades, the orthodoxy was for intricate webs of supply chains spreading across the globe. The steady march of globalisation, reinforced by free trade deals, allowed companies to outsource production of different components to a constellation of suppliers all around the world. With easier border checks and cheap and swift international logistics, just-in-time delivery was tuned to perfection. This was great for profitability because businesses had less money locked up in warehouses full of spare parts and unsold inventory. Yet the trade-off was that it made both the makers and the sellers highly susceptible to disruptions. Such as a pandemic. Or a war. Or political tit-for-tats between nations over trade.

It's too strong to say globalisation is in reverse, yet there has been a significant shift in the operations of multinationals to restore a bit of resilience to their supply chains – whether by transferring manufacturing facilities back home (onshoring) or to the neighbours (near-shoring). Perhaps not always the cheapest or quickest option, but less vulnerable to geopolitics, unexpected border closures or the vicissitudes of long-distance transport costs.

Working from home: no problems parking at Zebra's HQ

Geopolitical concerns have also escalated over any reliance on others for strategically important inputs such as computer chips. The US has responded with monster fiscal packages to drive innovation, investment in clean technology, and boost US semiconductor capacity as it looks to remain at the forefront of the global order. Many of these issues have also contributed to rising prices, with inflation stalking central bankers for the last two years and eating into household budgets.

We believe the shift in supply chains will mean more warehouses in Western nations where wages are higher. Investment in digital logistics tools will be crucial to boost productivity and keep costs in check with those of emerging markets that make heavier use of cheaper labour.

Scan time: Zebra is the #1 player in barcode scanning devices

With that front of mind, Harrison and I visited **Zebra Technologies**, a stock which we own, just north of Chicago. The company makes software and handheld devices for scanning barcodes and RFID (radio frequency identification) tags on things you want to keep track of. RFID is an old yet still underutilised technology. The access fob you use to enter your office uses RFID (and yes, it leaves a digital trail of your comings and goings). Yet as digital technology has improved and more businesses automate and digitise, these sorts of tools are being much more widely used.

Helping retailers keep track of their inventory remains a large slug of Zebra's sales. These companies are investing heavily to fight back against the threat of online competition. And Zebra of course supplies both sides, which is a marvellous strategy. Amazingly, only one in three frontline retail staff in America are equipped with RFID devices. We got to see Zebra devices in action when we visited a cavernous **Home Depot** in Atlanta (another holding of ours). Every staff member of the DIY and trade mecca now carries Zebra devices on the shop floor after a splurge of investment. These tools don't just optimise inventory and reduce waste, they help staff improve the customer experience by quickly locating products and checking stock.

When I first met Zebra many years ago, I was always concerned about the ability for firms to simply load the relevant applications on to employee smartphones, avoiding the need to shell out for extra devices. However, several issues have prevented this. Using personal devices on the shop floor reduces control over their activities – constant TikTok notifications are less good for raising productivity! Data security also needs to be much tighter than consumer devices deliver. Last but not least, there's a durability issue: warehouses and stores are fast paced and often have concrete floors. Using personal phones would be a telephonic massacre. And who pays if you break your smartphone while using it for work? The more nefarious might even be tempted to see it as a path to a free upgrade!

No Insta Zone: Zebra devices enhance employee productivity

Zebra has moved well beyond the retail industry. Transport and logistics is a key market (think train conductors scanning your QR code ticket), as well as healthcare, where its devices can help hospitals keep track of patients, avoid mistaken identities and better store patient documentation. This means people get the correct knee replaced (not just the right one!) and aren't given the wrong antibiotics. The World Health Organisation estimates that medication errors cause a death each day in the US and injure 1.3 million each year. The failure of wristbands to provide accurate information causes 250,000 deaths a year, according to Johns Hopkins University.

Looking to build out its technology capabilities, Zebra most recently bought Matrox Imaging for $875 million. It makes visual sensors for autonomous robots, a highly complementary technology, given Zebra's product range and customer base.

Fully 60% of a warehouse employee's time is spent walking! Not a great use of time when labour markets are tight and wages spiralling. Zebra has bought up several companies that allow it to offer lots of cost-effective solutions to improving productivity, without you having to take the difficult and expensive decision to convert an old warehouse to fully autonomous operations with conveyor belts and robotic arms. Fetch Robotics was bought in 2021 and allows Zebra to sell autonomous mobile robots. These little cousins of Roomba do just what they say on the tin: zip around warehouse racks sorting and picking products, reducing the need for arms and legs near the pick face (which can reduce injuries, too).

Digital retail: every shop floor worker at Home Depot now carries a Zebra

Getting and keeping staff is a big deal in the US at the moment. It was high on the agenda when we met Americold, a US real estate investment company that designs, builds and runs refrigerated supply chains for foodmakers and retailers. In other words, giant fridge freezers (including many on wheels and rails to get perishables safely from A to B). Labour is roughly half of its costs, with power being a close second. Automation is an obvious route here, and Americold can build highly automated facilities for its customers, apparently reducing the number of workers required from, say, 700 to 100. However, it's not the slam dunk you might think. Firstly, automation costs are materially higher upfront. But it can also depend on the nature of the factory. It's harder to automate if a cold facility services more than one customer. And some jobs are so simple automation is overkill: Ocean Spray's cranberries get delivered once a year after harvest and are immediately frozen and then released as required for production – extremely low touch requiring only five people.

Americold has contracts with many big hitters, including Tyson, Unilever, Lamb Weston and Whole Foods through 240 warehouses predominantly across America. As well as storage, Americold also provides flash freezing (which keeps fresh food at its best when it gets put on ice), packing and transport. The company often designs and builds warehouses specifically for a customer, which makes this business very sticky and hard for would-be rivals to break into, because changing integral parts of a supply chain can be risky. I well remember when KFC ran out of chicken a few years back when it brought in a new delivery partner! FCK.

Continuing a theme throughout our trip, analytics and data were embedded in Americold's work to help its customers manage their stock and keep track of each batch throughout its life – vital for foodstuffs. It has developed an online portal giving customers full look-through of their inventory, with the ability to access information on products and provide specific instructions – trivial sounding but imperative should they need to stop a batch of product being shipped out due to a recall. This can be a big competitive advantage, especially against smaller players.

Frozen food can be remarkably recession resilient, and in fact there was an increase through 2008 both in volumes and price. COVID-19 proved a more difficult environment, as supply chain disruptions and labour shortages led to lower food production. Long-term estimates are for the frozen food market to grow at 1-3% or roughly in line with wider economic growth – although the company could outgrow the market by taking market share. We're keeping an eye on it.

Expense spared: Americold reception reflects a tight control on costs

1–3%

A paltry long term growth estimate for the frozen food market

THUMBING MY WAY HOME

There's no better place to take the temperature of the US economy than America's third-largest housebuilder: Pulte Homes (which we don't own). As you might expect, the corporate HQ was smart, situated in one of many unexpected and sporadic skyscrapers in a suburb of Atlanta that seemed like an upmarket Croydon. The office was deathly quiet. In fact, we saw nobody at all apart from the investor relations person we met and a zombie I passed on the way to the bathroom. He confesses (the IR, not the brain-guzzler) that it's a struggle to get people back into the office – not surprisingly, Monday isn't a popular office day. A fact echoed around the world, I'm sure.

Pulte was started by an 18-year-old Bill Pulte who built a house in Detroit with his mates in the 1950s and realised he was quite good at it. The company builds a range of houses (single-family, townhouses and apartment blocks) serving everyone from first-time buyers to families and retirees. The latter are for over-55s, providing every amenity under the sun – described by them as like a cruise ship that doesn't move! I have sent Coombsy a brochure. The important point is that Pulte has carved out an element of diversification here, protecting against weakness in any one customer segment – like now, when affordability for first-time buyers has been particularly squeezed.

Retire in style: just don't tell my gran!

New home sales have been pretty resilient despite the fastest US interest-rate-hiking cycle in recent history. Sales have fallen back from an outlandish pandemic spike, yet they are still high relative to history. It's difficult to believe this will remain the case for long, however, as the rapid rise in interest rates bites into the economy over the coming year. Americans' borrowing rates have ballooned from 3% to over 7% in almost no time at all. Mortgages in the US are more standardised than here in the UK, with most people getting 30-year loans with the option to 'post the keys to the bank' and walk away from an underwater property. They can also repay without penalty, meaning they can refinance if interest rates fall but aren't as badly hit by rising rates.

Much higher borrowing costs alongside rampant house price inflation has pushed homeownership out of reach for many first-time buyers, and discouraged those with mortgages from moving house and losing their existing mortgages struck at lower rates. One staggering statistic: The US Federal Reserve reports that the median US house sold for $436,800 in the first quarter of 2023 – a third more than the fourth quarter of 2019. In response to this wild market of rising prices and mortgage rates, builders have been offering 'incentives' (read price cuts) on house purchases as well as lower-than-market mortgage rates to encourage completions. With interest rates and yields back on the rise, it remains a difficult market to dive into.

Looking many years out though, the US market is meaningfully short of homes and not enough are being put up. About 1.5 million will be needed each year of this decade to help support the country's population growth. This should deliver long-term growth, albeit with the potential for a volatile ride in between. Of course, hearing a housebuilder declaring not enough houses are being built isn't much of a surprise!

But today certainly feels different to 2008, when there were huge amounts of speculative building. In contrast to 15 years ago, more than 60% of Pulte homes are built to order from day one. Pulte has taken steps to improve profitability and deliver higher returns over the longer term, which is encouraging, such as buying options on land rather than buying it outright. This means they put down a small amount upfront to get first rights to buy if they require it at any point over five to 10 years. Doing this avoids tying up money in land that might not be required in a downturn – and indeed they walked away from 55,000 lots in 2022, worth over $1.5 billion, only losing the $50m they had paid for the options.

And there's no doubt the years of COVID-19 turmoil impacted supply, causing shortages of labour and materials. In the peak of the disruption build cycles doubled from 89 to 170 days. The company adapted to this well, reducing the number of options offered – so three types of flooring instead of 10, for example. Though far from ideal, Pulte did discover a time-tempered truth: the tyranny of choice. People find too many options intimidating, either putting them off buying altogether or regretting all the options they passed up and feeling miserable. Is this why Oli, the broker who joined us on our trip, spent an hour in a hardware store the size of Disney Land only to emerge with a plastic bucket? Who knows. In any case Pulte says its customers have actually welcomed a simpler menu.

Pulte's empty office was a reminder of the impact COVID has had on both commercial properties and housing. Remote working has enabled people to work further from the office, with remote workers able to move to lower-tax states with better weather.

Some businesses are leaning on workers to get them back to the office more often, while others are sticking with a fully flexible model. The optimal answer is probably somewhere between the two, so there's still a shake-out coming for property. This is likely to be highly localised, depending on the demands of employers, the area's lifestyle and the state of regional economies.

Tyranny of choice: an orange bucket was not on the shopping list

Housebuilders have never been a mainstay for our funds; they tend to be extremely susceptible to booms and busts. They often look cheap, but the risk is that their earnings get crushed in a downturn as people stop making big, life-changing purchases when they are concerned about their jobs and the future.

We had another The Last of Us experience on the outskirts of Milwaukee at Zurn's deserted corporate office. Zurn designs and manufactures water control and safety products, valves and sensors. This includes sensor-operated hand dryers, taps and toilet flushers. We don't own this one. Over the past few years, Zurn's managers have been busy selling its more industrial divisions and buying bolt-on businesses to focus on water. The most recent deal was to merge with Elkay Manufacturing – a supplier of water fountains and water bottle fillers, widening Zurn's product range yet selling to similar customers. Worryingly, we struggled to make the sensor work on the bottle filler in the meeting room! We're sure that's just a fluke and cruel irony.

Increasingly many of Zurn's water fountains and bottle fillers are sold to provide safe drinking water to US schools with unsafe levels of lead in the water supply from old pipes. More than half of US public schools either hadn't tested their water or didn't know whether they had. Of those that had tested, almost 40% had elevated levels of lead. That's a staggering 13 million kids. *And schools representing 57% of American kids don't know whether they were poisoning their pupils or not*. Lead causes all sorts of illness, from brain damage and anaemia to miscarriages. The cause of this is countless public and private lead piping systems throughout the country. The 2021 Bipartisan Infrastructure Deal allocated $15bn to replacing lead water pipes and a further $50bn to fixing the national water infrastructure. There is a lot of work to do to fix the backbone of the US. Michigan this year passed 'Filter First' legislation mandating that all schools in the state install filtered drinking water stations, and Zurn is well placed to help drive this rollout to provide clean water to American schools.

Water is priority number one for life and it's becoming more stressed and scarce with every passing year. Demand is constantly increasing as the planet's population grows and climate change is making weather increasingly erratic between drought and deluge. Also, people tend to waste more water the wealthier they get. One study found that the middle-class lawn and swimming pool combo was a greater driver of water scarcity than climate change and population growth. Researchers found that, during a 2017 drought in Cape Town, the richest 14% of households used half the city's water.

Glamour: sensor flush valves are highly engineered, durable and long lasting

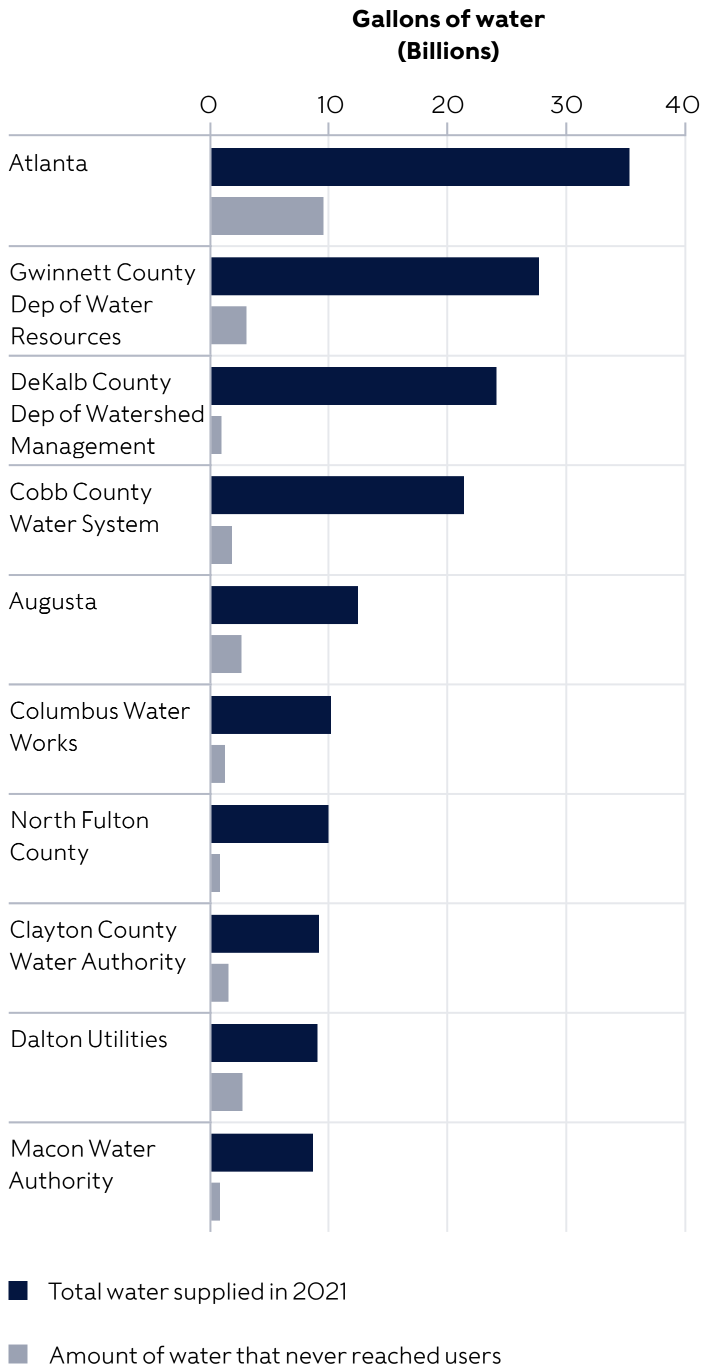
Zurn's management appear to have a clear plan to unlock the value of its water assets, recognising that these businesses increasingly attract higher stock valuations given the tailwinds behind the sector. Growing water scarcity is a global issue, with demand only increasing, and yet we waste an incredible amount. Continuing the water theme, we met **Badger Meter**, which we own, at its Wisconsin factory and HQ. Badger is one of the largest pure water meter manufacturers in North America, selling huge brass flow meters to the staggeringly fragmented US water utility market. There are 50,000-odd drinking water utilities in the US (albeit only 15% serve more than 3,300 people each). There are 35,000 or so wastewater schemes too… Badger's meters monitor usage, detect leaks and help reduce consumption. Increasingly utilities are adopting Badger's smart meters, which brings recurring revenue streams for Badger and a boost to its profit margins. These connected meters automate metering and provide real-time data feeding into software to reduce costs (no labour required to go out and take readings), improve billing accuracy and detect leaks quickly. The software element is growing at about 6% a year. In 2021, Badger bought water quality analysis business Analytical Technology, which it's planning to integrate into its platform. Embedding water quality into its services would be tremendously helpful, given the problems with water contamination outlined above. It could also allow companies to adjust their water treatment in real time, saving on chemicals and power if water quality is better than normal. We were led through Badger's innovation lab, and also given a tour of its machines that simulate years of usage to ensure the accuracy and resilience of meters. Meters lose their accuracy over time, and require replacing. Digital meters don't, however, although batteries only have a life of 15 years.

Badger is mainly a US business, although the problem with water is global. The UK is a particularly attractive market: water companies in England and Wales lose somewhere in the region of 3 billion litres a day from leaks in mains pipes. Badger can't come quickly enough!

Water woes were brought to our doorsteps last year as a summer heat wave saw drought across Europe and the UK. The picture was similar across the pond, with 40% of the Continental US in moderate or severe drought last year. Even today, nearly one quarter of US states are in some form of drought. One terrifying example is the precarious situation of Salt Lake City, Utah, whose namesake lake has already lost almost three quarters of its water due to over-use and, to a much lesser extent, repeated drought. Water take from the lake needs to be slashed by 30%-50% over the coming years to rejuvenate it, otherwise the mineral-heavy, dried-up bed will create toxic dust clouds laced with arsenic, threatening serious health risks to more than 200,000 people.

Water shortages are expected to increase, with drier environments getting drier and wetter climes getting wetter (more intense concentrations of falling water are harder to capture). This means there's growing demand to understand and protect water flow. Of course, saving water is good for water's sake, but the more efficient use of water also saves on the other resources required (and the subsequent emissions) to heat, pump and treat that water.

Water loss in Georgia's 10 largest utilities



America loses roughly 6 billion gallons of water each day — enough to fill 9,000 swimming pools. Few states force their water companies to audit their networks and publish the results. Georgia does.

Source: American Society of Civil Engineers and The Washington Post

BELT UP

A serious barney has been rumbling on between the US and China for many years now. It plays out mostly below the surface. Every now and then it captivates everyone like a slow-moving 'weather balloon' floating across the sky. Most of the time, it's sort of accepted as a thing and ignored.

But the tension between the two great powers is redefining global politics, business and technological development. America's 'Pivot to Asia' under President Barack Obama antagonised China, which thought the US was unnecessarily meddling in China's backyard. A few years later, in 2013, China launched its Belt and Road Initiative (BRI): an infrastructure, resources and trade-improvement programme for developing nations the world over, financed with reams of Chinese debt. As you can imagine, the take-up has been massive: 147 nations – accounting for roughly 40% of world GDP and two-thirds of all the people on Earth – have agreed projects or expressed an interest in one. The nations with long-term trading and infrastructure links with China now straddle the world and reach far into America's sphere of influence, including South and Central America. China wants to be seen as a great power with gravitas and respect at the world table. This underpinning of generational boosts to infrastructure in up-and-coming countries has bolstered China's global influence considerably. It has also secured supply of important metals and resources, especially ones that are vital for the development of electric vehicles and digital devices.

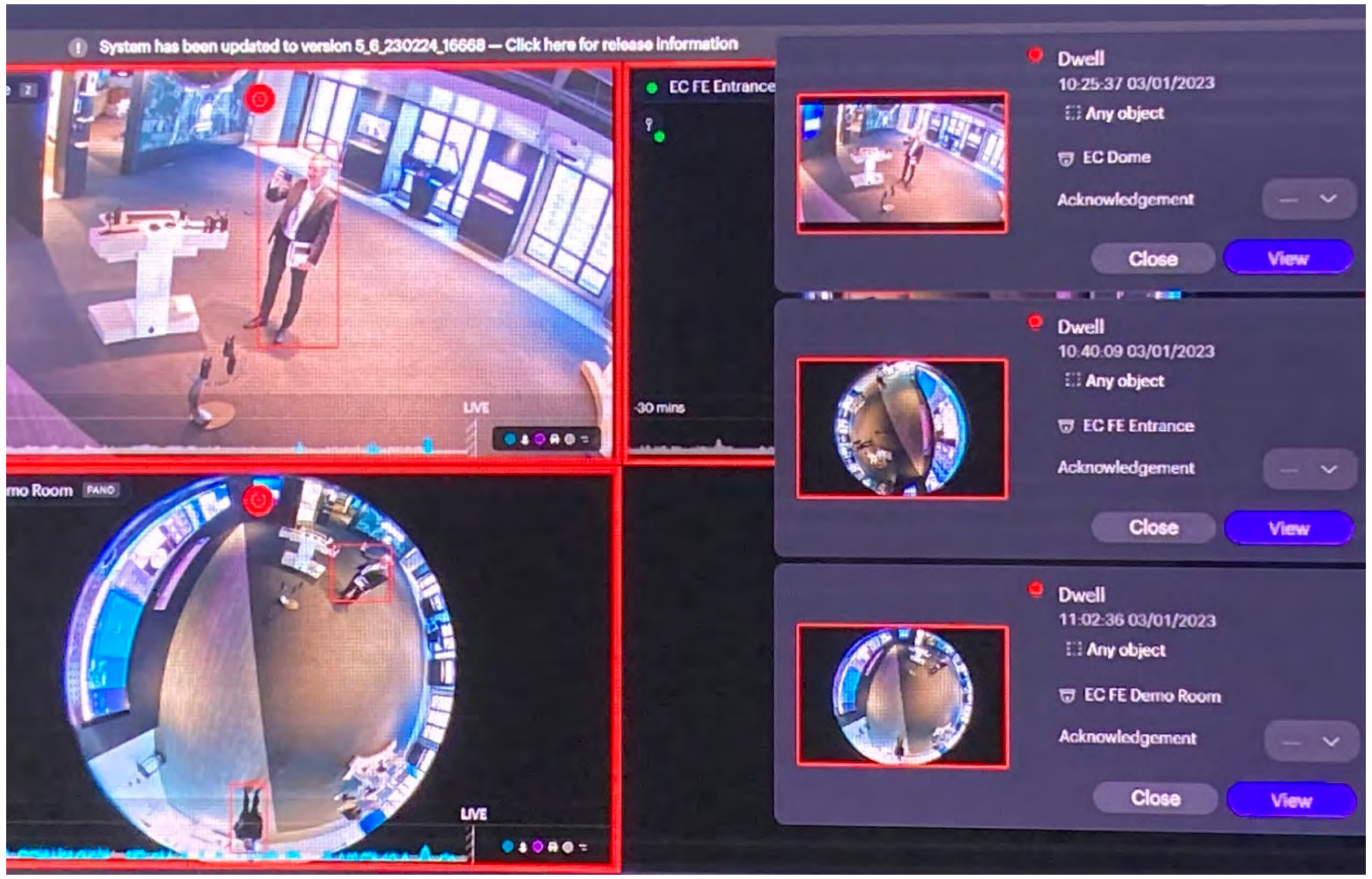
It hasn't gone completely smoothly, however. Unlike post-war Western development, Chinese infrastructure isn't a gift – it's strictly funded with loans, albeit at below-market terms. These loans are often denominated partly in dollars or euros and partly in renminbi and many of them have got the debtor nations into a pickle. Since 2016, the amount of loans extended on BRI projects has been in decline while China has issued about $240bn in emergency funding for delinquent countries. These bailouts have tended to be more expensive than IMF aid (5% versus 2% on average). With interest rates ramping higher, it's becoming ever harder for nations to stay on the right side of solvency. But these infrastructure-for-trade deals have bound China to more countries in the past decade, giving the aspirant power more diplomatic heft.

Combined with the tit-for-tat tariff war launched by President Donald Trump and continued by President Joe Biden, a fault line is steadily growing between the two largest trading nations. It's important not to overstate this effect though: China and the US are exchanging more imports and exports between each other today than in 2016. Televisions, cars, food, miscellaneous manufactured goods (all the tat) are growing smoothly. But some things are becoming more tightly controlled: technology, software, encryption, strategic commodities – all the saucy stuff in the digital/AI melting pot. Here, too, trade is still growing, but the time taken to process appropriate licences has trebled since 2017 to three months. The barbicans have been built, the moats dug and the crocodiles added, all that's left is for the US (or China) to raise the drawbridge when it thinks it's appropriate. That time may never come, but barbed diplomacy and the feverish focus on locking down vital metals, technology and manufacturing partners imply that both sides expect a true fissure in digital technologies one day.

Surveillance is one area where Western nations are already switching away from Chinese-made to home-grown alternatives, led by concerns about espionage and privacy. In Chicago we met with one company that could benefit: Motorola Solutions. Not the flip-phone brand now owned by Chinese electronics manufacturer Lenovo (which supplies virtually everyone in the Western world with work laptops, which sounds like a larger risk of widespread spyware, if you're into conspiracies). The Motorola we visited is the radio business that has bought up a few CCTV and access technology companies, with a bit of cyber security in the mix as well.

Motorola's bread and butter is encrypted radios, predominantly for the military, ambulance services, fire brigades, police and maritime services. As well as the radios, Motorola offers some pretty neat software to track emergency services cases from outset to completion. It can also help cops with storing digital evidence away for when criminals are brought to court. The radios can also register that an officer is down. This triggers an alert which, if not turned off by the officer in 10 seconds, sends out an immediate 'officer down' SOS to the command centre, and immediately provides the control centre with live feeds to any CCTV cameras in the area.

This link between radios and video – mounted on people, cars and buildings – is extremely helpful for supplying all possible information to decision makers instantly in situations where every second counts. I think it makes a business like Motorola very compelling. Motorola's AI is used to scan hours of video from numerous feeds for people or vehicles of interest, whether a blue coat or a partial licence plate. We watched a demo of this at Motorola HQ. The results were instant. This is tremendously helpful for public safety and facilitating quicker and more effective responses. Surveillance has become ubiquitous in the 21st century as the cost and size of cameras has shrunk significantly, even as their quality has soared. Of course, this isn't universally appreciated, surveillance brings immense power that can be abused by authorities. Also, while individual units are cheap, widespread coverage is still expensive and municipal budgets are already stretched. We were impressed with Motorola, but it's on the bench for now.



Enemy of the state: Motorola's advanced technology helps protect first responders

$240BN

in emergency aid has been issued by China to delinquent countries since 2016. These bailouts have tended to be more expensive than IMF aid (5% versus 2% on average).

FULL THROTTLE

The US has influenced global culture arguably more than any other nation. The French will remonstrate (mon Dieu) and we British will sputter (good heavens), but it is self-evident. People in the poorest countries still aspire to have a McDonald's burger, to listen to American music, to ape its fashions, and to get hold of its gadgets. America is seen as the land of plenty by many hundreds of millions of people, a place they would move to in a heartbeat, given the chance. That's not to say the love is ubiquitous, everlasting or unreserved. The US has a chequered history of supporting dictators, throwing its geopolitical weight around and conducting more than a little hypocrisy over the years.

We say it often, but the trip really drilled into us again just how vibrant and energetic the country is. It's not always right, but it's never less than full throttle. Its technology is the global gold standard and its companies are the most dynamic.

Iconic: public transport has a long way to go in the US

America faces challenges, not least from a changing climate and creaking infrastructure. We saw a whole lot of tired roads, railways and terminals in our six days. America is heavily in hock to the car, which makes for fewer quick transport wins on carbon and energy use than many other nations. The sheer quantum of scarce metals required to replace combustion-engines with electric ones is staggering and greater than America and its friends can supply.

Like the rest of the world, it's still wrestling with just how flexible work practices should be. However, the wide spread of approaches is encouraging: those that tread the best line will reap the rewards. One thing hits me though: it needs to be as accommodating to people who want to work as it possibly can. The easier it is for people to work, the easier it is for more people to contribute their skills to society, wherever they happen to live or whatever restrictions their personal circumstances throw up.

As American – indeed all Western – demographics become ever greyer, healthcare will become an increased burden on taxes. Having as many workers as possible, allied with the very best technology of the age, will be the best way to look after the old while not squeezing the aspirations of the young.

Powerhouse: the US economy is likely to remain in pole position

Looking around the US, it seems as if most people are getting to grips with the future. And, as usual, they're doing so with more than a dollop of bravado and a faith in private enterprise.

In its drive to survive, America remains firmly at the head of the starting grid.

Will McIntosh-Whyte

David Harrison

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