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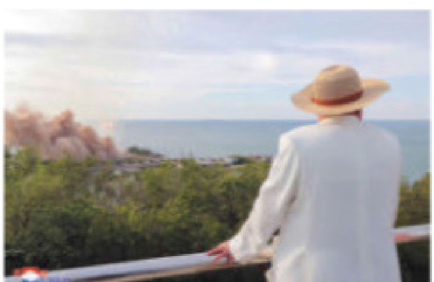

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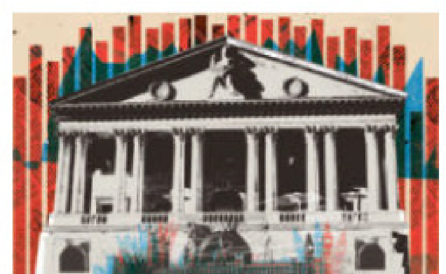

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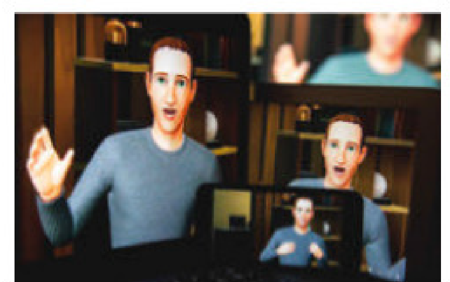

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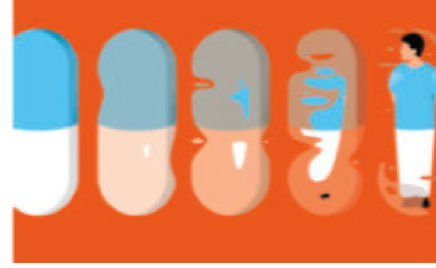

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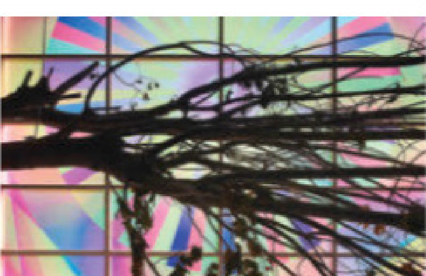

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PLEASE ENJOY RESPONSIBLY

Jeremy Hunt, **Britain's** new chancellor of the exchequer, ditched almost all of the unfunded tax cuts in the government's mini-budget; the cuts had helped cause mayhem in the markets when they were announced on September 23rd. Mr Hunt was appointed to the job after Kwasi Kwarteng was unceremoniously sacked as chancellor by Liz Truss, the prime minister. Mr Hunt, a former foreign secretary, has put the Treasury firmly back in control of policy, a humiliation for Ms Truss, who had promised to rip up "abacus economics". Amid chaotic scenes in Parliament, speculation swirled about how long Ms Truss could last.

Adding to the tumult Suella Braverman resigned from her job as **home secretary** after just 43 days. In a parting shot, Ms Braverman, who is on the Tory right, laid into the government's lack of direction.

As winter approaches

Russia once again pounded **Ukraine** with waves of cruise-missile and drone attacks, aimed at the country's electrical infrastructure in the hope of freezing Ukraine into submission. Russia seems to have acquired huge stocks of cheap Iranian drones. But Ukraine has been able to shoot down many of the drones and missiles and has so far been quick to restore power to affected areas. Overall capacity is suffering though, so rationing seems increasingly likely.

Ukraine's counter-offensive in the south appeared to be gaining momentum as the Russian occupation authorities in the city of **Kherson** started to evacuate civilians and move administrative offices across the Dnieper river. Adding to the sense of crisis, Vladimir Putin announced that martial law was being imposed in the four provinces that Russia has partially occupied. Kherson, one of the most significant gains for the Russians since the invasion began, may soon be back in Ukrainian hands.

Mr Putin suggested that his **mobilisation** drive to bolster army numbers was nearly over, and that 220,000 men had been drafted. Gunmen opened fire at a training ground for new recruits in **Belgorod**, close to the Ukrainian border, killing 11 people. The gunmen are reported to be Tajik nationals who had been recruited to fight in Ukraine and had got into a row over religion.

Elon Musk reversed course, and promised that Spacex, a rockets and satellites company that he runs, would continue to fund electronic communications in Ukraine through its **Starlink internet network**. Starlink has become a vital strategic tool for Ukrainian forces fighting Russia.

The head of **Germany's** cyber-security authority, Arne Schönbohm, was sacked for allegedly having close ties with Russian intelligence officers. A Russian firm linked to a former KGB officer was a member of a private cyber-security organisation that Mr Schönbohm established a decade ago. The interior ministry is carrying out an investigation.

Germany's chancellor, Olaf Scholz, extended the lifespan of the country's three remaining **nuclear-power plants** until mid-April, in the hope of averting an energy-supply crisis over the coming winter.

Sweden's parliament confirmed Ulf Kristersson as prime minister, more than a month after an election ousted the Social Democrats from power. His Moderate Party heads a centre-right governing coalition that includes the Christian Democrats and the Liberals, with support in parliament from the anti-immigration Sweden Democrats.

In **Turkey** 41 miners were killed by an explosion at a coal mine in Amasra, 400km east of Istanbul. The mine is owned by the state. Recep Tayyip Erdogan, the president, suggested the blast was caused by "fate", adding that an investigation would reveal the cause.

The UN discussed possible responses to the violent chaos in **Haiti**. A pair of resolutions have been drafted by the United States and Mexico. They would impose sanctions against gang members and their backers and leave open the possibility of sending a security force to the country. Russia and China may still veto the resolutions.

As protests against the regime persisted across **Iran**, a fire broke out in the notorious Evin prison on the outskirts of Tehran, where many political prisoners are held. The authorities said the death toll had risen from four to eight, with dozens more injured, but independent sources were unable to verify the figure.

At least 600 people, most of them in **Nigeria's** southern state of Bayelsa, have died this year in one of the worst flooding seasons to have hit the country, according to the minister of humanitarian affairs. More than a million people are said to have been displaced from their homes.

Ethiopia's government forces captured Shire, a key town previously held by rebels in Tigray, according to diplomats. The civil war is being waged as intensely as ever. A five-month truce was broken in August.

India's Congress party, the main national opposition, elected Mallikarjun Kharge, who is 80 years old, as its new leader. It is the first time in 24 years that the post has been held by a person who is not a member of the family led by Sonia Gandhi, whose son Rahul Gandhi is a perpetual prime-ministerial hopeful. Mr Kharge is said to have been the choice of the Gandhis.

In **Pakistan** Imran Khan won six of the seven parliamentary seats he contested in by-elections. Mr Khan turned the vote into a referendum on his popularity, to put pressure on the government to call an early general election. Pakistan faces soaring inflation, a cash crunch and damage from flooding that submerged a third of the country.

Australia's new left-wing government said it would no longer recognise Jerusalem as the capital of **Israel**, reversing the decision of the previous government. Just a handful of countries, including America, recognise the disputed city of Jerusalem as the Israeli capital, rather than Tel Aviv.

Showtime in Beijing

China's leader, Xi Jinping, opened the Communist Party's five-yearly congress with a speech that celebrated his first ten years in power. He said his "zero-covid policy" had saved lives and signalled that it would continue. He vowed to pursue peaceful unification with Taiwan, but did not rule out the use of force. Mr Xi, who will be granted a third term as party chief after the event, did not mention problems such as China's sputtering economy, though he did warn of "choppy waters" ahead. Days before he spoke banners were hung from a bridge in Beijing calling for his dismissal. Such protests are extremely rare in China.

Markets reacted positively to the British government's decision to scrap most of its **unfunded tax cuts**. The yield on 30-year gilts fell back to around 4.2%, still higher than it was just before the mini-budget spooked investors in late September. The pound traded around $1.12, not far off its lows in recent days. Jeremy Hunt, the new chancellor, is reportedly mulling windfall taxes on banks and energy companies to help plug a fiscal gap still worth tens of billions of pounds. Big cuts to public spending are also in the offing.

The **Bank of England** said it would start selling the bonds it has accumulated through its quantitative-easing programmes on November 1st, but only short- and medium-dated gilts and not bonds with a maturity of more than 20 years, which saw the sharpest sell-off in the recent turmoil. The central bank started buying longer-maturity bonds in late September to calm markets, but after two weeks that programme has now ended.

Food for thought for Mr Hunt

Britain's annual inflation rate rose in September, hitting 10.1% (the level it was at in July). Food prices made the largest contribution to inflation between August and September. They have risen by 14.6% over the past year. Although that was the biggest jump since 1980, staples like milk and butter were up by even more, some 30%. Energy costs were up by 70%, as gas prices nearly doubled over the year. There is no sign of the cost-of-living crisis receding for British households.

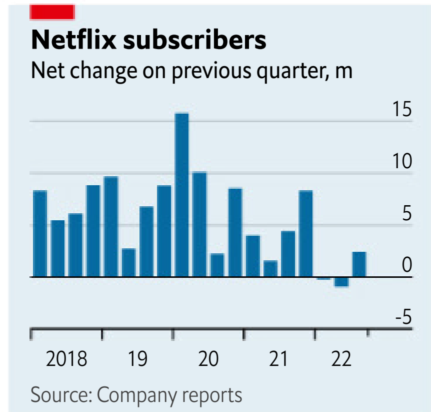
A raft of earnings from America's big banks showed a decline in profits as rocky markets took a toll on their lucrative investment-banking business. But at **Goldman Sachs**, where net income was down by 43%, year on year, another problem is its expansion into retail banking. Its boss, David Solomon, announced another reorganisation of the bank, splitting up its consumer business by rolling its savings and wealth products into asset-management and putting lending into a new division called Platform.

Swiss Re estimated that its claims from **Hurricane Ian** would come in at $1.3bn, causing a quarterly loss of $500m. The reinsurance company reckons the total insured market loss from the storm, which hit west Florida in September, would be between $50bn and $65bn. That could make it the second-most costly hurricane for insurers, behind Katrina in 2005.

The International Energy Agency said that, "defying expectations", global **carbon-dioxide emissions** are expected to grow by only 1% this year. The increase would have been much larger, it said, if it were not for the take-up of renewable energy and electric cars.

Tesla reported quarterly revenues of $21.5bn, its most ever, and a solid profit of $3.3bn. The company has delivered fewer cars than it had forecast, but raised their price as the cost of parts for the vehicles increased. Investors wonder whether this could continue in a recession.

Foxconn, an electronics contract manufacturer known for assembling the iPhone, said it hopes to do the same for electric vehicles, and perhaps take half that market. Liu Young-way, the chief executive, even hoped that "one day we can do Tesla cars for Tesla".



Netflix gained a net 2.4m subscribers in the third quarter, more than twice the number it had forecast and reversing six months of customer losses. The streaming service now has 223m users, far more than rivals, such as Disney+. To entice viewers Netflix is soon to roll out a cheaper subscription plan supported by advertising.

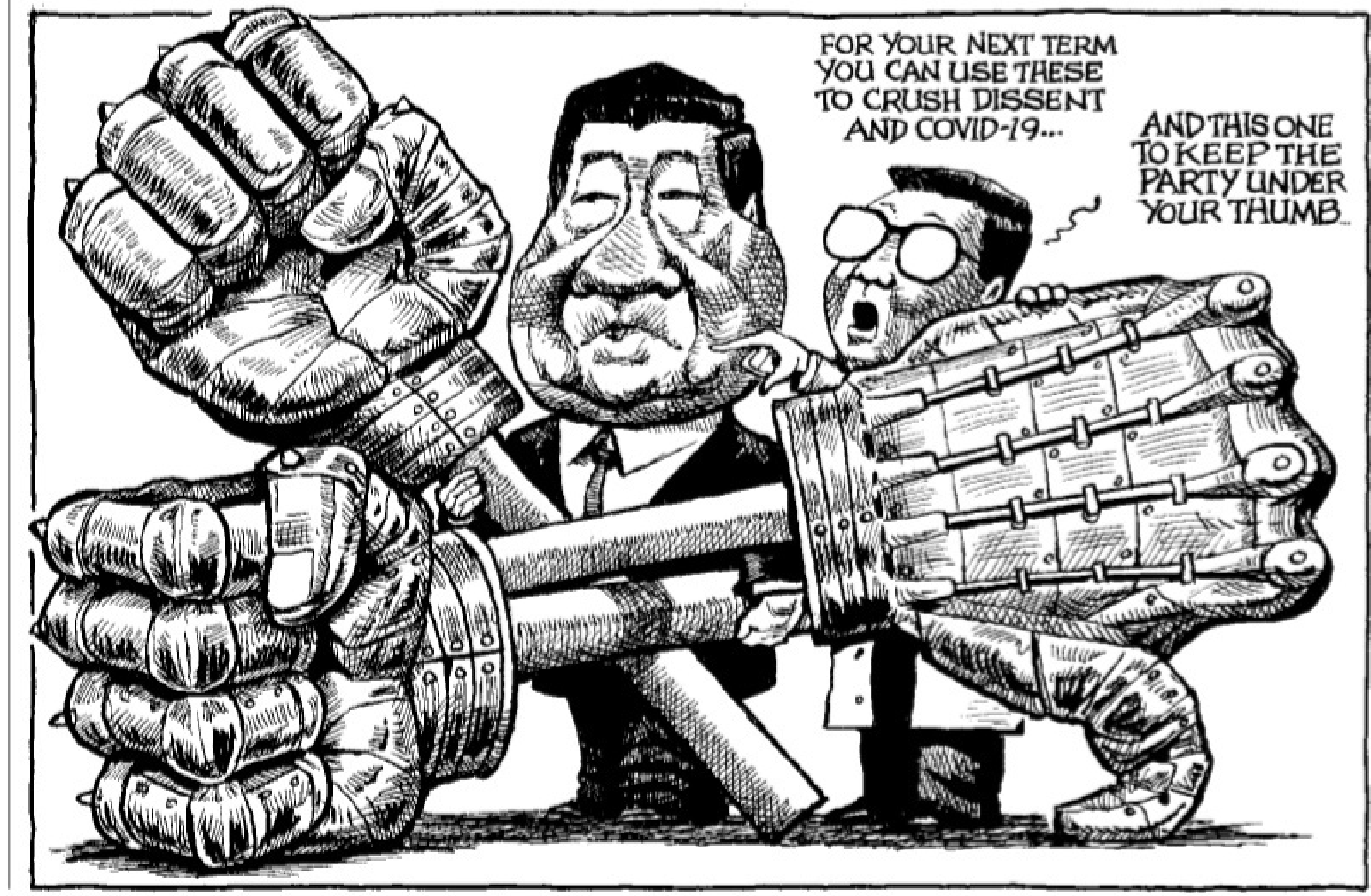
America's two largest supermarket chains, **Kroger** and **Albertsons**, agreed to merge in a $24.6bn deal. Both companies said they "expect to make store divestitures" to satisfy competition regulators, who will question consolidation in the industry.

Beyond Meat is cutting its workforce by a fifth. The plant-based meat industry was flavour of the month a few years ago, but consumers are now tightening their belts and have lost an appetite for pricier alternative-meat products. Longer established food companies have responded to inflation by pushing up prices. **Nestlé** is the latest to report surging revenues, even though sales volumes fell.

ExxonMobil has reportedly pulled out of Russia completely, because the Russian government expropriated its 30% stake in the Sakhalin-1 oilfield. In March Exxon said it planned to pull out of the project.

No news is good news

The Chinese government postponed the publication of figures on **GDP for the third quarter** and trade data, perhaps because it did not want potentially bad economic figures to detract from the crowning of Xi Jinping for a third term as leader. Officials didn't sign off on the trade data because of covid restrictions, apparently.



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House-price horror show

A slump in house prices is coming. It won't blow up the financial system, but it will be scary

OVER THE past decade owning a house has meant easy money. Prices rose reliably for years and then went bizarrely ballistic in the pandemic. Yet today if your wealth is tied up in bricks and mortar it is time to get nervous. House prices are now falling in nine rich economies (see Finance and economics section). The drops in America are small so far, but in the wildest markets they are already dramatic. In condo-crazed Canada homes cost 9% less than they did in February. As inflation and recession stalk the world a deepening correction is likely—even estate agents are gloomy. Although this will not detonate global banks as in 2007-09, it will intensify the downturn, leave a cohort of people with wrecked finances and start a political storm.

The cause of the crunch is soaring interest rates: in America prospective buyers have been watching, horrified, as the 30-year mortgage rate has hit 6.92%, over twice the level of a year ago and the highest since April 2002. The pandemic mini-bubble was fuelled by rate cuts, stimulus cash and a hunt for more suburban space. Now most of that is going into reverse. Take, for example, someone who a year ago could afford to put $1,800 a month towards a 30-year mortgage. Back then they could have borrowed $420,000. Today the payment is enough for a loan of $280,000: 33% less. From Stockholm to Sydney the buying power of borrowers is collapsing. That makes it harder for new buyers to afford homes, depressing demand, and can squeeze the finances of existing owners who, if they are unlucky, may be forced to sell.

The good news is that falling house prices will not cause an epic financial bust in America as they did 15 years ago. The country has fewer risky loans and better-capitalised banks which have not binged on dodgy subprime securities. Uncle Sam now underwrites or securitises two-thirds of new mortgages. The big losers will be taxpayers. Through state insurance schemes they bear the risk of defaults. As rates rise they are exposed to losses via the Federal Reserve, which owns one-quarter of mortgage-backed securities.

Some other places, such as South Korea and the Nordic countries, have seen scarier accelerations in borrowing, with household debt of around 100% of GDP. They could face destabilising losses at their banks or shadow financial firms: Sweden's central-bank boss has likened this to "sitting on top of a volcano". But the world's worst housing-related financial crisis will still be confined to China, whose problems—vast speculative excess, mortgage strikes, people who have pre-paid for flats which have not been built—are, mercifully, contained within its borders.

Even without a synchronised global banking crash, though, the housing downturn will be grim. First, because gummed-up property markets are a drag on the jobs market. As rates rise and prices gradually adjust, the uncertainty makes people hesitant about moving. Sales of existing homes in America dropped by 20% in August year on year, and Zillow, a housing firm, reports 13% fewer new listings than the seasonal norm. In Canada sales volumes could drop by 40% this year. When people cannot move, it saps labour markets of dynamism, a big worry when companies are trying to adapt to worker shortages and the energy crisis. And when prices do plunge, homeowners can find their homes are worth less than their mortgages, making it even harder to up sticks—a problem that afflicted many economies after the global financial crisis.

Lower house prices also hurt growth in a second way: they make already-gloomy consumers even more miserable. Worldwide, homes are worth about $250trn (for comparison, stockmarkets are worth only $90trn), and account for half of all wealth. As that edifice of capital crumbles, consumers are likely to cut back on spending. Though a cooler economy is what central banks intend to bring about by raising interest rates, collapsing confidence can take on a momentum of its own.

A further problem is concentrated pain borne by a minority of homeowners. By far the most exposed are those who have not locked in interest rates and face soaring mortgage bills. Relatively few are in America, where subsidised 30-year fixed-rate mortgages are the norm. But four in five Swedish loans have a fixed period of two years or less, and half of all New Zealand's fixed-rate mortgages have been or are due for refinancing this year.

When combined with a cost-of-living squeeze, that points to a growing number of households in financial distress. In Australia perhaps a fifth of all mortgage debt is owed by households who will see their spare cashflow fall by 20% or more if interest rates rise as expected. In Britain 2m households could see their mortgage absorb another 10% of their income, according to one estimate. Those who cannot afford the payments may have to dump their houses on the market instead.

That is where the political dimension comes in. Housing markets are already a battleground. Thickets of red tape make it too hard to build new homes in big cities, leading to shortages. A generation of young people in the rich world feel they have been unfairly excluded from home ownership. Although lower house prices will reduce the deposit needed to obtain a mortgage, it is first-time buyers who depend most on debt financing, which is now expensive. And a whole new class of financially vulnerable homeowners are about to join the ranks of the discontented.

Dangerous properties

Having bailed out the economy repeatedly in the past 15 years, most Western governments will be tempted to come to the rescue yet again. In America fears of a housing calamity have led some to urge the Fed to slow its vital rate rises. Spain is reported to be considering limiting rising mortgage payments, and Hungary has already done so. Expect more countries to follow.

That could see governments' debts rise still further and encourage the idea that home ownership is a one-way bet backed by the state. And it would also do little to solve the underlying problems that bedevil the rich world's housing markets, many of which are due to ill-guided and excessive government intervention, from mortgage subsidies and distortive taxes to excessively onerous planning rules. As an era of low interest rates comes to an end, a home-price crunch is coming—and there is no guarantee of a better housing market at the end of it all. ■

Turmoil in Britain

Welcome to Britaly

A country of political instability, low growth and subordination to the bond markets

In 2012 Liz Truss and Kwasi Kwarteng, two of the authors of a pamphlet called "Britannia Unchained", used Italy as a warning. Bloated public services, low growth, poor productivity: the problems of Italy and other southern European countries were also present in Britain. Ten years later, in their botched attempt to forge a different path, Ms Truss and Mr Kwarteng have helped make the comparison inescapable. Britain is still blighted by disappointing growth and regional inequality. But it is also hobbled by chronic political instability and under the thumb of the bond markets (see Britain section). Welcome to Britaly.

The comparison between the two countries is inexact. Between 2009 and 2019 Britain's productivity growth rate was the second-slowest in the G7, but Italy's was far worse. Britain is younger and has a more competitive economy. Italy's problems stem, in part, from being inside the European club; Britain's, in part, from being outside. Comparing the bond yields of the two countries is misleading. Britain has lower debt, its own currency and its own central bank; the market thinks it has much less chance of defaulting than Italy. But if Britaly is not a statistical truth, it captures something real. Britain has moved much closer to Italy in recent years in three ways.

First, and most obviously, the political instability that used to mark Italy out has fully infected Britain. Since the end of the coalition government in May 2015, Britain has had four prime ministers (David Cameron, Theresa May, Boris Johnson and Ms Truss), as has Italy. The countries are likely to stay in lockstep in the near future. Giorgia Meloni is expected to be sworn in as the new prime minister in Rome; Ms Truss's future could not be more precarious. Ministerial longevity is now counted in months: since July Britain has had four chancellors of the exchequer; the home secretary resigned this week after just 43 days in office. Trust in politics has declined as chaos has increased: 50% of Britons trusted the government in 2010 and less than 40% do now. The gap with Italy on this measure has shrunk from 17 percentage points to four.

Second, just as Italy became the plaything of the bond markets during the euro-zone crisis, so they are now visibly in charge of Britain. The Conservatives have spent the past six years chasing the dream of enhanced British sovereignty; instead they have lost control. Silvio Berlusconi was removed from power in Italy in 2011 after falling foul of Brussels and Berlin; Mr Kwarteng was kicked out of his job as chancellor of the exchequer because of the market reaction to his package of unfunded tax cuts. Traders in gilts are the arbiters of British government policy at the moment. Jeremy Hunt, the new chancellor, has eviscerated most of the tax cuts and rightly decided to redesign the government's energy-price guarantee scheme from April 2023. The decisions he must take to fill the remaining hole in the public finances are being designed with markets in mind.

Just as Italians fret about *lo spread* between benchmark government bonds and Bunds, so Britons have had a crash course in how gilt yields affect everything from the cost of their mortgage to the safety of their pensions. In Italy institutions like the presidency and the central bank have long acted as bulwarks against politicians. So it is now in Britain. By ending its emergency bond-buying on October 14th, the Bank of England forced the government to reverse course faster. There is no room for Mr Hunt to disagree with the Office for Budget Responsibility, a fiscal watchdog. These institutions were constraints on elected MPs before, but now the chains bind tightly and visibly.

Third, Britain's low-growth problem has become more entrenched. Political stability is a precondition of growth, not a nice-to-have. Italian governments struggle to get anything done; the same is true of brief administrations in Britain. When changes of leader and government are always round the corner, pantomime and personality replace policy. Mr Johnson was nicknamed "Borisconi" by some; by continuing to hover on the political scene, he may make this comparison sharper still.

And although fiscal discipline should calm the bond markets, it will not by itself increase growth. Mr Hunt is racing to balance the books as part of a medium-term fiscal plan to be unveiled on October 31st. Saving money by spending less on infrastructure would be fine for gilt yields but is not going to help the economy grow. There is little room for swingeing cuts to public services. Better to phase out the "triple lock", a generous formula for raising state pensions, and raise money in more sensible ways: scrapping "non-dom" tax status, for instance, or raising inheritance taxes. A rise in income tax would be better than reinstating the increase in national-insurance contributions, which fall solely on workers.

For now, things are turning ever more Britalian. Tory MPs are in disarray—evident in a chaotic vote on fracking and rumours of more resignations—and again consumed by intrigue about how long their prime minister can last. Ms Truss has become the human equivalent of Larry the cat, living in Downing Street but wielding no power. If (or rather, when) Tory MPs decide to bin her, they need to find a replacement themselves rather than outsourcing it to Conservative Party members. The odds of their feuding factions alighting on a unifying figure are low.

Spaghetti junction

The case for an early general election is becoming stronger as a result. It is unlikely to happen: why would Tory MPs vote for their own demise? The argument that Ms Truss or any successor lacks a mandate is flawed in a parliamentary system. But if Parliament is unable to produce a functioning government then it is time to go to the voters. That moment is drawing closer.

Holding elections has not resolved Italy's problems. But there is reason to feel more hopeful about Britain, where political instability is now a one-party disease. The Tories have become nigh-on ungovernable, due to the corrosion from Brexit and the sheer exhaustion of 12 years in power. Ms Truss is right to identify growth as Britain's biggest problem. Yet growth depends not on fantastical plans and big bangs, but on stable government, thoughtful policy and political unity. In their current incarnation the Tories cannot provide it. ■

Ukraine

Defying the odds

Ukraine's economy is staging a surprising recovery. But it needs more help

SWARMS OF MISSILES and drones are attacking Ukraine, damaging the country's power plants and causing rolling blackouts, as Russia seeks retaliation for the destruction of a crucial bridge to Crimea. Ukraine has in most cases been able to restore power quickly. That testifies to a broader resilience. Ukraine's economy is stabilising, even tentatively recovering. But if it is to continue doing so, it will need help.

As the military tide has turned, more than 6m Ukrainians have returned home. Businesses are getting back to work. Now that a UN-supervised grain deal allows the country to export agricultural produce via the Black Sea, farmers are cultivating their next batch of crops. McDonald's is reopening its restaurants in Lviv, though it will close them during air raids.

This adjustment to life under war conditions has been possible because the financial system has remained stable throughout (see Finance & economics section). The country's banks, which were cleaned up before the war, have continued to operate, out of bunkers if necessary. The central bank has introduced capital controls and sought to keep the exchange rate stable, although in July it was forced to devalue the hryvnia by 25% against the dollar. Inflation, at 24%, is running at the same rate as in the Baltic countries. Most important, Western cash has kept the government afloat and helped preserve the central bank's currency reserves.

Ukraine has received $23bn (12% of its pre-war GDP) in budget help, in addition to military and humanitarian aid. America has provided grants in a timely fashion, and has committed itself to offering $1.5bn a month next year. The European Union, however, has done neither. Its funding so far has been late, with billions still outstanding. The money comes in the form of loans, not grants. And member states are still squabbling over how to pay for next year's support.

This is shortsighted. For a start, Russia's economic war is intensifying again. Not only is Russia bombing power stations; it may also refuse to renew the grain deal next month. If Ukraine is to withstand these shocks it will need stable, predictable funding. Moreover, leaving Ukraine's central bank to bear the burden is risky. Already some firms are worried about further devaluations of the hryvnia and higher inflation. The uncertainty will deter the private investment that Ukraine needs as it rebuilds.

Insisting on loans rather than grants is also a mistake. Ukraine is unlikely to be able to afford to pay the money back. And it sends a depressing signal to a country that is fighting for a European ideal of freedom. The EU insists that these loans are on such favourable terms that they are grant-like. Nonetheless, the small print says they need to be repaid, meaning that they will add to Ukraine's official debt figures. The higher debt burden will make the country's eventual return to the bond market even harder.

And the EU's stinginess could undermine American support for Ukraine—support that is crucial for it to win the war and secure peace. Aid for Ukraine has gathered bipartisan backing in Washington. But the more Europe dithers, the more strained that consensus becomes. This week Kevin McCarthy, the minority leader of the House of Representatives, warned there would be no "blank cheque" for Ukraine if recession struck in America. The EU says it wants to be a more forceful geopolitical actor. All the more reason for it to pay up. ■

Renewable energy

India's next green revolution

India's clean-energy push shows how emerging economies could escape the coal addiction

IF YOU CARE about the climate a crucial question is how emerging economies, which accounted for 67% of carbon-dioxide emissions from energy last year, can shift to a cleaner approach. They derive a third of their primary energy from coal, and must meet the aspirations of poor citizens who lack cheap electricity.

China offers one template: its energy industry is shifting towards renewables. Yet it is still moving far too slowly to reduce its emissions and many countries may be wary of replicating its state-led approach. An alternative model is now visible in the other Asian giant, India, which is in the early stages of a green boom led by the private sector (see Briefing). Although it has obvious flaws, it provides hope that India can make the green leap.

India has immense energy needs. It is forecast to be one of the fastest-growing big economies this decade and will need to add capacity equivalent to the size of the European Union's power system by 2040. After a flirtation with hydro in the 1950s and 1960s it came to rely heavily on coal, which met 58% of its primary-energy needs in 2021. Like many governments, India's has committed to reaching net-zero emissions (by 2070).

The big surprise is that major changes are happening on the ground. In the past decade India has seen a 50-fold increase in installed solar power. In 2021 its renewables accounted for 5% of its primary-energy consumption, and 5% of global renewable primary-energy consumption. Private firms have plans to invest perhaps $200bn in the coming years in everything from generation facilities to green hydrogen plants (by comparison, global investment in wind and solar last year was about $300bn, and India's was roughly $15bn). The government wants to triple non-fossil-fuel capacity by 2030.

Behind the boom are a number of forces. One is the country's ▸▸

underlying attributes: sun-drenched India has some of the cheapest solar power in the world, and the life-cycle cost of new plants is lower than for coal ones. The government has helped by introducing guarantee mechanisms so that firms forced to deal with rickety power distributors can still secure funding. The prime minister, Narendra Modi, views clean energy as a catalyst for an industrial boom based on cheap power, batteries and electric vehicles that may shift manufacturing supply chains away from China. Clean power will help cut a large import bill for fossil fuels and, by lowering pollution, save millions of lives.

The final force is that India's big local conglomerates (including Reliance Industries, Adani Group and Tata Group) are deploying capital at scale. Whereas previously they would have been wary of such investments, now they think they have the certainty, financial clout and expertise to plough ahead. One gauge of the boom is that some investors and firms are getting more nervous about long-run coal projects, as cheap renewable power starts to undercut coal-fired power on price. Between 2010 and 2022, proposals for over 600GW of coal-fired power in India (about three times its installed base of coal plants) have either been put on hold or scrapped, with another 15GW-worth of coal generation retired from service.

Yet for all its successes India's surge faces several hurdles. One is financing. Experts reckon it will take over $500bn of investment by 2030 in clean energy, transmission lines, grid-scale batteries and related kit to achieve the government's 500GW. That is at least twice the present investment plans of the big firms, so India will have to attract new sources of capital at a time when interest rates are rising. The financial strain of huge capital projects could yet weaken the appetite of the big conglomerates: Adani Group, for example, is significantly indebted.

Power struggle

The biggest hurdle of all relates to government policy, which needs to be predictable enough to provide certainty to investors. It also needs to anticipate challenges—redesigning electricity grids, for example, as the share of intermittent power rises. India's officials have a good sense of what to do. But they face resistance from a coal lobby which controls vast budgets and employs millions. A state-run firm, NTPC, has just gone ahead with its first new coal plant for about six years; a government advisory body has called for more coal capacity. India's green boom is a test of the private sector's ability to marshal resources—and also of the government's ability to overcome vested interests. ■

Drugs and depression

Set patients free

Most people on antidepressants don't need them. Time to wean them off

ALMOST 35 YEARS ago American drug regulators approved Prozac, the first in a series of blockbuster antidepressants known as selective serotonin reuptake inhibitors (SSRIs). Prozac and its cousins were lauded by patients and doctors as miracle drugs. They lifted low moods quickly and seemed to have no drawbacks. Divorce, bereavement, problems at work—a daily pill was there to help with that, and anything else which made you sad. Many people have stayed on these drugs for life. In Western countries today between one person in seven and one in ten takes antidepressants.

The shine of SSRIs has worn off. A growing number of studies show that they are less effective than thought. Drug companies often publish the results of clinical trials selectively, withholding those in which the drugs turn out not to work well. When the results of all trials submitted to America's medicines regulator between 1979 and 2016 were scrutinised by independent scientists, it turned out that antidepressants had a substantial benefit beyond a (real) placebo effect in only 15% of patients (see Science and technology section).

Clinical guidelines have been revised accordingly in recent years. No longer are drugs the recommended first line of treatment for less severe cases of depression. For these, self-help guidance, behavioural therapy and recommendations for things like exercise and sleep are preferable. For work burnout, a sick note for time off may suffice. The drugs are to be reserved only for more severe depression, where they can be truly life-saving.

The problem is that lots of people who do not need antidepressants are already on them, refilling prescriptions written years or even decades ago. They should be helped to get off the drugs. The side-effects are often life-limiting and, as people age, become life-threatening. They can include sexual dysfunction (which sufferers describe as "genital anaesthesia"), lethargy, emotional numbness, increased risk of birth defects when the pills are taken during pregnancy, and, in older people, strokes, falls, seizures, heart problems and bleeding after surgery. This is a threat to health-care systems as long-term users age.

Doctors rarely talk to patients about stopping the drugs because they fear this could lead to a return of depressive symptoms. But for many people it may be fine to stop. Even among long-term users with several past episodes of depression, a recent trial in Britain showed that 44% of patients could stop taking pills safely. For milder cases, the success rate is probably higher still.

Several things are needed for change to happen. Doctors need guidelines on how to de-prescribe the drugs. Health-care insurers and providers, such as Britain's various national health services, should start paying for delivery techniques that help those who wish to give up the drugs but who need to do so gradually in order to avoid severe withdrawal effects. These include liquid formulations, tapering strips which contain pills with progressively smaller drug concentrations, and the services of pharmacies which prepare bespoke doses. In the Netherlands, 70% of people using tapering strips have managed to quit successfully.

All this could cost more than refilling prescriptions today. But with so many people on the drugs, the costs of side-effects will soon pile up. Add to that the misery of the millions whose lives have been robbed of common joys by near-useless prescriptions, and the case for change is unanswerable. ■

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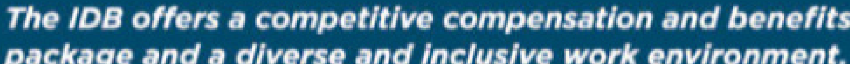

Letters

Ring in the changes

Regarding your article on the global trade in church bells ("Going for a bong", October 1st), although repurposing bells from scrap heaps should be celebrated, treating bells like commodities risks a more enduring loss. The staggering number of bells lost during the second world war speaks to the plundering of identity and soul that made the Nazi occupation so catastrophic.

Bells aren't chunks of bronze waiting to be plucked like fruit from a tree for a more industrious purpose. They are the very heartbeat of towns and villages the world over. The exact tone, timbre and resonance of a single bell or chime cannot be replicated once lost. Bells are an intrinsic part of cultural heritage, an aural and artistic link to an exact moment in history.

In an age where Benin bronzes, Italian marbles and Cambodian sandstones are being repatriated, and rightfully so, it seems incongruous that bells should be shuffled around without considered pause. Where possible, bells should be rehoused in the communities they have served for centuries.

Volodymyr Zelensky enjoined the audience at this year's Grammy Awards to fill the silence left by bombs with music. A silence lay on Germany after 1945. The bells that survived should remain to give witness to the indefatigable human spirit, regardless of whether church attendance may wax or wane.

PAUL ASHE
Director
National Bell Festival
Washington, DC

Detroit's diversification

You inadvertently offered a "Back to the Future" path for Detroit, by stating that "In the long run, the only way to fully reverse Detroit's decline is to diversify its economy" ("Revving up", September 24th). The city's diversification was recognised in 1969 by Jane Jacobs, in "The Economy of Cities". Jacobs contrasted Detroit's dynamic ecosystem of small producers to the stagnation of Pittsburgh's steel-dominated economy. The intervening decades have been tough for Detroit, but perhaps its DNA will help it recover its former prosperity.

DAVID ZETLAND
Lecturer in political economy
Leiden University College
The Hague

In defence of Jair Bolsonaro

It is truly puzzling that *The Economist* does not support Jair Bolsonaro for re-election as president of Brazil ("On a knife-edge", October 8th). Mr Bolsonaro defends property rights and free-market policies, and yet you favour the leftist, socialist candidate. Luiz Inácio Lula da Silva was convicted of crimes and got out of jail on a legal technicality. He denies wrongdoing, but he was never found not guilty of corruption. Nor is he the pragmatic leftist you make him out to be. Lula's government, in power from 2003 to 2010, leaned increasingly left as the years went by. His party is allied with the *Movimento Sem Terra*, a radical movement pushing for land reform. The threat of land invasions is real.

Under the Lula government, funds were sent to Cuba and Venezuela, "investments" that eventually became worthless and yet were financed by Brazilian taxpayers. A new Lula government would eventually trend towards ever more left-leaning policies, and increase the tax burden to finance them with consequences for the private sector and the overall economy.

You think Mr Bolsonaro should lose the election. Many of your readers would disagree. A victory for Mr Bolsonaro would show that Brazilians are voting against corruption and rejecting the kind of socialist policies that have ruined other Latin American economies such as Argentina, Cuba and Venezuela.

PRISCILLA LIMA
Rye, New York

They're here to help

I was surprised to see you omitting the larger societal role that consultants fill in your criticism of management-consulting firms ("Bulletproof suits", October 8th). Consultants are to the service economy what the means of production were to the industrial age. Occasionally consultants are called on to sprinkle holy water on a management decision, but more often than not, they are employed to help companies solve the issue of how to do more with less.

In an economy where there is a war for talent, constraints on resources and capital, and a fight for a reasonable return, consultants are a way, often the only way, for companies to hire the short-term manpower mixed with highly specialised advice needed to meet stakeholder expectations.

SEBASTIAN BELMARK
Manager
Finance and Performance
Deloitte
Copenhagen

The work of both McKinsey and Bain in South Africa was represented as fairly prosaic profiteering in your article. That isn't the case. The announcement that McKinsey is to face trial in South Africa, among the first cases to result from a judicial commission of inquiry into state capture, indicates how extraordinary its alleged criminal conduct is considered to be.

And Bain in effect destroyed the South African Revenue Service (SARS). The impact was almost immediate. Revenue collection fell precipitously, especially devastating in a country of so many poor reliant on public services. Illicit activity, previously curbed by the agency's investigative and enforcement capacities, exploded.

Legal charges don't quite capture the magnitude of harm done. Now South Africa tries rather woefully to put distance between itself and the "failing state" moniker. But it wasn't always so. In many respects SARS was considered a global model, filled with exceptionally committed, skilled public servants. It showed what was possible in a democratic South Africa. It was gutted; many of those public servants' lives ruined. Bain did that.

NICOLE FRITZ
Helen Suzman Foundation
Johannesburg

Your piece reminded me of an old story. A shepherd was tending his flock when a shiny silver BMW emerged. The driver, a young man in an Armani suit and the latest Polarised sunglasses, asked the shepherd, "If I can tell you how many sheep you have in your flock, will you give me one?" The shepherd glanced at his peacefully grazing flock and answered, "Sure."

The driver plugged his microscopic phone into a laptop and surfed to a satellite-navigation system. While the computer was busy, he sent some emails via his iPhone and, after a few minutes, nodded solemnly at the responses. Finally, he downloaded a 150-page report and pronounced to the shepherd, "You have exactly 1,586 sheep."

"Impressive. One of my sheep is yours," said the shepherd. The young man selected an animal. Then the shepherd said, "If I can tell you exactly what your business is, will you give me back my sheep?" The young man replied "You're on." "You are a consultant," said the shepherd without hesitation. That's correct," said the young man, impressed. "How ever did you guess?" "It wasn't a guess," replied the shepherd. "You drive into my field uninvited. You ask me to pay you for information I already know, answer questions I haven't asked, and you know nothing about my business.

Now give me back my dog."

PETER HIGGINS
Talent, Oregon

Letters are welcome and should be addressed to the Editor at
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More letters are available at:
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Skunk no more

GURUGRAM, MUNDRA AND PUNE

One of the world's most polluting countries plans to invest half a trillion dollars in clean energy

IT GETS ALMOST three-quarters of its electricity from coal, and has 39 new coal-fired power plants under construction. It digs up and burns more of the stuff than any other country except China. And it is coal's loudest advocate internationally: at last year's climate conference in Glasgow, it was the skunk at the garden party, blocking efforts to phase out the fuel most responsible for global warming.

This soot-smeared intransigence, however, distracts from a dramatic countervailing trend. While his underlings defended coal, Narendra Modi, India's prime minister, made a series of pledges in Glasgow that, if kept, will make his country a green-energy powerhouse. The most eye-catching was the promise that India would achieve "net-zero" emissions of greenhouse gases (GHGs) by 2070—meaning that any emissions that had not been eliminated by then would be offset in some way.

Mr Modi underpinned that goal with two exacting targets for 2030: to slash emissions by a billion tonnes from their current trajectory and, to that end, to increase non-fossil power generation (which includes nuclear and hydro as well as wind and solar) more than three-fold, from roughly 150GW to 500GW.

India is the world's third-largest emitter of GHGs. If it were to meet Mr Modi's targets, it would not just revolutionise its own energy mix, but also provide a big boost to global efforts to curb global warming. What is more, Mr Modi has declared it a "national mission" to develop "green hydrogen", a clean fuel made using renewables which could help decarbonise industries that remain stubborn polluters the world over. But just how plausible are these ambitions?

India's entire generation capacity, both clean and dirty, is currently only 400GW. So Mr Modi wants to build a whole second grid's-worth of green power in just eight years. To reach that goal, India will need to invest some $500bn in clean energy and improvements to the grid, according to an estimate by Bloomberg New Energy Finance (BNEF), a research firm.

Such a feat would not be unprecedented. China went from 44GW of solar capacity to 300GW in six years, and from 50GW of wind to 330GW in 11 years. But it was helped both by a huge manufacturing base in renewables and by an economy that excels at steering capital to favoured industries. Those are advantages that India lacks.

Renewable power is growing very fast in India. Solar generation capacity has increased 50-fold since 2012, to nearly 50GW at the end of last year. In the first half of 2022 another 7.4GW of solar was added. Indeed, when it comes to building new generating capacity, renewables have already supplanted coal. The capacity of new solar, wind and hydro plants constructed last year was nearly double that of new coal-fired plants (see chart 1 on next page).

Even so, investment in renewables is not proceeding fast enough to meet Mr Modi's targets. The 11GW of renewable capacity added in 2021 is far less than the annual increment required. Nonetheless, there are good reasons to take India's new green revolution seriously.

For one thing, reducing emissions is not India's only motive for overhauling its energy system. Mr Modi also wants both to spur manufacturing and to trim the bill for imported fuel. "How long will we be dependent on others in the field of energy?" he asked during his address on Independence Day in mid-August. India spent more than 4% of GDP on imports of fossil fuels last year, a particularly vexing sum for a country with a persistent current-account deficit.

Greening India's energy supply would also help reduce air pollution, a deadly scourge for many of its inhabitants. The World Health Organisation reckons that in 93% of the country, the level of air pollution is well above its guidelines. A study

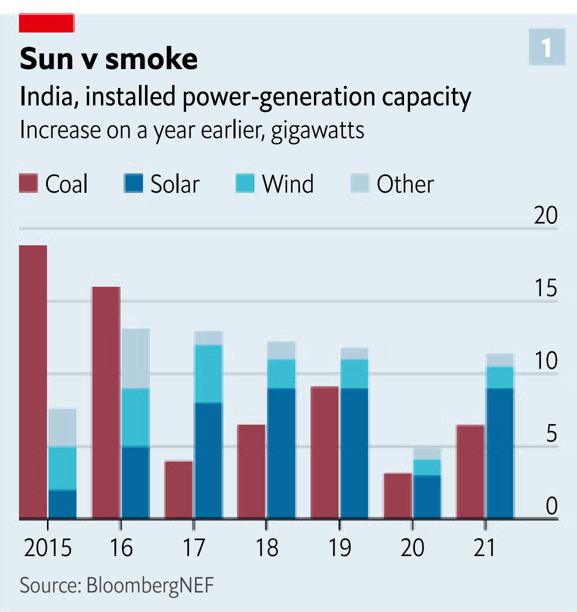
published in 2019 by the *Lancet*, a British medical journal, found that more than 1m Indians die each year as a result of the foul air. The choking smog that blankets much of north India especially at this time of year is a perennial political liability for the government.

Best of all, a big shift to renewables could help cut the cost of power generation. India's sunny climate and low labour costs make it one of the cheapest places in the world to produce solar power. In fact, an analysis by the International Energy Agency (IEA), a watchdog-cum-think-tank for energy-consuming countries, concluded that, after stripping out the effects of government subsidies, only the United Arab Emirates could rival it (see chart 2). That means that solar plants are a cheaper option for new electricity generation in India than coal- or gas-fired power stations. Power from windmills in India, although not the cheapest in the world, is also less expensive than that generated by burning fossil fuels.

What is more, India's government is coming up with all manner of inventive policies to incentivise investment in clean energy. One of the big obstacles to any overhaul of the power industry is the sorry state of the electricity-distribution companies (DISCOMS). Many of these state-controlled entities are all but bankrupt, with collective debts of perhaps $73bn. They do not look like the safest of counterparties for investors seeking to sell clean energy. So Mr Modi's government has introduced a mechanism that in effect makes India's federal government the financial backstop for new long-term contracts to provide renewable energy to the grid. It is also allowing solar and wind generators to bypass DISCOMS completely to sell power directly to manufacturers of green hydrogen.

To overcome India's ever-present problems of red tape and NIMBYism, officials are setting up clean-energy parks with connections to the grid and speedy processing of the necessary permits. The government also uses reverse auctions to maximise investments in renewables at the lowest possible cost: developers state the minimum price they would be prepared to accept for the power they generate, with the lowest bids winning. It has conducted similar auctions for "round-the-clock" green power, meaning renewables coupled with some form of energy storage, to get around the intermittency of wind and sunshine.

These policies are working. Investors including Adani Group, one of India's biggest conglomerates, are rushing to a renewables park in Kutch, a sun-drenched and windswept region of the state of Gujarat, for instance. With a planned output of 30GW, it will be the world's biggest combined wind and solar farm.



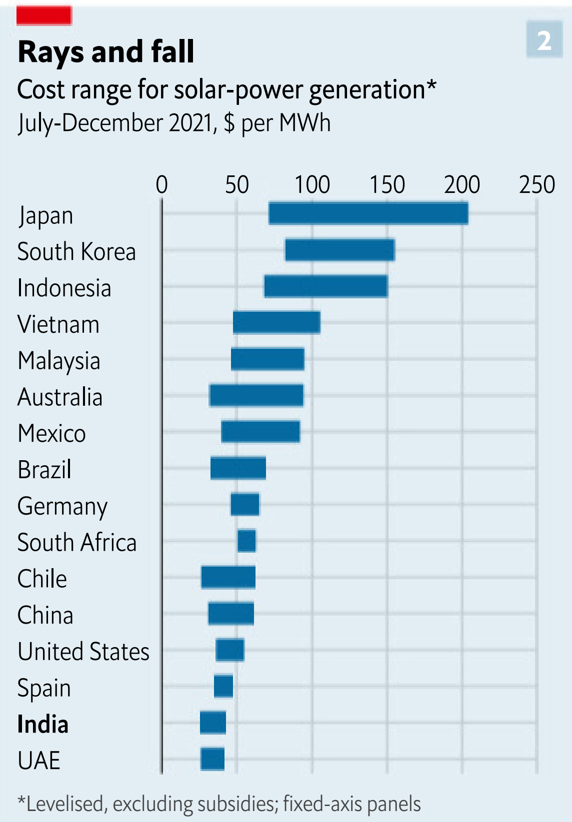
Source: BloombergNEF

By the same token, India is likely to receive offers to build generation capacity in excess of 25GW at its solar auctions this year. That is over ten times more than any other country (see chart 3 on next page). In August it held one of the world's biggest auctions for grid-scale battery storage.

Industrious industrialists

Indeed, one of the strongest indications that India's green ambitions are more than hot air is the enthusiasm of investors. Mukesh Ambani, the boss of Reliance Industries, another sprawling conglomerate, gushed in his latest message to shareholders, "We will have the world's most affordable green energy within this decade, and these solutions will then be exported to other countries."

Mundra, a busy port in Kutch developed by Adani Group, encapsulates the shifting priorities of India's industrialists. It is one of the world's busiest coal-handling ports, serving two huge coal-fired power plants nearby. But it is also home to a new solar-panel factory, a pilot plant building 160-meter-tall onshore wind turbines (among the world's largest) and new buildings where equipment to produce hydrogen will be made.



*Levelised, excluding subsidies; fixed-axis panels
Source: BloombergNEF

"We welcome you to a future powered by the SOLAR REVOLUTION" bellows a billboard. Adani is "indigenising the entire supply chain" for clean energy, explains Arun Kumar Sharma, a senior manager.

Gautam Adani, the group's founder and chairman (whose personal fortune of well over $100bn makes him one of the world's richest people), claims his companies will spend $70bn on greenery in India by 2030. With nearly 5GW of solar generation capacity as of mid-2021, Adani Green Energy, one of the group's divisions, is already on par with Italy's Enel Green as the world's leading developer of solar energy.

Not to be outdone, Mr Ambani plans to spend $80bn on clean energy in India. Reliance, like Adani Group, has made a mint from fossil fuels. But now it is developing a clean-energy cluster in Jamnagar, another port in Gujarat, which also houses the firm's massive petrochemicals complex. Mr Ambani plans to build 20GW of solar generation capacity by 2025, all of it to be consumed by his group for captive needs. "Once proven at scale," he says, "we are prepared to double the investment." Morgan Stanley, an investment bank, describes Mr Ambani's strategy as "full spectrum", stretching from the manufacture of solar panels and batteries to the development of devices to make and use green hydrogen.

It is not just India's behemoths that are embracing Mr Modi's green vision; smaller companies are investing heavily, too. A firm called Greenko, for instance, is building the world's biggest network of grid-scale energy storage using a technology called pumped hydro. It will use power from solar panels or windmills to pump water into elevated holding tanks. The water can then be released to turn turbines and generate power whenever electricity is needed. Mahesh Kolli, Greenko's president, says it will spend $5bn by 2025 to construct 50GW of storage capacity.

ArcelorMittal Nippon Steel, an Indian joint-venture between steel giants from Europe and Japan, has just signed a $600m deal for Greenko to provide round-the-clock clean power to one of its mills. It chose this option not simply because the power will be green, but because it was cheaper than building a coal-fired plant.

In the longer run Mr Kolli sees his technology as the solution to the intermittency of power generated by windmills and solar panels. He wants to build a nationwide, grid-connected "energy-storage cloud", akin to Amazon's data cloud. When the wind drops or the weather clouds over in Gujarat, say, the firm's pumped-hydro plants in Andhra Pradesh, to the south,

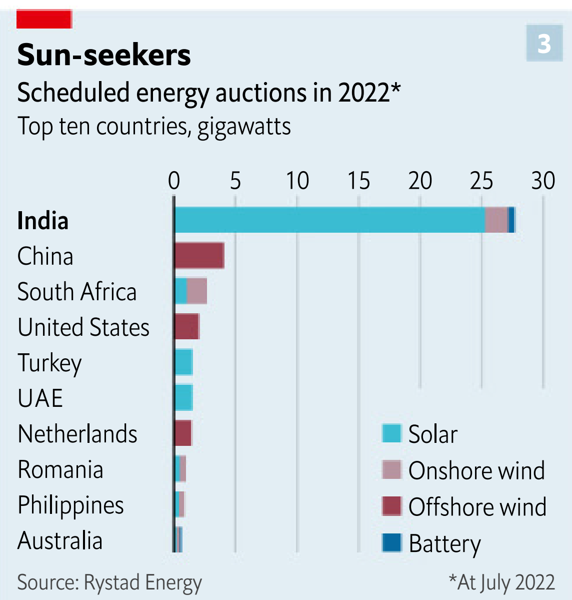
could supply a compensating amount of clean power via the national grid to aluminium smelters in Odisha, to the east, run by Hindalco Industries, a big new customer. Unlike America, which has only limited connections between regional grids, India has a much better-integrated national grid, which makes such an idea feasible. The IEA projects that it will have more pumped-hydro than any other country by 2026.

India is beginning to develop domestic supply-chains for clean energy. For example, Pune, a city in the state of Maharashtra which is already home to a cluster of car-part manufacturers, is becoming a clean-energy hub as well. Siddharth Mayur, a local and founder of H2E Power and homiHydrogen, has developed batteries for electric motor-scooters and auto-rickshaws that can be quickly swapped for fully charged ones when they run down. He is now making stacks, a component of fuel cells (which can be used to generate electricity from hydrogen), and is helping to foster local production of other parts. "By next year, 98% will be made within 60km of where we are sitting in Pune," he says.

Ravi Pandit, chairman of KPIT, an Indian software firm that counts big foreign carmakers as customers, thinks the inexpensive software and engineering talent that fuelled India's success in information technology a few decades ago will help in green energy today. Thanks in part to the widespread desire not to concentrate too much manufacturing in China, he points out, foreign capital and technology is pouring in.

The focus of a lot of the investment is green hydrogen, which, it is hoped, will allow big industries such as steelmaking and fertilisers to decarbonise. India produces almost none of it at the moment, although it does consume some 7m tonnes a year of ordinary hydrogen, made using fossil fuels. Investors think it will be a good place to make the green sort, since the process requires a lot of clean power, which India's solar industry can provide cheaply. India also produces very little natural gas, so there are few lobbyists campaigning against the development of a rival industry. The government has promised to provide incentives to green-hydrogen firms in a detailed policy to be unveiled soon.

With help from Stiesdal, a European clean-technology firm, Reliance is building a large factory in Jamnagar to manufacture electrolysers. These devices, powered by clean electricity from Reliance's planned solar farms, will then be used to manufacture green hydrogen. Mr Ambani asserts that these investments will make India the first country to produce green hydrogen for $1 a kilogram, within a decade. (The current cost is more than $4/kg.) He dismisses doubters, pointing to his recent success in delivering data to mobile telephones at the world's lowest cost.



Indian Oil, a state-owned energy giant that is the country's largest consumer of dirty hydrogen, announced in August that it, too, was entering the green hydrogen business. It plans to invest $25bn in that and other clean technologies by 2046, as part of an effort to reach net-zero emissions by that year. "We will make India a green hydrogen hub," says S.M. Vaidya, the firm's chairman.

Foreign investors are also enthusiastic. John Cockerill, a Belgian technology firm, has established a joint-venture with Greenko to produce 2GW-worth of electrolysers a year. Ohmium, a buzzy American startup making electrolysers, has built its only factory in India. It hopes to reach an annual output of 2GW by the end of this year. It recently dispatched to America the first Indian-made electrolysers ever to be exported, and expects to begin sending consignments to Spain soon as well.

Goldman Sachs, an American investment bank, has a stake in ReNew Power, a renewables firm which is working with Indian Oil on its green hydrogen plans. TotalEnergies, a giant French oil firm, has bought a quarter of a division of Adani Group that is developing green hydrogen.

India's green-hydrogen firms are even venturing abroad. Acme Cleantech Solutions, a solar-generation pioneer, has pivoted to making clean fuels. Together with Scatec, a Norwegian clean-energy firm, it is investing over $6bn to produce green ammonia (a derivative of green hydrogen) in Oman. The project is the first of its kind to be certified as carbon neutral. It also won commercial validation when Yara, a Norwegian fertiliser giant, agreed in July to negotiate a long-term contract to buy its green ammonia.

Rystad forecasts that India will be making more than 8GW of electrolysers a year by 2025 (roughly half the planned output of Europe, the world leader). Sanford C. Bernstein, an investment bank, reckons the hydrogen market in India could be worth $15bn to $20bn a year by 2030. Although it is not quite as bullish as Mr Ambani, Bernstein reckons "under $2/kg seems achievable towards the end of the decade".

Much could still go wrong. For a start, India's tycoons may not keep all their grand promises to lavish billions on the new green revolution. CreditSights, a research firm, has raised concerns about Adani Group's high levels of debt. Especially with global interest rates rising, Indian conglomerates may struggle to finance vast investments in clean energy.

Even if the billionaires spend as lavishly as they have promised to, the lion's share of the $500bn needed to meet Mr Modi's targets will probably come from abroad. But foreign investors do not see India as risk-free. The rupee has depreciated steadily over the years, reducing outsiders' returns. Mr Modi's tendency to stoke sectarian tensions creates political risks. And foreign investors, too, may feel the pinch as interests rates rise and the world economy slows.

Yet India's economy is growing faster than China's. Demand for electricity is increasing fast enough that the country will need to build as much generating capacity by 2040 as the European Union currently possesses, whether green or not. The $30bn or so that BNEF thinks India will need to invest in renewables each year to meet Mr Modi's target, although a daunting sum by local standards, is only a tenth of the money put into wind and solar globally last year.

It is early days for India's second green revolution, but the first shots have already been fired. Mr Pandit observes that the West had a hundred-year head start in the conventional automotive industry. It has been a long, hard slog for Indian firms to catch up and compete. In many areas of clean technology, by contrast, India suffers no comparable disadvantage. As a result, he predicts, it will excel: "India will do for hydrogen what China did for batteries." ■

Oregon politics

Unpacific

PORTLAND

Homelessness in their west-coast strongholds is a political liability for Democrats

IT WOULDN'T BE an election year in America without fearmongering campaign ads. Some candidates have elevated them to an art form. A recent one for Christine Drazan, the Republican running for governor in Oregon, opens with a woman recounting how she was held at knifepoint by a homeless man in Portland. It was only thanks to the police that she survived, she tells the camera, before warning that Kate Brown, the current Democratic governor, and Tina Kotek, the Democratic candidate to replace her, are "releasing criminals" and making Oregonians "less safe".

Portland, the state's biggest city, is an avatar of the Pacific north-west's particular brand of progressive. Yet the governor's race is surprisingly close for a state that Joe Biden won by 16 points. Polls suggest that Ms Drazan, formerly the top Republican in Oregon's House of Representatives, has a slight edge over Ms Kotek, that body's former Speaker. Ms Drazan could become Oregon's first Republican governor since Ronald Reagan was president.

There are two main reasons for this. First, a third candidate, Betsy Johnson, is splitting the vote. Before renouncing her party to run as an independent, Ms Johnson spent 15 years as a conservative Democrat in the state legislature. Her politics resemble those of Joe Manchin, the senator for West Virginia. She supports abortion rights, but annoys more-liberal Democrats by arguing for gun rights and blocking environmental regulation. Ms Johnson has benefited from the beneficence of Phil Knight, co-founder of Nike and Oregon's richest man, who poured nearly $4m into her campaign (he recently donated $1m to Ms Drazan too). Ms Johnson's campaign is pulling votes from Ms Kotek, as she courts Oregon's many unaffiliated voters and Democrats looking for a change.

Second, the race has become a referendum on Portland, which is struggling with violent crime, street homelessness and drug addiction. Ms Drazan's campaign ad is a ploy to whip up fear and resentment towards Democrats, who run all levels of state government. But it plays on the real worries of Oregonians about Portland's deterioration. Nearly three-quarters of likely voters polled by the *Oregonian* in September said they view the city negatively. Ms Brown, the outgoing governor, is the least popular governor in America. Ms Johnson and Ms Drazan are trying their best to paint Ms Kotek as her political doppelganger.

Worsening homelessness, which voters say is the most important problem facing the state, has made change more appealing to habitual Democrats. The homeless population of Multnomah County, which includes Portland, grew by 30% between 2019 and 2022, to roughly 5,200 people. Most of the growth has been among those who sleep outside. Rising housing costs and the closure of shelters during the pandemic have pushed more people onto the streets.

The proliferation of tent encampments in Portland's Old Town neighbourhood near the city centre has blocked pavements, scattered rubbish and made people's struggles with addiction more visible. Portland Clean and Safe, a programme that ▸▸

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employs formerly homeless people to clean downtown, disposed of more than 180,000 needles in 2021, up from 5,000 in 2014. Anthony McDougald, one of the programme's cleaners, often visits his brother who still lives on the street. "At one point you couldn't get through the sidewalk because of everybody's tent," he says.

This has changed the argument about street homelessness. "Portlanders have a lot of compassion for the circumstances that led people to the streets in the first place," says Portland's mayor, Ted Wheeler. "But that compassion has definitely been tempered by the impact it is having on the rest of the city." Residents see litter and graffiti, says Mr Wheeler, "and for a lot of people that's very dystopian."

That has prompted a policy change. Mr Wheeler is planning to ban unsanctioned encampments, a move that would have seemed radical only a year ago. Rather than allowing tents to be pitched anywhere, people will be directed to official campsites where they can get help finding housing or treatment for drug addiction. Where to put the camps, and how to enforce the ban, are yet to be worked out.

Oregon's Democrats are seeing what happens when elected officials demote public safety to a secondary concern. Local Democrats took chants to "defund the police" to heart in 2020, cutting the police department's entire gun-violence and recruiting teams. The cuts came at a particularly inopportune time. For decades Portland was one of America's safest cities. But the murder rate spiked there in 2020, as it did in cities across the country.

The cuts worsened a staffing shortage caused by the retirement of baby-boomers and the loss of many officers following the city's violent protests in summer of 2020. As in many other cities, peaceful demonstrations erupted in Portland after George Floyd was murdered by a police officer in Minneapolis. Unlike in other cities, left- and right-wing extremists flocked to Portland to stir up trouble. Antifa clashed with Proud Boys, buildings were set on fire and at least one person was shot dead. The federal troops Donald Trump sent to Portland to quell the riots (and bolster his own law-and-order campaign) inspired more riots.

The political violence that tarred Portland's peaceful protests is still on voters' minds. About 70% of Portland voters say the demonstrations damaged public safety, and fully half suggest that they actually harmed racial unity. While Oregon mulls whether a Democrat or Republican is best-suited to help fix its flagship city, Portlanders are hoping for a government overhaul of their own. Residents will vote on a bumper ballot measure that would change the way officials are elected, the size of the city council and its responsibilities.

Portland's struggles matter beyond state lines. West-coast cities from San Diego to Seattle seem unsure what to do about sky-high housing costs, tent encampments and open-air drug markets. These are also political problems for Democrats, who run America's big cities. Unsheltered homelessness is visible evidence that government is not working as it should. The growth of encampments is a rebuke to progressive politicians out to prove that their policies make life better and more equal for everyone. It is also fodder for Republicans who argue that Democrats can't be trusted to run the country if they can't solve the problems in their own backyards.

Mr Wheeler hopes that his encampment ban can be exported to other cities if it proves successful. "I predict two years from now every city in America will be confronting this issue," he says. Nationally, though, homelessness is not on people's minds. Only 4% of Americans polled by Gallup in September chose hunger, poverty and homelessness as the top issue facing the country. The governor's race in Oregon will test whether a left-leaning state will punish Democrats for problems that have mushroomed on their watch. If Mr Wheeler's prediction is right, liberals elsewhere may want to pay attention. ■

Midterm maths

Skewed samples

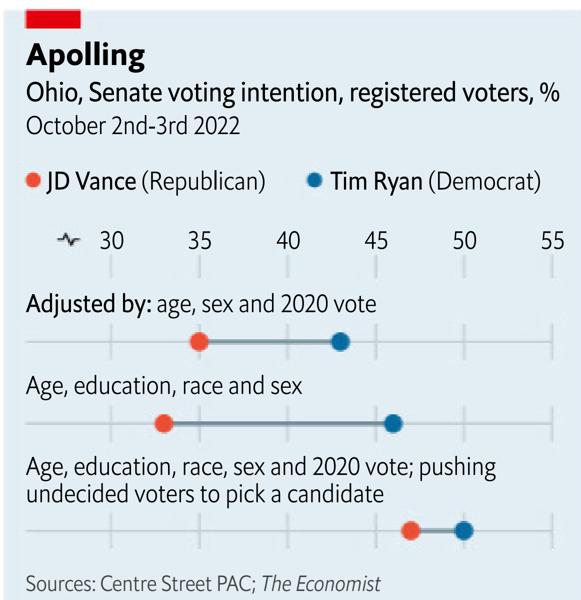
WASHINGTON, DC

Why a Democrat-aligned Super PAC is publishing funny poll numbers

ONE THING is assured in political polling: you will eventually be wrong. Elections can turn on a knife's edge and polls are imprecise. But pollsters also fall short by failing to account for bias in their data. Is there any way to know if a poll is going to be wrong before an election occurs?

One way is to compare a survey to other polls taken in the same race and interrogate outliers. Another is to peer under the hood and look at a pollster's assumptions and processes. Either way, polls by Center Street PAC, an allegedly non-partisan political action committee, look off.

The PAC was formed in 2021 to support centrists. Center Street has endorsed Tim Ryan, a Democratic congressman from Ohio in the state's Senate race, and published polls in an array of other competitive races. Their surveys routinely find much higher support for Democratic candidates than other polls do.



In Ohio, Center Street's polls show Mr Ryan winning 43% of registered voters versus 35% for JD Vance, his Republican opponent. That is surprising in a state that Donald Trump won by eight points in 2020. In Pennsylvania, Center Street puts John Fetterman, the Democrat, at 50%—16 points ahead of Mehmet Oz, the Republican, on 34%. *The Economist*'s aggregate of publicly released polls show the Democrats tie in Ohio and up six in Pennsylvania.

What explains the difference? Center Street balances its polls by age and gender. Yet best practice is to account for race and educational attainment too, lest a pollster miss non college-educated whites, who lean Republican. Kurt Jetta, who runs its polls, reckons the step is unnecessary because he adjusts his polls by past vote, too.

The Economist analysed the PAC's polling data from Ohio and found that if Mr Jetta had adjusted his sample to be representative of Ohioans by age, sex, race, education and past voting, Mr Vance's support would have risen to 37% (to Mr Ryan's 43%). Yet that six-point margin is still an outlier. What explains the rest of it?

When respondents to the poll say that they are undecided in a given race, Mr Jetta does not push them to pick a candidate, as other pollsters do. But 52% of undecided voters say they voted for Mr Trump in the last presidential election. They may well come home to Republicans. According to our analysis, if undecided voters pick the same party as before, Mr Ryan's lead drops to 3 points—well within the survey's margin of error. "It bothers the crap out of me," Mr Jetta says, that his method may be off.

Center Street gets its data from an online panel that is not representative of the population and so needs to be heavily adjusted. That means higher uncertainty. And the PAC's main job is to raise money for candidates. Mr Jetta says that Center Street uses its polls to show "high net-worth" donors that the committee can make a difference in key races. Outlier polls may convince them to give more. ■

School fights

Compendium of crazy

PHOENIX

Partisans will believe mad things about their political opponents

As if there were not enough other threats to American civilisation to consider, the national epidemic of furries, or children who identify as animals, in schools has been getting a lot of attention. Popular social-media accounts, including Libs of TikTok, which highlights daft things liberals are supposedly doing, spread the idea that schoolchildren are self-identifying as cats, and teachers are placing litter boxes in school bathrooms so that they may defecate comfortably. This is not actually true. But the speed with which this idea became mainstream illustrates how social media can confirm partisans' wildest ideas about the other side, as well as how hard such fantasies are to dislodge once they have taken hold.

In January the superintendent of Midland Public Schools in Michigan, where the rumour began, addressed community members on Facebook: "Let me be clear in this communication. There is no truth whatsoever to this false statement/accusation! There have never been litter boxes within [our] schools." Several other schools followed, denying that their districts were providing special accommodations for furries. Yet almost a year on, politicians are still repeating the furry claim. Two weeks ago a Republican candidate for governor in Colorado said she had received over 100 messages from parents about furries in schools. The idea has, naturally, been repeated by Republican Congresswoman Marjorie Taylor Greene.

Partisans do not just disagree with their political opponents—they despise them. In 2017, a poll by Nathan Kalmoe of Louisiana State University and Lilliana Mason of the University of Maryland found that 55% of respondents believe that people in the opposing party are a serious threat to the country. Nearly two out of five said the opposing party is "downright evil." Once one group has decided the other is evil, fantasies about their behaviour follow.

This mental habit afflicts Democrats too. In 2021 Arizona became one of only five states to require parents to opt their children into sex education, rather than automatically enrolling them as is the case in most states. A school district in Chandler, a town outside Phoenix, adopted a new policy based on the state law which some parents interpreted as too conservative, says Lindsay Love, a school-board member. Then an image circulated online of a "chicken-breast permission slip." A teacher was seemingly asking for parents' permission for pupils to use chicken breasts in a culinary class. A picture of the permission slip circulated on social media. This is "the inevitable result of voting for R's [Republicans] in AZ," concluded one poster. The "chicken-breast permission slip" appears to have been a joke. A po-faced official from the district described it as a misinterpretation of district policy.

Around the same time, about 30 minutes north in Scottsdale, Arizona, another controversy was brewing. In November a group of conservative parents claimed that the school board had compiled a "secret dossier" on them. Specifically they claimed that the father of the school-board president, Jann-Michael Greenburg, Mark Greenburg, had collected photos, Social Security numbers, divorce decrees and other private information on nearly 50 parents in a Google Drive folder.

The Scottsdale Police Department con- ▸▸

Beer sommeliers

Draught me in

CHICAGO

The growth of craft beer is creating demand for a new type of beer expert

Neil Witte, from Kansas City, Missouri, has two degrees, in philosophy and in German. Yet he says that the toughest exam he has ever taken was the one he did to be qualified as a "master cicerone"—that is, an expert in beer, roughly equivalent to a master sommelier. (The word comes from an Italian term for guide.) The exam is organised by a firm based in Chicago, and takes over two full days. It involves a three-hour written essay question, a multiple-choice test, as well as a blind tasting test and an oral examination. Mr Witte, who passed only on his third attempt, is now one of just two dozen or so fully qualified "masters" on the planet. But there are around 4,500 qualified cicerones (which also requires an in-person exam), as well as almost 150,000 people qualified as "certified beer servers" via an online multiple-choice exam.

The growth of the "cicerone" reflects the ever increasing complexity of American beer. In recent decades, the overall consumption of beer has lost market share to wine, spirits and alcopops. Yet "craft beer" has thrived. In 1982, there were just 93 breweries across the entire country. Last year, there were 9,247, according to the Brewer's Association, an industry group. The number continued to expand (though more slowly) even when the covid-19 pandemic shut bars. Craft beer now accounts for 13% of total beer output, and is growing at a hoppy rate of 8% per year, while sales of traditional brews are flat. More complicated beers require better-educated bartenders to sell them, says Ray Daniels, who first invented the concept of the cicerone.

Waiter, this is corked

Some brewers are even trying to compete with wine and spirits for prestige. Samuel Adams, a craft brewer from Boston, Massachusetts, sells a beer it calls "Utopias." The latest version is aged with cherries for nearly 30 years in bourbon and wine casks, and contains an alcohol level of 28%. Your correspondent tried some, and to his uncultured taste buds, it tastes less like beer and more like an intriguing sort of sherry. But it sells for $300 a bottle. Goose Island, a brewery in Chicago, also sells a beer aged in bourbon barrels, for a somewhat more modest price (around $50).

Both Mr Daniels and Mr Witte admit that beer will never have quite the elitist draw as fine wine. For one thing, even the most exciting beer does not store well, making it a poor speculative investment. But Mr Witte says becoming a master cicerone has cracked the possibility of tasting pairings with meals at fancy restaurants. And though few restaurants yet employ in-house full cicerones, there is stout demand for the qualification from distributors and marketing types. Customers are getting ever more demanding, about types of beer but also things like cleaning draught lines. The untapped market for beer expertise gets lager day by day.

cluded a month later that the online folder included only publicly available information, and an independent forensic investigation found no evidence that the folder was created using the district's computers or email server. Mark Greenburg is suing two parents, Amanda and Daniel Wray, for defamation. Ms Wray and other parents are suing the Greenburgs back. The incident has received plenty of media attention. Kari Lake, a Republican candidate for governor, featured the parents in a campaign ad.

Partisan fantasies are also a gift to grifters. A man in Minneapolis claimed his van had been set on fire and graffitied with "Biden 2020" and "BLM" because he was flying a Trump 2020 flag. This was not true. The man later pleaded guilty to wire fraud for filing over $300,000 in fraudulent insurance claims (and receiving $61,000 from the insurance company and $17,000 in donations through a GoFundMe page). ■

The midterms

What's in a name?

MIAMI

Florida Democrats have taken to calling Republicans socialist

To THE VOTERS in a South Florida congressional district, the political advertisement lays out a stark choice: "This election will determine if we remain a beacon of freedom or we become a socialist dictatorship." Surprisingly, though, the candidate speaking—with a bejewelled American flag on her lapels—is the Democratic candidate, who casts herself as the warrior for freedom and her opponent, a Trump-supporting Republican, as a socialist menace. What is going on?

"Socialist in the language of Miami-Dade [County] is very different from the dictionary definition," explains Annette Taddeo (pictured above), the Democratic candidate in question and a current state senator, sitting in a windowless office at her campaign headquarters. "Republicans have used the word 'socialist' against us effectively many times through numerous elections...but we are seeing so many of our freedoms being taken away, and government intervention and government telling us what we can and cannot do," she explains. "So, I'm flipping the script."

Antipathy to socialism is indeed one of the most potent political forces in southern Florida. It is one that Democrats ignored to their cost as self-described democratic socialists, such as Bernie Sanders and Alexandria Ocasio-Cortez, gained prominence in 2018 and 2020. Between 2016 and 2020 Donald Trump improved his vote share in Miami-Dade by an astonishing 22 percentage points. Among majority-Hispanic precincts in the county, the shift towards Mr Trump was as high as 20 points. "Many voters have come from countries that don't have law and order. They don't want to defund the police," says Kevin Cabrera, who ran Mr Trump's campaign in Florida, and is standing himself for the post of county commissioner. "Democrats think that all Hispanics care about is immigration."

In 2020 Democrats were slow to respond to successful messages about socialism, admits Jose Parra, a consultant for the Florida Democratic Party for Hispanic votes. "You don't just say, 'I'm not a socialist'. That's like saying, 'I don't beat my wife.' You have to pick spokespeople like Annette Taddeo whose father was kidnapped by FARC [the Colombian left-wing terrorist organisation]," he says.

Democrats are, belatedly, pushing back. Campaign operatives are circulating videos of María Elvira Salazar, Ms Taddeo's opponent and a former Spanish-language anchorwoman, interviewing Fidel Castro—who would probably lose a popularity contest in the area to Satan. They are angrily pointing out it was a group of mostly Venezuelan asylum-seekers fleeing the regime of Nicolás Maduro whom Mr DeSantis flew to Martha's Vineyard in a stunt meant to boost his eventual presidential run.

The pushback is muddled, however, both by President Joe Biden's attempts to seek rapprochement with Mr Maduro over petrol prices, and by a national party that seems more socialist-curious than communist-bashing. A survey from the Pew Research Centre, a public-opinion think-tank, conducted in August found that significantly more Democrats have a favourable impression of socialism than they do of capitalism—57% for the former, and 46% for the latter. Young Democrats, those under the age of 30, are twice as likely to have a positive impression of socialism as of capitalism.

When asked to compare the two systems, Democrats overall say that socialism does a better job than capitalism in giving all people an equal opportunity for success and providing basic needs such as housing and health care. Only 46% of partisans say that socialism restricts individual freedom; slightly more, 52%, say that capitalism impinges on individual liberty.

That reflects the fact that, in America, the word socialism is remarkably malleable. In Miami, it means something like "authoritarian", but is an all-purpose pejorative. Among Republicans, it is a synonym for out-of-touch and extreme (Senator Ted Cruz, a Republican from Texas, recently labelled the opposing party a bunch of "transgender, wacko socialists"). Among generic Democrats, it denotes the aspiration for something Scandinavian in style—welfare-statism without actually seizing the means of production—like the democratic socialism practised in Europe by most self-described socialist parties.

Confusingly though, the actual Democratic Socialists of America, an influential pressure group whose rose logo can be spotted in hipster-ish corners of Brooklyn and Washington, DC, aspire for a future of "popular control of resources and production, economic planning [and] equitable distribution". It is not a message tailored to win in Miami. ■

Taxing California

How high?

SAN FRANCISCO

Californians may raise taxes on the wealthy again to subsidise electric cars. What could go wrong?

GAVIN NEWSOM, California's Democratic governor, presents himself as an environmental champion, pushing for aggressive rules to reduce greenhouse-gas emissions and ban the sale of petrol-powered cars from 2035. So when Mr Newsom recently began appearing in television adverts encouraging voters to reject Proposition 30, a ballot initiative to increase taxes on the wealthy in order to fund electric-vehicle expansion, it turned heads. In the advert, Mr Newsom describes Prop 30 as "a Trojan horse that puts corporate welfare above the fiscal welfare of our entire state".

Proposition 30, which will appear on the ballot on November 8th, has a motley crew of critics. Whereas the state's Democratic Party and a couple of mayors have endorsed it, seeing this as a sensible way to raise funds to fight climate change, Mr Newsom has instead taken the side of the California Republican Party and California Teachers Association, the teachers' union, in opposing it. "There has never been a coalition like this," says David Crane of Govern for California, a good-governance group that opposes the bill.

The diverse opposition is especially striking because the ballot initiative sounds so innocuous. Prop 30 promises to raise taxes on those earning $2m a year or more by 1.75 percentage points, potentially generating $3.5bn-$5bn in additional state revenue a year. This would then be used to fund the roll-out of electric vehicles through tax rebates and charging stations. It would also provide more money for wildfire prevention. Why is the push to tax the rich in order to fight fires and carbon emissions so controversial?

Some of it has to do with how Prop 30 has been bankrolled. Its biggest backer is Lyft, a ride-hailing firm, which has spent around $35m to support the measure (and has already committed to moving all of its fleet to electric vehicles by 2030). Critics, including Mr Newsom, say that Prop 30 is a way of getting taxpayers to foot the bill for Lyft going green. (Uber, which is larger and better capitalised than Lyft, has neither funded nor endorsed Prop 30.) Starting in 2030, California will require 90% of miles travelled by drivers for ride-sharing firms to be in electric vehicles. Prop 30 would help pay for that transition by offering rebates to drivers to buy electric vehicles.

Lyft and tuck

It is not clear that this is necessary. California has already allocated $10bn to ease the transition to greener vehicles. The federal government's Inflation Reduction Act also contains more tax credits and other incentives to switch to electric cars. A further criticism is that the new tax money would bypass the state's "general fund", which pays for education, health care and other basic services, setting up competition for tax dollars between electric vehicles and Californians' many other needs. This explains why the mighty teachers' union has come out against it.

An immodest proposition

While Prop 30 might seem a niche issue, it is anything but. The fight over it exposes three larger issues facing the Golden State. The first is California's attempt to be a pioneer on environmental and climate issues by pursuing tougher policies on emissions than the rest of the country. The state's policies may be good for the rest of humanity, but the result is that petrol prices there are the highest in the country, running about 56% higher than the national average, because California requires a unique formulation of cleaner fuel that only a handful of refineries can produce.

Second, Prop 30 highlights the drawbacks of direct democracy. California allows citizens to bring forward ballot initiatives if they collect enough signatures to qualify for the ballot (equivalent to 5% of the number of people who voted for the governor, which this year is around 623,000 signatures). "We can have the best legislature in the world, and then some company can go around us and raise taxes," says Mr Crane. Ballot initiatives have taken big fiscal tolls on the state before. Prop 13, passed by voters in 1978, limits the amount by which a home can rise in taxable value each year, narrowing the state's tax base and making it reliant on volatile personal income tax receipts.

Third, Prop 30 also tests California's status as a home for innovators and entrepreneurs at a time when no-income-tax states like Texas and Florida are wooing new residents. California relies on personal income tax for around 59% of state tax revenue, compared with an average of 47% in the 41 states and Washington, DC, that collect personal income tax, according to the Tax Foundation, a think-tank.

One way to think about California's tax structure is as a bear balanced on a wine bottle. The state relies heavily on the support of a narrow group. In 2019 only 35,000 people earned $2m or more a year, with a total tax liability of $27bn, around 33% of the statewide total. Already California's top earners face the highest income-tax rate of any state, at 13.3%. Since 2009, the state has raised taxes on top earners twice.

Increasing the rate further could be risky. In 2020 California had a net outflow of 260,000 taxpayers, up nearly 58% from 2019 and representing about 1% of total state-income tax collections. "A depressing number of California's wealthiest have already left," says Michael Moritz, a venture-capitalist who opposes Prop 30. By Mr Moritz's calculation, around 20 Californian billionaires have moved out of the state recently, depriving it of around $15bn-20bn in lifetime taxes.

Since it needs a yes vote from a majority of Californian voters to pass, Prop 30's fate is also balanced precariously, as if on a wine bottle. So, some feel, is California's appeal for its wealthiest taxpayers. ■

Lexington | Frenemy mine

The blow-up with Saudi Arabia reveals America's new strategic weakness

"We are all Semites together," the Saudi minister for foreign affairs smoothly replied, after President Richard Nixon informed him that while his envoy, Henry Kissinger, was Jewish, "a Jewish-American can be a good American." Mr Kissinger was angry at the president but pleased the Saudi made no mention of oil during that meeting at the White House in October 1973, as the Arab-Israeli war raged. According to "The Prize", by Daniel Yergin, Mr Kissinger concluded the Arabs were unlikely to use oil as a weapon against America, despite its support for Israel. But within three days, Saudi Arabia had stopped shipping oil to the United States, and other Arab states were following suit.

Semites or not, American leaders seem fated to be blindsided by Saudi Arabia. They are unable even to resolve whether the Saudis misunderstand them in return or in fact understand them all too well. The latest source of American consternation is the decision earlier this month by OPEC+, a group of oil-producing countries led by Saudi Arabia and Russia, to cut production, ostensibly to prevent a drop in the price of oil. Joe Biden plans to "re-evaluate" the partnership, his aides say; he told CNN, "There's going to be consequences for what they've done with Russia."

The 80-year alliance between Saudi Arabia and America is not in imminent peril. Shared interests in security and stable energy prices will hold them together for now, as after the 9/11 attacks, when most of the terrorists proved to be Saudi. Yet this uproar is different, in part for reasons that expose an emerging, dangerous American vulnerability in world affairs.

Mr Biden promised in his campaign to treat Saudi Arabia like "the pariah that they are". By waging gruesome war in Yemen and, according to American intelligence, presiding over the dismemberment of a *Washington Post* columnist, Saudi Arabia's crown prince, Muhammad bin Salman, had heightened the contradictions in America's foreign policy past Mr Biden's breaking point. He wanted to put new emphasis on human rights and democracy.

Then the pandemic waned and the war in Ukraine began. Petrol prices surged. "Pariah" started to seem like too strong a word. After much debate within his administration, Mr Biden decided to travel to Saudi Arabia, where he fist-bumped the crown prince and then met with him.

There was a warning sign: Mr Biden later said he raised the murder of the journalist, Jamal Khashoggi. That provoked Saudi Arabia to starchily disclose that the prince responded by noting Americans' abuses of Iraqi prisoners at Abu Ghraib. Still, the relationship appeared to be back on track.

Then came the production cut and fears of a jump in oil prices that would benefit Russia and also upset American voters just before the midterms. "It was a slap in the face," says Representative Ro Khanna, a California Democrat. Mr Khanna has introduced a bill to stop arms sales to Saudi Arabia. Senator Dick Durbin of Illinois, the Democratic whip, has called for letting the Justice Department sue OPEC members for antitrust violations. As America grows self-sufficient in energy and impatient with its Middle Eastern entanglements, the alliance makes less sense on Capitol Hill. Mr Khanna notes the rising generation of Congressional leaders has little experience of Saudi Arabia as a reliable partner. The Saudis, he warns, are risking the relationship over the longer term.

Yet at the moment only Democrats seem to be upset with the Saudis. Republicans are upset at Mr Biden. The reason is that Saudi Arabia disclosed that the Biden administration had requested the cut be postponed for a month. Biden administration officials insisted they were asking the Saudis to wait to see if the price of oil would indeed fall. But a delay would also have averted the danger of a sharp price rise at the pump before voters went to the polls.

Representative Elise Stefanik of New York, the third-ranking House Republican, told the *New York Post* that seeking the delay was "a very egregious, inappropriate and illegal action by the president". She suggested Republicans may try to impeach him for it.

Democrats believe the Saudis are the ones playing politics, to return Republicans to power. Donald Trump made the first overseas visit of his presidency to Saudi Arabia and defended Prince Muhammad. ("I saved his ass," Mr Trump boasted to Bob Woodward of the *Washington Post*.) Mr Trump's son-in-law, Jared Kushner, struck up a prince-to-prince relationship with Prince Muhammad, and on leaving the White House secured a $2bn investment from the Saudis for his investment firm.

The American game

The Middle East has long been a spawning ground for conspiracy theories. America has become one, too. That does not mean the dark suspicions are wrong. Perhaps everyone is playing politics. Or perhaps, as is often the case in life, motives are so mixed that even the players themselves cannot disentangle them.

Prince Muhammad was more angered than mollified by Mr Biden's visit, the *Wall Street Journal* reported. But Saudi Arabia has complex interests of its own, and he may have viewed the production cut in the context not of American politics or of the Ukraine war but of his own expensive domestic investment programme.

What seems clear is that, whether Saudi Arabia is playing one political party off the other or not, it is becoming child's play to do so. If the adversary of one party can so easily become the other party's friend, America has developed a new strategic weakness, one that will ensure its future unreliability on the world stage.

As prime minister of Israel, Binyamin Netanyahu jeopardised bipartisan support for its objectives by campaigning against Barack Obama's nuclear deal with Iran. Mr Netanyahu got what he wanted from Mr Trump, only to see Mr Biden try to resurrect the deal. Endless head-snapping oscillation of that kind will be one price of a foreign policy captive to America's tribal politics. That is in the interests of no one, except democracy's real enemies. ■

Brazil

Missing the samba beat

RIO DE JANEIRO AND SÃO PAULO

The next president will face a big, tricky in-tray

HEMMED IN BY houses on one side and the Anchieta highway to the coast on the other, the Mercedes Benz factory in São Bernardo, a suburb of São Paulo, is the company's biggest assembly plant for trucks outside Germany. Founded in 1956, it is being modernised. As a result, it plans to almost halve its workforce of 7,400, mainly by outsourcing parts of its operations. For Mercedes, this is part of a global strategy. For São Bernardo, the heartland of Brazil's car industry, it is a body blow.

In 2019 Ford shut its factory, next door to Mercedes, with the loss of 2,700 jobs. Toyota has gone too. A decade ago the metalworkers union based in São Bernardo represented 108,000 members. Now that figure is 70,000, says Moisés Selerges, its president. "This government doesn't have a policy for industry," he laments of Jair Bolsonaro, Brazil's president. "Its policy is to cut down trees and plant soyabeans."

The union's woes illustrate one side of a dramatic shift in Brazil's economy. Manufacturing now accounts for just 10% of the country's GDP, down from 15% in 2004 and 26% in 1993. In contrast, revenues from agribusiness, broadly defined, now represent 28% of the economy, according to calculations by the University of São Paulo. That is a success story. Brazil has become the world's third-biggest exporter of agricultural products, behind the United States and the European Union, with shipments worth $125bn last year. Productivity in Brazilian agribusiness is growing at 3% a year, compared with 0.5% for services and zero for manufacturing, says Marcos Jank of Insper, a business school.

This structural shift has political, cultural and foreign-policy implications. But it is taking place in a context of overall decline, a diminished international profile and fierce political conflict exemplified by an ill-tempered presidential contest. The campaign will culminate in a run-off on October 30th between Mr Bolsonaro, a hard-right populist, and Luiz Inácio Lula da Silva of the leftist Workers' Party (PT).

→ Also in this section

28 Haiti's worsening condition

— Bello is away

When de-industrialisation began in the 1990s, it coincided with the opening and modernisation of the economy. Some of the factories that shut had been protected by tariffs and import prohibitions, and were inefficient. The Real Plan of 1993, which involved a new currency and fiscal reform, ended four decades of high inflation, the consequence of the distortions accumulated under "national developmentalism", the ugly jargon for a policy of state-promoted industrialisation. It gave a renewed boost to the economy. Poverty began to fall and income gaps to narrow.

Fernando Henrique Cardoso, the president from 1995 to 2003, liked to say that Brazil had found "a sense of direction" again. That progress continued under Lula, who governed from 2003 to 2011. By 2011 the country boasted the world's sixth-largest economy. He promoted Brazil on the world stage, symbolised by the country's playing host to the 2014 World Cup and the 2016 Olympics in Rio de Janeiro.

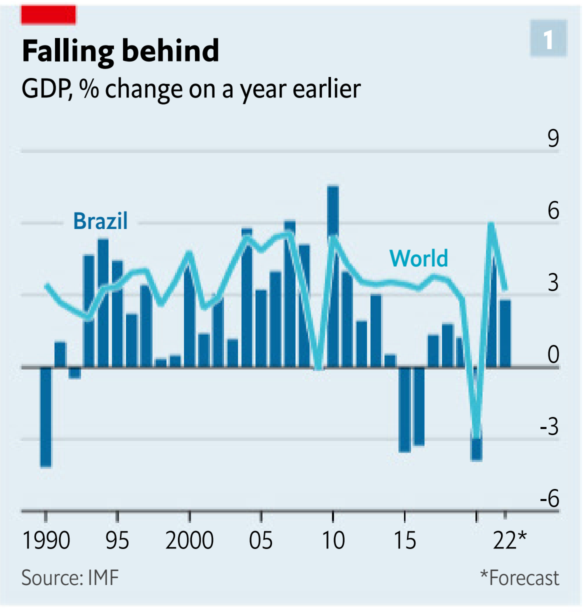
Some critics say the turning-point came in Lula's second term, when he gave up on reforming the economy and the pub- ▸▸

lic administration, preferring to expand the state and surf a commodity boom which included big, new offshore-oil discoveries. Others put their finger on the election of 2014, when Dilma Rousseff, Lula's chosen successor and a more dogmatic leftist, spent her way to a second term, only for the economy to slump a year later. Over the past ten years economic growth in Brazil has averaged just 0.3% a year, less than half the rate of population growth (see chart 1). Poverty is rising and income distribution is getting more uneven in an economy that is now just twelfth-biggest in the world. The rest of the economy is not providing alternatives for those well-paid jobs being lost in industry.

Brazil seems to have lost its way. Mr Bolsonaro is both a consequence and a further cause of all these changes. A core source of his support is in agribusiness. In the election's first round, he swept the centre-west and the states of São Paulo and Paraná, the heartlands of commercial farming. His culture war against the left is a symptom of a country divided against itself. *Sertanejo*, or Brazilian country music beloved of conservatives, is booming. Farmers have bought radio stations in São Paulo state and samba artists are now rarely aired, notes Miguel Lago, a political scientist.

Mr Bolsonaro and his economy minister, Paulo Guedes, claim to want to boost the economy by shrinking the state. But they did relatively little of this beyond partly privatising electricity generation and allowing private investment in water and sewerage. Their manifesto for a second term includes more privatisation, an attack on bureaucracy and pledging investment to digitise public administration.

Lula in some ways represents the older, industrial Brazil. He first came to prominence during a military government in the late-1970s as a strike leader of the São Bernardo union. But he, too, has become a divisive figure, adored by poorer Brazilians as a symbol of social justice and abhorred by others for the large-scale corruption that flourished under the PT's rule. He was himself convicted of corruption, and spent 19 months in jail, before his sentence was annulled by the Supreme Court in 2019.



There are signs that Lula knows that there can be no return to "national developmentalism". Ms Rousseff's attempt to revive it, by raising tariffs and coddling private-sector "national champions", merely accelerated de-industrialisation. Lula has opposed privatisations. But he would not reverse them. He "is not talking about making the state bigger but improving its quality", says Gabriel Galípolo, an economist who is advising him. A Lula government would promote private investment in infrastructure, says Mr Galípolo.

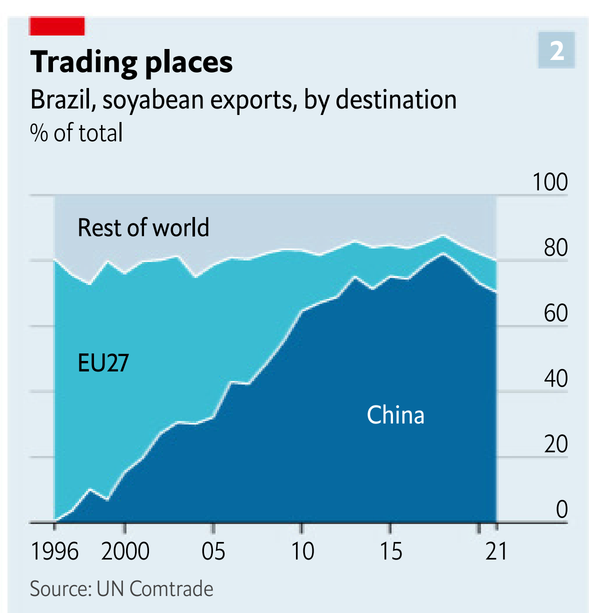
Brazil is "big enough to have everything", including manufacturing, argues Arminio Fraga, who ran the Central Bank under Mr Cardoso. But getting back on a track of faster growth with a changed economic structure requires reforms. Three things stand out: education and training, reform of the state and the budget, and better environmental policy.

For the first 160 years or so of its life as an independent country Brazil neglected education. In 1980 the average worker had less than four years of schooling. That period had more than doubled, to 9.3 years, by 2018, according to the statistics institute. But quality remains a problem. In the PISA standardised international tests in 2018 Brazil ranked 66th out of 77 countries. Brazilian 15-year-olds lagged behind on reading, science and especially maths. Improvement seems to have stopped in 2009.

Mr Bolsonaro handed the education ministry over to people linked to evangelical Protestant churches, another core part of his support base. They have been more interested in incorporating conservative values in the curriculum than in improving quality, and have cut budgets. The president also scorns science, as his denial of the gravity of covid-19 and of climate change have highlighted. Similarly, vocational training has been neglected. There is a shortage of places, and courses tend to be geared to an industrial economy.

A more diverse economy needs a more agile government. "The Brazilian state is profoundly incompetent," notes André Lara Resende, an economist who previously served in Mr Cardoso's government. Administrative reform has been a pending assignment since those days. So, too, is tax reform. Mr Selerges, the union president, complains that manufacturing is more heavily taxed than are services.

The state's problems are partly fiscal. Public spending is close to 40% of GDP. That is a similar share to that in many rich countries, but Brazilians get far poorer services and overall the state does little for the poor. Almost 80% of spending goes on payroll and pensions, compared with less than 60% in most countries, notes Mr Fraga.



Public investment is just 2% of GDP. In 2016 Michel Temer, an interim president, introduced a rigid cap on spending. Both Lula and Mr Bolsonaro want to scrap it (indeed, in practice, the president already has). Investors will expect the new government to come up with a new fiscal rule to replace it. Mr Bolsonaro yielded control over much discretionary spending to Congress. Clawing back government control over the budget will involve a tough political fight.

Breadbasket blues

Under Mr Bolsonaro, Brazil has attracted international obloquy because of his gleeful destruction of the Amazon rainforest. Ricardo Salles, his environment minister until last year, dismantled the agencies responsible for enforcing the laws against deforestation. Lula has said he would reinstate his environmental policy, under which deforestation slowed.

Even Mr Bolsonaro, and his new minister, now seem to accept the need for more control. So do many in agribusiness. Because of China's growing appetite for soya, the European Union takes only 16% of Brazil's farm exports, compared with 41% in 2000 (see chart 2). "The big incentive for better environmental policy isn't trade. It is reputation and the attraction of investment," says Mr Jank.

Brazil still has great strengths. Its abundant food and energy are wanted by the world. Its government mainly borrows from local investors, and not in foreign currency. Its fiscal situation is less dire than Argentina's, for example. "Under every government for the past 25 years we have taken at least one step in the right direction," says Carlos Simonsen Leal, the president of Fundação Getulio Vargas, a university. But there have been false steps as well. If Mr Bolsonaro wins and continues to practise the politics of confrontation, Brazil will continue to drift. Lula has a rare chance for personal redemption. The question is whether he would use it to carry out the reforms Brazil needs to become a successful 21st-century economy. ■

Haiti

A modern inferno

PORT-AU-PRINCE

Cholera, hunger and gang violence are plaguing Haiti

Few countries have experienced as much foreign meddling as Haiti. After winning independence from France in 1804, it lived through a two-decades long occupation by the United States. Since 1994 the United Nations has sent forces to the country twice. After an earthquake in 2010 aid organisations flocked there. Now another intervention seems imminent. On October 19th the United Nations was due to vote on two resolutions backed by the United States and Mexico to send a force into the country and to impose sanctions on gang members. The vote was delayed, but expected imminently.

The proposals followed a request made 12 days earlier by Ariel Henry, the Haitian prime minister, for foreign help. The force may involve armed troops, to try to break the grip that gangs have on the country. They have cut off fuel and blocked humanitarian aid. But President Joe Biden's administration appears unwilling to send its own people. Speaking at the UN on October 17th, America's representative to the UN spoke of "a partner country" sending a "limited, carefully scoped, non-UN mission". The targets of the second UN resolution, on sanctions, would include Jimmy Chérizier, known as "Barbecue", the head of the G9 coalition, the most powerful criminal group in the country. He and others involved with gangs will have their assets frozen, and will face a travel ban and an arms embargo.

Foreign boots are controversial. The most recent UN mission, from 2004 to 2017, did make Haiti safer. But peacekeepers also inadvertently introduced cholera to the country, which killed nearly 10,000 people. Some sexually abused girls. But today even some Haitians, notoriously anti-intervention, would welcome outside help. "Depending on the objective, this could be a good thing," says Jean Robinson Pierre-Louis, an artist and English teacher. There is no other way out, reckons Robenson Dormezil, a construction worker. "To come out of the crisis, a foreign force is necessary. Unfortunately the police are under-equipped," he says.

Haiti's 11.5m people have long struggled with poverty and insecurity, which covid-19 only worsened. But the situation has deteriorated rapidly since the assassination of Jovenel Moïse, who was then president, in July last year. Gangs have proliferated. They find plenty of recruits among young men with no job or prospect of one, and they easily outgun the police. The number of murders has doubled since 2017. The UN has documented gang rapes of children aged as young as ten and of elderly women. The usually bustling streets of Port-au-Prince, the capital, are quiet, and eerily empty after 7pm.

The current crisis was sparked when Mr Henry ended fuel subsidies in September, as his government could no longer afford them (they cost $400m, or a quarter of government expenditure). Young Haitians, frustrated by the lack of work and rising prices, took to the streets. The G9 coalition dug trenches to block access to the country's largest fuel terminal, where it says it will stay until subsidies are reinstated.

As a result, fuel has run out. Schools have not reopened after the summer holidays. Only three ambulances are working in Port-au-Prince. The UN reckons a record 4.7m Haitians do not have enough to eat. An outbreak of cholera—for the first time in three years—has already killed at least 22 people. For the past month the building site where Mr Dormezil works has been shut because of the insecurity and lack of cement. He eats barely once a day.

A domestic political solution seems unlikely. The country has had no parliament, no president and no elections since Mr Moïse's death. He ruled by decree for much of his time in power from 2017. Mr Henry has an even weaker democratic mandate and little support. But it would be tricky to hold elections in Haiti in its current state. Mr Henry has dismissed a plan proposed by a group of respected civil-society figures, known as the Montana Accord. It proposed a two-year transition period, with an interim president and prime minister, before any new elections are called.

Mr Biden's government was slow to act, says Robert Maguire of George Washington University in Washington. Its main concern is the rising number of migrants. Some 50,000 were apprehended in the United States between September last year and this August, 12 times as many people as the same period two years ago. The administration has backed Mr Henry, largely ignored those behind the Montana Accord and has failed to appoint a special envoy to Haiti. "People in power who are involved in massive human-rights violations...are the interlocutors for the international community," argues Rosy Auguste Ducena, a Haitian human-rights lawyer.

American attitudes are starting to change. Earlier this month the United States sent a coastguard vessel to patrol Haitian waters (though it is unclear what it will do, other than deter migrants). On October 15th the United States and Canada delivered armoured vehicles to the Haitian police. Mr Biden's administration also says it will increase its training and equipping of the Haitian police and block visas for Haitian officials and people involved in funding or supporting gangs.

At the UN, China or Russia are likely to veto the proposals. And not all Haitians are keen. The group behind the Montana Accord are against foreign troops. Some Haitians have taken to the streets to protest at the idea. Yet such is the chaos and desperation that many reckon some form of armed intervention is necessary. Without it, a dire situation is likely to worsen. ■

Searching for sustenance

North Korea

Tactical advantage

SEOUL

Kim Jong Un is strengthening his nuclear deterrent and diversifying his array of threats

NORTH KOREANS looking skyward on October 8th would have seen some 150 fighter jets thundering overhead, and perhaps for a moment feared the worst. But they are more likely to have shrugged it off as yet another demonstration of their country's military prowess, returning to the more pressing matter of finding enough food to keep their families alive.

Such is the frequency with which North Korea has held drills and tests this year (see chart on next page) that shows of strength have become routine. It kicked off the year with an unprecedented number of launches. These included both tests of "hypersonic" missiles designed to evade detection and its first intermediate-range ballistic missile (IRBM) and intercontinental ballistic missile (ICBM) tests since 2017.

It has kept up the pace. In the past month North Korea has launched more than a dozen missiles. On September 25th it launched one from a platform submerged under a lake, later claiming that it is developing underwater launch silos. On October 4th it tested another IRBM, which flew over Japan and covered more than 4,500km, the farthest a North Korean missile has been known to go. And on October 18th it fired hundreds of shells off its coasts in a "grave warning" to the South.

Earlier in the year generals were testing new technology. But the tests of the past month are different. They had some novel elements, but mostly they have involved weapons already known to work. This suggests North Korea is evaluating its combat-readiness, says Jenny Town of the Stimson Centre, a think-tank in Washington.

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The North says it is merely doing the same as South Korea and America, which held their first full-scale joint exercises in five years over the summer. But a report on October 10th in *Rodong Sinmun*, North Korea's paper of record, offered a better explanation. Not only was Kim Jong Un, the dictator, present at the latest tests, giving them a higher profile than the earlier technical trials, but, it said, their purpose was to simulate the use in warlike scenarios of tactical nuclear weapons, referring to low-yield warheads meant for battlefield use rather than annihilating entire cities.

South Korean spooks believe the North is preparing for a nuclear test—its seventh—which could come within the next few weeks, perhaps before America's mid-term elections on November 8th. South Korea's deputy defence minister suggested that there might be multiple tests. After nuclear warheads and the ICBMs necessary to deliver them to the American mainland, tactical weapons represent the next stage in North Korea's nuclear deterrent, which Mr Kim sees as his insurance policy against foreign interference. An arsenal of smaller weapons would help to counter the threat posed by South Korea's armed forces.

That is a significant sharpening of what Mr Kim calls his "treasured sword" of nuclear weapons. By showing off a range of delivery methods, a variety of test sites and advances in smaller warheads, he is signal-

ling that his nuclear programme is so diverse and well-developed that his enemies cannot be sure to eliminate it with preemptive action. Only one nuke would have to survive to give him the potential to cause unthinkable damage. Last month Mr Kim made clear that a nuclear strike could be triggered "automatically" under certain conditions, including his own assassination. Any move against him, in other words, would be disastrous for everyone.

America and South Korea's response has been to stress their "ironclad" alliance and threaten annihilation if the North tries any funny business. On October 5th America briefly deployed an aircraft-carrier to the waters east of the peninsula. South Korea test-fired missiles of its own, scrambled jets and fired artillery in like-for-like drills. Both countries imposed new unilateral sanctions on North Korean individuals and organisations accused of aiding North Korean weapons development.

Accompanying the displays of economic, rhetorical and literal firepower was the standard offer of talks. This month America restated its willingness to sit down "without preconditions" and expressed a desire to "transition from an era of provocation to an era of pragmatic engagement".

Yet sticking to a playbook that has failed for decades is a questionable strategy. The defence capabilities of America and South Korea are robust enough to repel an attack, says Jo Bee-yun of the Korea Institute for Defence Analyses, a think-tank in Seoul. But it is not clear that the allies are credibly communicating that "nuclear coercion or nuclear blackmail will not succeed". They must adapt to the new threat posed by tactical nuclear weapons, she adds.

Yoon Suk-yeol, South Korea's president, has also stuck to his old line, arguing that North Korea has "nothing to gain from nuclear weapons". Yet it is clear that Mr Kim does not see things that way. Nuclear weapons bolster his security, give him more leverage and help him build up the stock of chips he could bargain away for concessions. If talks were indeed to happen, the later the better for Mr Kim, so he can continue to work on his weapons.

Moreover, America's offer of unconditional talks comes with one big condition: that the eventual aim of negotiations is denuclearisation. Mr Kim has been very clear that the country's nuclear status is "irreversible", even going so far as to codify this long-standing policy in law in September. As long as America insists that he gives up his nukes, he has no interest in talking about anything.

North Korean weapons tests are "especially concerning because we don't have a plan for how to de-escalate", says Ms Town. The longer America and South Korea content themselves with ineffective bluster, the stronger North Korea gets. That will only make Mr Kim more confident that he can resist more pressure—and heighten the risk of miscalculation. ■

Test patterns

North Korea, confirmed missiles launched* under Kim Jong Un

*Capable of delivering a payload of at least 500kg over a distance of at least 300km †To October 19th

Source: Nuclear Threat Initiative

The Philippines

Recusal of service

MANILA

A drug bust involving the justice minister's son causes headaches all round

THE PHILIPPINE Drug Enforcement Agency is usually quick to crow about its more notable drug busts. But it was struck dumb when its agents arrested Juanito Remulla on October 11th and seized 894 grams, or $22,000-worth, of extra-strong cannabis that they suspect him of importing. That is because the most notable aspect of the bust was that the 38-year-old suspect is the eldest son of Jesus Crispin "Boying" Remulla, the justice minister (pictured), who is ultimately responsible for prosecuting such crimes.

When the agency did eventually announce the arrest on October 13th, the minister promised to let justice take its course, issuing a handwritten statement acknowledging that his duty would override his paternal instincts. Yet by staying in post, he failed to quash any lingering doubt about his impartiality. Ferdinand "Bongbong" Marcos, the president, endorsed his decision to stay on. That may turn out to be a miscalculation.

For Mr Remulla senior, the problem is that only his son's eventual conviction on all charges would convince sceptics that prosecutors had not granted him favourable treatment. Yet that would entail a grim fate: punishments for drug offences in the Philippines are harsh, even when the drug in question is cannabis, which is much less harmful than the country's most popular narcotic, methamphetamine, locally known as *shabu*. Mr Remulla junior faces life imprisonment if found guilty.

The case has broader implications too. Rodrigo Duterte, Mr Marcos's predecessor as president, oversaw a bloody campaign to wipe out the *shabu* trade, which resulted in the extrajudicial killing of more than 6,250 suspects during his six years in office, according to the official count. The Philippine government, under both Mr Duterte and Mr Marcos, has resisted efforts by the International Criminal Court to investigate the opening stages of the country's war on drugs. The government argues that its own legal system in general, and the justice ministry in particular, can be trusted to prosecute impartially and punish any wrongdoing. Letting the younger Mr Remulla off lightly would weaken that argument. The president and his justice minister are inclined to protect Mr Duterte because his daughter, Sara Duterte, is Mr Marcos's ally and deputy.

The affair also reflects badly on Mr Marcos, who is trying to rehabilitate the reputation of his family, which was ruined by the violence and corruption of the regime presided over by his dictator father, also called Ferdinand Marcos, until a popular uprising drove him into exile in 1986. The trial of Mr Remulla junior may well have implications for the reputations of all three political families. ■

Duty comes first

Pakistani politics

One-man party

ISLAMABAD

Imran Khan appears to be more popular than ever

IT'S ALWAYS election season in Pakistan. The country has been holding by-elections every couple of months ever since 131 lawmakers from the Pakistan Tehreek-e-Insaf (PTI) party resigned en masse in April, when their leader, Imran Khan, was ousted as prime minister in a vote of no confidence. Yet the latest round of polls on October 16th, with eight parliamentary seats up for grabs, was unlike any other: seven featured the same PTI candidate, Mr Khan himself, who painted it as a referendum on his popularity. He won six.

Mr Khan has made his point. When he was forced out by a coalition of opposition parties with the blessing of the army, which runs things behind the scenes, it seemed as though Mr Khan's political career was over. But instead of going quietly, he took to the streets and held rallies in which he alleged, without evidence, that America and the opposition had conspired to topple him because he refused to give in to their foreign-policy demands. His supporters find this a perfectly reasonable argument and turn out in huge numbers at his events. Mr Khan has spent the past several months demanding early elections (the next one is due by November 2023). He is now threatening to march with his supporters on Islamabad, the capital, to force the government into holding one.

That is a recipe for more political instability in an already crisis-ridden country. The big worry is that his threatened march will force a showdown on the streets of the capital. Still, it will not easily translate into getting him his election. It is the prerogative of the prime minister, Shehbaz Sharif, to dissolve the House. He is adamant that parliament will complete its term, hoping that this will allow his ruling Pakistan Democratic Movement alliance to stabilise the economy with the help of an IMF programme that Mr Khan sabotaged on his way out of office by announcing extravagant fuel subsidies.

The task is daunting. Mr Sharif has just replaced his finance minister of barely five months in an attempt to tackle soaring inflation, which remains at more than 20% year on year. The cost of damage from devastating floods over the summer has been estimated at $32bn-40bn. The World Bank reckons that the poverty rate could rise by up to 4 percentage points—an additional 9m people—in the coming months. The government is seeking to reschedule

Power to the person

$27bn in debt, much of it owed to China, which tends to dislike restructuring loans. The risk of sovereign default has receded in the past few months, but it has not entirely disappeared. Meanwhile high global prices for natural gas threaten an energy shortage come the winter.

To soldier on amid those challenges and continuous meddling from Mr Khan, the government is pursuing a plethora of strategies. It has wielded the law against Mr Khan, forcing him to defend himself in various cases that have the potential to disqualify him from electoral politics. Another ace up Mr Sharif's sleeve is the appointment of a new army chief in late November—a position of enormous power in a country where the armed forces make or break governments. Indeed, Mr Khan lost his job as prime minister in part because he fell out with the incumbent, General Qamar Javed Bajwa.

Secret recordings of conversations in the prime minister's office, many from Mr Khan's term, have surfaced online. The leaks appear to be aimed at discrediting Mr Khan and debunking his claim that there was an American-led conspiracy to topple him. The government has ordered an inquiry but is conspicuously unmoved by the breach, which also revealed conversations involving Mr Sharif. Mr Khan, for his part, claims that the government will release forged "dirty videos" to try to damage him.

Mr Khan has vowed to give Mr Sharif only a few more days to call elections. The interior minister has warned that the government will "hang [Mr Khan] upside down if he takes his long march into Islamabad". President Joe Biden recently said that Pakistan is "maybe one of the most dangerous nations in the world" as it has "nuclear weapons without any cohesion". Pakistan's warring politicians seem to be trying their best to prove him right. ■

New Zealand

Getting real

WELLINGTON

Jacinda Ardern's government has got tougher on China. But will that last?

TO HAVE ONE politician accused of spying for a foreign government may be regarded as misfortune. But to have two is certainly carelessness. In 2017 Yang Jian, a Chinese-born member of New Zealand's National Party, was revealed to have worked for more than a decade in Chinese military-training centres. He admitted to teaching spies (though not to being one) yet remained in his Kiwi job until 2020, when he retired. Days later, a second Chinese-born MP, Raymond Huo of the Labour government, said he was leaving politics. He too was accused of having links to China's Communist Party. New Zealand's intelligence agencies had prodded both parties to remove the men.

Snooping is just one way that China attempts to influence New Zealand's democracy. Donors linked to China's government have given money to both its big parties. Chinese companies have hired outgoing Kiwi politicians. All this has earned New Zealand a reputation for being weak on China and security. A report published by Canadian intelligence in 2018 called it "the soft underbelly" of Five Eyes, an intelligence-sharing pact among those two countries and America, Australia and Britain.

China accounts for about 30% of Kiwi exports, including lots of dairy and meat products. With just 5m people, New Zealand worries about being clobbered with trade bans like those inflicted on Australia. Unlike its bigger neighbour, which proved resilient to China's measures, it does not have piles of iron ore to protect its economy against coercion, officials reason.

Yet the country has lately been toughening up to its biggest trading partner. In recent years, Jacinda Ardern's Labour government has changed a slew of laws and policies, reflecting "a more clear-eyed view of the challenges that China presents", as David Capie of Victoria University of Wellington puts it. That includes blocking Huawei, a Chinese telecoms giant, from involvement in New Zealand's 5G network, and strengthening foreign-investment rules to include a "national-interest assessment" (meaning that deals can be knocked back if they are deemed a threat). Foreign political donations have been banned. The government plans further changes to the electoral act, to make the identities of more donors public.

In its region, New Zealand has boosted its diplomatic engagement with Pacific is- ▸▸

land states, which China is wooing. At home, it is trying to beef up its defences. Signals-intelligence capabilities have been roughly doubled, says Andrew Little, the minister responsible for its intelligence agencies. A defence review is under way in response to what planners now call "challenges of a scope and magnitude not previously seen in our neighbourhood".

New Zealand used to be timid about overt criticism. But over the past couple of years it has joined in more than 20 international statements criticising China's actions in Hong Kong, Xinjiang and elsewhere, points out Anne-Marie Brady, of the University of Canterbury, who researches Chinese interference. "The thinking has changed drastically within the government since 2018," she says. In public, New Zealand still talks up its trading relationship with China. In private, it is encouraging exporters to diversify into other markets. The firmer line does not go down well with China. Its embassy in Wellington warns that "misguided accusations" could throw the relationship off course.

China-watchers in New Zealand wonder whether this more assertive stance will last. An election is due next year. The National Party, if it won, might take a more timid line, emphasising business over security. John Key, a former National prime minister, says he does not see China "as the aggressor that everybody else sees" and warns against "inflammatory language". The party would not hesitate to raise its concerns, claims its foreign-affairs spokesman, Gerry Brownlee (who was recently criticised for saying that China was "dealing with a terrorist problem" in Xinjiang). But "let's not create an enemy where an enemy might not exist." ■

Banyan Tightrope act

Central Asian countries are subtly distancing themselves from Russia

On city streets, say visitors to Almaty in Kazakhstan, to Bishkek in Kyrgyzstan and to Tashkent in Uzbekistan, a change in the ethnic mix makes it feel surreally as if the Soviet Union has been reconstituted. Since Russia's president, Vladimir Putin, invaded Ukraine in February, huge numbers of Russians have fled, many ending up in the former Soviet states of Central Asia.

The early incomers were professionals and protesters: liberal types who quickly understood the nature of the catastrophe Mr Putin had wrought upon his own country as well as upon Ukraine. More recently have come draft-dodgers. Mr Putin announced a mobilisation of more than 300,000 Russian men last month. Since then, at least 100,000 have fled to these three countries alone.

At the apogee of the Soviet Union, ethnic Russians, who made up a big chunk of Central Asia's urban population, were the imperial overlords. Even since independence, citizens of Central Asian states coming as migrant workers to Russia have suffered discrimination, been the butt of casual racism and condemned to the most menial jobs. The boot is now on the other foot, but Central Asians are declining to employ it against the Russian posterior. Many Russians declare amazement at the welcome given to them (though tensions are now rising as some of the newcomers default to their usual arrogance).

The warmth between ordinary people is the flip side of strained official relations between Central Asia and Mr Putin. The region's leaders are appalled at his violence towards Ukraine. It has, says Kate Mallinson of Prism Political Risk Management in London, laid out in plain sight Russia's unreconstructed imperial impulse, with clear risks for Central Asia.

The region's governments have refused to endorse either the invasion or Russia's annexation of eastern Ukrainian provinces. They will not return draft-dodgers. And even though in January, under the terms of a mutual-security pact, Mr Putin sent troops to Kazakhstan to help counter an attempted putsch, no debt of gratitude exists. The idea that Kazakhstan should "eternally serve and bow down at the feet of Russia" is "far from reality", Kassym-Zhomart Tokayev, the president, told Russian television.

The protocols and body language of meetings between Mr Putin and Central Asian leaders are also revealing. At a gathering last month in Uzbekistan, the Russian president, notorious for keeping world leaders waiting, stood twiddling his thumbs for President Sadyr Japarov of Kyrgyzstan, a small, poor country where Russia is used to calling the shots. At a Russia-Central Asia summit hosted by Kazakhstan last week, Mr Tokayev conspicuously failed to have a one-on-one meeting with Mr Putin.

Cumulatively, these signs and slights point to Russia's waning influence in Central Asia. But make no mistake: this is no break. Historical ties between the countries run deep. Central Asian elites are intertwined with those of Russia. Older members grew up in the Soviet Union. Younger ones are at home clubbing in Moscow. Economic ties are crucial. Central Asia relies on remittances from migrant workers in Russia, as well as imports of sugar and wheat. One of the world's biggest pipelines carries most of Kazakhstan's oil to a Russian port on the Black Sea. Russia employs the ability to close it at will. Its security services remain powerful in the region.

And there is no escaping geography. Kazakhstan's 7,644km border (4,750-mile) with Russia is second in length only to Canada's with America. Towns with big populations of ethnic Russians on Kazakhstan's side offer plenty of scope for Mr Putin to stir up trouble by playing on ethnic grievances, as he did for years in eastern Ukraine.

Yet even diminished influence, way short of a break, still creates a vacuum. It is being filled in part by China. Kazakhstan, Kyrgyzstan and Uzbekistan are also keen to move closer to Turkey and the West—all part of what Kazakhstan calls a "multi-vector" approach to balance between competing powers. For now, the region is just about managing its high-wire act with Russia. On the other hand, concern is growing that Mr Putin will further escalate his war in Ukraine with greater targeting of civilians or, worst of all, the use of nuclear weapons. Nargis Kassenova of Harvard University argues that would cross a line for Central Asia's leaders—Kazakhstan, for instance, has nuclear disarmament at the core of its foreign policy. A perilous rupture would then surely follow.

Succession planning

Heir unapparent

The longer Xi Jinping clings to power, the harder it will be to engineer an orderly transition

The emperor Qin Shi Huang is celebrated for unifying China, starting its Great Wall and building himself a vast mausoleum, guarded by an army of terracotta warriors. Less widely known is what happened after he died in 210BC on a tour of eastern China. According to the historian Sima Qian, aides concealed the death until the imperial entourage reached the capital, in order to stop his eldest son and heir from taking power. They had food sent to the royal carriage and handled business from there as before. Carts of fish were placed nearby to mask the corpse's stench. The ruse paid off at first. The eldest son committed suicide and a younger one, backed by the scheming aides, took the throne. But he proved weak. Within four years he was dead and the Qin dynasty collapsed.

Imperial Chinese history is littered with succession sagas tainted by bloodshed and skulduggery. Communist China was not much better for its first six decades. When Hu Jintao handed power to Xi Jinping in 2012 after ten years in office, it was the first complete, orderly leadership transition since the revolution in 1949. A decade later, however, Mr Xi is set to be granted a third five-year term—breaching the norms Mr Hu helped to establish—after the Communist Party's congress ends on October 22nd. And with no end to the Xi era in sight, China is once again confronting questions that have plagued its history.

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How does an all-powerful leader retire? And what happens if one suddenly dies or is incapacitated?

China's succession norms were admittedly flimsy and mostly unwritten. Deng Xiaoping, who took power in 1978, introduced them to protect against Mao-era despotism and Soviet-style gerontocracy. That did not stop him from wielding huge power almost until his death in 1997, aged 92. His successor, Jiang Zemin, also meddled in politics long after retiring. Some see 2012 as an anomaly. Yet the partial institutionalisation of succession, combined with collective leadership, provided enough stability to underpin an extraordinary economic expansion. With the shift back to one-man rule, some scholars now foresee succession problems common to other modern-day autocracies—as well as China's own emperors.

Among such scholars is Erica Frantz at Michigan State University, who has compiled and analysed data on 301 authoritarian regimes from 1946 to 2020. She and her colleagues conclude that as autocrats concentrate power in their own hands, they tend to extend their own tenure—often considering themselves indispensable and fearing elite recriminations if they retire. But that often comes at the expense of the regime they represent. "These choices that Xi Jinping is making are positive for him in the short term, but in terms of the longer ▸▸

time horizon, they are elevating the risk that the regime will see instability and perhaps an earlier collapse," says Ms Frantz.

One way for authoritarian regimes to enhance their resilience is to establish rigid term limits. The best example is Mexico's Institutional Revolutionary Party, which enforced a one-term cap on the presidency while in power from 1929 to 2000. That is rare, though. Another way is to designate a successor, clearly and early. But autocrats other than monarchs often avoid that, even when old or sick. Some fear the elite will reject their choice, as when Zimbabwe's Robert Mugabe tried to hand power to his wife in 2017. Others worry that the anointed heir will try to seize power prematurely, as Mao's second one, Lin Biao, was accused of doing in 1971.

Another concern for autocrats is that designating a successor implies an intention to step down imminently, limiting their options and undermining their authority. That is a more likely rationale for Mr Xi, who did not elevate a potential heir to the Politburo Standing Committee—the top leadership body—at the previous congress, as earlier norms required. Two or more next-generation Chinese leaders might be on the new Standing Committee to be unveiled on October 23rd. But none is considered a successor and Mr Xi, now 69, is widely thought to be planning another ten years in power, if not longer.

Although that may foster stability by clearly signalling Mr Xi's intent, it also increases the risk that he dies or becomes seriously ill while in office. Democracies can obviously face such problems too: America's current president is 79. Unlike America, though, China has no clear line of succession or procedures for filling unplanned leadership vacancies. An autocrat's sudden death or incapacitation seldom leads to regime collapse in the short term. The elite usually coalesces around a replacement to protect its own interests. But it can cause infighting. A bitter power struggle erupted in China even before Mao's death in 1976. Ill health, often concealed from the public, can also cause the kind of paralysis that plagued the Kremlin under its hospital-bound leaders Yuri Andropov and Konstantin Chernenko.

Mr Xi appears in fine enough fettle. But as a portly former smoker who was a local official in a period when regular banqueting and heavy drinking were *de rigueur*, he would be lucky to have avoided some associated ailments. And there have been occasional rumours of ill health, especially after he appeared to walk with a slight limp on a visit to Europe in 2019. The speech he gave at the congress on October 16th was about 90 minutes shorter than his three-and-a-half-hour marathon in 2017. Among the retired leaders on stage (many of whom now forgo the black hair dye they used in office), a white-haired Mr Hu (79) appeared markedly more frail than at past appearances—a reminder of how mortality could catch up with Mr Xi over the next decade.

If Mr Xi's health endures, there is still time for him to identify one or more potential successors, possibly at the next congress in 2027 or the one after. But whoever replaces him will inevitably struggle to match his authority, especially if nominated relatively late. That is one reason why Nicolás Maduro, Venezuela's president, has had trouble filling the shoes of Hugo Chávez, who named him as successor just three months before dying in 2013. China's next leader will face an elite dominated by Xi loyalists and highly invested in the status quo—with no clear norms for how long to stay in power. "There will be power fragmentation and struggle after Xi's rule," predicts Yang Zhang of American University in Washington. "Without basic rules, succession means struggle. It's just about when, and who will be involved."

Research on China's emperors reaches some similar conclusions. Yuhua Wang of Harvard University has compiled data on 282 emperors across 49 dynasties. He found that dynasties lasted for 70 years on average and the most common cause of collapse was elite rebellion. About half of all emperors died naturally. But identifying a successor made an emperor 64% less likely to be deposed. And their chances of dying naturally and preserving their dynasty increased further if they appointed an heir within five years of taking power—a similar timescale to the succession norms that Mr Xi is dismantling.

Mr Xi may not have crunched the data in the same way. But he displays an avid interest in China's imperial past, frequently quoting from historical texts. Mao, whom Mr Xi emulates in so many ways, was also a fan of China's ancient history. He often referred to the "Zizhi Tongjian", a chronicle published in 1084 that recounts the lessons learned from previous Chinese emperors. That did not help him engineer a smooth succession. Of his heirs, one died in prison, another was killed in a plane crash after a failed coup attempt, and the last was toppled after just two years in power. Perhaps Mr Xi will fare better. But the longer he clings to power, history suggests, the harder that becomes. ■

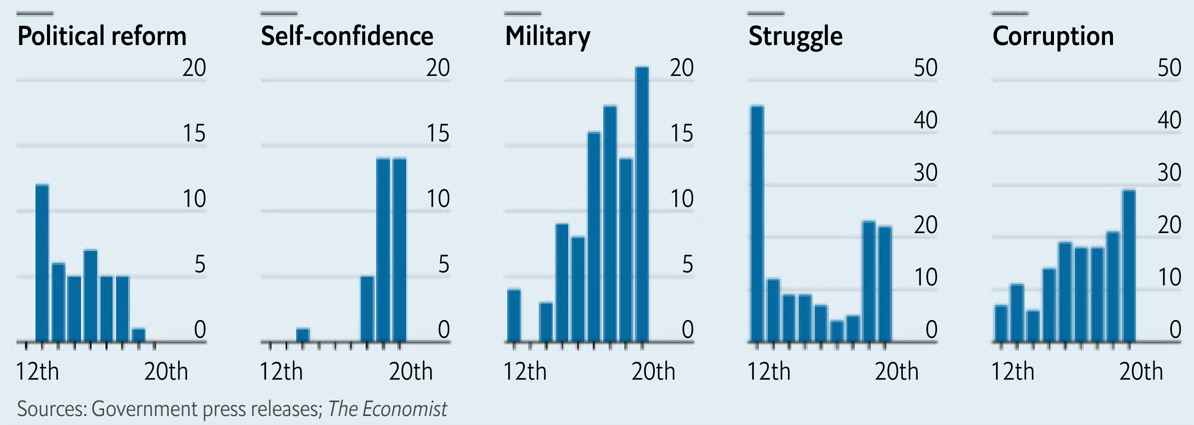
Political phraseology

Xi's word counts

In his reports to party congresses, even Xi Jinping signals change subtly

Chinese Communist Party congresses are rarely occasions for dramatic policy announcements. To show consistency in the party's line, leaders submit reports that mostly praise the party's achievements and restate broad goals, using familiar phrases. At the start of the party's 20th congress on October 16th, Xi Jinping stuck to convention. He did indulge in a small change of format, offering relief to the nearly 2,300 delegates in Beijing's Great Hall of the People by reading an abridged version. Still, in his plodding delivery, it took nearly two hours.

But as the party's 97m members will be reminded during endless study sessions in the weeks ahead, these reports are important. Mr Xi's was the product of nearly a year of work, involving research by more than 50 institutions and feedback from



thousands of people. Cadres ignore at their peril any linguistic tweaks, changes of emphasis, new terms or omissions. The full version of this latest report contained about 30,000 characters (around 25,000 words in the official English translation). They will be pored over carefully.

Readers may notice how certain words have been gaining in frequency of use from congress to congress (the events are five years apart). Some of these reflect Mr Xi's view of an unsettled world: "drastic changes in the international landscape, especially external attempts to blackmail, contain, blockade and exert maximum pressure on China", as his report put it.

One such word is *anquan* (security). It appears 91 times in the document, compared with 35 in the farewell report delivered by Mr Xi's predecessor, Hu Jintao, in 2012 (Mr Xi took over after that year's congress). Another rise has been in uses of the word *junshi* (military). There were 21 this time. In 1982, at the first congress of the Deng Xiaoping era, there were just four (see chart on previous page). The word *douzheng* (struggle or fight) appears 22 times in the latest report. "We have shown a fighting spirit and a firm determination to never yield to coercive power," it says, in a clear swipe at the West. Mr Hu used *douzheng* only five times in 2012.

Mr Xi offered no hint of any political relaxation. The term *zhengzhi tizhi gaige* (political structural reform) made a dramatic debut at the congress in 1987, with 12 mentions. This time Mr Xi did not use it, the first such omission since that time. He had much to say about traditional ideology: eg, "Marxism works" (though it should not be treated as "rigid dogma"). Harking back to communist ideals, he referred eight times to a need for "common prosperity".

But Mr Xi's report reveals anxiety. "Uncertainties and unforeseen factors are rising," it says. "We must be ready to withstand high winds, choppy waters, and even dangerous storms." It refers to one of Mr Xi's preoccupations: escaping the "historical cycle of rise and fall". His remedy is "self-reform", which involves eliminating corruption, ideological wavering and disloyalty to himself. After a ten-year fight against graft that has toppled many serving and former high-ranking officials, including political rivals, he signalled that there would be no let-up. The report mentioned *fu* (corruption) 29 times, a record for post-Mao Zedong congresses.

Lest anyone begin to waver in their faith in the party's—and Mr Xi's—ability to cope with the dangers ahead, the report kept repeating another of his cherished terms: *zixin* (self-confidence). Not everyone has got that message. After a rare protest on October 13th, involving a banner on a bridge calling Mr Xi a dictator, security in Beijing was tightened still further. ■

China's economy

Moving to mid-levels

HONG KONG

Will the Chinese of tomorrow live like the Spaniards of today?

CHINA'S COMMUNIST PARTY is known for its powers of political choreography and economic control. When its leaders gather at moments of pomp and portent, neither the public nor the economy is allowed to spoil the scene. Thus when the party met in 2017 for its twice-a-decade congress, the most important event in the country's political calendar, the economic stage was expertly set. The currency was stable. Borrowing was tamed. And, as if on cue, China's statisticians reported that the economy was growing a bit faster than the official target rate.

Five years later, as the country's leaders began another week-long congress on October 16th, the economic backdrop was much less bright. Consumer spending has been depressed by China's "zero-covid policy" and its ever-present threat of lockdowns. The property market has faltered. And youth unemployment has risen to around 20%. In marked contrast with five years ago, Xi Jinping, China's leader, has "botched the political business cycle", as Barry Naughton of the University of California, San Diego, put it in a recent article.

None of these concerns loomed large in Mr Xi's report to the congress, which, as is customary, took a loftier, long-term view. He said China would aim to increase its GDP per person to that of a "mid-level developed country" by 2035, repeating a goal set in happier times two years ago. The target is ambitious but vague. It implies an income level of $30,000 or so, according to commentary last year from Liu Shijin, who used to work for a think-tank attached to the cabinet. That is close to Spain's level of prosperity. If China's GDP per person were to double in real terms from 2020 to 2035, and if its inflation-adjusted exchange rate rose by about 1% a year, its GDP per person would reach nearly $25,000 (in today's dollars) in 2035. That is not too far from where Spain is now, although it is presumably far short of where Spain will be by 2035.

That the Chinese of tomorrow might live like the Spaniards of today seems hard to imagine right now. The economy this year will probably grow by less than 3%, far below the official target of 5.5%. On October 18th China postponed the release of a raft of economic figures, including growth for the third quarter. The data may have been delayed because they were off-message: economists had forecast growth of just 3.3%. Another possible reason would be less nefarious—and perhaps more telling. The officials required to sign off on the figures may have been unable to do so because they were stuck inside the strict quarantine bubble of the congress, reported Bloomberg News. Thanks to China's zero-covid policy, the country's policymakers have failed to produce a timely economic recovery. They cannot even produce punctual economic data. ■

When "wolf warrior" diplomacy goes too far

Chinese diplomats scuffled with pro-democracy protesters from Hong Kong outside the Chinese consulate in Manchester on October 16th. One protester was pulled onto consular grounds and beaten, until a British policeman rescued him. British MPs have called for Zheng Xiyuan, the consul-general, to be declared persona non grata for his alleged role in the fracas. China has blamed the protesters and the British authorities.

Chaguan | No turning back

Xi Jinping opens a high-stakes political meeting in an uncompromising mood

Hard, risk-filled times are coming to China and the world, and Xi Jinping is in his element. For nearly two hours on October 16th China's supreme leader instructed Communist Party members to face challenges at home with a fighting spirit, and to seize strategic opportunities in a shifting international balance of power. The last part is code for the perceived decadence and decline of America, a country that hovered over the whole speech as a source of menace, though it went unnamed. Mr Xi's uncompromising address—a political report, in party jargon—suggests that officials will stick with what he called his "all-out people's war" against covid-19. It calls for resistance to foreign powers bent on containing China; and for members to guide the young to heed the party, study diligently, keep fit, pursue realistic goals and, in due course, make more babies for the motherland.

Mr Xi delivered his remarks with grim relish in a solemn setting, the opening of the 20th National Party Congress in the Great Hall of the People in Beijing. Such gatherings are held twice a decade. National congresses set overarching party doctrine and select (or, in truth, rubber-stamp) a new slate of leaders for a five-year term. This time, the stakes are unusually high. That is true for Mr Xi, who is set to emerge with his mandate extended for a precedent-trampling third term and wielding more personal and ideological authority than any ruler since Mao Zedong. It is also true for his party, which faces strong headwinds, not least because of policies imposed by Mr Xi.

China's economy is slowing, in part because of the rolling lockdowns and travel curbs that underpin Mr Xi's strict "zero-covid" approach to pandemic control. Private-sector dynamism and confidence have been dampened in part because of his moves to impose the party's writ on business sectors that are deemed a threat to order and national security. For ordinary Chinese aged 40 or younger, who are used to living in a country on the rise, it is a shock to have to worry about a wobbly housing market putting savings in peril, and to see young people, including college graduates, struggle with rising unemployment. Business and political elites know that China's global image has suffered during the past few years, at least in liberal democracies. Foreign alarm at China is directly linked to its assertiveness, as pugnacious Chinese diplomats reject criticism of their country's iron-fisted ways and the Chinese government uses economic coercion to bully or punish countries that displease it. This has stoked distrust that is changing views of China's reliability as a trade partner and supplier. The West's rude awakening about Russia involves new clarity about China, too, after Chinese leaders and diplomats declined to condemn Mr Xi's avowed best friend, Vladimir Putin, for his invasion of Ukraine. With awkward timing, Mr Putin's murderous incompetence and nuclear brinkmanship in Ukraine leave Mr Xi going into a party congress as the best friend of a loser.

Amid all this turbulence, Mr Xi's report concedes no ground. It flatly defends his zero-covid policies for putting the lives of the Chinese people first, while delivering "tremendously encouraging" epidemiological and economic results. While paying lip-service to economic openness, it suggests that self-reliance in a hostile world is a higher priority. It calls for the party to oversee the cultivation of world-class scientists and engineers at home, and emphasises party leadership over high-tech industrial policies. As if working its way, defiantly, down a list of foreign concerns about China's rights record, the report hails the crushing of Hong Kong's democratic opposition for "restoring order", and—without naming Tibet or Xinjiang—boasts of effectively containing "ethnic separatists, religious extremists and violent terrorists".

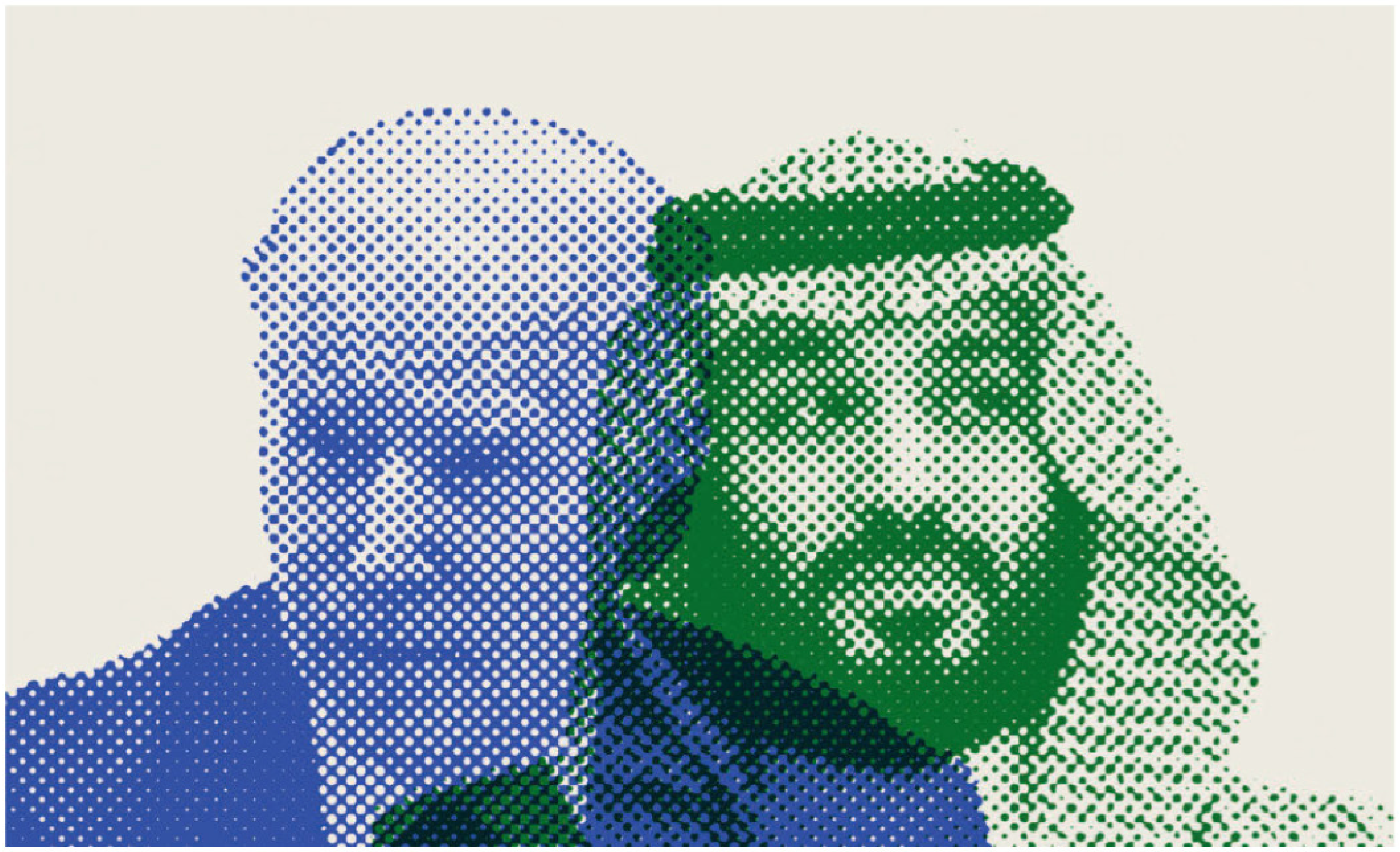
Reports to a party congress do not discuss current events such as the Ukraine war or unveil detailed policies: they are high-level ideological texts drafted over many months. Still, this year's restates a long-standing Chinese charge that a peaceful world order is undermined by American defence alliances in Europe and Asia, or what the report coyly calls "exclusive groups targeted against particular countries". In something of a relief for foreign governments, its language on Taiwan includes a mix of blandishments and threats to use force if that democratic island declares independence, but no new, urgent deadlines for its conquest.

The party congress does not feel your pain

This generally defiant tone is not surprising. Mr Xi has another term to secure, and party congresses are at the best of times not moments for leaders to show weakness. These are not the best of times. But the report's complete absence of reassurance is revealing, nonetheless, about Mr Xi's mandate to rule. China's population really is weary of zero-covid controls. Lots of homeowners, unemployed young people and their parents are scared about the future. Chinese entrepreneurs are sincerely anxious about statist economic policies. It is not hard to meet Chinese officials and scholars alarmed by Mr Xi's picking of fights with the West. Yet the report offers no solace to such anxious groups, because their members have no way of holding Mr Xi to account.

Mr Xi's constituency is not the country at large. It is not even the 2,300 delegates at the congress, who are window-dressing in a party ritual as preordained as a coronation. Tellingly, a telegenic handful of delegates were chosen to field pre-screened press questions on the opening day, including an astronaut in uniform, an Olympic athlete and an ethnic-minority official in traditional garb. Most proceeded to heap praise on Mr Xi.

Mr Xi's mandate to rule comes from a few party bosses and elders, meeting in secret long before the congress. The brutal rules of elite Chinese politics give a leader no incentive to acknowledge the costs of his policies, let alone admit mistakes. In the Great Hall of the People, Mr Xi's unyielding report was greeted with prolonged applause. That was the sound of deference to power. ■



America and the Gulf

The long goodbye?

DUBAI

For all their frustrations, America and Saudi Arabia are still inseparable

IN SAUDI ARABIA, leaving one's wife is a simple matter of repeating *talaq* ("divorce") three times. Perhaps thankfully, breaking up is harder to do in diplomacy. Since October 5th, when the OPEC+ oil cartel decided to cut production by 2m barrels per day (bpd), relations between America and Saudi Arabia have plunged to their lowest point in decades. Democrats in Washington seem determined to abandon their partner of 77 years (see Lexington). Gulf states are enraged by what they see as America's sneering, disrespectful tone.

As in any relationship, some of the angry talk is just that. If a total rupture is unlikely, however, so too is any hope of America and its Gulf partners agreeing to kiss and make up. The oil-for-security bargain that has underpinned their relationship for decades has frayed, but no one knows what will replace it. The unhappy marriage looks likely to last for years yet.

To hear it from Saudi Arabia, the OPEC+ cut was a technical decision. Oil markets are a mess. Prices have been on a roller-coaster. Many OPEC members were falling short of their assigned quotas. A looming rich-country recession could depress demand. The Saudis describe the cut as a pragmatic move to avoid a supply glut and keep some spare capacity in reserve.

To America, however, this was an unconscionable betrayal. Joe Biden, the president, had vowed to treat the kingdom as a "pariah" over its murder in 2018 of Jamal Khashoggi, a journalist. He reversed himself this summer, with crude at $120 a barrel, and flew to meet Muhammad bin Salman, the Saudi crown prince and de facto ruler, in his homeland. Now, less than three months later, the Saudis have orchestrated a move that could mean costlier oil.

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39 Zimbabwe's pregnant schoolgirls

40 South Africa's booming underworld

Mr Biden accused the kingdom of siding with Russia, since higher prices will pad Vladimir Putin's treasury. "There's going to be some consequences," he growled.

The claim aired by many fellow Democrats that the Saudis want to help Republicans in the coming midterms, since higher prices at the pump will hurt the administration, seems implausible in Gulf circles. Oil ministers do not make decisions about world energy markets to sway the outcome of a Senate race in Pennsylvania.

Fellow oil producers have closed ranks. Bahrain and Kuwait, both OPEC+ members and American partners, said they agreed with the production cut. Even the United Arab Emirates (UAE) made a public show of support. The UAE often disagrees with Saudi Arabia on oil policy: it wants to sell as much as it can, even on the cheap, lest its oil become a stranded asset. Yet it too insists OPEC+ made the right call.

On the sidelines of a conference in Abu Dhabi earlier this month, one Emirati energy executive was furious about America's response. It smacked of colonial-era rhetoric, he said. "Who is he? Who is Joe Biden?" he grumbled. "These are our resources." Abdulkhaleq Abdulla, an Emirati political scientist, thinks Democrats must "wake up" and accept that the Gulf is "ready to say no to America". Ali Shihabi, a less abrasive commentator close to the Saudi royal court, wondered if the kingdom might quit OPEC and form a more elite cartel. "Saudi ▸▸

could easily operate without OPEC and coordinate production with the two or three key players privately," he mused.

The UAE seemed to send yet another message on October 11th, when Muhammad bin Zayed, its president, flew to St Petersburg to meet Mr Putin. Emiratis say he was there to discuss a peace plan for Ukraine. Nothing solid emerged from the meeting, but that he went in person instead of making a call or sending his foreign minister was a stark reminder that the Arab world, unlike the West, refuses to take sides over Russia's invasion of Ukraine.

Since 1945, when Franklin Roosevelt met King Abdelaziz bin Saud aboard the *USS Quincy*, the Saudi-American relationship has been rooted in a simple bargain. The kingdom keeps the oil flowing; America keeps the kingdom safe. Both sides now accuse the other of reneging on the deal.

Yet this falling-out is rooted in mutual misunderstanding. Democrats no longer want only a reliable supply of oil; they also want it at a comfortably low price. The Gulf states, meanwhile, want a more active protector. The Carter Doctrine held that America must protect its energy interests in the Middle East. For today's Gulf monarchs, that does not mean simply policing the Strait of Hormuz. It also means leaping into action when they are threatened by Iran or its proxies. America's dismal failure in Iraq and Afghanistan has not inspired confidence, to put it mildly.

Neither side is willing to indulge the other. The Saudis and their neighbours have no wish to forgo billions in revenue to help Mr Biden's party win a few extra votes. And most Americans, after two decades of disastrous wars in the region, would like to turn away from it. Some Gulf officials hope a second Donald Trump presidency in 2025 would tighten ties with America. Yet his wing of the Republican party is not keen to protect the Gulf petrostates.

Despite its frustrations with America, the Gulf has no good alternative. Russia cannot fill a role as protector and arms supplier. With his army bogged down in Ukraine, Mr Putin needs whatever weapons his sanctions-hobbled economy can produce for his own battles. And Russia offers few prospects for trade and investment. China is a more useful partner. It does not nag about human rights. It is a big source of investment. But it has no interest in guaranteeing the Gulf's security. Like Russia, it maintains friendly ties with the Gulf's arch-rival, Iran.

So America and the Gulf states are unhappily stuck with each other—for now. They may disagree sharply over oil prices, the war in Ukraine and many other issues. The oil-for-security bargain is no longer a solid foundation for their relationship. But no one in Washington or Riyadh seems keen to find something that is. ■

Protests in Iran

The ayatollahs dither amid the fire

Iran's protests spread, as a notorious prison burns

THE TERROR was worst for those trapped in solitary cells the size of tables. The fire began in a basement sewing workshop and spread through Evin prison, crammed with protesters detained in the past month of unrest. Guards fired tear-gas and bullets into the smoke to force back those trying to escape. They shot at prisoners who had climbed onto the roof to breathe—and to chant against their jailers. Beyond Evin's walls, Iranians in their thousands echoed their cries and honked their car horns.

No Iranian prison is as notorious as Evin. For 50 years it has been the holding pen, interrogation centre and gallows of the state's political prisoners. It lies at the base of the Alborz mountains, casting a shadow over the capital below. The fire billowing inside it lit up the city and evoked the torching of the Rex Cinema, back in the summer of 1978, when the death of more than 470 people as a result of an arson attack triggered the Islamic revolution that overthrew the shah.

Today's authorities quenched the fire, quelled the protests and insisted that "the Bastille project had failed", a reference to the storming of the Parisian prison at the start of the French revolution of 1789. Officially only eight died in Evin. But clerics and regime loyalists, who at first ignored the protests, now openly denounce them as a movement bent on sweeping the regime aside. The mayhem in their citadel left many wondering about the strength of their hold on power. The ayatollahs initially treated the protests with cold disdain. That has given way to fevered warnings of American and Israeli plots. And the protesters, as their confidence grows, are issuing communiqués demanding a transitional government to replace the theocracy.

Big events in the Middle East often have small beginnings. The Arab spring erupted after a policeman confiscated a Tunisian peddler's cart. Last month Mahsa Amini, a 22-year-old Kurdish woman, died after police detained her for improperly wearing her hijab on a trip to Tehran, the capital. "No one thought there would be anything more than limited protests," says Sadegh Zibakalam, a politics professor at Tehran university. "But the dissent hasn't calmed down. It's becoming like a volcano."

The protest is led by a generation that many had assumed was too young to care, hooked on its screens and seemingly disconnected from society. Students had largely stayed out of previous bouts of unrest. But Ms Amini's death roused a generation fuming at a fresh tightening of the dress code. This time the protesters are versed in the social norms of their peers worldwide; many are hungry for a night out clubbing (not of the police-baton sort). Tired of the clerics' insistence on gender segregation, women burn their veils, publicly cut their hair and lunch in men-only canteens in universities. They shout "Death to the dictator" during school-assembly renditions of loyalist hymns like "Greetings, commander". And in contrast to previous protests, after which many activists fled abroad, they refuse to stop in

Redecorating the cells in Evin jail

the face of water cannon, gunfire and mass arrests. "No retreat from the government, so no retreat from the people," says a female student at a university in Tehran.

Increasingly, traditionalists in chadors and full headscarves, who used to comprise the regime's base, are joining the protests. Scenes of state violence against women have offended religious women steeped in Shia Islam's narrative of martyrdom and holy struggle, says Shirin Saeidi, an expert on Iranian gender politics. Protests have spread from cosmopolitan cities to provincial towns which the clerics considered their heartland. "We don't want a regime that kills children," cried protesters in Ardabil, a quiet city 580km north-west of Tehran, after a local 16-year-old girl was reportedly beaten to death for refusing to sing a pro-regime song in her classroom. All-female universities designed to recruit the next generation of ideologues have come out in protest, too. "Get lost!" shouted girls at al-Zahra, a women's university favoured by the regime's elite, when Iran's hardline president, Ebrahim Raisi, visited.

The regime seems divided over how to respond. "One school of thought says we should have dealt with the protests more ruthlessly from the beginning to prevent them gathering pace. The other says if we'd crushed them they would only have come back more severely three months later," says Mr Zibakalam. "Neither side has the upper hand." The supreme leader, Ayatollah Ali Khamenei, has called on establishment figures to support the security forces more whole-heartedly.

But many regime insiders, including businessmen and politicians, have kept a studied silence. Some, including Ali Larijani, an influential and long-standing former speaker of parliament, have openly called for the police and the security forces to stop enforcing the mandatory veil. "It should have a cultural solution," he told the official newspaper, *Ettellat*. Some are even siding with the protesters. "They kicked my head and my face...They pushed me into a van...and punched me in the face," Javad Mogoi, a hitherto loyalist documentary film-maker, wrote on his Instagram page, after he tried to stop the security forces beating a girl.

The regime is also divided over how to respond to growing international support, albeit rhetorical, for the protests. Some favour dangling the prospect of an agreement on Iran's nuclear programme in the hope of persuading Western governments to ease off. Others want to play up the supposed threat of foreign interference to unify the ranks at home. Mr Khamenei rails at foreign plots. His officials rattle sabres at Iran's oil-rich neighbours, further unsettling global energy markets. The regime's praetorian guard, the Islamic Revolutionary Guard Corps, has staged war games on the border with Azerbaijan, threatens to fire more missiles into Iraqi Kurdistan and claims to have struck the Omar oilfield, controlled by American forces in eastern Syria. "I warn the al-Saud regime to control their media or the smoke will get into your eyes," said Hossein Salami, the Revolutionary Guards' chief.

As the fog grows inside the regime, the curtain of fear that has cowed the opposition seems to be lifting. Normally reticent academics are voicing acerbic criticism. A female Iranian climber has broken with state policy by competing internationally without a veil. And on October 14th a manifesto for a peaceful transition to a democratic, secular government went viral on social media. In the words of the Tehran university student, "This time it's the government that seems so scared." ■

Zimbabwe's pregnant schoolgirls

We want to stay at school

TSHOLOTSHO

It is still a struggle for girls with babies to continue their education

Brilliant Ndlovu has never really known childhood. Since the age of seven she has headed her household in Tsholotsho, a town in rural western Zimbabwe, after her parents went to work abroad. The oldest of five, she scraped a living growing crops while trying to keep up with her schoolwork. But in 2020 the covid-19 pandemic struck, coming shortly after a devastating drought. Farmers could not afford to pay child labourers like Ms Ndlovu. "So I looked for a man to help support my family," she recalls. She found one who demanded sex in exchange for money. Aged 17, she got pregnant.

Ms Ndlovu was one of 4,770 Zimbabwean girls to drop out of school in 2020 because of pregnancy, up from about 3,000 the year before, according to government statistics. The true number may be higher. Siqinisweyinkosi Mhlanga, who runs Orphan's Friend, a community centre in Tsholotsho where Ms Ndlovu now spends her days, says that there may be ten times more school dropouts in her province than the official tally. In August 2020 Zimbabwe's government amended the Education Act to prohibit schools from expelling pregnant girls, joining a growing club of African countries that are letting pregnant teenagers continue with their education. A third of Zimbabwean women marry before they are 18.

Previously Zimbabwe's education minister had described student pregnancy as a "misdemeanour of a serious nature", punishable by expulsion. But the amendment "didn't make any difference", says Ms Mhlanga. In 2021, after teenage pregnancies rose during the covid lockdown, the number of pregnancy-related dropouts rose to 5,985, according to official statistics.

Stigma and cost, rather than laws, push girls out of school. When they fall pregnant their families often "don't accept that girls can excel", says Samkeliso Tshuma, the founder of The Girls Table, an NGO in Bulawayo, Zimbabwe's second city, that promotes girls' rights. Most girls drop out of school before teachers even know they are pregnant.

Still keen to study

The minority who persevere soon run into other barriers. When a girl called Happiness became pregnant at 15, she told her parents: "I'm not stopping school." They supported her until she failed her exams, a month after giving birth. They didn't have enough money to pay for her to resit them, so she lost the chance to get the highest school-leaving certificate which would have qualified her for entry to a university.

The average rural household spends $3.23 a month on education. For Zimbabweans living below the poverty line (38% of them in 2019, up from 23% in 2011), that is quite a chunk of their income. In the first half of this year more than half of children were turned away from school because of non-payment of fees. Pregnant girls are often the first to lose out. And school can be a hostile place for them. Some complain that boys tease them, saying they smell of milk.

Organised crime in South Africa

The murky side of the rainbow nation

JOHANNESBURG

The state's withering has led to the underworld's blossoming—and vice versa

LAST YEAR Gold Fields announced it would start building a solar plant to help power South Deep, one of the largest gold mines in the world. Soon afterwards, the South African mining firm got messages from several self-styled "business forums", a euphemism belying their real interest: extortion. The forums demanded a cut of the contract to construct the plant. They followed up with texts to employees and unauthorised visits to the mine, which lies just outside Johannesburg.

The consequences of non-compliance were not spelt out. But they could be assumed. Since 2015 forums have spread from the province of KwaZulu-Natal to the rest of the country, invading construction sites and demanding a share of any deal. In 2019 forums affected at least 183 projects, worth more than 63bn rand ($4bn). That year gun-toting forum members led to two firms pulling out of a project to build what would have been the highest bridge in Africa. After the incident the boss of the South African firm said of its German partner: "They have worked in 80 countries, including Afghanistan and Iraq, but have never experienced anything like this."

From bad to worse

There is a lot of crime in South Africa. In the past few months alone there has been a spate of shootings in taverns, a mass rape in a mining town and multiple kidnappings. These are not random incidents, notes Mark Shaw, director of the Global Initiative Against Transnational Organised Crime (GI-TOC), a think-tank headquartered in Geneva. They are a result of flourishing organised crime that is "an existential threat to South Africa's democratic institutions, economy and people".

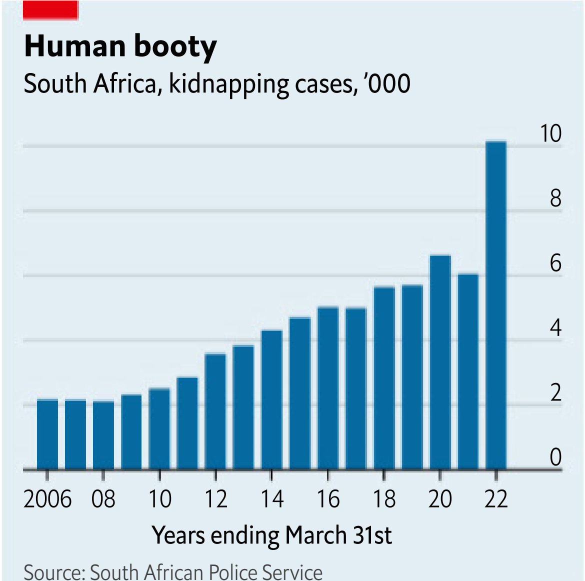
In a report last month GI-TOC described 15 illicit "markets", ten of which it said are growing. (The other five are "stable".) In an earlier paper it ranked South Africa 19th in the world for organised criminality, ahead of Libya and Russia. "Few [countries] host so many illicit markets across such a broad spectrum of criminal activity."

South Africa is a transit point for heroin going from Afghanistan to Europe and cocaine leaving Latin America for Asia and Australasia. It is also a hive of wildlife crime: the familiar scourges of rhino and elephant poaching as well as the trafficking of rock lobster, abalone (marine snails) and succulent plants. Kidnapping cases rose from 6,000 in the year to March 2021 to more than 10,000 12 months later, in part because of the rise of syndicates who demand ransoms (see chart). The gun-runners who deal in the more than 2m unregistered firearms in the country make everything worse.

Yet many criminal enterprises target more prosaic parts of the economy. The sharp rise in the copper price in 2020 led to a surge in cable theft. South Africa's telecommunications firms have formed a special unit partly to combat the crime. Eskom, the state power utility, says cable worth about 2bn rand is stolen every year. Transnet, the public freight-rail operator, said in October 2021 that more than 1,000km of cable had been stolen so far that year. During the pandemic criminals stripped PRASA, the state passenger-rail company. The network carries 4% of the passenger volume it did from 1999 to 2008.

One source of vandalism is the so-called "taxi industry", which runs the minibuses used by two-thirds of commuters. Earlier this year a taxi firm's employee was jailed for torching a PRASA train and station; the prosecutor noted that "only the taxi industry benefits when trains are put out of service." GI-TOC says taxis are run by "mafia-like associations". About half of South Africa's assassinations are linked to the taxi business. Its cash-only model makes it a potential money-laundry.

South African mining is besieged by criminality. Tens of thousands of *zama zamas,* or illegal miners, work for criminal outfits. An industry body reckons they cost the sector 7bn rand a year. Illustrating the scale of illegal operations, in April the military and a private-security firm retook control of a chrome mine that had been extracting metal worth more than 1m rand a day. Around 10% of South Africa's annual chrome production is exported illegally. A recent survey reckoned there were about 20 illegal chrome-processing plants.



Major figures in the South African underworld operate in myriad markets. Consider, for instance, Petros Sydney Mabuza, a kingpin assassinated last year. As well as running a rhino-poaching syndicate, he was reportedly involved in the taxi industry, extortion and robbery of vans carrying cash. At his funeral a helicopter brought his casket to the venue, with the box draped in leopard skin.

South Africa's organised-crime boom has many causes. But the chief one is that the state has been enfeebled by a corrupt ruling party, the African National Congress (ANC). The police, too, are regularly implicated. Officers have been convicted, among other offences, of drug-dealing, gun-running and aiding illegal mining. In North West province police are said to help deliver food and guns to *zama zamas*, and serve as hitmen for a mining kingpin.

The rot starts at the top

Though organised crime predated and outlasted Jacob Zuma, president from 2009 to 2018, it exploded under his reign. Law-enforcement agencies were hollowed out and stuffed with cronies. Crime data show the impact. In the first half of the 2010s there was a 60% drop in the number of arrests and an 83% fall in convictions. The murder rate fell by more than half from 1994, when Nelson Mandela was elected, to 2011. Since then it has risen by 38%.

"State capture" under Mr Zuma has been well documented. But criminality runs deeper than government graft. Many business forums, for example, are said to have links to the ANC's "radical economic transformation" faction, which is aligned to Mr Zuma. These groups say they are not gangsters but vehicles for black empowerment; when they invade sites they demand 30% of the construction contract's value, citing a law that reserves that fraction for "local" firms in public procurement. One group was even called the Federation for Radical Economic Transformation.

Cyril Ramaphosa, Mr Zuma's successor, promised to overhaul law enforcement. But as usual there is a chasm between his rhetoric and reality. Rather than rely on the state, those who can afford it opt for private security. In 1997 there was roughly one private security guard for every policeman. Today the ratio is almost four to one.

Gold Fields stood its ground—but only after it built fences at the site and procured private security for employees. Ultimately the extortionists went away. But they will be back somewhere else, soon enough. ■

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Drones over Ukraine

Shooting Shaheds

DNIPRO AND WASHINGTON, DC

Iranian drones pose a fiendish military problem for Ukraine

THE ALARM came around 8am. A worker at the power station on the outskirts of Dnipro was telling his crew to take cover when the windows blew out. A cruise missile struck a small building nearby. A second hit soon after. With huge plumes of smoke rising, police officers arriving at the scene were met by a stampede of stray dogs running away.

The explosions on October 18th knocked the plant at Dnipro off the grid, though most power was restored within hours. On the same day Iranian-made drones blasted the town of Kryvyi Rih, about 150km to the west, where a few days earlier a drone had hit an electrical substation, risking a blackout at a hospital. There were more drone and missile attacks across the country. In Kyiv they cut power to an eastern part of the city.

Russia's strikes on Ukraine's cities—more than 400 since October 10th—mark a new turn in the war. The aim is to cripple the country's infrastructure and demoralise the population as winter approaches. Ukraine's president, Volodymyr Zelensky, says the country has lost 30% of its power stations. The government is starting to restrict electricity supplies, accusing Russia of "killing by freezing".

Russian strikes often simply aim to sow terror. But they do not appear to have affected Ukraine's ability to fight. As of October 19th Russian-installed officials were evacuating civilians from the occupied city of Kherson, which forms a pocket on the western bank of the Dnieper river, in anticipation of a Ukrainian assault. General Sergei Surovikin, the new commander of Russian forces in Ukraine, admitted he may have to make "difficult decisions", which may refer to a withdrawal. Also on October 19th a nervous Russia imposed martial law in the Ukrainian lands it had recently annexed.

Western countries say deliberate attacks on civilian targets amount to war crimes. They have promised to rush more help to Ukraine, especially air-defence kit, and are debating new sanctions against Iran. Western officials say Russia is short of high-end ballistic and cruise missiles, and its arms factories, hit by Western sanctions, are struggling to make enough new ones. As a consequence Russia must rely on Iranian weapons.

Assembled from commercially available components, the delta-winged Shahed-136 drone flies slowly and carries a small warhead—about 50kg, instead of the more usual 450kg or more for ballistic and cruise missiles. Its distinctive buzz has earned it nicknames such as "moped" and "farter". Unlike the fancy loitering munitions America has been supplying to Ukraine, it is more of a flying bomb, aimed at fixed sites through a combination of mechanical guidance and commercial satellite-navigation. It can be shot down by anti-aircraft missiles, aircraft or sometimes even with a rifle. Its navigation signal is vulnerable to jamming.

Quantity trumps quality

But it is small and flies low, so is hard to spot. More important, it is cheap—a fraction of the cost of more sophisticated weapons, and often less expensive than an air-defence missile. So Shahed-136s can be sent in large volleys from several directions, overwhelming air defences.

Ukraine says it has destroyed 60% of the Shahed-136s Russia has fired so far, but lots still get through. Their warheads may be too small to destroy fortress-like power stations. But they "do not attack thermal power plants themselves; they attack substations that supply the grids with electricity," says Antonina Antosha, spokeswoman for DTEK, which owns the Dnipro plant.

Ukrenergo, which runs Ukraine's grid, ▸▸

says it has thus far been able to restore at least some power within a day in areas blacked out by missile strikes. It has maintained its links to the EU's grid, which it established soon after the invasion so that European countries could supply it with power in an emergency. But if the bombing campaign is protracted, as seems likely, repairing the system will get harder. DTEK says it is critically short of many components, including mobile substations and specific types of circuit breakers, power transformers and cables.

That makes defending against drones all the more urgent. But how? Use too many missiles against the drones, or pull air defences back to protect cities, and front-line troops become more vulnerable to attack by Russian aircraft. Western armed forces are themselves short of air-defence systems.

A better answer, says Philip Breedlove, a former commander of NATO, is to improve the integration of existing sensors (eg, radars) with shooters (eg, missiles). A portable Stinger anti-aircraft missile can easily knock out a Shahed-136, but the soldier's only "sensors" are his eyes and ears. If he had better warning of what was coming from which direction, he could position himself to have a much better shot, says General Breedlove.

Integrating military systems is a headache for Western forces in peacetime. Doing it in the midst of a war, with donated weapons of many vintages, will be fiendishly difficult. Once again, Ukraine is the testing ground for 21st-century warfare. ■

Germany

The Kremlin's empty lobby

BERLIN

Russia was deeply embedded in German politics; but that has changed fast

At a trade congress in early October Olaf Scholz, Germany's chancellor, declared that he "always" knew Russia would use its energy resources as a weapon. But in 2016, when he was vice-chancellor and his Social Democrats were the junior partner in a coalition led by Angela Merkel, Mr Scholz said it was simply "not correct" to suggest that Nord Stream 2, a second gas pipeline across the Baltic Sea, might make Germany too dependent on Russia.

The chancellor's memory may be faulty, but since Russia's invasion of Ukraine in February his government has radically decoupled Germany from Russian energy supplies, even as it has showered diplomatic, financial and military support on Ukraine. And there is no evidence that Mr Scholz was ever an ardent *Putinversteher*—an apologist for Vladimir Putin, Russia's president. Alas, all too many other prominent German politicians, businessmen, academics and even sports stars did indeed act as shills for Mr Putin. Hinting at the depth of Russian penetration, it was revealed on October 17th that Arne Schönbohm, the head of Germany's cyber-security agency, is being investigated over suspicions of links to Russian intelligence.

To be fair, Mr Schönbohm's links appear tenuous: before taking office he ran a cyber-security trade group, some of whose members appear to have had fishy pasts. Plenty of cases are more clear-cut. Consider Matthias Warnig, a former officer in the notorious Stasi, East Germany's secret police. Later, Mr Warnig used these connections to help German companies gain a toehold in post-Soviet Russia. Mr Warnig did very well, eventually becoming CEO of the $10bn Nord Stream 2 project. In 2014, soon after Russia annexed Crimea, provoking a barrage of Western sanctions, Mr Warnig was Mr Putin's host at a lavish party in St Petersburg. The party honoured Gerhard Schröder, a former chancellor of Germany, on his 70th birthday. One of Mr Schröder's last acts in office had been to push through the first Nord Stream pipeline. In "retirement" Mr Schröder has served on the boards of the state-controlled Russian energy giants Gazprom and Rosneft, in addition to Nord Stream 2's.

Gerhard Schröder and friend

Thanks in part to such high-level influence, by last year Germany had grown to depend on Russia for more than half of its gas supply. German firms had also sold infrastructure, such as refineries and storage facilities, to Gazprom and Rosneft. Mr Scholz's government has now nationalised those assets, ceased imports of Russian gas and allowed Nord Stream 2 to go bankrupt. But as the tide of Russian influence recedes, what stands exposed is more than prominent fixers such as Mr Schröder or Mr Warnig. Russian energy firms appear to have constructed an entire archipelago of influence operations.

In a recent exposé of what it calls the Gazprom Lobby, an investigative team from Correctiv, an online news portal, revealed a web of links between German politicians, German energy concerns and a clutch of seemingly innocuous NGOs. These groups energetically sponsored conferences and all-expenses-paid trips to Russia. The table-talk among their members tended to paint Western condemnation of Russia's invasion of Georgia in 2008 and of Crimea in 2014, and of assassination attempts against Russian dissidents, as overblown and hypocritical.

Rather than focusing on the centre of Germany's federal government, Russia's lobbyists appear to have targeted leaders at the state level. Among the members and distinguished guests of such well-funded outfits as the German-Russian Raw Materials Forum, the German-Russian Chamber of Foreign Trade and a short-lived Dialogue of Civilisations Research Institute were numerous former and serving minister-presidents of Germany's 16 federal states.

At one typical event in the eastern state of Mecklenburg-Vorpommern in 2018, more than 800 guests celebrated Russia Day. Manuela Schwesig, the state's minister-president, beamed as a deputy minister in Mr Putin's government praised her state, Nord Stream 2's terminus, as "a kind of outpost for us in Europe". Ms Schwesig now admits that supporting the pipeline was a mistake. Her Gazprom-funded NGO has closed. Similar *mea culpas* have flowed from business leaders and politicians. Mr Schröder and Mr Warnig, the former Stasi spy, have disappeared from the public eye. Several Germans who acted as unofficial observers for a sham independence referendum in the Donbas in September were promptly fired.

On the fringes, Mr Putin's investment in influence-peddling still pays dividends. The Russian narrative of pursuing a noble struggle against Western hegemony gains traction among the far left and far right. Some fashionable intellectuals still sniff that the West fails to "understand" Russia. But between July and September, support for Mr Scholz's Ukraine policy rose from 70% to 74%. ■

Ukraine's trains

The Kramatorsk express is back

KYIV

Ukrainian Railways reconnects a city scarred by a bombing

KYIV'S CENTRAL train station is a majestic example of Soviet neo-classical architecture, all soaring arches and granite tiles. In the early days of the war thousands of locals desperate to escape Russia's invasion slept on the floor here, stumbling over each other during air-raid blackouts as they waited for the next train west. Now it hosts happier stories. On October 14th Alina, a young woman holding a bouquet of yellow and blue flowers, was in the main hall waiting to meet her sister, who had fled to Poland. "I haven't seen her for eight months," she said, fighting back tears.

Meanwhile on Track 1, Ukrainian Railways was preparing for the departure of the first train to Kramatorsk, a city in the country's east, since its station was bombarded by Russia on April 8th. The missile attack struck amid crowds of civilians fleeing Russia's advance. Sixty people were killed, including seven children. Gruesomely, Russian soldiers had painted the words "for the children" on a missile casing. Now the line was back in service, with one of Ukrainian Railways' newest and fastest trains, capable of 140km an hour. "We made an unscheduled trip [in advance] to check that the tracks were not mined," said Oleksandr Shevchenko, deputy head of Ukraine Railways' passenger division.

To do it, the train made a detour to avoid a bridge knocked out by the Russians. Such rerouting is possible because the 20,000km-long rail network which Ukraine inherited from Soviet times is reasonably dense. The railways carry a very large share of the country's intercity traffic. Even before the war about half of land-passenger-kilometres were by rail, a much higher share than in Germany or France, despite having less track.

When the war began, trains became the workhorses of the refugee-evacuation effort, carrying millions of Ukrainians to the Polish and Hungarian borders. Since then, with the skies too dangerous for aircraft, they have become even more important. Dispatchers ride the lines incessantly, rerouting trains when the tracks are damaged. Nearly all of the locomotives and half of passenger carriages are over 40 years old, but buying new carriages and electrifying more track have been postponed in favour of urgent repairs. The railways have also acquired new roles, such as carrying visiting dignitaries. With Ukraine's airports closed, trains have become the standard way for foreign cabinet ministers and presidents to reach Kyiv. The rail company calls this "iron diplomacy".

Viktoria and her sister were heading home to Slovyansk, a city next to Kramatorsk. In July, during the Russian advance, Slovyansk was only a few kilometres from the front lines, and it was shelled mercilessly. Ukraine has since driven the Russians back some 20km. "We stay there because we have nowhere else to go," Viktoria said. "But you have to send your kids elsewhere, because the things you see and hear there aren't for children."

But the re-established route is a success, Mr Shevchenko says. By the second day passenger numbers had risen from 49 to over 300. Now he has other challenges on his mind. On October 17th Russian drones struck electrical infrastructure near Kyiv's central station. Passengers were stuck in its bomb shelters, at risk of missing their departures. But the trains, Mr Shevchenko said, could not wait; they left on time. "There should be something that is predictable during war." ■

French arms to Ukraine

Red roses...and artillery

PARIS

Fresh transparency over arms deliveries also exposes their limits

"ROMANTIC GESTURES take many forms," began a witty clip posted by the Ukrainian defence ministry on October 12th, with images of red roses, chocolates and sunset over the city of Paris. "But if you really want to win our hearts," it went on, "nothing beats 155mm highly mobile self-propelled artillery." Designed as both a cute and serious message to the French government, the video concluded "*Merci beaucoup, France*. Please send us more."

The Ukrainians could scarcely have hoped for a swifter response. That evening President Emmanuel Macron announced that France would send six more Caesar howitzers, in addition to the 18 already delivered, as well as anti-aircraft systems, radars and more. On October 15th Sébastien Lecornu, his defence minister, spelt out the details. France would send Crotale air-defence systems, to be operational within two months, and train 2,000 Ukrainian soldiers. It is also looking at sending LRU multiple-launch rocket systems (MLRS), similar to the American HIMARS. Some reports suggest that three of the French systems are already on the ground.

This shift in the French approach to arming Ukraine is doubly arresting. First, the country is talking more about what it is doing. Although France exported arms to Ukraine long before Russia's invasion in February, it has since insisted that such information is classified, and that disclosing it would compromise Ukraine's battle plans. France contests the figures compiled, for instance, by Germany's Kiel Institute. Those suggest that, between January 24th and October 3rd, France offered just €220m ($216m) in military aid, or under 2% of the total pledged to Ukraine, less than Britain, Germany, Poland and Norway.

Mr Macron's critics put this meagre effort down to his ambition to act as a potential mediator between Russia's Vladimir Putin and Ukraine's Volodymyr Zelensky. French officials argue instead that the numbers simply understate their contribution, which includes classified quantities of anti-tank missiles, shoulder-launched anti-aircraft missiles, armoured vehicles, ammunition, intelligence and other aid. They add that France, unlike some others, delivers what it promises, and sends only what Ukraine specifically asks for. Stung by criticism, though, France seems to have decided that it is now time for a bit more disclosure.

▸▸

Second, the French contribution has come under increasing scrutiny at home. After a visit in September to the main military-aid hub in Poland, François Heisbourg, a military specialist, agreed that French weaponry did indeed constitute under 2%, in tonnage, of all deliveries to Ukraine. Upstaged by smaller European countries with far less military might, France has started to debate whether this share is enough. "Every day Ukrainians are dying for freedom in Europe," Benjamin Haddad, one of Mr Macron's deputies, told parliament on October 3rd. Sending more weaponry, he said, would show that France can "live up to their sacrifice".

The new French announcements "look like a step change", says Mr Heisbourg. The expected delivery of MLRS, he notes, "puts the French on a par with similar transfers by Britain and Germany". Three such systems could be operational within three to four weeks. Ukraine has also ordered motorised floating bridges. That is financed by a new French fund, worth €100m, for the country to buy kit directly from France.

The tougher question may be how much further France could go. France and Britain each spend about 2% of GDP on defence. Yet so far a gung-ho Britain seems to have had fewer qualms about eating quite deeply into stocks of some of its key weapons in order to supply Ukraine. The 18 Caesar cannons represent nearly a quarter of the French army's entire stock. The extra six will come off a production line from Nexter, a French firm, as part of an order originally destined for Denmark. Three French MLRS would represent nearly a quarter of what the army possesses.

Mr Zelensky has also asked France for its SAMP/T anti-aircraft defence system. But the country owns just eight. The French are keenly aware of the risks of depletion. "The right balance", General Pierre Schill, head of the French army, told a parliamentary hearing in July, "would be not to give up too much of our equipment."

"In French strategic thinking, liberty of action is everything," says Michael Shurkin, a defence analyst at the RAND Corporation, an American think-tank. The French want to be able to engage independently in the full range of warfare, and want the tools to give them those options. So they are cautious about depleting stocks in a way that might impede this. Moreover, the French army has over time become focused on expeditionary and counter-terrorist operations, rather than the sort of high-intensity land warfare that requires massive reserves. As a consequence, in Mr Shurkin's words, France is "a strong ally stretched thin". In short, France is making its military support for Ukraine clearer than ever. But it may not have a lot more to give. ■

An unequal burden

Government support to Ukraine

Selected countries, €bn

0 10 20 30 40 50 60

United States
Europe (total)*
Germany
Poland
Britain
France
Italy
Spain
Netherlands
Czech Rep.
Norway
Austria
Sweden
Belgium
Denmark

Military aid
Humanitarian aid
Financial aid
Share in EU commitments
Estimated refugee costs†

*Includes EU members, European NATO members and Switzerland †Based on €500 per person per month

Source: "The Ukraine support tracker: which countries help Ukraine and how?", by A. Antezza et al., Kiel Working Paper, 2022

Italy

Not so easy

ROME

Giorgia Meloni runs into trouble building her coalition

IT LOOKED AS if it was going to be simple. Voters last month handed the right its first clear parliamentary majority since 2008. And since the Brothers of Italy (FdI) party won far more votes and seats than the other parties in the conservatives' alliance, it was clear that its leader, Giorgia Meloni, would be prime minister. All they had to do was share the spoils of victory: the cabinet posts and speakerships.

Yet by October 20th, when President Sergio Mattarella was due to start the consultations that precede the formation of a new government, doubts were rife about the stability of the next administration and its readiness to join Italy's traditional allies in standing up to Russia. The reason? One that has bedevilled Italian politics for almost 30 years: Silvio Berlusconi's legal problems. The 86-year-old Mr Berlusconi—yet again on trial, this time for allegedly bribing witnesses—wants the justice portfolio for his party, Forza Italia. Ms Meloni would prefer that it went to a retired prosecutor.

The first sign of trouble came when Forza Italia tried and failed to block Ms Meloni's choice for speaker of the Senate, Ignazio La Russa. From his seat in the upper house, a furious Mr Berlusconi dispatched the victorious candidate with an obscenity and was later photographed with what was apparently an unflattering pen portrait of Ms Meloni: "opinionated, domineering, arrogant and offensive", he had written. Ms Meloni tetchily replied that he had forgotten another trait: "I can't be blackmailed."

A meeting between the two appeared to yield a truce. They agreed the right should present a united front to Mr Mattarella, and Mr Berlusconi later insisted the defects he had listed were not Ms Meloni's. But the next day he claimed—though Mr La Russa denied it—that Ms Meloni had accepted his choice of justice minister. Then a recording of Mr Berlusconi was leaked that was deeply embarrassing for the prime minister-in-waiting. In one passage, he could be heard claiming that he had wrung from her an additional cabinet seat for Forza Italia; in another, that he had renewed his long-standing friendship with Vladimir Putin. In a longer version of the recording leaked the next day, he appeared to go further, blaming the war on Ukraine.

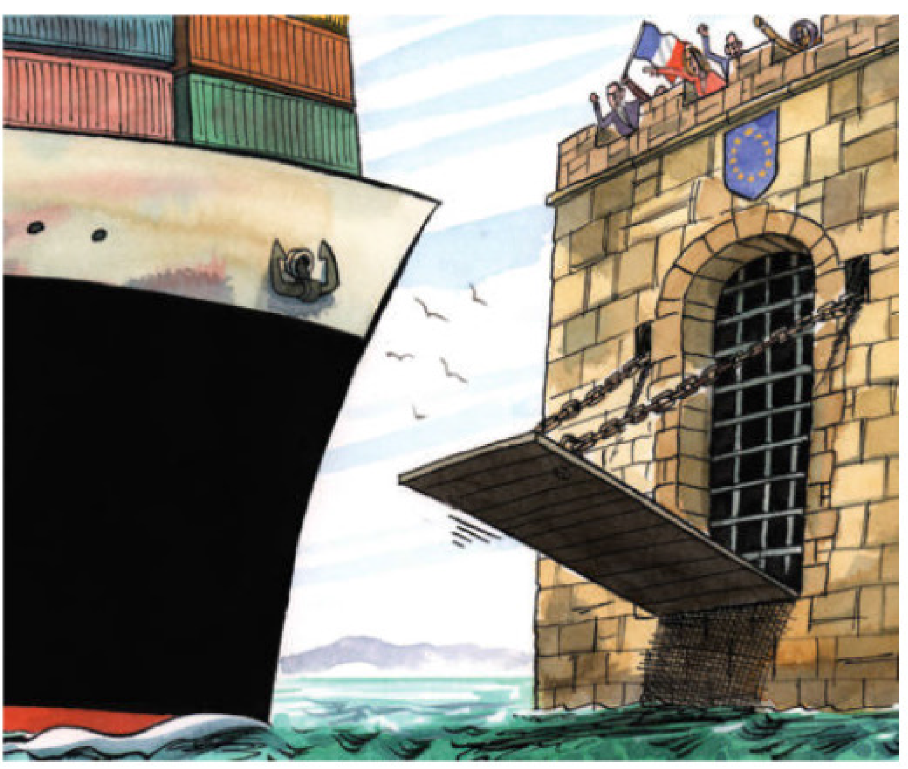
That is diplomatic poison for Ms Meloni, who has strived to reassure America and NATO that her government would support Ukraine, notwithstanding Mr Berlusconi's history of friendship with Mr Putin and the admiration for the Russian leader expressed in the past by her other main ally, Matteo Salvini of the Northern League.

Mr Berlusconi's mischief-making highlights the lengths to which he is willing to go to protect his interests. But it obscures the weakness of his position. The reason Forza Italia failed to block Mr La Russa was that at least 17 opposition senators voted for him in a secret ballot. Why, given that Mr La Russa is among the least repentant of the former neo-fascists in Ms Meloni's party? A theory doing the rounds was that a centrist group was signalling willingness to replace Forza Italia in a future coalition. The centrists denied it. And they would anyway account for only nine of the 17 rogue votes—though that would be enough to guarantee the right a majority (albeit a slim one) in both houses. Mr Berlusconi is skating his Russian dance on thin ice. ■

Meloni in the maelstrom

Charlemagne | Fetchez the barricades!

Europe's ambivalence towards globalisation risks turning into outright scepticism



Pity the European policymaker trying to make sense of how voters feel about the outside world. Over three-quarters of EU citizens from Ireland to Greece say they are in favour of free trade. Globalisation is welcomed by an impressive six in ten Europeans, despite being vilified by lefties as a sinister American plot. It should follow that protectionism—essentially the opposite of free trade and the very thing to derail globalisation—would have few fans. And yet in the same series of opinion polls organised by the EU, far more Europeans say they feel warmly towards protectionism than oppose it. Not since Boris Johnson left Downing Street has anyone tried so brazenly to eat a cake and have it too.

The indecisiveness of the public is reflected in Europe's approach to its economic arrangements. For the most part the EU is open to trade and welcomes foreign investment, part of a squishy consensus that free markets work (with a few corrective measures). At the same time, a protectionist instinct remains, and it has been gaining ground of late. Europe has been looking at the outside world, and is not sure it wants to be overly reliant on it. War on the continent's doorstep, exploding Russian gas pipelines and endless trade fights between China and America—Europe's two largest trading partners—have boosted those who would like to raise the drawbridge a touch.

Think of it as Europe going French. For years Emmanuel Macron, France's president, has talked up the idea of "strategic autonomy". The concept is all-encompassing, but includes the idea that Europe's economy should not be dependent on foreigners for critical inputs such as semiconductors or electric-car batteries. Underlining the point in thick marker-pen, France's finance minister these days is also minister for "industrial sovereignty"; its agriculture honcho is minister for "food sovereignty". To sceptics France's pitch for economic self-determination is simply a way of re-upping its penchant for *dirigisme*: becoming less reliant on American or Chinese imports offers a path to mollycoddling French firms, perhaps turning them into European "champions" in the process.

This approach used to have enough critics for Parisian ploys to be foiled. Small countries, including the Netherlands, Ireland and Scandinavians, made their fortunes on foreign trade and pushed the EU towards more openness. Germany has similar interests, given its world-beating exporting firms. It also has its own liberal tradition, in which the state set the rules but (usually) did not interfere to decide which companies thrived. Crucially, Britain tipped the scales towards open markets, and liked rules that prevented France and others from doling out subsidies to favoured firms. The bits of the European Commission in Brussels in charge of negotiating trade deals or keeping a lid on state aid formed a liberal deep state, on hand to enforce the free-market mantra.

One by one, the opponents to *dirigisme* have fallen by the wayside. Britain left the EU. That defanged the smaller northern European cluster that had long been its allies; a free-trading "Hanseatic league" they set up to lobby for a pro-globalisation approach disbanded after a time. The rise and rise of China spooked Germany, whose *Mittelstand* of small firms went from being suppliers to Chinese companies to competing with them. Donald Trump's election in America in 2016, and an ensuing trade spat with Europe, further highlighted the perils of relying even on age-old allies. Then the pandemic seemed to prove Mr Macron's fears were well founded as Europe discovered how dependent it was on outsiders for everything from face masks to paracetamol.

French claims that Europe was being naive when it came to trade—seemingly the only one playing by global rules—started to resonate. How could European firms bound by tough carbon-emission targets compete with Chinese ones left free to pollute? The Dutch, once ardent free-traders, began speaking of "open strategic autonomy", sounding like Mr Macron with a different accent. French-infused remedies gained traction. The EU is now putting together plans for a carbon border tax, which liberal critics once decried as a form of green protectionism. Forget limits to state aid: under the aegis of a French commissioner, Thierry Breton, microchips and car batteries are receiving dollops of European cash. Investments by foreign firms into the EU are increasingly screened, better to keep corporate wrong'uns out of Europe.

Et tu, Manu?

Hopes that the pendulum might swing back towards open markets have been dashed by the war in Ukraine. "The energy crisis, like the pandemic before it, shows that the state has worked," says Jacob Kirkegaard of the German Marshall Fund, a think-tank. Subsidies to industry are flowing again. Germany's self-serving belief that trading with autocracies would in time turn them into good liberals blew up in its face. Many people are asking whether German reliance on China for industrial exports might one day prove as foolish as its past reliance on Russia for gas imports. Joe Biden only partly removed Mr Trump's tariffs, and is pushing "Buy American" measures with just as much vim (if a bit less bluster) than his predecessor. Governments featuring populists, as in Italy or Sweden, tend rather to like state capitalism *à la Française*.

What looked like a healthy tension between free-traders and their opponents may turn into a rout. After America infused its recent "Inflation Reduction Act" with green subsidies that only applied to stuff made at home, the EU at first aired a quiet protest. Allowing European firms to participate in America's decarbonisation efforts would make the measures even more effective, suggested Margrethe Vestager, one of the remaining liberal stalwarts in the European Commission. If nothing else, that might avoid a new trade war. Mr Macron has picked a different tack, demanding Europe "wake up" and start favouring its own industries. In the past even sceptics of free trade only muttered such things in private. Now they are being said out loud. ■

After Trussonomics

Who runs Britain now?

One thing is abundantly clear: it isn't Liz Truss

It was only Liz Truss's third session of prime minister's questions, and already she was battling to survive. "I'm a fighter and not a quitter," she cried. Her colleagues were quiet. An opposition MP gently suggested she was facing "mental anguish and despair". She screwed up her face.

Like a magnet pulled over a box of pins, a brush with the bond markets is reordering British politics. Ms Truss's ill-starred dash for growth has given way to a singular task of restoring Britain's fiscal credibility. Institutions that she had ignored or railed against, notably the Treasury, the Bank of England and the Office for Budget Responsibility (OBR), are newly powerful—as are old ideas like sound money. The effects will outlive Ms Truss's spell at the top of government, which will surely be short.

As *The Economist* went to press, her administration was disintegrating. On October 19th Suella Braverman, the home secretary, quit (see later story); a Commons vote on fracking turned into a circus. Ms Truss's net approval rating of minus 70 is the lowest that YouGov has recorded for a major party leader since the pollster was founded in 2000 (see chart). Polls taken in the week since October 13th gave the Labour Party leads of 21 to 36 points.

Ms Truss's project of borrowing for growth-boosting tax cuts, which has long circulated on the Tory right, has not survived first contact with lenders to Britain. A mini-budget on September 23rd triggered a sharp sell-off in government debt. That in turn sparked a fire-sale by pension funds, which forced the Bank of England to buy gilts to protect financial stability.

Ms Truss surrendered on October 14th, the day on which Andrew Bailey, the bank's governor, insisted its intervention would end. She fired Kwasi Kwarteng, her chancellor, and installed Jeremy Hunt, who promptly cancelled some £30bn ($34bn) of tax cuts in a six-minute TV address. By October 19th, the yield on 30-year government bonds was down to 4%, from a peak of 5% on September 27th before the central bank intervened. Daily movements in gilt yields, for a time measured in fractions of a percentage point, had settled down to being counted in hundredths of them. "The teacher is back in the room, and he's got the cane back from the children," remarks a former cabinet minister.

Now the Tories must ditch not just Trussonomics, but also the conviction that their electoral coalition will not accept more austerity. Cuts to areas of public spending that were previously beyond reach have been put on the table (see next article). Only one scenario is off-limits: the one in which the OBR, the government's fiscal watchdog, declares that Mr Hunt's medium-term plans fail to meet the rule of seeing the ratio of debt to GDP fall over the medium term. The reactions of focus groups have been subordinated to those of bond markets.

The gilt sell-off had been fuelled by attacks on the Treasury, the OBR and the central bank by Ms Truss, who spent her campaign to run the Tory party railing against "abacus economics". The new dash for market credibility has led to the reinforce-

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ment of all three institutions.

"The Treasury has not so much reasserted itself, as been sucked in to fill the void," says Philip Hammond, a former Conservative chancellor. Mr Kwarteng's first act in office was to fire Sir Tom Scholar, the Treasury's top civil servant. But he has been replaced not by a swashbuckling outsider, but by James Bowler, whose career has been spent preparing budgets and running public-spending policy and who, says one colleague, is "steeped in Treasury institutional wisdom". "The abacus strikes back," is the verdict of another policymaker. The Treasury has taken control of a vast energy-subsidy scheme from the business department, and is preparing to gut it.

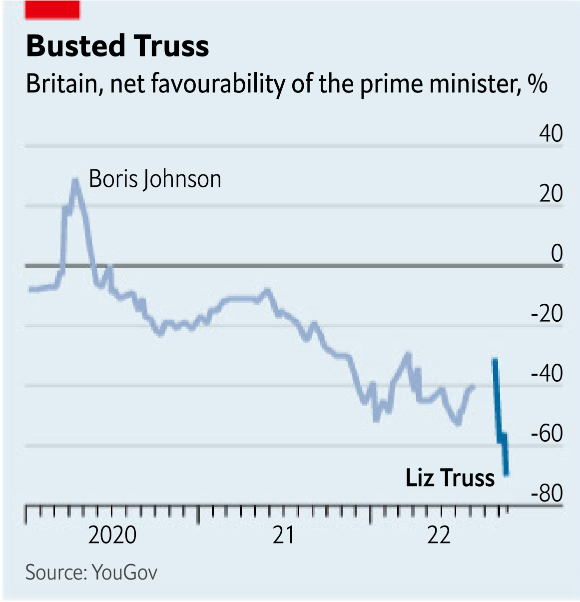
Mr Hunt admits that Mr Kwarteng's refusal to commission forecasts from the OBR increased the markets' alarm. The OBR has been powerful since its founding in 2010 but has never been so prominent. Its verdict on the medium-term fiscal plan that Mr Hunt is due to unveil on October 31st looms over the government like a Roman emperor's thumb. This is uncomfortable terrain for a technocratic and apolitical body, says Ben Clift of the University of Warwick, but one that will buttress it. "I don't think anyone will push them around any time soon."

The prime minister had the Bank of England in her sights, too, proposing in the leadership campaign to alter its mandate. Mr Kwarteng declined to show it his draft budget, which threw monetary and fiscal policy into conflict: he just opened the taps and declared it Andrew Bailey's job to deal with the resulting rise in inflation.

The stand-off between the bank, the government and the pension funds resembled that between three gunmen in "The Good, the Bad and the Ugly", says Sir Charles Bean, a former deputy governor of the bank. The bank stood firm. Mr Bailey's pledge that its intervention would end on time forced pension funds to hurry their deleveraging and pushed Ms Truss to ditch her budget. "The bank has played a blinder: it has called the government's hand and they've been forced by concerns about the market into making the early announcements," says Sir Charles. Mr Bailey speaks of a "meeting of minds" with Mr Hunt, who in turn insists on the bank's independence.

The Conservatives are in turmoil. Fiscal disciplinarians feel they have triumphed in a decades-long internal battle against the libertarian right. "For a generation, nobody's going to try that again," declared Matt Hancock, a former health secretary. Brexit sovereigntists have lost their footing, too: after a six-year project to enhance Britain's autonomy, the country is at the mercy of outsiders. Within the Labour Party, Rachel Reeves, the shadow chancellor who has preached fiscal discipline, looks strengthened against the left.

A world in which the limits of the acceptable fiscal deficit are clearly defined by the market will force rival parties to be more candid in their choices on the levels of public spending and the taxation required to fund them, argues Lord Hammond. If Labour wants better public services, and the Tories lower taxes, they will need to confront the trade-offs. When Ms Truss leaves office, she will take with her the idea that politicians can promise the earth and let borrowing take the strain. ■



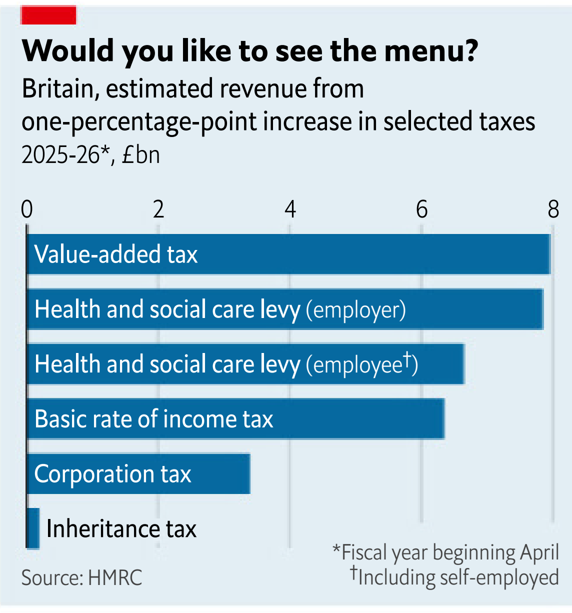
Fiscal policy

Abacus economics

As Britain's government looks to cut borrowing, almost nothing is protected

Not too long ago Liz Truss dismissed the Treasury's obsession with the balance of taxes and spending as "abacus economics". The government she leads is now eager to demonstrate its counting skills. On October 7th the Office for Budget Responsibility (OBR), a fiscal watchdog, reportedly told the government that it would need to cut annual borrowing by around £70bn ($78.5bn; 2% of GDP) by the 2027-28 fiscal year or fall foul of its own fiscal rule. As Jeremy Hunt, the new chancellor, works on a plan to be unveiled on October 31st, he has said "nothing is off the table". But what should be on it?

Start with the easy stuff. Mr Hunt has already cancelled a swathe of tax cuts attempted by his predecessor, Kwasi Kwarteng. Corporation tax for the most profitable companies will rise to 25% after all; the basic rate of income tax will stay at 20%; and a duty-free shopping scheme will be axed. That adds up to around £30bn of revenue in 2026-27. By pre-announcing those measures, as well as a reduced subsidy for household energy bills starting from next April, Mr Hunt will have tugged down interest rates. The OBR estimates that spending is reduced by around £7bn when gilt yields and short-term interest rates fall by half a percentage point.



That still leaves a hole large enough to make even the most eager number-cruncher squirm, of a little over £30bn. Because the government is trying to rectify a credibility problem, it will struggle to perform the old trick of promising vague cuts to public services in future. Specific targets might include the aid budget, which if kept at 0.5% of GDP rather than the planned level of 0.7% would save around £6bn. Cutting investment spending by 0.5% of GDP could save another £14bn, according to the Institute for Fiscal Studies, a think-tank, though that would make a mockery of the government's claim to be pro-growth.

Mr Hunt is eyeing up day-to-day spending by government departments, as each 3% cut in non-investment spending outside health and defence would save around £7bn. But after a decade of squeezes and pandemic-related backlogs there is little fat to trim. Nick Davies of the Institute for Government, a think-tank, notes that even based on current plans, most departments had little hope of returning to pre-pandemic performance levels by 2024-25. If the government wants more efficient public services, careful planning rather than quick grabs for cash will be required.

The welfare bill also looks vulnerable. Linking rises in working-age benefits to earnings rather than prices for the next two years would save £13bn, and doing the same to the state pension would save around £6bn, though getting either through Parliament would be tricky. Real-terms cuts to benefits would be regressive and cause great hardship, though Mr Hunt has refused to rule them out. Ditching the "triple-lock", a formula which would uprate the state pension in line with inflation, is a sensible longer-term goal, but is better done gradually than abruptly in the middle of a cost-of-living crunch. On October 19th Ms Truss promised to protect it. ▸▸

Raising taxes is Mr Hunt's final option. Inequality-busting measures like increasing inheritance tax by ten percentage points and ditching non-domiciled status, which allows foreign citizens to pay lower taxes, would bring in £2bn and £3bn respectively. Going ahead with the health and social care levy, a payroll tax of 1.25% paid by employers and employees, would raise over £14bn (see chart). But it would be better to raise income tax, which is more progressive and applies to a broader range of income. Raising the basic and additional rates of income tax by two percentage points each would raise more than £16bn. One percentage point on value-added tax, a sales tax, would raise some £8bn, but at the risk of exacerbating short-term inflation.

Mr Hunt could attempt more radical tax grabs. He could look into reducing the interest rate the Bank of England pays on bank reserves, in effect a tax on the banking sector. He could merge the income tax and national-insurance systems to expand the scope of the latter, or even fix Britain's absurd system of property taxation, which is based on home values last assessed in 1991, and apply a land-value tax. But doing any of those well would take more time than Mr Hunt has to spend. ■

Britaly

Low-growth gang

What a comparison between Britain and Italy reveals

Britain has long thought of itself as being part of the same economic club as America, France or Germany. It is, after all, the third-biggest economy in the West. So it is a mark of the glum mood in the country that commentators are now drawing comparisons to Italy instead—a place that, aside from *la dolce vita,* is known for interminable political drama, economic stagnation and nervous bond markets. The two countries' economies and fiscal positions differ considerably, not least because Italy uses the euro and does not have its own monetary policy. A comparison is revealing nonetheless.

Both Britain and Italy have an economic-growth problem that stems from underinvestment and lacklustre productivity, which in turn reflects deep-rooted structural factors. But Italy's disease is considerably more advanced. Its living standards, measured by real GDP per person, have not risen since 2000. That in part reflects an ageing population. Italy has 37 old people for every 100 of working age, compared with 30 in Britain and 26 in America. Its courts and public administrators make decisions at glacial speed, which impedes business. A thicket of regulations is one reason why the country's many small, often family-run firms do not expand.

Britain's decline is at an earlier stage. GDP per person is still growing, although it has fallen behind America and Germany since the mid-2000s. Impeded credit flows after the financial crisis, restrictive planning rules and a poorly skilled workforce mean that investment and productivity growth is nearly as low as in Italy (see chart 1). Investment as a share of GDP was 18% in 2019, below 21-23% in America, France and Germany, but in line with that in Italy (see chart 2). All of this has dire consequences for living standards in the future.

The malaise is apparent in stockmarkets, too. As companies elsewhere, chiefly in America and China, have innovated and swelled, Britain's stockmarket has shrunk in importance. Its share of global market capitalisation has fallen from 8% to 3% over the past 20 years. Its importance in Europe's total market value has declined, too. Italy's share of the world's stockmarket was never as big as Britain's was, but it has shrunk at a similar pace.

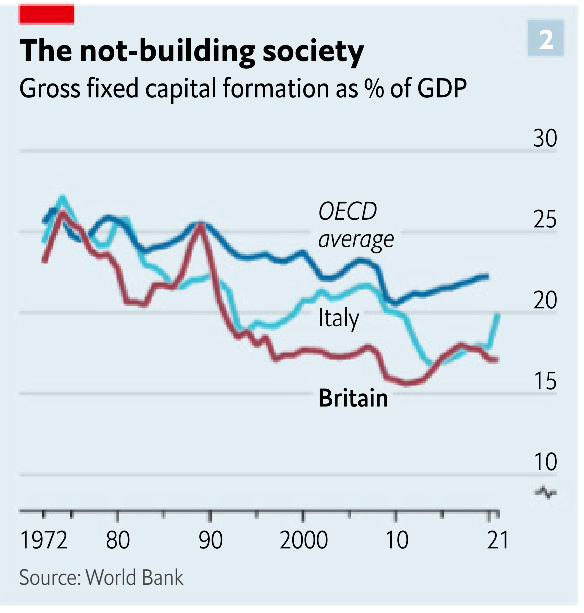
Both countries have serious regional imbalances. In Italy, the richer manufacturing-oriented north has long left the south in the dust. In 2019 GDP per person in the south was about half of that in the north. Britain is also unbalanced, with output per worker in London around 70% higher than that in the north-east of England. It is possible to construct lots of other measures of regional inequality, depending on the size of the region and the measure of income used. In 2019 Philip McCann, then an economist at the University of Sheffield, put together 28 of them for 30 of the mostly rich members of the OECD. He concluded that Britain was the most geographically unequal large advanced country, with Italy a close second.

When it comes to the countries' financing positions, however, the picture is more complex. Italy has high net public debt, of around 138% of GDP in 2021. Its slow economic growth means that those debts risk becoming unsustainable. Moreover, it is a member of a currency union with shared monetary policy, which means it cannot benefit from a weaker currency to boost its economy or prevent a run on its public debt. Its failure to implement reforms, revive growth and lighten its debt burden means that investors tend to worry about its creditworthiness. As a result, they demand a premium, or a "spread", to hold Italian debt over safer German Bunds. Over the years, fears about spreads widening have led the European Central Bank to devise various schemes to buy government bonds in times of trouble.

Britain has far lower public debt, of 85% of GDP. It has its own currency and a central bank that sets interest rates for the country alone. The government's mindless mini-budget jolted investors into expecting higher inflation, and therefore higher interest rates from the Bank of England, which pushed up government-bond yields. It also prompted an emergency intervention by the bank to stop a fire-sale of assets by pension funds. The market turmoil has prompted the government to reverse its plans, rather as bond markets forced Italy's governments to change course in 2011 and 2018. But few investors worry that Britain will default on its debts (see Buttonwood).

The kindness of strangers

Britain relies more on external financing than Italy does, however. According to the IMF, it is likely to run a current-account deficit of nearly 5% of GDP this year, meaning that it is a net borrower from abroad. (Italy's deficit is expected to be 0.2%.) That means financing conditions rely in part on the appetite of foreign investors for domestic assets. And the less the country does to fix its growth problem, the less attractive it becomes for investment. Political paralysis has consequences. ■



Immigration

Dashed dreams

Suella Braverman's departure reveals a rift in Tory views over immigration

After Suella Braverman ended her bid for the Conservative Party leadership in July, she said she would back Liz Truss as leader because she would "unleash the opportunities of Brexit". It soon became clear that the two women had not discussed what that might involve. On October 19th, following a series of outbursts in which Ms Braverman contradicted her boss's stance on immigration, she resigned. Grant Shapps, the transport secretary in the government of Boris Johnson, has replaced her.

Ms Braverman admitted sending a document from her personal email to a parliamentary colleague. That, she said, was a "technical infringement of the rules", so she had to go. Yet her resignation letter went on to express concern about the government's direction and note that it had broken "key pledges". Ms Braverman then appeared to suggest that the prime minister should depart. "Pretending we haven't made mistakes, carrying on as if everyone can't see we have made them, and hoping that things will magically come right is not serious politics," she wrote.

Her departure is yet another knock to a besieged prime minister. It is doubtless connected to Ms Braverman's own political ambitions: she will surely be trying to position herself as a right-wing successor to Ms Truss. Yet her short, pugnacious term as home secretary also illuminates a more profound disagreement on post-Brexit immigration policy that splits the party.

Ms Truss wishes to expand immigration in some areas to boost growth. Ms Braverman repeatedly emphasised a strong desire to cut it. She said she wanted to reduce net migration, estimated at 239,000 in the year to June 2021, to "tens of thousands"—a goal set by David Cameron from 2010 that was eventually ditched by Boris Johnson after repeated misses. Whereas Ms Truss appears to be a mouthpiece for an "open Brexit", Ms Braverman represented a "closed Brexit", says John Dalhuisen of the European Stability Initiative, a think-tank.

Earlier this month Ms Braverman said she had "concerns" about a proposed trade deal with India because it would lower barriers to immigration from the country. That was not what Brexit voters had wanted, she maintained; besides, many Indians overstayed their visas. If her comments did not sink a deal with a notoriously difficult negotiating partner, they seem to have delayed it. Britain had hoped to sign a deal by late October, but it now seems unlikely to be concluded this year.

In truth a new era of Indian immigration is already under way. Since a post-Brexit points-based system was introduced in January 2021, the number of migrants from outside the European Union has surged. In the year to June, 46% of those granted visas for skilled workers were from India. Their numbers have grown by 80% since 2019. Nigeria and the Philippines supplied many of the rest. Only 10% were from EU countries.

Polls suggest Britons are more comfortable with the new system, with its emphasis on skills and control, than with the free movement from Europe that preceded it. Polling by Ipsos shows that more feel that immigration has had a positive effect on Britain than a negative one. In 2015 the same survey revealed the opposite.

Ms Truss also reportedly wants to expand the government's Shortage Occupation List, which makes it easier for firms in some understaffed industries to bring in more workers. Businesses are lobbying for the government to make it easier to bring in high-skilled immigrants in other ways, too, including by loosening the requirement to speak English and lowering salary requirements in some regions. ▸▸

Restitution

Carbon capture

Britain took the Koh-i-Noor diamond. Indians want it back

The maggots didn't help matters. Most myths about the Koh-i-Noor diamond are easy to dispel. The 106-carat stone, which currently sits in the Tower of London, was not, as some suggested, found by the god Krishna; nor was it stolen by a lion that was then slain by a bear. Nor is it the world's largest: in international gem league tables it currently sits in 90th position. But the idea that it curses unworthy males lingers—persistent enough that only British queens, not kings, have worn it.

Certainly many of its male owners had a rum time of it. Ahmad Shah, an 18th-century Afghan ruler, developed a facial tumour so severe he had to cover it with a jewelled mask (contemporaries considered the overall effect spoiled by the maggots that dropped from behind it). Another owner had his skull smashed so badly that his brains spilt onto his sheets; another who encountered it had molten lead poured on his freshly shaven head. The diamond, says Anita Anand, co-author of the book, "Koh-i-Noor", "doesn't bring out the best in people".

One for the ladies

It still causes strife. As soon as Elizabeth II's death was announced, and again when Charles III's coronation date was set, demands for its return to India began trending on Twitter (it was taken from its last Indian owner, the ten-year-old Maharaja Duleep Singh, by the East India Company in 1849).

Britain is used to rancour over old stones. But many Britons seem to have reacted to the demands with bafflement: less the usual "We will not" than "The what?" As a character in Salman Rushdie's "The Satanic Verses" observes: "The trouble with the Engenglish, is that their hiss hiss history happened overseas, so they dodo don't know what it means."

India does know. The country Britain once called "the Jewel in the Crown" of its empire has not forgotten this jewel. The ruling BJP party has said that a plan for Charles's wife, Camilla, to wear the crown in which it is set at the coronation would bring back "painful memories".

In a sense the stone's fame is odd. The history of colonial rule in India offers far bloodier chapters: after the Indian Uprising of 1857, British officers blew Indians from cannons. Yet it is the diamond, so small it can fit in the palm of a hand, into which much anger at Britain's colonial history has been distilled.

The Koh-i-Noor, as one Victorian observed when it was taken, is a "historical emblem of conquest in India. It has now found its proper resting place." The first statement is clearly true. The second is increasingly contested.

To tackle some of the shortages in low-skilled labour, meanwhile, the prime minister is said to be considering raising the annual cap on visas granted under the Seasonal Agricultural Workers Scheme. It is set for this year at 40,000; the National Farmers' Union says that is insufficient, and that fruit and vegetables are rotting in the ground. Raising the cap would be nothing new: it was tripled (to 30,000) in 2021. Ms Truss is also said to be considering expanding the scheme beyond farm workers. Last year it temporarily took in poultry butchers and lorry drivers.

The new home secretary is likely to smile on such ideas, as will Jeremy Hunt, the all-powerful new chancellor (see Bagehot). Mr Shapps is drawn from the opposite wing of the party to Ms Braverman. He voted to remain in the EU and has made clear his distaste at the sort of culture-war rhetoric she revels in. He is relaxed about Britain's population growing quickly if it boosts the economy. Yet he is no friend to Ms Truss: he helped orchestrate a rebellion against her budget during the Tory party conference earlier this month. And whatever the policy, the issue of immigration will keep infuriating many. ■

Walking in cities

Step by step

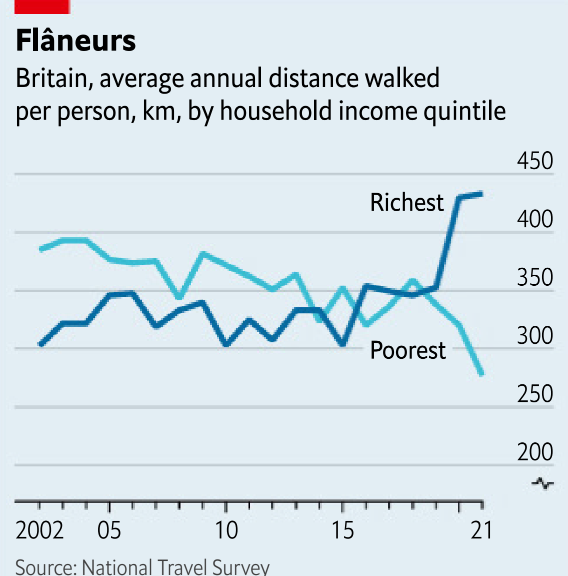
BIRMINGHAM

The least sexy form of travel is finally getting some attention

"YOU CAN taste the pollution here," says Lisa Trickett, a councillor representing King's Heath in Birmingham. The main street that runs through the trendy suburb is a less-than-ideal environment for walking. Cars and lorries trundle up the road, emitting fumes and noise; the pavement is obstructed by bus shelters and monolithic digital advertising boards. But power in King's Heath, and across Britain, is shifting to pedestrians. It is one of the great changes wrought by the pandemic.

Pavements used to be full of walkers, sometimes travelling far. In "David Copperfield", Charles Dickens's hero walks from central London to Highgate—a distance of 7km (4.5 miles) ending in a nasty hill—to see if his friend is at home. Public transport and cars made everyone lazy, the well-to-do most of all. In 2002 people in the top household-income quintile made an average of 219 walking journeys a year, according to the National Travel Survey. They drove almost three times as much.

People were walking a little more before covid-19 struck, in terms of distance if not number of journeys. The pandemic put



more of them on their toes. Between 2019 and 2021 walking trips went from 26% to 31% of all journeys as most other forms of travel declined. Longer strolls of over a mile grew most sharply. People in high-income households, who had walked less than the poor, started tramping farther than anyone else (see chart).

Britons walked during lockdowns because there was little else to do. But the middle classes seem to have kept up the habit because their work patterns have changed. Many now toil remotely for several days a week: Ms Trickett says that she used to canvass in the evening but now goes out in the mid-afternoon because so many people are at home. Desiring a change of scene, they might walk a kilometre or two for a sandwich. In 2021 people in the top quintile walked almost as often as they drove (258 journeys against 293).

Cycling flared more spectacularly in the early months of the pandemic. But that did not last. In 2021 the average person travelled 89km by bike, only 1.5km more than in 2019; walking was up by 9km. Adam Tranter, the West Midlands Cycling and Walking Commissioner, puts that down to infrastructure. Cities like Birmingham are not designed for cyclists, who must often share roads with cars. Cycling was nice during the worst of the pandemic because the roads were quiet; as the cars came back, the cyclists retreated. But cities have always made space for pedestrians.

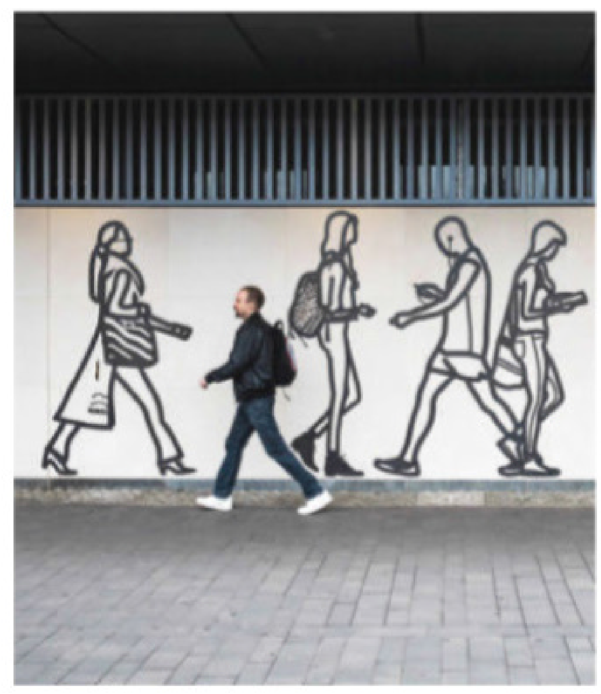
During the pandemic they created more. In May 2020 the national government offered local authorities money to create wider pavements, bike lanes and "low traffic neighbourhoods" (LTNs) which tend to involve blocking residential roads to cars. Many cities and towns took up the offer. Drivers could not object too strongly to closures, since they were not using the roads much. And lockdowns had changed people's expectations. "When we were only allowed out for our one bit of exercise per day, we got a sense of what a calmed city would look like," says Huw Jenkins, who advises the Liverpool City Region authority on transport and air quality.

Drivers eventually realised what was happening, and a backlash began. Ms Trickett, who backed an LTN in King's Heath, believes that she lost votes as a result. "The level of abuse I've had," she says. "I fully expected somebody to blame the queen's death on the LTN." Some LTNs have been scrapped—Ealing, a suburb of London, removed seven last year. But many others have remained. A study of London by two academics, Rachel Aldred and Anna Goodman, finds that the zones boost walking more than cycling.

Pedestrians also have the upper hand in Coventry, 30km east of Birmingham. The city was bombed flat in the second world war, then rebuilt according to prevailing notions of urban planning, with a car-free shopping centre surrounded by fast roads. The city authorities have gradually narrowed some roads and purged vehicles from others as part of an ongoing rebuilding of the city centre, which is now one of Britain's finest.

Jim O'Boyle, a councillor in Coventry, uses the same phrase as Ms Trickett when talking about the politics of road use. Drivers vehemently protest the removal of road lanes and parking spaces, they say. But they must also heed the "silent majority" of pedestrians. That Nixonian expression is odd, coming from Labour politicians, and not entirely accurate. As walking becomes more middle-class, pedestrians are growing more powerful.

One big obstacle remains. All Saints Road in King's Heath, which has been blocked to through traffic, ought to be a lovely place to stroll. It is not, however, because cars are parked on the pavements. That practice is sort-of legal outside London. The Scottish government banned it in 2019, although the law has not come into effect. The British government consulted on a ban in 2020 but has not responded. Expect a noisy row when it does. ■



Art imitates life

Bagehot | Meet the man in charge

Jeremy Hunt is the most powerful person in Britain. For now

THE MOST powerful person in Britain entered the House of Commons on October 17th to a chorus of respectful grunts. Addressing MPs—as well as a wider audience of investors who buy gilts and sterling—he began soberly: "We are a country that funds our promises and pays our debts." Jeremy Hunt, the new chancellor, delivered the message like a doctor with a grim diagnosis. Next to him sat Liz Truss, the actual prime minister. She stared into the middle-distance while Mr Hunt set about running the country.

Mr Hunt is chancellor in name but prime minister in practice. In his first week he has undone about £30bn ($34bn, or over 1% of GDP) of tax cuts and reforms that Ms Truss was elected by Tory party members to carry out; her measures had sparked panic in markets and a plunge in the polls. By the end of his first month in the job Mr Hunt will reveal tax rises and spending cuts worth tens of billions more. Britain has long had a constitutional monarch, a ceremonial figurehead who is ultimately powerless, says one wag. Now it has a constitutional prime minister.

Becoming Britain's de facto leader caps a meandering career for Mr Hunt. At its start he was most famous for an unfortunate slip of the tongue by a broadcaster saying his surname. Six years as health secretary, the hardest job in a Conservative government, proved he had competence and political nous. A year as foreign secretary, the easiest job in any government, turned him into the closest thing the party has to a statesman. When Kwasi Kwarteng was defenestrated as chancellor on October 14th, Mr Hunt was one of only a few obvious successors.

Mr Hunt's task is clear, if difficult. After the blunders of Mr Kwarteng and Ms Truss, Britain now pays a "moron risk premium" on its debt, in the words of Dario Perkins, a strategist at TS Lombard. Mr Hunt's job is to remove it, and perhaps win a technocrat discount. Colleagues argue he is qualified. For starters, he is not a moron; he is intelligent and, best of all, reassuringly dull. One former cabinet colleague compared him to a "more ambitious Philip Hammond", a dour but dependable former chancellor. Is that praise? "When gilt yields are above the Greeks', it's praise."

Mr Kwarteng picked fights with Britain's technocratic institutions; Mr Hunt has built his career on working with them. Health secretaries enjoy only indirect control over the country's health-care systems. NHS England, which was run for most of Mr Hunt's tenure by Sir Simon Stevens, is in effect the country's biggest quango. Ministers may set the strategic direction, but are in theory removed from day-to-day policy. Sir Simon, a very capable and very political official, took charge. Mr Hunt, for the most part, let him, focusing instead on a few topics, such as patient safety and junior doctors' pay and conditions. The arrangement worked well.

A similar approach is under way now that Mr Hunt has moved into 11 Downing Street. Mr Kwarteng promised to smash the Treasury orthodoxy of sound money and balanced books; Mr Hunt will reinforce it. Mr Kwarteng tried to ignore the Office for Budget Responsibility, which comes up with economic forecasts; Mr Hunt will treat its word as gospel. Mr Kwarteng tried to bully the Bank of England; Mr Hunt will work in concert with Threadneedle Street. Brexit was supposed to turn Britain into an economic laboratory. Under Mr Hunt, there will be no experiments.

Fights will take place elsewhere in government. Most politicians are inveterate people-pleasers. As foreign secretary Boris Johnson proved averse to displeasing anyone, offering kind words to people who required diplomatic bollockings. Mr Hunt is happy to deliver hard truths, whether lecturing eastern European allies about media freedom or scrapping with doctors and nurses, an always powerful lobby. Raising taxes or slashing spending will be deeply unpopular, but Mr Hunt will not mind.

In the patronising vernacular of Westminster, Mr Hunt is a "grown up". He was not always. Mr Hunt had a reputation as an oddball when he became culture secretary in 2010. At one point he had to deny hiding behind a tree to avoid journalists who had spotted him attending a party with James Murdoch, a media executive and son of Rupert. He is prone to occasionally wild statements. As foreign secretary Mr Hunt performed a volte face on the EU, going from campaigning to stay in the club to comparing it to the Soviet Union in a little over two years.

Mr Hunt may today be a picture of fiscal piety. But when he campaigned for the Conservative leadership in 2019, he suggested slashing Britain's corporation tax rate to 12.5%. Although painted as a moderate centrist—to use the jargon, a "wet" Tory—Mr Hunt's political sympathies are for the red-blooded Thatcherism that Ms Truss would applaud. But he is clever enough to know when such schemes are feasible. It is not that Mr Hunt became normal; the Conservative Party became weird.

A punt on Hunt

Ultimately, Mr Hunt represents a return to the era of David Cameron and George Osborne, who ran the country from 2010 to 2016, when he started his own ministerial career. Among Mr Hunt's first acts as chancellor was to place Rupert Harrison, an influential former aide to Mr Osborne, on an advisory economic council. Brutal spending cuts are again coming to departments that were already hacked to bits during those years of austerity.

Few voters will welcome that. But what people may appreciate is the new chancellor's manner. British politics has suddenly woken up to the virtues of dullness, personified by the return of Mr Hunt. In 2015 a revolutionary fervour enveloped British politics, with all sides of politics competing to offer radical solutions. Leaders from across the spectrum promised disruption, whether in the form of Jeremy Corbyn's socialism, Mr Johnson's Brexit or Ms Truss's ill-fated free-market experiment. None of them worked well. Mr Hunt offers nothing but technocracy, orthodoxy and competence. That will do for now. ■

Underwater infrastructure

Sabotage at sea

The world's underwater infrastructure offers a tempting target. How best to defend it?

On October 12th Vladimir Putin, Russia's president, gave an ominous warning. Energy infrastructure around the world was now "at risk", he said. Mr Putin's warning came a month after explosions tore through Nord Stream 1 and 2, a pair of gas pipelines running from Russia to Europe under the Baltic Sea. The pipes were not in use at the time. But the ruptures left plumes of methane bubbling to the surface for days.

Mr Putin's warning was a study in chutzpah. Russia denies responsibility for the explosions. But few doubt that the Kremlin did it. It has used cuts in gas supplies, or the threat of them, to try to blackmail Europe since the early days of its invasion of Ukraine. The attacks occurred just as Russia was escalating its war, mobilising reservists, annexing territory and making nuclear threats. The incident has focused minds on both the importance of underwater infrastructure and the difficulty of protecting it.

Subsea pipelines and cables have proliferated since the first one was laid, in 1850. In Europe, pipelines are vital conduits for energy. Some, like the two Nord Stream connectors, bring gas from Russia; others take oil and gas from the North Sea ashore in Britain, the Netherlands and Norway. Subsea electricity cables allow countries to exchange power. Globally, energy conduits are dwarfed by pipelines for bits and bytes. TeleGeography, a data-analysis firm, reckons there are more than 530 active or planned submarine telecoms cables around the world. Spanning over 1.3m kilometres, they carry 95% of the world's internet traffic (see map on next page).

Western officials worry that such infrastructure offers a juicy target, for Russia and others. Those concerns predate the war in Ukraine. "We are now seeing Russian underwater activity in the vicinity of undersea cables that I don't believe we have ever seen," claimed Rear-Admiral Andrew Lennon, then commander of NATO submarine forces, in 2017. In January this year Admiral Tony Radakin, Britain's chief of defence staff, noted a "phenomenal increase" in Russia's underwater activity over the previous 20 years. There are no proven recent examples of state-sponsored cable-cutting. But rumours abound. In November 2021, cables serving underwater acoustic sensors off the coast of northern Norway—an area frequented by Russian submarines—were cut.

Western officials say that a particular source of concern is Russia's Main Directorate of Deep-Sea Research, known by its Russian acronym GUGI. It has a variety of spy ships and specialist submarines—most notably the *Belgorod*, the world's biggest submarine, commissioned in July—which can work in unusually deep water. They can deploy divers, mini-submarines or underwater drones, which could be used to cut cables. In 2019 a fire aboard the *Losharik*, one of GUGI's mini-submarines, killed 14 Russians in the Barents Sea. The fact that all were officers indicated the specialist nature of the organisation's work.

Cable chicanery, though, is not a Russian invention. The first act of military cable-cutting occurred in 1898 during the Spanish-American war, says John Ferris, a historian at the University of Calgary. One of Britain's first acts during the first world war was to tear up German telecoms cables laid across the Atlantic. Germany responded with attacks on Allied cables in the Pacific and Indian Oceans.

More recently, espionage has been the order of the day. Ivy Bells, an American operation to place listening devices on Soviet underwater communication links, including in the Sea of Okhotsk, was exposed in 1980. In 2013 Edward Snowden, a contractor for the National Security Agency (NSA), America's signals intelligence agency, revealed an Anglo-American project had tapped at least 200 fibre-optic cables round the world.

Other countries are getting in on the act. In a speech on October 11th, Sir Jeremy Fleming, the head of Government Communications Headquarters, Britain's signals-intelligence agency, said that China was seeking "to bend international flows of da-

ta around the Indo-Pacific region towards interception platforms inside China". In 2020 America's Justice Department recommended against allowing Pacific Light Cable Network, a joint project between American and Chinese firms, to connect America to Hong Kong. China, it said, was aiming to turn Hong Kong into a "dominant hub" for tapping traffic.

But in the aftermath of the Nord Stream explosions, sabotage is a more immediate concern than spying. The attacks have given impetus to the creation of capabilities to spot underwater threats and respond to them (or, which is less often stated, to allow attacks on a rival's infrastructure). On October 4th Britain confirmed it would purchase two "Multi-Role Ocean Survey Ships" carrying advanced sensors and underwater drones. France published its own seabed warfare strategy in February. As a statement of intent, on February 15th it sent a lieutenant more than 2,100 metres under the sea—far deeper than conventional submarines can go—to conduct a symbolic inspection of a cable.

Yet the seabed is not amenable to control. A paper published last year on Russian military robotics by the International Centre for Defence and Security, an Estonian think-tank, noted that Estonia and other Baltic states had only a limited grasp of what was going on under the Baltic because of quirks of hydrology, scarce surveillance platforms and limited information-sharing between countries. It concluded, perhaps presciently: "It would be difficult to prevent Russian [drones] deployed in international waters from damaging critical undersea infrastructure."

That does not mean inflicting such damage is simple. Cables and pipelines could be damaged by cyber-attacks, say officials familiar with the issue. But in practice, most attackers will need to get physically close. The first step in a sabotage mission is finding the target. With big, heavy pipelines, which are typically made from concrete-lined metal sections, that is relatively easy. Older communication cables, being smaller and lighter, can shift with the currents. Newer ones are often buried, says Srinivas Siripurapu, head of research and development at the Prysmian Group, the world's largest cable-manufacturer.

It is also increasingly possible for operators to detect tampering. Mr Siripurapu says that more than half of his firm's new projects include "distributed fibre-optic sensing", which can detect vibrations in the cable or changes in its temperature. But that will not reveal whether the problem is a geological event or an inquisitive drone—or which country might have sent it. Underwater attribution is slow and difficult. Investigators were not able to inspect the Nord Stream pipelines until the gas leaks had subsided. They have still not been able to find a smoking gun (or at least not one that they have revealed). And sending a vessel to investigate a mishap in the middle of the Atlantic would be much trickier than doing so in the shallow waters of the Baltic.

Determined attackers, in other words, are likely to get through. The effects of a successful attack will differ. Pipelines and subsea electricity cables are few in number. If one is blown up, gas, oil or electricity cannot easily be rerouted through another. Communication cables are different. The internet was designed to allow data to flow through alternative paths if one is blocked.

And at least when it comes to connections between big countries, plenty of alternatives exist. At least 18 communication cables link America and Europe. Australia has 16 cable connections to other countries. Two dozen sprout from America's west coast and cross the Pacific. These figures include known cables; armies and spy agencies lay others whose whereabouts are not publicised (though the ships laying them can occasionally be glimpsed on ship-tracking websites).

"There is significant redundancy on these routes," says David Belson, head of data insight at Cloudflare, a big infrastructure firm which helps distribute traffic around the internet. Traffic can be rerouted between them relatively easily. In June, when the AAE-1 and SMW-5 cables, stretching from France to Hong Kong and Singapore respectively, were disrupted, traffic was affected for just four hours before returning to normal.

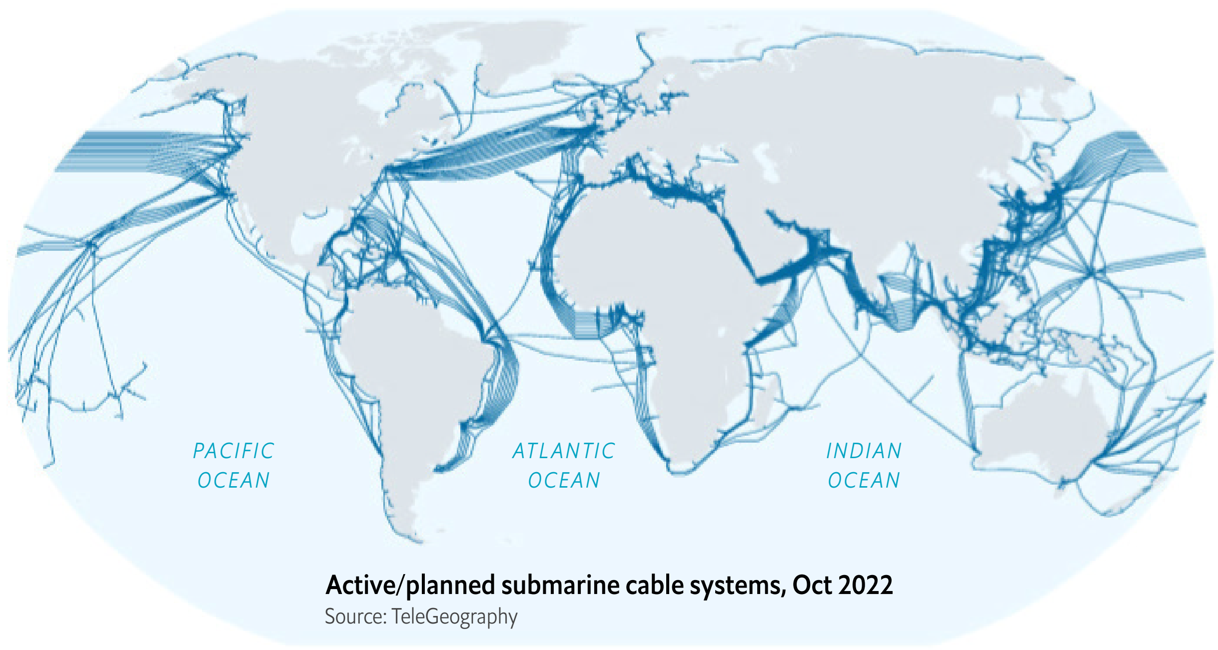
Many European officials argue that the Nord Stream explosions should nevertheless serve as a wake-up call. In the aftermath of the attacks, Ursula von der Leyen, the president of the commission, proposed stress tests on offshore digital and energy infrastructure, and satellite surveillance to detect suspicious ships. "Critical infrastructure is the new frontier of warfare," she argued a few days later. "And Europe will be prepared."

Bart Groothius, a Dutch MEP, who has campaigned on the issue for many years, says Mrs von der Leyen's proposals do not go far enough. Even if companies detect cable disruption, he says, they do not always report it. "There's no collective institution that records all the incidents that are going on, and what is behind them—we don't have any statistics behind it." Elisabeth Braw of the American Enterprise Institute, a think-tank, agrees. She says the problem often falls into the gap between private and public sectors.

Some countries are attempting to bridge that gap. America's energy department holds a regular dialogue with energy firms, says Ms Braw. In July Italy's navy said it was working with Sparkle, an Italian telecommunications company, to conduct "joint reconnaissance and monitoring" of its undersea cables. *The Economist* understands that Britain's security services keep in regular touch with cable operators.

Resilience may offer the best defence. In the aftermath of Russia's invasion of Ukraine, Europe has already rushed to develop more of the infrastructure necessary to import liquefied natural gas, which is not delivered by pipeline, but shipped by tanker from countries such as America and Qatar. And telecommunication cables, at least, can be fixed relatively quickly. Phil Walker, the boss of Pharos Offshore Group, which has laid more than 160,000km of subsea cables, reckons repair ships can usually fix broken cables within two weeks of a fault.

The problem is that profits in cable laying have exceeded those in cable maintenance, leading to a relative decline in the number of repair ships. If multiple cables were struck at once, says Mr Walker, that scarcity would be felt. Spy ships and deep-sea drones may be eye-catching. But the key to underwater resilience may be a good stock of spare cable and the ships to lay it. "It's a bit of an art," adds Mr Walker, "but not much has changed in the 30-odd years I've been doing it." ■



Active/planned submarine cable systems, Oct 2022

Source: TeleGeography

Meta

Reality bites

THE METAVERSE

As Facebook fades, Mark Zuckerberg hopes for success in another dimension

It is night-time at the Soapstone Comedy Club. In fact, it always is. The club is a space in Horizon Worlds, Meta's flagship metaverse app, where users can watch and perform comedy in virtual reality (VR). "It's hard to do stand-up when you have no legs," quips one performer, gesturing to his hovering avatar, before accidentally dropping the virtual microphone and floating offstage. A night out in VR lacks some of the atmosphere of a real bar, though it does cause authentic dizziness and nausea.

It is almost a year since Mark Zuckerberg announced that his company would change its name from Facebook to Meta, to reflect its commitment to the metaverse and, no doubt, to escape the firm's toxic public image. Many were unsure what the word meant, but with the company's value at a near-all-time high of $1.1trn, and its core social-network advertising business humming away on the back of a pandemic boom, investors were willing to indulge the experiment.

A year on, things look different. The metaverse on which so much has been staked remains unproven and unpopular. Meanwhile there are signs that both users and advertisers are drifting away from the social networks that pay Meta's bills. Since its rebranding the company's share price has dropped by 60%, destroying more than half a trillion dollars of market value (see chart 1 on next page). Forecasts for profits in 2023 have fallen by about 50%, according to data from Bloomberg. Meta's next earnings results, due on October 26th, represent an "existential quarter", says Mark Shmulik of Bernstein, a broker.

What has gone wrong? The sell-off of Meta stock began in February, after the company reported its first-ever drop in daily users of Facebook, its first and largest social network. After 18 years of uninterrupted growth it lost 1m of them between October and December 2021 (see chart 2). It has since bounced back, adding 39m more, while users of Meta's "family of apps", which includes Instagram and WhatsApp, have kept growing.

But the new users increasingly come from poor countries, and are therefore less valuable to advertisers. Last year Frances Haugen, a whistleblowing former Meta executive, claimed that in Facebook's five most valuable markets, account registrations for under-18s had fallen by a quarter within a year. Meta has hurried out a new short-video product, Reels, to stem the bleeding to TikTok and other new rivals.

As users wobble, so do advertisers. In the second quarter Meta's revenue fell year on year, for the first time in its history (see chart 3). Inflation, interest rates and war all played a part. But the ad business has been permanently changed by Apple's new rules. These make it harder for iPhone apps to track users' online activity, which in turn makes it harder to serve them relevant ads and see whether they work. Meta has said that Apple's changes will cost it $10bn this year in forgone revenue. Companies are shifting their advertising to what admen call the bottom of the funnel: points at which the consumer is close to a purchase (Amazon, which serves ads to customers based on what they have just ▸▸

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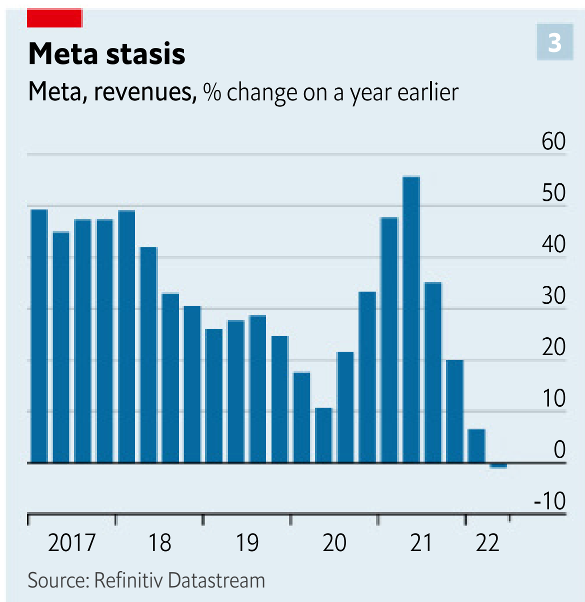
searched for, has been a big beneficiary).

As it faces these market headwinds Meta is also being harried by regulators. America's Federal Trade Commission (FTC) is suing Facebook for abusing its supposed monopoly in social networking, an accusation which seems increasingly eccentric given recent advances by TikTok and other rivals. In July the FTC pounced on Meta's proposed acquisition of Within, a maker of VR fitness apps. And on October 18th British regulators ordered Meta to undo its purchase of Giphy, a maker of animated images that it had bought in 2020.

Meta is better equipped than many of its rivals to overcome these obstacles. Reels already accounts for more than 20% of time spent on Instagram, and is making more money than Instagram's successful Stories feature did at the same stage of its introduction, the company says. Heavy investment in artificial intelligence (AI) is helping Meta develop "probabilistic" ad models to replace the signal that was lost with Apple's changes. Advantage+, a recent Meta ad product, uses AI to help advertisers develop and place ads.

A trickier ad business serves to widen Meta's competitive moat, points out Mr Shmulik: smaller rivals like Snap, whose share price has fallen by nearly 90% in the past 12 months, are the real casualties. Still, Meta's advertising franchise has probably been permanently impaired. And the company is scrambling to rebuild its ad business without the architect of its previous one, Sheryl Sandberg, who left the company last month.

All this would be enough to give investors jitters. The fact that Meta is simultaneously making a colossal bet on the metaverse threatens to test their faith to breaking point. Reality Labs, the company's metaverse division, has so far run up losses of $27bn. Meta has sold more than 17m Quest 2 VR headsets, estimates IDC, a data company, mostly at or below cost. It has also been on a hiring spree, last year announcing 10,000 new metaverse jobs in Europe. The pace of hardware development continues: on October 11th Meta unveiled a more advanced Quest Pro headset, and Mr Zuckerberg showed off prototype hardware including a wrist-worn neural-input device. A Quest 3 and Quest Pro 2 are already in the works.



Source: Refinitiv Datastream

When—or whether—the metaverse will take off remains unclear. The Quest's main use so far is gaming. Fitness is a growing niche, though Meta's progress in that area could stall if its purchase of Within is blocked. The Quest Pro is aimed at businesses; on its launch this month Meta announced a partnership with Microsoft, which will provide VR versions of apps like Teams and Office. A "Quest for Business" subscription will be available next year.

But the social uses of VR, about which Mr Zuckerberg is most enthusiastic and where Meta should have the greatest advantage, remain unpopular. In February Meta reported that just 300,000 people had used Horizon Worlds; the firm has said nothing since. On October 16th the *Wall Street Journal* reported that, according to internal Meta documents, the number of regular users had declined since the spring. A leaked internal memo suggested that even company employees were having to be cajoled to use it ("If we don't love it, how can we expect our users to love it?").

Mr Zuckerberg is hardly the only one who sees potential in VR. In the first half of next year Apple is expected to release its debut headset, and Sony will launch its latest gaming-focused goggles for its PlayStation console. If headsets do become the new PCs, as Mr Zuckerberg has predicted, Meta will enjoy a considerable first-mover advantage. The Quest 2 accounted for 88% of global VR-headset sales in the first half of this year, IDC reckons. The Quest Pro is the most advanced set of VR glasses around. Meta's hiring binge means that it has much of the top VR talent, says Jitesh Ubrani of IDC. If Meta can control and tax a successful VR platform, as Apple and Google control their mobile operating systems, it will own a gold mine (Meta already skims off as much as 47.5% from Horizon Worlds purchases).

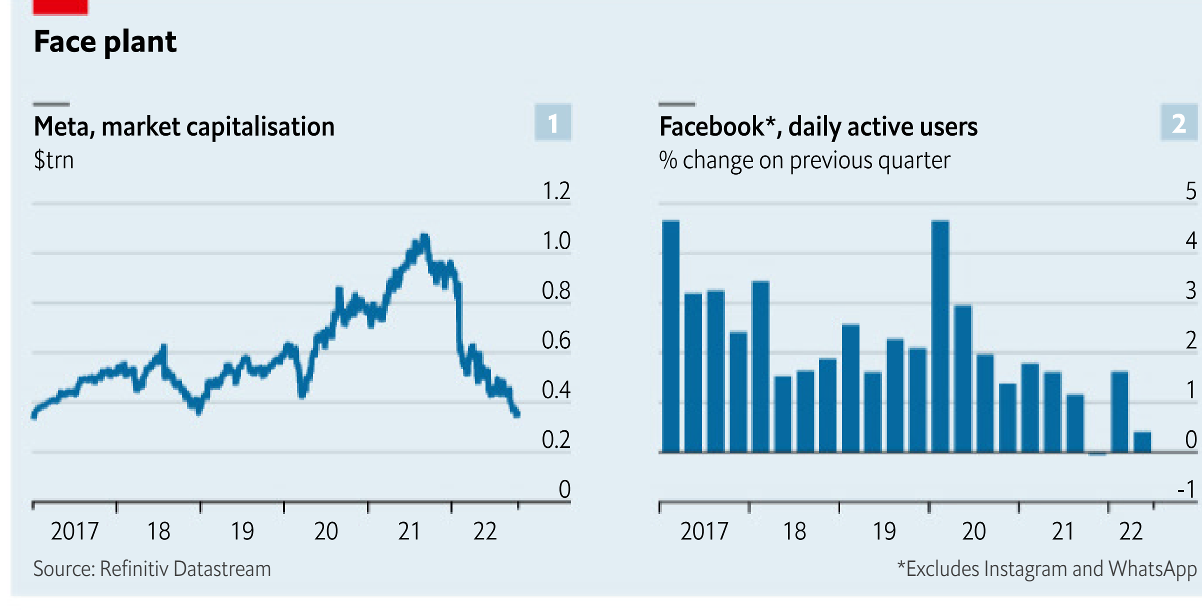
The question is timing. Meta's unusual structure gives Mr Zuckerberg total control. The firm's board proved to be ineffective at dealing with Facebook's scandals over privacy and misinformation. Now, rather than urge caution, it has allowed a flawed chief executive to gamble billions on the metaverse. In May Mr Zuckerberg admitted as much when he told Protocol, a news site: "If people invest in our company, we want to be profitable for them…But I also feel a responsibility to go for it…[Meta] is a controlled company, so I can make more of these decisions than most companies would."

Antisocial behaviour

Yet the more Meta's core business wobbles, the less investors will be willing to give Mr Zuckerberg's metaverse plans the benefit of the doubt. A company can only spend that much on a new idea if someone is prepared to fund it. They might be if "your core profitability from your core business is on solid footing", says Mr Shmulik. That is Meta's difficulty. "The core isn't on a solid footing at the moment."

To calm investors' nerves, Meta is reining in its spending a little. It expects its total expenses this year to be about $7.5bn lower than it forecast at the end of 2021. It has scrapped some projects, including a smart watch that was in development, and bumped up the price of the Quest 2 by $100. And it expects to reduce its headcount.

Meta executives compare the company's predicament now to ten years ago, when it was managing the transition of its social network to mobile. Shifting a billion Facebook users from desktop to phone was no mean feat, made harder by the fact that Mr Zuckerberg was late to spot the importance of mobile. That experience may have influenced his approach to the metaverse. Meta's new VR technology, he said on October 11th, was for those "who'd rather be early than fashionably late". The risk, as investors grow impatient, is that this time Meta has made its move too soon. ■



Source: Refinitiv Datastream
*Excludes Instagram and WhatsApp

Semiconductors

The silicon squeeze

SAN FRANCISCO

The American chip industry's $1.5trn meltdown

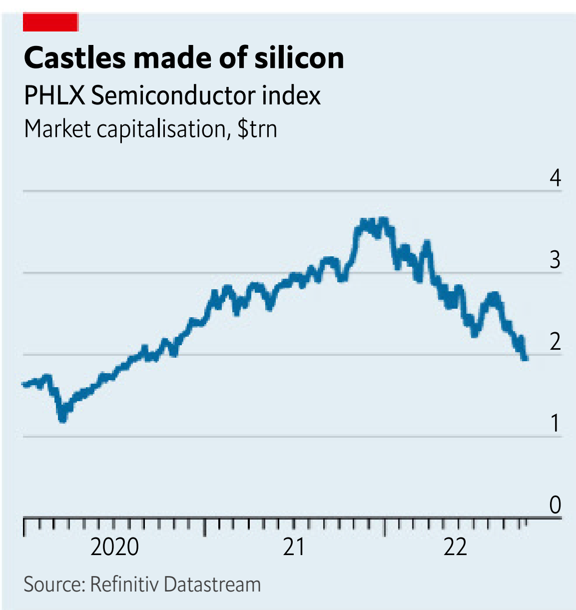
IN LICKING COUNTY, Ohio, fleets of dump trucks and bulldozers are shifting earth on the future site of chip factories. Intel is building two "fabs" there at a cost of around $20bn. In March President Joe Biden called this expanse of dirt a "field of dreams" in his state-of-the-union message. It was "the ground on which America's future will be built", he intoned.

In the spring it was easy to be dreamy about America's chipmakers. A global supply crunch had proved how key chips were to modern life. Demand was still rising for chip-powered technology, which nowadays is most of it. Investors were less gloomy about chips than other tech, which was taking a stockmarket beating. The CHIPS act was moving through Congress, promising subsidies worth $52bn for projects like Intel's in Ohio, in order to reduce America's reliance on foreign fabs.

Today the dreams look nightmarish. In late September Micron, a maker of memory chips, reported a 20% year-on-year fall in quarterly sales. A week later AMD, a chip designer, slashed its sales estimate for the third quarter by 16%. Intel reportedly plans to lay off thousands of staff, following a string of poor results that are likely to continue when it presents its latest quarterly report on October 27th, and has just slashed the valuation of the initial public offering of its self-driving unit to a third of the $50bn it had originally envisaged. Since July America's 30 or so biggest chip firms have together cut revenue forecasts for the third quarter from $99bn to $88bn. This year more than $1.5trn has been wiped from the combined market value of American-listed chip businesses (see chart).

The industry is notoriously cyclical: new capacity takes a few years to build, by which time the demand may no longer be white-hot. In America this cycle is now being turbocharged by the government. The CHIPS act, which became law in August to cheers from chip bosses, is stimulating the supply side of the semiconductor business just as the Biden administration is stepping up efforts to stop American-made chips and chipmaking equipment from going to China, dampening demand for American products in the world's biggest semiconductor market.

Whether or not it makes strategic sense for America to bring more chipmaking home and to hamstring its geopolitical rival with export bans, the combination of



more supply and less demand is a recipe for trouble. And if America's policies speed up China's efforts to "resolutely win the battle in key core technologies", as President Xi Jinping affirmed in a speech to the Communist Party congress on October 16th, they may give rise to powerful Chinese competitors. Field of dreams? Enough to keep you awake in terror at night.

The cyclical slump has so far been felt most acutely in consumer goods. PCs and smartphones make up almost half the $600bn-worth of chips sold annually. Inflation-weary shoppers are buying fewer gadgets. Gartner, a research firm, expects smartphone sales to drop by 6% this year and those of PCs by 10%. Firms like Intel, which in February told investors it expected PC demand to grow steadily for the next five years, are revising their outlooks as it becomes clear that many covid-era purchases were simply brought forward.

Other segments could be next. Panic buying amid last year's chip shortage has left many manufacturers with too much silicon. New Street Research, a firm of analysts, estimates that between April and June industrial firms' stock of chips was about 40% above the historical level relative to sales. Stockpiles at makers of PCs and cars are similarly full. Intel and Micron have blamed weak results in part on customers' high inventories.

The supply glut and weak demand is already hitting prices. The cost of memory chips has dropped by two-fifths in the past year, according to Future Horizons, a research firm. The price of logic chips, which process data and are less commoditised than memory chips, is down by 3%.

Chip buyers will work through their inventories eventually. But afterwards they may buy less than before. In August Hewlett Packard Enterprise and Dell, two hardware-makers, hinted that demand from business customers was softening. Sales of PCs and smartphones had started to level off before covid-19, and this trend will probably resume. Phonemakers cannot stuff ever more chips onto their devices for ever. For firms such as Qualcomm, which derives half its sales from smartphone chips, and Intel, which gets a similar share from those for PCs, that is a headache.

The chipmakers' response has been to bet on new markets. Qualcomm is diversifying into cars. In September its bosses boasted it had $30bn-worth of orders from carmakers. AMD, Intel and Nvidia, another chip-designer, are battling over cloud-computing data centres, where chip demand is strong. Intel is also expanding into semiconductors for networking gear and devices for the hyperconnected future of the "internet of things". It is also getting into the contract-manufacturing business, hoping to win market share from TSMC of Taiwan, the world's biggest chipmaker and contract manufacturer of choice for fabless chip-designers such as AMD and Nvidia.

These efforts, however, are now running into geopolitics. Like their counterparts in China and Europe, politicians in America want to lessen their country's dependence on foreign chipmakers, in particular TSMC, which manufactures 90% of the world's leading-edge chips. In response, America, China, the EU, Japan, South Korea and Taiwan together plan to subsidise domestic chipmaking to the tune of $85bn annually over the next three years, calculates Mark Lipacis of Jefferies, an investment bank. That would buy a fair bit of extra capacity globally.

At the same time, prospects for offloading the resulting chips are darkening as a result of America's restrictions on exports to China. Many American firms count the Asian giant, which imported $400bn-worth of semiconductors in 2021, as their biggest market. Intel's Chinese sales made up $21bn of its total revenues of $79bn last year. Nvidia said that an earlier round of restrictions, which curbed sales of advanced data-centre chips to Chinese customers and to Russia after its invasion of Ukraine, would cost it $400m in third-quarter sales, ▸▸

equivalent to 6% of its total revenues.

The new controls, which target Chinese supercomputing and artificial-intelligence efforts, are a particular concern for manufacturers of chipmaking tools. Three of the five biggest such firms—Applied Materials, KLA and Lam Research—are American. The share of the trio's sales going to China has shot up in recent years, to a third. Toshiya Hari of Goldman Sachs, a bank, thinks the controls may cost the world's toolmakers $6bn in lost revenues this year, or 9% of projected sales. After the latest rules were unveiled, Applied Materials lowered its expected fourth-quarter revenue by 4% to $6.4bn. Its share price has dropped by 13%; those of KLA and Lam Research have tumbled by a fifth.

Chip bosses now fear that China could retaliate, further restricting access to its market. It is already redoubling efforts to nurture domestic champions such as SMIC (in logic chips) and YMTC (in memory), as well as local toolmakers, which may one day challenge America's silicon supremacy. The result could be a diminished American industry with less global clout and too much capacity—a shaky foundation on which to build America's future. ■

Kweichow Moutai

100% proof

China's giant distiller is beating the covid hangover

Harsh lockdowns are a fact of life in "zero-covid" China. One in September in Chengdu, a south-western city of 20m, stopped locals from visiting tea houses, a favourite pastime. In Sanya, an island-resort town, tens of thousands of tourists were kept off the white-sand beaches in August. In Guiyang, another large south-western provincial capital, it was the boozing that suffered. Apart from forcibly confining almost 6m residents to their homes for most of last month, the authorities shut more than 50 shops owned by Kweichow Moutai, a distiller of a fiery, sorghum-based liquor. And it happened right in the middle of the year's busiest shopping season, when tourists flock to the cool, mountainous region to sample local varieties of the firewater.

Guiyangese and visiting tipplers were no doubt upset—all the more so for being unable to drown their irritation. For Kweichow Moutai, the episode barely registered. The devastating lockdown in its home province notwithstanding, on October 16th the company reported net profits of 44bn yuan ($6.2bn) in the first nine months of 2022, 19% more than in the same period last year and its best performance in a while.

National tobacco and alcohol sales are rising in spite of (or perhaps thanks to) plummeting consumer confidence. They grew by 7% between January and August, compared with a year ago, even as other retail and leisure spending has been hammered. Cosmetics sales, for example, fell by almost 3% in the first eight months of 2022, year on year. Those of garments, footwear and hats were down by 4.4%. The lockdown of Shanghai, China's business hub and largest city, left dozens of sprawling malls and shopping districts devoid of people for two months. Official data on vehicle sales showed that not a single new car had been sold in the city of 25m in April.

Moutai's resilience is not just the result of robust sinful consumption. Although it enjoys little name recognition and few sales abroad, the state-run firm has built one of the world's most valuable consumer brands. In 2017 its market capitalisation surpassed that of Diageo, the London-based maker of spirits such as Johnnie Walker. In 2020 it overtook the Industrial and Commercial Bank of China, one of the world's biggest lenders. In October it briefly became China's largest listed company. Today it is worth 2.1trn yuan ($286bn).

Part of its secret recipe for success lies in its history. It was the favoured hooch of Mao Zedong, China's revolutionary leader, and other top apparatchiks. Americans got a taste of it in 1972 when then-premier Zhou Enlai raised a glass to toast Richard Nixon as the countries normalised relations. Such stories have burnished its brand at home. Over the past 50 years no formal banquet has been complete without a bottle (or several). Vintage cases sell for tens of thousands of dollars.

The company also has an eye to the future. It has invested heavily in its online sales channel (called iMoutai), which probably made up for some lost sales when its Guiyang shops were shuttered in September. And it has been expanding its range by adding innovative new products such as a Moutai-infused ice cream, launched earlier this year.

These virtues have helped Kweichow Moutai withstand China's long covid hangover. Its bigger headache has to do with vice. State media have accused Moutai of being the booze of choice of crooked officials, who accept pricey bottles as backhanders. Many of the firm's own bigwigs, including a former chairman, have been arrested on bribery charges in recent years. The mere mention of an anti-graft campaign can hurt liquor stocks. Billions of dollars were temporarily wiped off Kweichow Moutai's market value on October 11th as rumours swirled that civil servants would be banned from drinking alcohol. ■

Retailing

Fodder for the FTC

America's second-biggest grocer goes shopping

Grocery is a boring business. Peddling bread-and-butter products (literally) at wafer-thin margins hardly sets pulses racing. Unless, that is, you are an American politician. On October 18th Amy Klobuchar and Mike Lee, two senators, called a hearing to discuss the proposed acquisition by Kroger, America's second-biggest grocer by revenues, of Albertsons, the fourth-largest. The top Democrat and Republican, respectively, on the Senate antitrust subcommittee also sent a letter urging the Federal Trade Commission (FTC) to size up the $25bn deal, which they say "raises considerable antitrust concerns".

Really? The American grocery market features a few national chains competing fiercely on price with regional rivals, fast-growing dollar stores and, increasingly, Amazon's e-emporium. Together Kroger and Albertsons would have a market share of 19%—not exactly the stuff of monopoly and still less than Walmart, the supermarket behemoth, with 25% (or 30% if you add Sam's Club, Walmart's Costco-like membership-only big-box chain). The industry's operating margins of 3-4% hardly scream robber barons.

To allay any fears, Kroger and Albertsons have offered to spin off as many as 375 stores into a separate company. Kroger also says that it would use half the $1bn in expected annual cost savings from the merger to reduce prices for shoppers (closing some of the gap with Walmart's "Every Day Low Prices"). And it promises to set aside

Grocer and grocer to a deal

$1bn in the coming years for wage rises, on top of the $1.2bn it says it has diverted to higher staff pay of late.

Some of the rest of the windfall could usefully go to beefing up its digital offering. The pandemic has accustomed people to buying everything online, including food. Weak e-commerce chops may explain why Albertsons' grocery revenues of $61bn did not grow at all last year and Kroger's declined from $105bn to $104bn, according to Bank of America, while digitally savvier rivals like Costco, Target and Walmart increased theirs. If Kroger-Albertsons offers more choice online that, too, seems like a win for consumers.

Such arguments are unlikely to cut the mustard with Lina Khan, the FTC's crusading head. Ms Khan does not conceal her dislike of big business. In her view the role of competition policy is not merely to stop companies from gouging consumers but also to protect smaller firms, workers and other "stakeholders". She may have it in mainly for big tech—she made her academic name with a paper entitled "Amazon's antitrust paradox"—but is none too fond of big grocers, either.

In an article from 2017, Ms Khan and her co-author lambasted the FTC for approving Albertsons' earlier $9bn merger with Safeway, a rival (reserving especial ire for Albertsons being allowed to reacquire some of the assets the FTC had ordered it to divest, after the buyer went bust). It is hard to see her waving through an even bigger deal—never mind that the merged company would be better able to stand up to her Amazon bugbear. A jump in Albertsons' share price suggests that investors expect the transaction to go ahead. But Ms Khan won't make it easy. ■

Bartleby Walking in employees' shoes

It is hard for bosses to understand what life is like for staff. But not impossible

Any manager worth their salt knows the value of spending time "walking in their customers' shoes". There are many ways to do it. You can observe customers in their natural habitat. Pernod Ricard's boss recently told Bloomberg, a news service, about his habit of bar-hopping in order to see what people want to drink. Such research is a lot less fun if your company makes soap dispensers for public toilets but the same principle applies.

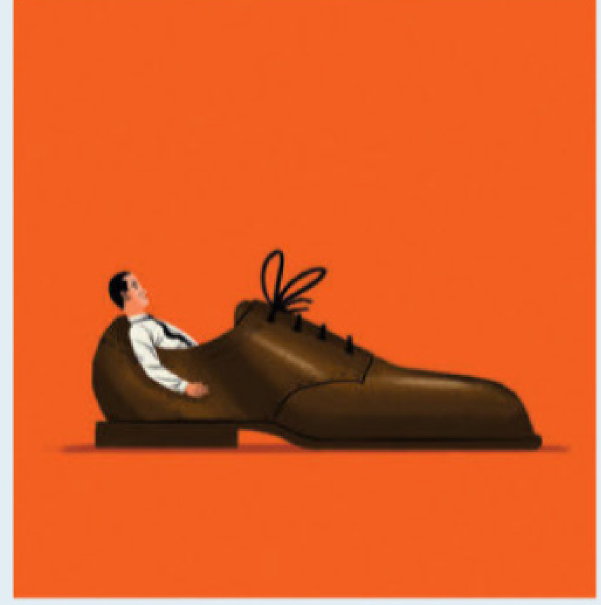
You can be a customer yourself, buying your company's products, ringing your own helplines and enduring the same teeth-grinding muzak. Or you can hear from your customers directly. Jeremy Hunt, who has just been appointed Britain's finance minister but was once its longest-serving health secretary, started each day in that job by reading a letter of complaint from a patient or their family, and writing back to each correspondent personally. If you cancel one internal meeting a week and use that time to hear from customers instead, you will come out ahead on the trade.

This idea does not apply only to customers. It can also be useful inside the organisation. Walking in employees' shoes is a way for bosses to understand what impedes productivity, what saps morale and what makes workers feel valued. A sense of affinity can come from living in the same community as other members of staff. Recent research found that CEOs in Denmark who lived within 5km of their offices seemed to foster better work environments than those who lived farther away. But short of moving house, how else can managers get inside workers' heads?

Even if a boss genuinely wants to hear the unvarnished truth, employees may not be comfortable delivering it. Anonymous surveys can help encourage honesty, as can exit interviews, but even in these settings, workers may temper their views. Reviews on sites like Glassdoor can be brutal, but the motives of the people posting them are not always transparent. Corporate-messaging apps like Slack can provide a partial window into how some teams are getting on, but surveillance is not a form of empathy. And none of this is the same as knowing what it is actually like to be an employee.

It is very hard for managers to replicate the experiences of normal employees. Rooms will magically become available if the boss asks for one; everyone else has to roam around the building like wildebeest that have become separated from the herd. Managers do not have to remind people of their names. They are less likely to suffer some of the common feelings that undermine workers' enthusiasm for their jobs: rare is the boss who feels overlooked or underappreciated. And they are also much less likely than employees to encounter incivility from colleagues.

One option is to appear on "Undercover Boss", an entertaining reality-TV show in which executives put on preposterous disguises, work in their own organisations and discover what life is really like for their workers. If you go down this route you will learn a lot, but you will have to admit to an audience of millions that you have absolutely no idea what is going on in your own organisation. (A less involved option is not to bother with the cameras and to wear your own home-made disguise in the office, though there is a risk your moustache will fall off at a pivotal moment.)



Even without disguises it is good for managers to spend time doing the same work as their underlings. (It is also good for them to stop referring to people as underlings.) Airlines and retailers have run schemes that involve executives working in front-line roles in airports and on shopfloors. DoorDash, a delivery app, has a programme called WeDash that requires salaried employees to make regular drop-offs. And bosses can do things for themselves that people without assistants must navigate alone. Filling out expense forms is a chore: everyone should have to do their own, at least occasionally. By default bosses should fly in the same airline class as their colleagues do. And so on.

If managers can learn a few things by walking in employees' shoes, there is also value in workers thinking about what life is like as a boss. It is not all business-class travel and people agreeing with you. Imagine getting in a lift and conversation around you always dying. Imagine being grumbled about all the time, or knowing that your absence causes a general lightening of the mood. Imagine not being able to kick a difficult decision upstairs. The boss wears much nicer shoes but they can still pinch.

Schumpeter | Where's the war bounty?

Despite Ukraine, these are not boom times for America's armsmakers

Camden, a small town in the backwoods of southern Arkansas, is having an unusual brush with the outside world. It is a quiet place. At this time of year there are more Halloween dolls tied to its lampposts than there are people in the streets. It also has a reason to keep its head down. The nearby Highland Industrial Park, which has a few manicured lawns amid thousands of acres of thick forestry, is home to the factories of some of America's biggest weapons manufacturers, such as Lockheed Martin and Raytheon Technologies. "It's been kind of a hidden secret," says Michael Preston, Arkansas's secretary of commerce. Or as a local businessman whispers, "it's a fear thing: 'shhhh'."

The war in Ukraine has made it hard for Camden to remain low-key. Behind high fences and the forest canopy the armsmakers are assembling many of the weapons made famous by Ukrainians who use them to stall the Russian invasion. Javelin missiles, HIMARS guided-missile launchers and GMLRS rockets, known as "gimmlers", have become household names on TV and social media. Politico, a news website, recently profiled Camden as "the struggling Arkansas town that helped stop Russia in its tracks". That has drawn more attention, including from your columnist. He was intrigued that some of these Russia-thumping munitions are stored in bunkers dating back to the second world war. More pertinent, he expected to witness America's military-industrial complex on a full war footing. Instead he discovered just how plodding parts of the American defence juggernaut can be.

In theory, these should be heady times for makers of weapons. Russia's assault on Ukraine, combined with strategic fears about China, have pushed up America's proposed defence budget for next year, including for procurement of new firepower. Since February America's NATO allies have also promised to spend more on defence, which is likely to bolster demand for American kit, such as Lockheed Martin's F-35 fighter jets. Much of the American weaponry supplied to Ukraine has come from US military stockpiles, which will require a surge in the industry's production capacity to be replenished. The prospect of higher demand, coupled with the view that defence companies are safe investments in times of economic turmoil, has led their stocks to handily outperform the S&P 500 index since February. On October 18th Lockheed Martin's share price jumped by the most in more than two years after its third-quarter results slightly exceeded forecasts.

Drill down, however, and things look much less buoyant. The fillip to Lockheed's shares owed more to its promise to return a slug of cash to shareholders than to any gung-ho predictions about orders. In fact, it expected sales growth to be flat next year and "low single digits" the year after. The view from Camden is equally downbeat. Locals report few signs of a surge in Ukraine-related production, not least because the industry is suffering from the same post-pandemic hangover of rising inflation, supply-chain strains and labour shortages as the rest of American manufacturing. Moreover, the possibility, however slim, that next month's midterm elections could alter America's strategic priorities is weighing on people's minds.

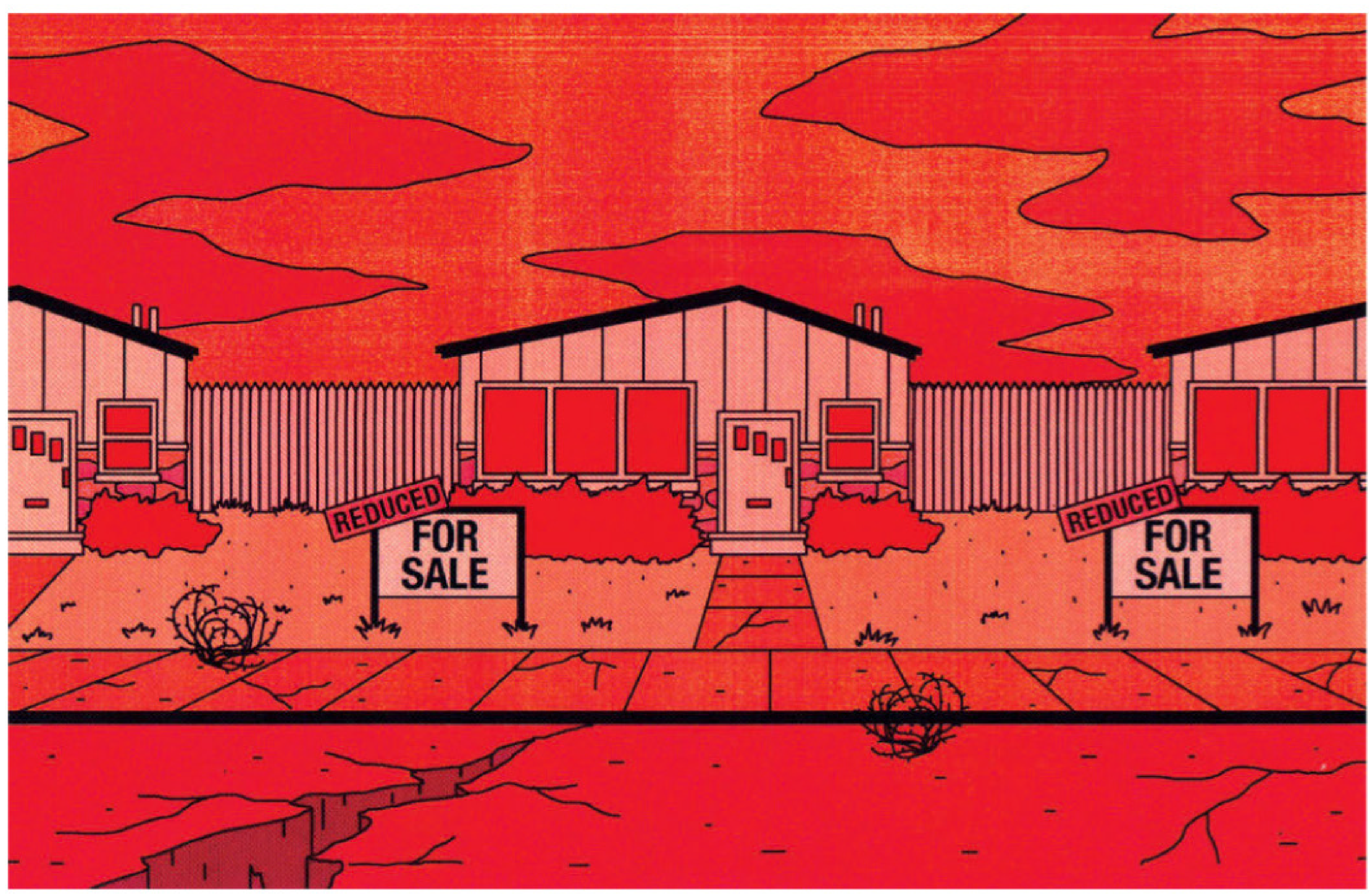
The most sobering reality is that the industry is not as stagflation-proof as it appears. Yes, some contracts are "cost-plus", where firms are guaranteed a markup to the unit cost of production. But until Congress approves the new defence budget, many programmes are funded at last year's price levels, which fail to offset costlier material and manpower. This exacerbates the supply-chain problem. As the Centre for Strategic and International Studies, a think-tank, has highlighted, years of consolidation have made supply lines brittle. Rising prices make suppliers more reluctant to make long-term commitments. That is why companies like Lockheed have been forced to make advance payments to suppliers to set the wheels in motion for higher production—a move that requires big cojones without firm orders from the Pentagon. Furthermore, even as wages rise, it is a struggle to recruit staff. In the Camden area, job postings have long exceeded hirings. The Southern Arkansas University Tech, which trains students in skills such as welding, has recently rebranded its sports teams as "The Rockets" to tout the job opportunities in missile defence.

Part of the problem is that the industry appears in two minds about making heavy weapons. The fastest growing part of defence spending is on snazzy programmes like space and hypersonics. Terrestrial weaponry like vehicles and long-range missiles have been lower-priority. That prompts a former general in Arkansas to gripe that armsmakers often overlook ground forces. Compared with the air force, the army has historically been seen as "just a bunch of dog-faced soldiers trudging in the mud", he growls.

Lady MAGA

Then there is politics. Normally the likelihood that Republicans would make gains in the midterms would be a cause of optimism in the arms business, because of the party's hawkish reputation on defence. But as signs plastered across Camden's lawns remind everyone, the Republican candidate in the Arkansas governor's race is Sarah Huckabee Sanders, who served as White House press secretary under Donald Trump. That underscores the potential Trumpian influence that may resurface after the elections, dividing consensus on support for Ukraine—and the NATO alliance.

For all that the residents of Camden are hesitant to discuss defence, some believe production will pick up within a few years. The Highland Industrial Park is looking to make space available if suppliers want to move closer to their customers. The town is considering providing more housing to attract workers. A craft brewery has recently opened in Camden, partly to offer defence workers a nightlife. The town is coming to terms with its new status. That it is doing so only slowly is fine. The military-industrial machine hardly moves at rocket speed either. ■



Property markets

The crack-up

MONTREAL AND SYDNEY

A vast housing boom has come to an end. How bad will things get?

FOR TWO years during the covid-19 pandemic, home-sellers in Quakers Hill, a suburb in the farthest reaches of Sydney's sprawling west, raked in fortunes. Some 60 or 70 viewers would traipse round every house up for sale, recalls Josh Tesolin of Ray White, an estate agent. Buyers jostled at auctions, bidding well above the odds. "We'd ask for, let's say, $1m and sell at $1.4m," says Mr Tesolin. "The market back then was crazy—a very different picture to now." This year prices in the neighbourhood have fallen by 20%, he estimates. Owners are pulling their homes, because they cannot sell them for as much as they want. The market is gumming up.

Australian house prices have dropped for five straight months, placing Quakers Hill at the forefront of a global trend. As central banks race to tame inflation, they are raising interest rates at the fastest pace in at least four decades—which is now translating into housing-market carnage. Prices are falling in nine of the 18 countries monitored by Oxford Economics, a consultancy, and are dropping fastest in the most overheated markets. In Canada and Sweden they have fallen by more than 8% since February; in New Zealand they have fallen by more than 12% since their peak last year. Prices have begun sliding in America and Britain, too. Many other countries are heading in the same direction.

Transactions are also down. Home sales in America fell by a fifth in August, compared with the previous year, according to the National Association of Realtors, a lobby group. In New Zealand, quarterly sales were at their weakest since 2010 in the three months to June. The share prices of large British builders, such as Barratt and Taylor Wimpey, have halved this year. Those of DR Horton and Lennar, America's biggest, are down by more than 30%.

This represents the end of a long boom—one which many homeowners have come to take for granted. Rock-bottom mortgage rates and constrained supply fuelled a steady rise in rich-world house prices in the decade after the global financial crisis of 2007-09. Prices in America, for instance, rose by nearly 60% from their trough in 2012 to the end of 2019. Then came the pandemic, during which prices truly rocketed. In America, Canada and the Netherlands they are up by more than 30% since 2020. Lockdowns and the shift to remote work increased demand for suburban properties with gardens or offices. Governments, worried about a housing crunch as covid spread, temporarily eased or removed mortgage regulations, making it easier to buy. Pandemic savings helped first-time buyers stump up hefty deposits.

But interest-rate rises have now returned mortgage rates to levels not seen for decades. A year ago the 30-year fixed-rate mortgage in America was below 3%. Today it is only a little shy of 7%. In New Zealand, mortgage rates have passed 7% for the first ▸▸

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time in eight years; in Britain, the average five-year fixed-rate loan now exceeds 6% for the first time in a dozen. This will make life more difficult for prospective buyers, and will increase the chance of distress among existing homeowners. It is a change that is likely to carry uncomfortable political and social consequences for many years to come.

Three factors will determine where the pain is most acute, and thus where these consequences are most likely. The first is recent price growth. Housing markets where prices have surged since the pandemic are especially vulnerable to cooling demand. While many rich countries slowed to annual growth rates in the single digits at the start of this year, America and Canada maintained double-digit rises, fuelled by huge demand for housing in the mountain towns and sunbelt states that attract well-heeled Californians and New Yorkers, along with cities like Toronto.

Borrowing levels are the second factor. The higher household debt is as a share of income, the more vulnerable owners are to higher mortgage payments and defaults. Central bankers will find solace in the fact that household debt relative to income is lower than it was on the eve of the global financial crisis in countries including America, Britain and Spain. Yet some countries face a mountain of debt. This makes them sensitive to even small rises in mortgage rates. Households in Australia, Canada and Sweden, which managed to escape the full brunt of the financial crisis, have run up staggering borrowings in the years since, prompting warnings from financial watchdogs. As Stefan Ingves, governor of Sweden's central bank, has put it: "It's like sitting on top of a volcano."

The third factor is the speed with which higher interest rates pass through to homeowners. The biggest risk is to borrowers on floating-rate mortgages, which fluctuate with changes in policy rates. They face an immediate reduction in their disposable income. In Canada variable-rate mortgages account for more than half of all loans. In Australia and Sweden, they account for nearly two-thirds.

In other countries, fixed-term borrowing is much more common, which means that rate rises pass through with a considerable lag. The vast majority of mortgages in America are on such terms. These mortgages are also more popular than before across Europe. But not all fixed-term loans are alike. In America the bulk of them are fixed for two or three decades. In other countries, even fixed-rate borrowers will face soaring mortgage costs soon enough. In New Zealand fixed-rate mortgages make up the bulk of existing loans, but more than 70% have a maturity of less than two years. So do nearly half of those that were taken out in Britain last year.

Bring this together, and all the ingredients for a deep housing slump are in place. This time, though, it is likely to be led not by America, but by Canada, the Netherlands, Australia, New Zealand and Norway (see table). In Australia and Canada prices could plunge by as much as 14% from their peak, a little more than is expected in America or Britain, according to forecasts from a number of property firms. Economists at the Royal Bank of Canada expect the country's volume of sales to plummet by more than 40% in 2022-23—exceeding the 38% drop in 2008-09.

Pain thresholds

Within each country, some people will suffer more than others. The credit quality of the average borrower has improved in recent years, as tighter regulations introduced following the global financial crisis have made it more difficult for riskier borrowers to take out mortgages. But the toxic combination of a rate shock and a surge in living costs will put homeowners under severe strain.

In Australia, for instance, three-fifths of housing credit is on variable terms. According to the central bank's latest financial-stability report, published on October 7th, half of these borrowers would see their spare cash, or that left after mortgage and essential living expenses, fall by at least a fifth if interest rates rise in line with market expectations—and 15% would see this measure turn negative. In Britain nearly 2m households, or a quarter of those with mortgages, could see higher payments absorb an additional 10% of their household income by early 2025. In the Netherlands, the share of homeowners paying more than a quarter of their income towards their mortgage would rise from 12% to 26% if interest rates were to rise by three percentage points.

First-time buyers and recent borrowers are especially vulnerable. Many stretched their finances to buy a home, leaving less spare cash to cover a jump in mortgage costs. In America, first-time buyers counted for one in three sales last year. Many have meagre savings. Around half of Australian buyers who took out loans between the start of 2021 and August 2022 had less than three months' worth of mortgage payments set aside for a rainy day. Millennials who have at last managed to buy a property are in for a nasty surprise.

First-time buyers have also had less time to accumulate equity. Oxford Economics estimates that a 15% drop in house prices in America over a year would cancel out two-thirds of the housing equity they have accumulated since the start of the pandemic. By contrast, older owners are more secure. More than half of American homeowners aged 65 or over moved in before the turn of the millennium. This

Floored

Housing-risk indicators, selected countries

(Ranking out of 17 countries*, 1=most exposed)	Policy rates %-point increase Jan 1st 2021-Oct 18th 2022	Household debt as % of net disposable income 2021†	House prices % increase 2019-Q2 2022
Canada (1)	3.00	186	41.7
Netherlands (2)	1.25	222	39.7
Australia (=3)	2.50	203	26.7
New Zealand (=3)	3.25	122	38.1
Norway (=3)	2.25	241	26.4
Sweden (6)	1.75	203	32.2
Luxembourg (=7)	1.25	187	34.7
United States (=7)	3.00	101	45.3
Portugal (9)	1.25	126	29.0
Britain (10)	2.15	148	23.6
Denmark (=11)	0.65	249	18.8
Finland (=11)	1.25	156	14.1
Germany (=11)	1.25	102	28.1
France (=14)	1.25	124	17.2
Ireland (=14)	1.25	119	21.8
Spain (16)	1.25	106	5.3
Italy (17)	1.25	91	9.7

*Average of three indicators †Or latest

Sources: Knight Frank Research, Macrobond; OECD; Refinitiv Datastream

leaves new owners at greater risk of being pushed into negative equity, which makes it hard to move house or remortgage. In Britain, a 20% fall in house prices would leave as many as 5% of mortgages in negative equity, according to Neal Hudson of Residential Analysts, a consultancy. Around one in ten mortgage-holders in London would be affected.

The good news is that banks should be able to weather the slump. In 2007-09 a rise in unpaid debt pushed some American ones to the brink. Banks in Britain now hold nearly four times as much capital to cover losses, according to Capital Economics, another consultancy. The Bank of England's latest stress test suggests the country's lenders would be able to absorb a 33% fall in house prices and a rise in the unemployment rate from 3.5% to 12%. In America banks have stepped back from the mortgage market, with non-banks now providing more than half of new mortgage lending. Thus risks are no longer concentrated in systemically important lenders.

Still, the housing squeeze will have profound consequences. "The housing cycle IS the business cycle", wrote Edward Leamer of the University of California, Los Angeles, in a paper published in 2007. It noted that housing slowdowns had preceded eight of the past ten recessions in America. After the financial crisis, Mr Leamer followed up with a paper entitled "Housing really is the business cycle", in case readers had failed to get the message. The link between the two cycles arises because housing confers "wealth effects" on owner occupiers. When house prices rise, people feel good about their financial situation, so borrow and spend more. When they fall, people tighten their belts. In 2019 research by the Bank of England found that a 10% increase in house prices raises consumption by 0.35–0.5%.

Another important channel between the housing market and the rest of the economy is investment. Capital spending associated with housing, especially house building, can be extremely volatile—and is often the difference between a growing or shrinking economy. Indeed, falling residential investment accounted for a third of the fall in America's GDP in 2007-09. Research on Britain has found similar results. House builders chase booms and scarper at bad economic news. As worries have mounted this time round, American private housing starts have fallen by 20% since April. This time strained borrowers, already cash-strapped because of inflation and hefty energy bills, will also spend less on other goods and services as they try to meet their higher mortgage payments.

Some people see an upside to a housing crash. They hope lower prices will allow young folk to buy their first houses. These hopes are almost certain to be dashed. In housing corrections, and sometimes for years after, home ownership rates tend to fall, rather than rise. In Britain, for instance, about 65% of people own their own home, down from 70% at the start of the global financial crisis. In Ireland, which experienced an almighty crash in the late 2000s, the home ownership rate is still more than ten percentage points below its peak. Economic conditions that cause house prices to fall simultaneously imperil the chances of would-be homeowners. Unemployment rises and wages decline. If interest rates jump, people are able to borrow less and mortgage lenders tend to become more skittish about lending. In Canada, increased borrowing costs will "swamp" any savings from a lower purchase price, predicts Tsur Somerville of the University of British Columbia.

The residential is political

The biggest effect of a housing downturn may be in politics. In countries where home ownership is seen as a rite of passage, lower prices without any increase in affordability will rub salt in already sore wounds. "Falling to what? Falling to absurdly grotesque prices instead of just unthinkable?" asks Robin Black, a community worker and bike mechanic in Montreal. "Basically I've accepted that dream is over. I missed the window." A few millennials have scrimped to afford a deposit; now they will have to struggle to make much higher mortgage payments. The threat of repossession lurks. Losing your house is a possibility in a way it was not before.

For years more established homeowners took comfort in the thought that, even if real-wage growth was terrible, at least the price of their house was rising. Those days are over. Even baby-boomers, the great winners from a decade of price growth, now face the prospect of living off a smaller nest-egg in retirement, as downsizing becomes less lucrative. All this means rising interest rates will have unpredictable political repurcussions, as people who once benefited from the status quo discover what it feels like to lose out.

Do not be surprised, then, if policymakers launch enormous rescue operations. Already Hungary's government has offered its citizens protection from rising mortgage interest rates. In its analysis of New Zealand's housing, the IMF worries that "policy support may be needed to avoid second-round effects and a pronounced downturn". In Spain, banks are reportedly considering limiting payment increases on variable-rate mortgages. Martin Lewis, a British financial pundit who has more influence than all the country's newspapers combined, has started to campaign for state support for mortgage-holders. As house prices fall to earth, such demands will only grow. ■

Banking

Stick to Manhattan

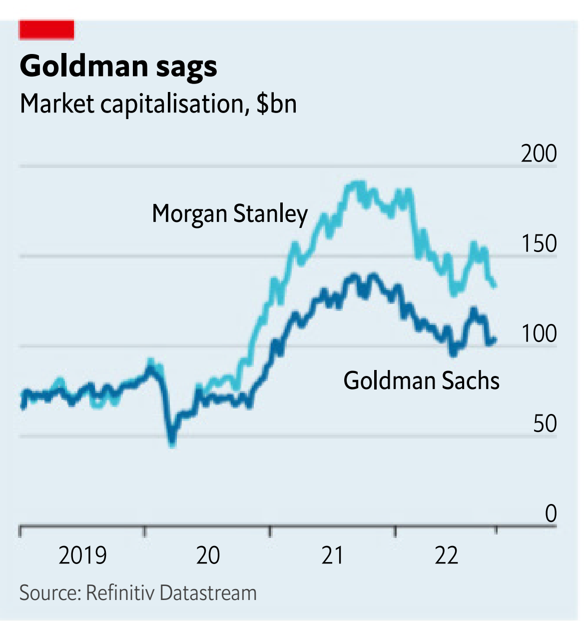
WASHINGTON, DC

Goldman Sachs's disastrous Main Street gamble

How hard can it be? Goldman Sachs is supposed to employ the sharpest minds in finance. Traders on the other side of a deal shake in fear; bosses flock to its bankers for advice; investors hang on its analysts' every word. In 2016, when Goldman launched its consumer business, it seemed only a matter of time before these masters of the universe mastered the pedestrian business of making loans to ordinary people. But it is clear now—after the third reshuffle in almost as many years was announced on October 18th—that Goldman should have stuck to Wall Street.

Profits are falling across the big banks as the economic cycle turns. High interest rates are killing lucrative investment-bank revenues and putting pressure on consumers. In the third quarter, compared with a year ago, net income fell by 17% at JPMorgan Chase, 25% at Citi, 29% at Morgan Stanley—and by a whopping 43% at Goldman. This partly reflects its dominance of businesses that have slowed sharply, like investment banking. But it is also because, without those vast profits in trading and investment banking to distract shareholders, the turn in the credit cycle is revealing just how terrible Goldman is when it comes to consumer lending.

Its consumer bank was launched in 2016 by Lloyd Blankfein, Goldman's previous boss, with a savings account called Marcus, which was named after the firm's founder. A more aggressive move into consumer lending then followed—led by David Solomon, the firm's current boss—with a credit card offered in partnership with Apple. A comparison with JPMorgan's lending business shows just how far be-



hind Goldman is. Goldman's loan book is a sixth of the size of its rival's; its consumer loan book is a ninth as big. And the firm is setting aside relatively more for credit losses in the third quarter. Goldman anticipates losing 13% of its consumer credit-card and instalment loans. JPMorgan expects to lose just 6%.

The reshuffle will split up Goldman's consumer bank, bundling its consumer savings and wealth products into the asset-management arm, and sticking the lending ones into a new "platforms" business, where they will sit alongside wholesale and business banking. This might help to disguise some of the consumer bank's thorniest problems. The reshuffle will also wrap together the firm's trading and investment-bank businesses, which should make it easier for shareholders to compare Goldman's performance in its Wall Street businesses with those of its rivals, like Morgan Stanley or JPMorgan, who organise themselves this way.

Yet even a broader comparison does Goldman few favours nowadays. Since 2019, as Goldman has focused on its consumer bank, Morgan Stanley has doubled down on its asset-management offering. It has acquired Eaton Vance, an asset manager, and E*TRADE, a retail broker. A quick look at market capitalisations is all it takes to discern which strategy is preferred by investors (see chart on previous page).

In 2019 Harit Talwar, then boss of Goldman's consumer effort, is supposed to have "thanked" Julian Salisbury, one of the investment bank's top earners, for "making all the money we're spending". The joke was hardly a rib-tickler at the time, and it is rather less funny now. But at least Goldman's rivals are laughing. ■

Buttonwood The moron risk premium

Parsing the bond market's judgment of the British government

After a month of being exciting for all the wrong reasons, Britain's bond market is at last settling down. All it took was an emergency bond-buying programme from the central bank, the defenestration of a chancellor, the installation of a sensible successor, the humiliation of a prime minister and the shredding of a vast unfunded tax-cutting package that set the fiasco in motion.

At the height of the chaos, Britain's five-year borrowing costs were higher than those of Italy and Greece, two countries that have difficult relationships with their lenders. Although the markets are now calmer, the country's sovereign bonds, or "gilts", still trade at much higher yields than they did before the self-inflicted blow. Dario Perkins of TS Lombard, an investment-research firm, has dubbed this a "moron risk premium". What does the premium mean for Jeremy Hunt, the new chancellor, as he seeks to restore order to the country's finances?

It is important to remember that countries are not companies. Familiar measures from the corporate-bond market do not mean the same thing when applied to sovereign debt. If two American firms borrow in dollars at different rates, the implication is that the one with the lower rate is the more creditworthy. In some cases, this works for government debt, too, such as for countries like Argentina and Colombia that borrow a lot in another country's currency (the American dollar), or for those like Germany and Italy that share a currency and a central bank. But for the most part it does not. America's ten-year yield is higher than Slovakia's. That does not mean America's government is the riskier prospect. Similarly, Britain has not suddenly morphed into one of the euro zone's more troubled members.

Instead, government-bond yields reflect a wealth of interlinked factors. Chief among these is the expected future path for the interest rate set by the central bank whose currency is being borrowed. There is information about inflation (which may force the bank to raise rates), GDP growth (which may make it more sanguine about doing so) and unemployment (which may make it more reluctant). There is a judgment about the central bank's own hawkishness or dovishness.

Then there are the other risks. If the currency is likely to weaken, foreign investors should demand a higher yield to compensate. If inflation remains untamed, the value of both interest payments and principal will be eroded, also requiring a higher yield. There is little doubt the actions of Britain's government have pumped up gilt yields. But these yields say as much about the country's economic trajectory as they do about its government's credibility with investors.

One way to sharpen the picture is to take the government-bond yield for a given maturity and subtract the average interest rate the market expects from the central bank over that period. Known as the "asset-swap spread", this is analogous to the credit spread for a corporate borrower. For the long-dated gilts that sparked Britain's near-meltdown, the measure did indeed balloon in the last week of September, before falling back to lesser levels once the Bank of England intervened. Yet asset-swap spreads are also contaminated by other factors, like demand for government debt for use as collateral or liability matching.

A better option is to look at the cost to insure a government's debt. Credit-default swaps are bilateral contracts where one counterparty agrees to insure the other against the loss due to default on a specified bond, in exchange for a fixed stream of payments. The fixed stream is quoted as a percentage of the amount insured, or "spread", and implies a probability of default for the issuer of the underlying bond. Britain's credit-default swaps trade at far lower spreads than those of Italy, which means the market perceives Britain's risk of default to be much lower.

If yields are a bad guide to risk, their volatility is a better one. Daily movements are measured in "basis points", or hundredths of a percentage point. It tells you something that the intraday range for British 30-year gilts on September 28th spanned 127 of them, more than the annual range in all but four of the last 27 years. Before the blow-up, the largest daily increase had been a mere 29 basis points. Since then, similar-sized moves have become routine. Britain's sovereign debt is not flashing red with bankruptcy risk. But its chancellor, and his successors, face a long and grinding slog to convince investors that gilts are once again a safe bet.

Conflict economics

The long march back

ODESSA

Ukraine's economy has adapted to war, and seems to be growing again

When Odessa's ports were shut by naval threats at the start of the war, farmers were unable to ship their produce. "We were getting phone calls from Milan, crying, saying they didn't have ingredients for their pasta," remembers Alla Stoianova, a local official. Since the region's ports are the main export route for Ukraine—the world's second-largest exporter of cereals and third-largest exporter of vegetable oils—global food prices rocketed.

The blockade was most painful for Ukrainians, however. Russia's invasion has dealt the country's economy a savage blow. Battles are raging on land that last year produced a fifth of GDP. According to the Kyiv School of Economics, shelling has caused $10bn-worth of damage to firms. Workers have joined the fight or fled to safety. Of the 6.2m internally displaced people, a third are unemployed. The IMF reckons GDP will shrink by 35% this year.

Yet slowly and grimly the country's economy has adapted to war—and seems to be growing again. Take Odessa's ports. They are operating at less than normal capacity, but they are now operating. A worker says he is called in for two or three shifts a week. From the promenades of Odessa's stately park, freighters can be seen floating between towering yellow cranes.

A grain deal negotiated in July under the auspices of the UN allows Ukraine to export agricultural products; since then, at least 7.8m tonnes of grain have made it out. The country expects a harvest of 65m-70m tonnes this year, down a third from prewar levels but a healthy total given the circumstances. The crop should be sufficiently profitable to enable planting for the new season. As food can leave by ship, rail capacity is freed up for the export of metals.

Ukraine's success on the battlefield has also made a difference. In August just as many people entered Ukraine from the EU as went the other way. The share of firms working at more than half capacity reached around 80% in September, up from 57% in May. This reflects both growing security and official support. A government programme has helped 745 businesses relocate to safer parts of the country.

Meanwhile, smart policymaking has prevented the country from entering a financial crisis. When the war began, the budget deficit leapt to $5bn a month (against pre-war expectations of $600m). Despite the central bank's best efforts, in July it had little choice but to devalue the currency. Another devaluation now seems likely given the gap between the cash exchange rate and the official one, says Olha Pindyuk of the Vienna Institute for International Economic Studies, a think-tank.

Yet these problems have proved to be navigable ones. Banks entered the war well capitalised, thanks to consolidation and a clean-up after Russia's land grab in 2014. Digital skills honed in the covid-19 pandemic have kept their doors open. The independence of the central bank, established in the post-2014 reforms, has helped prevent panic. "None of this would have been possible eight years ago," says Natalie Jaresko, finance minister in 2014-16.

International donors have stepped up with much-needed cash. At first, the offerings were just enough to keep the government afloat. But as the war has dragged on, the need for bigger commitments has become clearer. America has sent $8.5bn and will shortly add another $4.5bn. The EU and its member states have promised a similar amount, but have failed to stump up. In September, after much back and forth, they agreed to send €5bn in loans. Perhaps unsurprisingly, America's patience with Europe is running low.

So is Ukraine's. The government reckons it will run a budget deficit of $38bn next year, equivalent to 19% of pre-war GDP. It needs an estimated $17bn to rebuild critical infrastructure and housing for returnees. Timely money is more important than its form. "But of course it matters a lot whether it's loans or grants when considering Ukraine's eventual return to markets," notes Kostiantyn Kucherenko of Dragon Capital, an investment firm in Kyiv.

The Biden administration hopes to send $1.5bn a month in grants next year, if it can overcome Republican opposition. The European Commission is working on a proposal, but its budget has been allocated. Haggling between member states is expected to continue for some time to come.

Ukraine's exact needs will depend in part on the fate of the grain deal. The agreement expires on November 19th. The Kremlin complains that its fertiliser exports are hampered by Western sanctions, and wants Ukraine to reopen an ammonia pipeline from Russia to the port of Yuzhne, which sits 20km (12 miles) to the north-east of Odessa. Local officials fear such demands are a pretext for cancelling the deal.

Ukraine's government has a role to play, too. Its spending needs to be better targeted, argues a recent report by the Centre for Economic Policy Research (CEPR), an academic network. Some measures—such as price caps on gas and district heating, introduced in July—are wasteful. Aid to displaced people takes the form of a basic income, which goes to all regardless of need.

The CEPR report advises taking a leaf out of America's playbook from the second world war. During the conflict, the number of American households paying income tax grew tenfold, and the federal tax take more than doubled. Ukraine's flat-tax system, designed to make the country an attractive place to invest in normal times, is ill-suited to supporting a war economy. The country's economy is now growing, but its prospects remain uncertain. Extra support will be needed. If Ukrainian ministers were to take some more tough decisions, tight-fisted Europeans would have one less excuse for failing to pay up. ■

Free exchange | How's your luck?

Why inflation refuses to go away

If the return of high inflation caught many off guard, its refusal to leave has been more shocking still—in the past week countries including America and Britain have been surprised yet again by high prices. The Federal Reserve goofed when it forecast in December 2020 that prices would rise by less than 2% in each of the following two years. It goofed on a grander scale in December 2021, when it reckoned that inflation in 2022 would be just 2.6% even though prices were already rising by more than 5% a year. But the Fed was hardly alone in its misjudgments. IMF forecasts have badly and repeatedly undershot inflation. And in late 2020 this newspaper correctly judged that prices would jump in the months ahead, but concluded that the odds of a more sustained period of inflation were low.

Why, then, has inflation been so damnably persistent? In one sense, the answer is trivial: it has remained high because spending has remained high and because monetary policy has been too loose. But this is an unsatisfying answer. Policy has not been tighter because central banks did not think it needed to be (see the errant forecasts). And as inflation has persisted, policy has adjusted. Back in December 2020, the Fed thought its interest rate would remain near zero in 2023; now it expects it to rise to at least 4.6%. What is trickier to work out is why inflation has repeatedly defied forecasts. New work produced by a penitent IMF takes a stab at the question. Its analysis points to three potential culprits: shocks, wages and expectations.

In 2020 and 2021, as the covid-19 pandemic interfered with the production of goods and services, governments unleashed a torrent of fiscal aid. Meanwhile, the peculiar conditions faced by households led to dramatic shifts in consumption, which swung sharply towards goods and then back towards services. After an initial deflationary pulse, the net effect of this turmoil was to push up prices. Last year about 40% of the rise in American prices relative to the pre-pandemic trend, and 66% of the rise in euro-area prices, was attributable to disruptions to production and higher commodity prices, the IMF calculates. Generous stimulus and shifts in household spending accounted for another 30% in both America and Europe.

The barrage of shocks continued with Russia's invasion of Ukraine in February. With the exception of those for America and China, errors in the IMF's inflation forecasts for big economies have in fact been larger this year than last. And although problems projecting core inflation were chiefly responsible for bad forecasts last year, underestimates of contributions from food and energy have been the bigger problems this one.

The effect of Vladimir Putin's war has been compounded by a shock rise in the value of the dollar, which is largely a product of the Fed's aggressive campaign against domestic inflation. As other currencies weaken, their economies' import costs rise, exacerbating inflation troubles. In a note published on October 14th Gita Gopinath, the IMF's deputy managing director, and Pierre-Olivier Gourinchas, the fund's chief economist, calculate that a 10% appreciation in the value of the dollar raises consumer-price inflation in foreign economies by about 1% on average, with larger effects in places more dependent on imports.

Strong wage growth is the second suspect. In normal times, wage growth is mostly determined by labour productivity, inflation expectations and the presence or absence of labour-market slack. Faster productivity growth and higher expected inflation translate into more wage growth; higher unemployment translates into less. In the early stages of the pandemic, these relationships broke down. According to the IMF's analysis, fundamentals mattered less than the intense constraints on labour supply associated with lockdowns and social distancing. As the recovery kicked in, normal patterns began to assert themselves. Yet this has not helped much with wages. The supply of labour has become less of a problem, but pay packets have kept growing thanks to robust hiring and low unemployment.

Rising wages power consumer spending and contribute directly to higher prices for labour-intensive services. Indeed, some hawks worry about a wage-price spiral, in which workers demand higher pay to cover rising prices, as firms raise prices to cover rising wage bills. Yet the IMF's work suggests some caution is in order. Although wage growth has been strong, in many countries it has not been strong enough to keep up with inflation. Sinking real wages can act as a drag on spending and inflation. A study of 22 historical episodes comparable to this one—during which nominal pay rose, and both unemployment and real wages fell—finds that wage-price spirals rarely emerge. In the median episode, inflation began to fall even as unemployment remained low, which is a near-ideal scenario for policymakers.

Nevertheless, it persisted

There are caveats. Tighter monetary policy was required to slow inflation in most cases. The unusual nature of present circumstances may mean that past experience is of dubious relevance. And crucially, much depends on what happens to inflation expectations—a third and unpredictable inflationary force. People's beliefs about the future affect their consumption and wage bargaining. If recent experience looms large in the formation of these beliefs, that would help to explain persistent inflation, and would complicate central bankers' jobs.

Beliefs are tricky to measure, but there is nevertheless some cause for concern. Although measures of expectations in America have been relatively well-behaved, those in Britain and the EU are less encouraging. That, as much as anything, is why interest rates will keep climbing. Having been fooled and fooled again, central banks will not relent until the only inflation surprises are those on the downside. ■

Drugs for depression

The need for a clear head

Researchers are closing in on the best ways to prescribe antidepressants, and to get those who do not need to take them, off them

A five-minute chat with her doctor is how Adele Framer's 11-year ordeal began. She complained about work-related stress. For that, she was prescribed paroxetine, a common antidepressant. There was no conversation about alternatives, such as psychotherapy, nor a discussion of the drug's side-effects or when to stop taking it. "I had a very typical patient experience and a very typical patient attitude at the time," says Ms Framer. "I was a believer that it would be a great idea to just solve my problem with an antidepressant."

Her libido vanished when she started on the drug. Then, after a few years of taking the medication, she became extremely apathetic and lethargic, a common effect of the antidepressant that deepened over time. So, now no longer in the stressful job she had once held down, she saw little reason to persevere. But trying to stop was a disaster. She became hyperactive and agitated. She had "brain zaps": electric-shock-like sensations. Her sexual dysfunction became worse ("completely no feeling down there"). And these were just some of her withdrawal symptoms.

Ms Framer began reading scientific papers about what was happening, and set up SurvivingAntidepressants.org, a website on which people could share tips on how to taper their use of the drugs. In 2021 she published a paper summing up the collective wisdom from this project in *Therapeutic Advances in Psychopharmacology*.

News from the trenches

That paper has been viewed more than 95,000 times. It is the most-read article published in the journal in the past six months. Its main message, backed up by other recent publications, is that, for many people, getting off antidepressants can take months or even years of painstaking reduction of the drugs to smaller and smaller doses—not just a couple of weeks, as doctors had long believed.

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This observation is starting to make its way into medical guidelines, such as those revised in June by England's National Institute for Health and Care Excellence, which recommends good medical practice in the country's National Health Service (NHS). Britain's Royal College of Psychiatrists has also penned new guidelines.

For paroxetine, Ms Framer's antidepressant, they prescribe what is known as the Horowitz-Taylor method—lowering the dose by 10% every two to four weeks until it has tapered off completely. Each step involves a specific combination of the solid and liquid forms of the drug. But many doctors in Western countries still follow the older recommendation that patients halve the amount in two or three quick steps and stop—a method that works for some patients but can cause severe withdrawal symptoms in others.

This inconsistency of advice is just one sign of how much more there is to learn about how antidepressants work. Despite $22bn being spent on depression research in the past 20 years by America's National Institutes of Health alone, there are still big questions for science to answer about these drugs. But new lines of inquiry that have emerged in recent years are already leading to changes in decades-long prescribing practices.

Antidepressants came onto the medical scene in the 1960s in response to the serotonin hypothesis—a belief that a lack of a signalling molecule called serotonin was a leading cause of depression. Tricyclics, an early generation of them, blocked protein ▸▸

channels called serotonin transporters through which serotonin is reabsorbed by a neuron after it has done its job. That kept the serotonin molecules in play, and so amplified their signal.

Unfortunately, tricyclics also interfere with a lot of other signalling mechanisms, which meant people could easily kill themselves by overdosing. But new drugs called selective serotonin reuptake inhibitors (SSRIs), which appeared in the 1980s, specifically block the serotonin transporters, so are much safer—so much so that by the 1990s they had become a lifestyle drug, prescribed widely for normal emotional reactions to events such as bereavement or work burnout.

Better living through chemistry?

Their use is still rising (see chart 1). In Western countries 10-15% of adults take antidepressants, usually SSRIs. And people are taking them for longer than they used to. A quarter of Americans using antidepressants have been doing so for at least a decade. As people age, that becomes increasingly hazardous. They raise the risk of falls, gastrointestinal bleeding, strokes and bleeding after surgery. And when taken during pregnancy, some antidepressants have been linked to a doubling or tripling of the risk of certain birth defects.

At the same time, the benefits have turned out to be less than once believed. For many years drug companies, the main source of research on SSRIs, tended not to publish in scientific journals the results of clinical trials that cast doubt on their products' utility. That practice biased scientific reviews of the field in the drugs' favour. But companies are nevertheless required by America's medicines regulator, the Food and Drug Administration (FDA), to submit to that agency all the data collected during their trials, making them available for others to examine.

The most recent such analysis, published in the *BMJ* in June, combined the results of all trials of antidepressants filed to the FDA between 1979 and 2016. It found that the drugs had a substantial effect on depression beyond that of a placebo for only 15% of patients, mainly those whose cases were severe.

Moreover, while all this has been going on the serotonin hypothesis has come crashing down. Researchers have looked from many directions for a relationship between serotonin and depression. They have found little or no evidence to link the two. So, though antidepressants unquestionably do help some people with depression, exactly how they do so is unknown, and exactly how many people truly benefit is a matter for serious investigation.

Though many patients' symptoms do, indeed, ameliorate when they start taking antidepressants, for those with less severe depression this is mainly a consequence of the placebo effect of taking a pill. A study published in 2010, which examined research on two common SSRIs, estimated that for people with less severe depression the odds of improving by taking the drugs were just 6% higher than they were for taking a placebo. For those with more severe depression they were 25% higher.

Less severe depression is often "situational"—linked to stressful events such as divorce, bereavement or job loss—so self-help guidance that teaches patients how to cope, or more formal psychological therapy, are now considered better initial options. "If you are less severely depressed, anything you do is going to work better than its absence. It doesn't matter what you do," says Steven Hollon, a researcher at Vanderbilt University, in Tennessee.

The challenge, therefore, is to identify those who would truly benefit from using an antidepressant. One research line, still in its infancy, employs statistical models that combine and analyse lots of disparate information, from status at work to personality traits, about individual patients.

These studies have identified a handful of things that distinguish those for whom drugs can be helpful from those who might do better on some form of psychotherapy. They confirm what might, to many, seem intuitive—that such therapy is the better option for people who are unemployed, who are going through stressful events, who are married or cohabiting (perhaps because it helps people resolve relationship problems or encourages them to talk to their partner about their depression) or who have already tried antidepressants without success. Contrariwise, people predicted to do better on medication include those scoring highly for a fundamental personality trait called neuroticism. The hope is that combining such information about individual patients could be used to develop personalised predictions about whether they would do better on therapy or on medication.

A new project by Wellcome Leap, a medical-research charity, goes much further with this idea. It uses a "big-data" approach to crunch information collected from a dozen sites about thousands of patients with treatment-resistant depression. Such data include genetic and blood tests, neuroimaging scans and records of movement and sleep patterns derived from wearable devices and smartphones.

"We want to be able to take from different treatments that may apply to a specific patient's biology," says Regina Dugan, Wellcome Leap's boss. Ultimately, she says, the research could identify particular categories of patients who require specific combinations of treatments. These could involve things like light therapy (to adjust a person's circadian rhythm and improve their sleep), psychotherapy, transcranial magnetic stimulation, medication and supplementing some metabolites that may be implicated in depression.

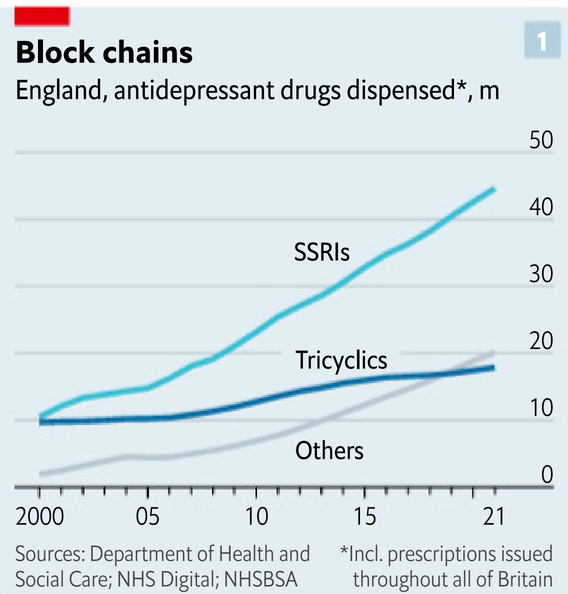
If this line of research bears fruit, doctors would eventually throw a patient's data into a scoring system which would tell them how likely it was that an antidepressant would be helpful—and if so, which one. At the moment, drug choice works by trial and error, with the initial SSRI being selected more or less at random and a replacement chosen a few weeks later if it does not do the business.

Getting the balance right

How and when people should stop the drugs once they recover is the subject of another extensive line of research. Two things have so far emerged about how to time such cessation, one positive and one negative. The positive is that if patients stay on the drugs, they are less likely to have a relapse of depression. The negative, some data suggest, is that the longer they are on the drugs, the greater the risk becomes of their experiencing withdrawal symptoms. "We have to try very carefully to strike the right balance, which is to treat people with antidepressants for just the right amount of time—which is probably something like nine months," says David Taylor from the Maudsley Hospital in London. Erick Turner from the Oregon Health and Science University agrees. "You want six to 12 months in the bag as far as treatment response goes before you consider stopping", he says.

In practice, that decision must also consider the patient's circumstances. "If the person was about to begin a new job that would probably be a bad time to go off the medication," observes Robert DeRubeis from the University of Pennsylvania. This is because nobody knows for sure which patient will have withdrawal symptoms or a relapse of depression.

To investigate the matter, a group called the ANTLER project looked at nearly 500 patients in Britain who had taken one of four



common antidepressants for at least nine months. Half continued their medication. The others received placebo pills which looked identical to those they had previously been taking. Over a period of a month or two the dose of drugs in the placebos was reduced until there was none left. This study, which was published in March, found that, a year later, 56% of the placebo group had relapsed, compared with 39% of the group that stayed on antidepressants.

Worsening of anxiety and depression was particularly common in the placebo group at 12 to 16 weeks—a finding that can guide doctors and patients on how to plan the timing of tapering the drugs. Notably, the patients in this study had already had two previous relapses of depression. For those who are on their first prescription the outcomes may be better.

For a long time, stopping taking SSRIs was thought not to provoke withdrawal symptoms. Any symptom which did appear was seen, instead, as a sign of relapse into depression. However, this belief in the ease of ending SSRI treatment was based on studies in which the patients had been on it for just a few weeks. That, it turns out, is usually too little time for the body to develop dependency on them. Eventually, researchers began listening more carefully to patients who had stopped taking them. The consensus was that the resulting symptoms were different from those they had had when in the grip of depression.

This has led to a recognition that the symptoms of withdrawal and those of relapse are, indeed, separate. For one thing, withdrawal symptoms usually arrive suddenly and immediately. Relapse tends to take more time to come on.

A dose of dissent

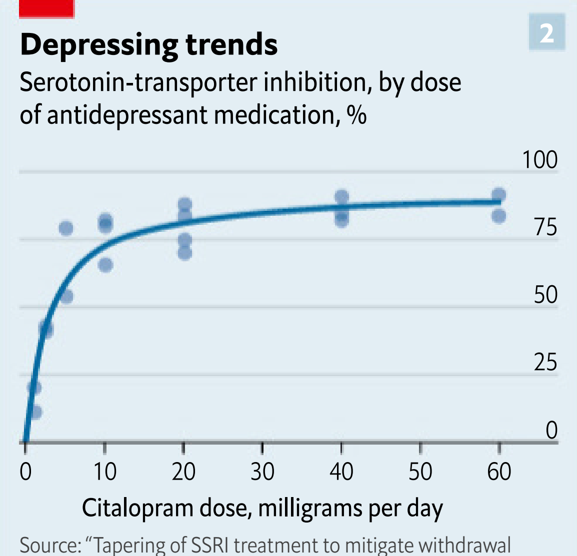
How common withdrawal symptoms are remains unclear. A review of the research published on that topic, carried out in 2019, found that between 27% and 86% of people attempting to come off antidepressants experienced withdrawal symptoms, and that nearly half of them described those symptoms as severe. The variation in these results may have several causes. How long people took the drugs for, and the dose they took, are two. Quitting is also harder for drugs with shorter half-lives (a measure of how long they take to clear from the bloodstream).

It was in light of these sorts of data that Dr Taylor and Mark Horowitz, of University College, London, began the research that led to what has become known as the Horowitz-Taylor method. Drawing on brain images of serotonin-transporter blockage by SSRIs, they proposed a biological explanation for this difference in withdrawal symptoms. Their study found that the effect of the drug on the brain increases steeply at small doses but levels off at higher ones (see chart 2). In other words, reducing SSRIs more slowly at lower doses is needed to produce a gradual decline in their effect—and thus minimise withdrawal symptoms.

That led to the idea of stepped reductions which now bears their joint names. "It's a bit like when you give up cigarettes, the last few cigarettes can be the hardest to give up," says Tony Kendrick from the University of Southampton, who is running a trial on stopping the use of antidepressants in primary care in Britain.

Putting into practice all that has been discovered recently about antidepressants is a challenge. A predictive algorithm may say that therapy is best. That may not, though, be covered by a patient's health insurance—and therapists are, in any case, generally in short supply. Some people may not have the time to undergo therapy. Under pressure to do something to help their struggling patients, many doctors prescribe an antidepressant even when official guidelines tell them that therapy should be the first line of treatment.

As things stand, doctors rarely suggest to patients that they should stop taking the drugs. "It's a systems issue. We just don't have systems to start de-prescribing," says Dee Mangin of McMaster University, in Canada. Such cessation is usually initiated by patients who, like Ms Framer, decide that the side-effects are no longer worth it. The sexual-dysfunction problem is one of the reasons most commonly cited, particularly when people meet a new partner. "There is really no way of combating the sexual side-effects other than stopping the drug," says Dr Turner. Another is people realising, because of the scary effects on their brain after they have accidentally missed a dose (by forgetting to order a refill, for example), that they have developed a strong physical dependency on them.



But patients perceive the side-effects differently, says Dr Mangin. Some find the emotional numbing helpful, because it makes them feel less reactive, she says "and that can be a helpful thing for a while or if they feel anxious". "But that is also the reason why some people want to come off," she adds. "They don't like being like that."

Nor do the economic incentives stack in favour of cessation. Most SSRIs are off-patent and therefore cheap. In Britain, a year's supply of the pills may cost around £40-50 ($35-44). "Getting people off them doesn't save the NHS much in terms of the cost of the drugs," says Dr Kendrick. "The problem is that when people try to come off if you get only one or two people to have a severe relapse and end up in hospital, that would cost an awful lot," he says. This leads to a reluctance to promote quitting.

Moreover, the liquid formulations of antidepressants needed for the preparation of small doses are expensive—a month's worth may cost as much as an annual supply of the pills. And not all antidepressants are available in liquid form, because there are no incentives for drug companies to produce something that will help people stop taking their drugs.

"Tapering strips"—prescriptions of pills that contain smaller and smaller amounts of a drug—are available in the Netherlands and have been shown to result in a 70% quit rate. But the Netherlands is an exception, and the strips are too expensive for a lot of those in other countries who try to import the Dutch versions. An alternative is to obtain tapering doses from a compounding pharmacy (a business which can measure out minuscule amounts of the pills). But that, too, is expensive—and not usually covered by health insurance. So patients are stuck.

This unwillingness to ante-up is, though, short-sighted. Health-care systems face a risk of there being growing numbers of ageing patients who start to experience the worst side-effects of the long-term use of antidepressants. There will be extra falls, strokes, seizures, heart problems, surgery complications and more. Pay now. Or pay double later. ■

Venus

Read my LIPs

Why the awful fate of Venus may yet be visited on Earth

VENUS AND Earth are of almost equal size and grew from the same mixture of raw materials, yet while Earth has been wet and temperate for most of the 4.5bn years it has existed, Venus is a bone-dry 450°C pressure cooker.

This has only a little to do with Venus being closer to the Sun. Though it receives about twice as much sunshine as Earth, its slow rotation (from sunrise to sunrise its days last for 117 terrestrial ones) means that if Venus magically got as wet as Earth, those long, hot days would let thick cloud cover form. This would shield its surface, making it not much warmer than Earth is. Its oceans would not boil away.

Yet the evidence suggests they have. There are, for example, traces of erosion by water on some of the planet's older features. And the Venusian atmosphere is ridiculously rich in deuterium, a heavy isotope of hydrogen. This is thought to have come from a vanished ocean tens or hundreds of metres deep, the water of which evaporated. Molecules of the resulting vapour were then broken up by sunlight and the normal hydrogen in them escaped into space, leaving its heavier cousin behind.

Based on this idea, Michael Way of NASA calculated in 2016 that Venus could once have had a stable, temperate climate. Something bad must have happened to bring it to its present sorry state. And if Richard Ernst, of Carleton University in Ottawa, Canada, is correct, that bad thing might one day happen to Earth, as well.

Dr Ernst outlined his theory of what occurred—which he developed jointly with Dr Way and Jeffrey Scargle, also of NASA—at a recent meeting in Denver of the Geological Society of America. It depends on the fact that, from time to time, Earth experiences huge volcanic eruptions which form basalt-covered areas called large igneous provinces (LIPS). These eruptions also burp vast amounts of CO_2 into the atmosphere.

One of the biggest of them, 252m years ago, caused the greatest mass extinction of animal life on Earth. Another, 66m years ago, probably helped do for most of the dinosaurs (though Earth's collision at this time with a large space rock is reckoned to have delivered the *coup de grâce*). But smaller LIP-forming eruptions also upset Earth's equilibrium. The greenhouse effect caused by the CO_2 released can increase the planet's temperature by 10-15°C.

In the long term, that is a blip. But Drs Ernst, Way and Scargle wondered what would happen if two or more LIP-forming events occurred simultaneously.

By itself, a double LIP would serve only to make things hotter than a single one, before they then returned to normal. A triple LIP, however, or even a double one that occurred during a period with an already-hot climate, would raise the temperature past a tipping point. All surface water would evaporate—and water vapour is, itself, a greenhouse gas, so this would raise the temperature even further.

With no rain, no rivers and no oceans, there would be no erosion of rocks—a process that allows them to react with and sequester atmospheric CO_2. Plate tectonics would also grind to a halt, for it depends on the rocks of the ocean floor being waterlogged, and therefore heavy enough to sink into the underlying mantle. This buries carbon fixed in those rocks for aeons. If that no longer happened Earth, like Venus, would remain hot and dry indefinitely.

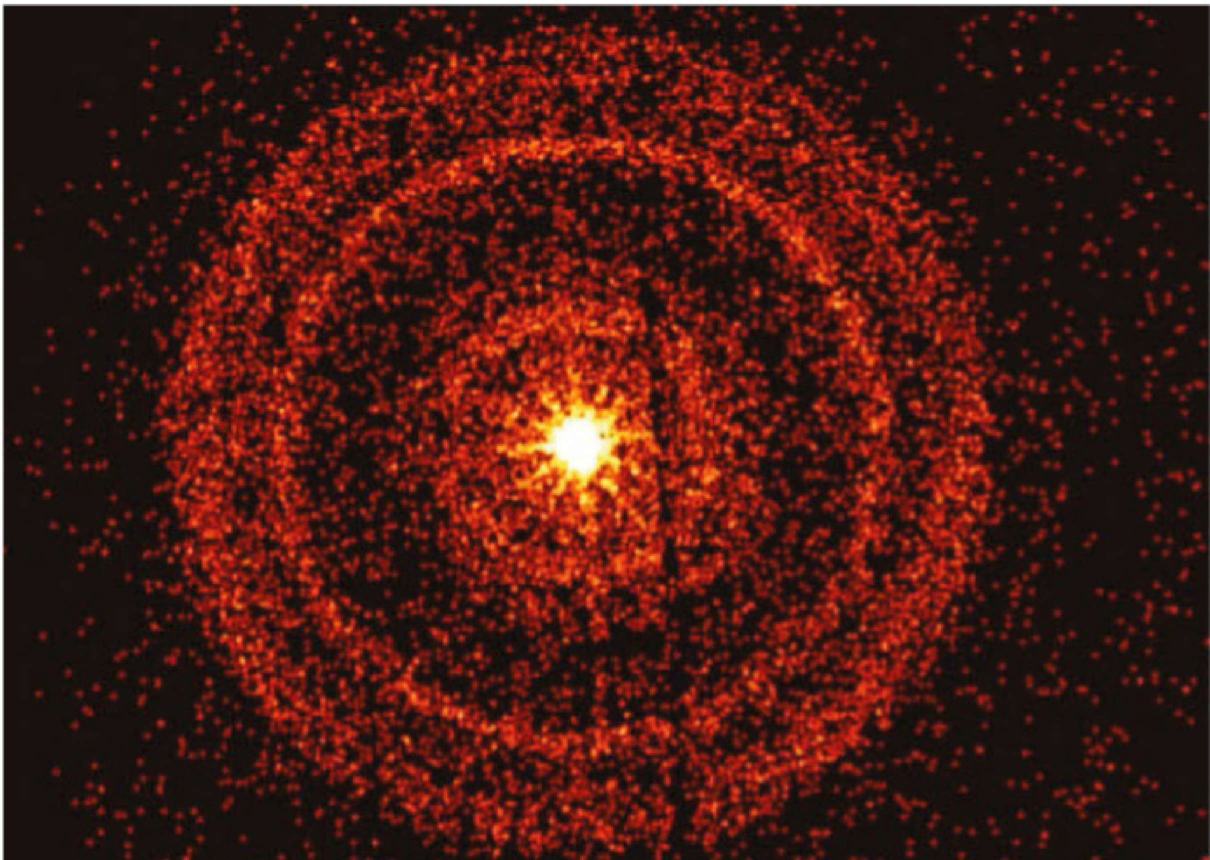
But could such a coincidence realistically occur? The trio think so. The hundreds of LIPS found on Earth formed over a period of about 2.8bn years. Those numbers are large enough for them to have carried out a statistical analysis.

First, they established that LIP-formation occurs at random. There is thus no reason why two or more events should not happen simultaneously. Given their average frequency—once every 15m years—the chances that, were history rerun, multiple simultaneous LIPS would have wrecked Earth's climate look to be about one in five.

Earth, then, has been lucky—and Venus perhaps unlucky. There are features on Venus which look like LIPS, but extensive volcanism about 700m years ago has made the planet's earlier history hard to read. That volcanism may, on the other hand, be a sign of the multiple LIPS that the trio reckon should be there.

For proof of their theory, Dr Ernst pins his hope on three probes which should visit Venus in the 2030s—EnVision, to be launched by the European Space Agency, and NASA's DAVINCI and VERITAS. These will look in detail at both surface features and the composition of the atmosphere.

There might also, Dr Way reckons, be another way to add confidence to their idea. If the search for extraterrestrial planets turned up two like Earth and Venus that were in the same system, but with the one nearer to its star having oceans and the one farther away being in a runaway-greenhouse state, it would suggest that, one day, Earth's luck could run out as well. ■



An astronomical alchemist

This picture, taken by the Swift X-ray Telescope, an orbiting observatory, is of the afterglow of the brightest flash yet observed by astronomers—a so-called gamma-ray burst, dubbed GRB 221009A. It was caused by the explosion and subsequent collapse to form a black hole of a star about 30 times as massive as the Sun. It happened 2.4bn light-years away. Even so, its radiation, which arrived on October 9th, disrupted the ionosphere, and thus some radio communications. Events like this excite those interested in how the heavier elements of the periodic table form. They are the alchemical crucibles in which nuclear reactions create things like cobalt, titanium, vanadium and zinc. Studying GRB 221009A's afterglow should help determine the details.

Neanderthal man and woman

Highland clans

DNA grants researchers a glimpse of Neanderthal family life

FRESH FROM his award a couple of weeks ago of a Nobel prize for his work on the DNA of early human species, including Neanderthals, Svante Paabo (or, more accurately, he and a group of his acolytes) have just published in *Nature* one of the biggest genetic studies yet of that species.

These Neanderthals lived 50,000 years ago in the Altai mountains of Russia. The remains under study—17 bone and tooth samples belonging to 13 individuals—came from two caves about 100km apart. One, called Chagyrskaya, yielded 11 individuals (three boys, three girls, three men and two women). The other, Okladnikov, yielded two (a boy and a woman). Taken together, this work almost doubles the number of Neanderthal genomes that have been described. It also gives a tantalising glimpse into Neanderthal social lives.

It is extremely unlikely that all of these individuals were contemporaries. But the researchers think they have found both a trio and a pair of relatives. They did this by computing a value called DNA divergence.

DNA divergence compares nuclear genomes by choosing sections of their DNA at random and checking if, for each chosen section, the two genomes match. The more similar the DNA sequences are, the more closely, it can be presumed, the two individuals are related. Applying this approach to the Chagyrskaya remains revealed a father, his daughter and a close maternal relative who probably shared a grandmother with the father. Separately, it matched a young boy to an adult female relative, potentially a cousin, aunt or grandmother.

The individuals in the Okladnikov cave were related closely neither to each other nor to anyone from Chagyrskaya. Yet the researchers found an intriguing connection. The woman's mitochondrial DNA matched that of a man from Chagyrskaya.

Mitochondrial DNA is passed intact from mother to offspring. It is not involved in sexual mixing, so it changes only by the random process of mutation. The lack of mutations that might have distinguished the DNA of the individuals in question from each other suggests not only a common ancestor, but a relatively recent one.

Further analysis showed also that two of the mitochondrial DNA samples from Chagyrskaya were closer to the Okladnikov boy than to any of the other Chagyrskayans. And when the team looked at data on Y-chromosomes, which pass intact from father to son, as well as their mitochondrial data, they were able to draw some tentative conclusions about Neanderthal communities.

If members of a population mate more or less at random with those of the opposite sex, the so-called coalescence time—how far in the past their most recent common ancestor lived—should be the same for mitochondrial (matrilineal) and Y-chromosome (patrilineal) DNA. The researchers found, however, that the average coalescence time for the Y-chromosome was 500 years, while that for the mitochondrial genome was around 5,000 years.

To explain this order-of-magnitude difference, they modelled various possibilities. The one which best fitted the data was that the Neanderthals of the Altai lived in groups of around 20 individuals, with at least 60% of the females in a group having migrated there from elsewhere. The size of such groups is similar to that deduced for Palaeolithic bands of *Homo sapiens*, which probably had around 25 members.

When dealing with humanity's ancestors and cousins it is easy and tempting to over-interpret the scarce data available—and practitioners of the subject have indeed been guilty of doing this in the past. So these conclusions should be treated with care. But if nothing else, this study shows that the methods which brought Dr Paabo his prize have increased the pool of data available for such speculations in an extraordinary way. ■

Conserving elephants

Know your boundaries

Malaysia's elephants spend more time outside protected areas than in them

WAY BACK in 1999, Iain Douglas-Hamilton, a doyen of research into African elephants, made an intriguing discovery. Using the Global Positioning System (GPS) to track them—a first—he found that they knew exactly where the boundaries of protected areas were. They ranged freely within these areas, but when crossing between them, through apparently similar but unprotected habitat, they did so at night and at what was (for an elephant) a gallop.

At first sight, it looks as though Asian elephants did not get the memo. They seem to travel outside protected areas with gay abandon. But a study by Ahimsa Campos-Arceiz of Xishuangbanna Tropical Botanical Garden, in Yunnan province, China, and Benoit Goossens of Danau Girang Field Centre, in Sabah, Malaysia, suggests that this abandon is not quite as gay as it seems.

Dr Campos-Arceiz, Dr Goossens and their colleagues synthesised the work of three research groups who were following in Dr Douglas-Hamilton's footsteps by tracking their quarry with GPS. Collectively, these groups studied, over the course of more than a decade, 102 elephants in both west and east Malaysia. Altogether, they recorded more than 600,000 GPS locations.

As they report in the *Journal of Applied Ecology*, they found that these elephants, though concentrated in Malaysia's protected areas, spent more than half of their time outside them. The reason, which did not pertain to Dr Douglas-Hamilton's study, was that habitats inside and outside those areas differed. In Malaysia, protection tends to be afforded to primary forests. Elephants prefer more disturbed areas, with palms and saplings to snack on, and also grasses, among them bamboo. Mature forest trees offer fewer opportunities to feed.

Which is not to say that the protected areas offered no protection. Most forays went less than 3km from those areas. Home ranges, by contrast, were measured in hundreds, or thousands, of square kilometres. The upshot is that Dr Campos-Arceiz and Dr Goossens suggest a change in conservation policy to recognise the value of these areas of secondary growth, which are often neglected because of an understandable desire to preserve what primary forest is left.

Where the grass is greener

Tech and culture

Medicis 2.0

SAN FRANCISCO

The money now flowing from Silicon Valley to the arts is shaking up culture in the region

IN A FORMER gym in a gentrifying warehouse district, a maple tree, complete with roots, is suspended in the air. Immersive screens depict streams and plants. The inaugural exhibition at the Institute of Contemporary Art San Francisco (ICA SF), by Jeffrey Gibson, a Native-American artist, is meant to reveal humanity's connection to the Earth and its despoliation.

The uprooting also symbolises the disruption for which the home of the technology industry is famous. The museum itself marks a break with the past. Local artists and performers have long complained that the tech industry does little to support them. Now, for the first time, Silicon Valley's plutocrats are underwriting a new cultural institution in their own backyard.

The founder of ICA SF is Alison Gass, a seasoned curator with many connections in Silicon Valley. The core backers are art-lovers who made fortunes in tech: angel investors, venture capitalists and the co-founders of Slack and Instagram. The arts programme at Meta (previously Facebook) pitched in. At $5.5m, this sort of giving is a new departure for a cohort of tech titans who hitherto have not matched their forebears' artistic philanthropy.

Early Silicon Valley firms such as Hewlett-Packard, Apple and Adobe have funded local arts institutions for decades. Yet by 2016, according to a report called "The Giving Code", only about 15% of Silicon Valley philanthropy was staying in the area. The arts were not a priority. At the same time, the influx of tech wealth has pushed up rents in the past decade, forcing out creative types, galleries and studios; today it costs 30% more to live in San Francisco than in New York. Amid this displacement, there is a "deep chasm" between tech's resources and its artistic giving, argues SVCreates, an arts-support group.

An obvious reason is that "there are a million things" the wealthy can choose to support, says David Hornik, a venture capitalist who, with his wife Pamela, invested in the new museum. On a planet that is "flooding and burning, there are lots of alternatives to the arts that are drawing people's dollars". Tech tycoons have poured billions into global issues such as poverty and education; locally, Marc Benioff of Salesforce and Mark Zuckerberg have built hospitals. A few billionaires are big art-buyers, such as Larry Ellison of Oracle and the late Paul Allen, the co-founder of Microsoft, whose collection will be auctioned in November. Yet collectors alone do not sustain a cultural ecosystem.

Tech has good reasons to support culture, argue boosters of the arts, particularly in northern California. Computer technology evolved in the creative ferment of the Bay Area's counterculture (with some help from the defence industry). Art and tech are natural bedfellows—"analogous forms of creative problem-solving", observes Tina Vaz, head of Meta's arts programme. Tech projects such as the metaverse need the imagination of artists, she says. Meanwhile the arts—from film and performance to painting and music—can be a means to bridge social gulfs and help tackle other problems that techies hold dear.

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These messages are now being heard by a new wave of tech leaders. Founders and investors were galvanised by the health and social crises of 2020, and by the worsening inequality visible around them. The difference from previous generations lies in their approach. Museum directors and fundraisers around San Francisco Bay say today's tech donors have little interest in galas or seeing their names on plaques. Their aim is rather to revise old ways of doing business and make the art world more responsive and accessible.

Take the ICA SF: its seed funding came from Andy and Deborah Rappaport, investors who previously started a communal arts complex to support galleries facing eviction in San Francisco. It will show living artists—with an emphasis on those neglected by the canon—and "respond to the complex social reality in which we live", says Ms Gass. In this it resembles a tech startup, a "platform" that can quickly "pivot" to new projects. That risk-taking attitude is "a very venture-capital way of looking at things", Mr Rappaport says.

Giving in a material world

Other tech donors are innovating, too. New models include direct payments to artists, an approach tried by some European governments but uncommon in America. This year a guaranteed-income scheme in San Francisco is supported by $1.3m from MacKenzie Scott, the former wife of Jeff Bezos, founder of Amazon, and #StartSmall, a foundation created by Jack Dorsey, co-founder of Twitter. Mikkel Svane, the founder of Zendesk, a web-based customer-support service, recently donated $1m to the de Young Museum with the proviso that it must be used to buy contemporary art from local galleries and artists. "It's like watering your own front garden," enthuses Ana Teresa Fernández, an artist whose work the museum acquired.

Savvy arts bodies are inviting tech innovators onto their boards and leadership teams. Take SFJAZZ, whose state-of-the-art performance space benefited from a $20m gift from Bob Miner, a co-founder of Oracle. The new chair of its board, Denise Young, is a singer and former Apple executive. Or consider the fundraising campaign for Berkeley Repertory Theatre that has been led by Bruce Golden, a venture capitalist and theatre-lover.

It remains to be seen whether such largesse will endure in a downturn. But one thing is clear: the era in which donors wrote big cheques without measurable results, as the Rockefellers and Guggenheims once did, is passing. Today's munificent tech entrepreneurs expect to see a return on investment. Ms Gass is sure that institutions such as hers will provide one. The arts, she avers, can "forge civic progress and make the city a better place". ■

The civil-rights movement

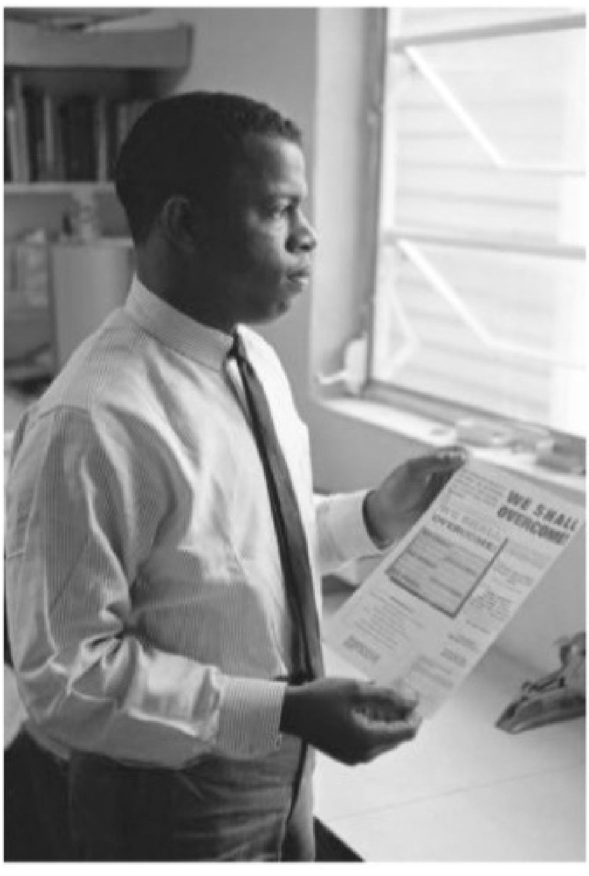
War without war

Waging a Good War. By Thomas Ricks. *Farrar, Straus and Giroux; 448 pages; $30*

BULL CONNOR, the commissioner of police in Birmingham, Alabama, had a message for the Ku Klux Klan: "By God, if you are going to do this thing, do it right." That Sunday in May 1961, he promised the Klansmen 15 to 20 minutes to attack the passengers arriving on a Trailways bus before any police would show up. Using bats and clubs, they should "make them look like a bulldog got ahold of them". The terrorists made the most of the opportunity.

How can people prepare to face such violence? The Freedom Riders—volunteers who rode on buses across the South to force the desegregation of the terminals—knew they could be killed. James Bevel, the civil-rights leader who dispatched many of them, asked each to write their eulogy so he could gauge their conviction. "If I can't explain to your folks why you're dead," he told them, "I'm not going to send you."

In "Waging a Good War", his new history of the civil-rights movement, Thomas Ricks recognises in this episode an agonising challenge that he studied in his years as a military correspondent for the *Washington Post*: how can commanders ready themselves to order, and their soldiers to undertake, missions that may be suicidal? Tracing the critical period from 1954 to 1968, Mr Ricks draws an elaborate parallel between the movement and a military campaign, finding common strengths in their shared emphases on training, discipline, logistics, planning and strategy.



John Lewis, making good trouble

The result is a peculiar, valuable book. Peculiar because the analogy can be strained, even inapposite (such as in comparing children who volunteered to march and be jailed to child soldiers); valuable as his focus prompts Mr Ricks to look past protests and speeches to the rigour, patience and vision that made them succeed. "The civil-rights movement was often creative, but it was rarely spontaneous," he writes. "Its members did not just take to the streets to see what would happen."

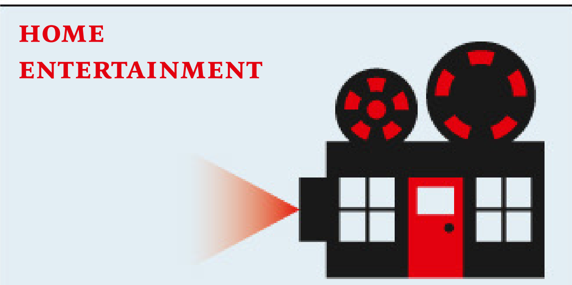
The movement is often misremembered as offering "passive resistance", taking a beating like those passengers disembarking in Birmingham. It was, in fact, fiercely aggressive, much to the consternation of President John F. Kennedy, his brother Robert, the attorney-general, and white and even black moderates. A better term is "militant non-violence", meaning any attack was to be met relentlessly by another non-violent action. Learning this discipline required workshops in the practice of non-violence which, says Mr Ricks, "the American military would call intense training and indoctrination".

One early trainee was John Lewis (pictured), the son of Alabama sharecroppers, who would one day become a member of Congress. "Did you hear what I said?" a racist sheriff said to Lewis, ordering him to retreat from the courthouse steps during a climactic confrontation in Selma, Alabama, in 1965. "Did you hear what I said?" Lewis reciprocated. "We are not going back." There was, Mr Ricks observes, "nothing passive about Lewis's response".

In Mr Ricks's telling, the civil-rights movement has a lot to teach the armed forces. Its openness to internal debate, its sensitivity to the sentiment of the local population, its attention to the end-game and consolidating its gains—all would have helped American commanders in (for example) Iraq.

Yet the question of success also points up the limits of his analogy. The book would have been improved by a chapter elucidating the profound differences between war and militant non-violence. Unlike many wars, the civil-rights movement was not a zero-sum enterprise: its gains benefited everyone. One radical conviction at its core was that its adversaries were human beings deserving of empathy.

Look your attacker in the eye, volunteers were told; imagine him as a baby who has not yet learned to hate. They saw their goal not as victory but always as justice and reconciliation. That is a lesson not just for armies, or today's online movements, but for polarised Americans in general. ■



The fictions of motherhood

A woman's place

"Monkey Grip" anticipated the themes and techniques of novels today

In 1972 Helen Garner lost her job as a teacher. She had led a frank discussion about sex with her young students and written an anonymous piece about it for a countercultural magazine, entitled "Why does the women have all the pain, Miss?" She was subsequently identified as the author, and the education department in the Australian state of Victoria did not take kindly to her freewheeling, expletive-laden pedagogical approach. Being sacked was the best thing that ever happened to her, Ms Garner later said, as "it forced me to start writing for a living."

When "Monkey Grip", Ms Garner's first novel, was published five years later, it jolted Australia's literary scene. It follows Nora, a young mother living in a communal household in Melbourne, who falls in love with Javo, a heroin addict with "violently blue eyes". A parade of bohemians passes through the house, taking drugs, doing chores and co-parenting, as well as "swapping and changing partners—like a very complicated dance to which the steps had not yet been choreographed".

Until 1972, when the policy was scrapped, Australia had one of the world's strictest censorship regimes. Books that were acceptable in America and Europe never made it past the customs officers who guarded the country's ports. (A collection of 15,000 texts deemed blasphemous, indecent or obscene is now held at the National Archives in Canberra.) Readers' tastes tended to be schmaltzy. Little wonder Ms Garner's book caused a stir.

Some reviewers scoffed at the book, claiming she had merely turned her diaries into a novel, but others recognised that it was a trailblazing piece of what is now called autofiction, the transmuting of personal experience into stories. Both Patrick White and Raymond Carver were fans. In 1978 Ms Garner became the first woman to win the National Book Council Award, a prestigious Australian literary gong. The novel was adapted into a film, and later she displayed similar lyricism and directness in acclaimed narrative non-fiction books about a murder trial ("Joe Cinque's Consolation"), sexual harassment at a university college ("The First Stone") and a devastating family-violence case ("This House of Grief").

Inspired by Jean Rhys and Doris Lessing, Ms Garner captured some of the realities of womanhood. Her novel is particularly astute about the ambiguous feelings elicited by mothering, a theme that has been picked up anew by female writers in the 21st century. In an essay she wrote of her "speechless desolation" when contemplating the constraints of her own mother's life.

"Monkey Grip" encapsulates the tension between responsibility and freedom that women have always had to negotiate. Nora likes to spend her time reading books by Virginia Woolf or Henry James, writing her diaries and staying out all night at parties. She loves her child sincerely, yet there is something surreal about the role of parent. She finds it hard to shake the idea that "one day the real mother will come back, and I'll only have been babysitting, and then I can go home." ■

Cybercrime

Hacked off

The Ransomware Hunting Team. By Renee Dudley and Daniel Golden. *Farrar, Straus and Giroux; 368 pages; $30 and £23.99*

On July 16th 2019 Teiranni Kidd, heavily pregnant, was admitted to hospital in Alabama. Unbeknown to her, the hospital had been hit with a ransomware attack—a malicious program had scrambled its computers, and the attackers were demanding money to restore them. With its systems down, medics were forced to rely on pen and paper to get their jobs done. In a subsequent lawsuit Ms Kidd alleges that, because of this, nobody noticed her daughter's birth was going badly. The baby was eventually born with severe brain damage caused by a lack of oxygen during the delivery, and died nine months later.

Over the past decade ransomware attacks have spread like knotweed. Alabama's hospitals are not the only ones to have been affected. When Britain's National Health Service was hit in 2017 more than a third of the country's hospital trusts were compromised. In 2021 a big American oil pipeline was crippled, leading to a declaration of emergency in 17 states and Washington, DC. Train services, ports and even entire cities have been affected, as have millions of ordinary people who have seen family photographs, work projects and private documents held hostage by attackers.

Though the general idea is easy to grasp—criminals encrypt the target's files, then ask for money to decrypt them again—the nuts and bolts of cybercrime are often baffling to the uninitiated. Renee Dudley and Daniel Golden, a pair of journalists, have written a good introduction to the subject. They focus as much on people as on the computers. Their book is named after a group of volunteers who try to fight back against hackers.

Ransomware makes use of cryptography, the same mathematical technique that protects credit-card data and instant messages from prying eyes as they are transmitted across the internet. Done properly, files scrambled by ransomware are unrecoverable unless you pay the hackers for a long alphanumeric key. But programming is only rarely done perfectly, and almost all software is full of bugs. Attackers exploit them to infect machines; ransomware code, in turn, often contains faults. The ransomware-hunters can sometimes find those chinks in its digital ▸▸

armour, allowing victims to retrieve their files without paying.

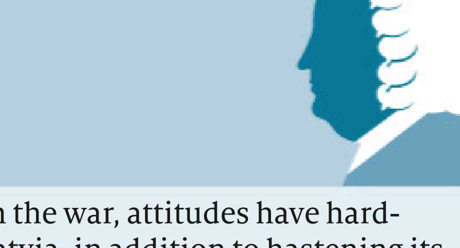
Many of the team members are "white-hat" hackers (ie, ethical hackers). Their reasons for fighting back include relish of the technical challenge and a strong sense of justice. They cannot always help, but when they can, they make a point of refusing payment for their services—though they sometimes express exasperation at the ingratitude of some of the people they assist.

Having access to those at the sharp end provides the authors with some fascinating anecdotes. Pricked by his conscience, a remorseful hacker contacts a member of the team to offer decryption keys for nothing. Other gang members make contact to undermine rival gangs or pursue vendettas, tipping off the researchers to weaknesses in their competitors' software.

It is still unclear where the ransomware story will end. High-profile raids and rising ransom demands have persuaded governments to take the threat seriously. Shortly after the oil-pipeline attack the gang behind it shut down, citing pressure from American authorities.

But other factors are boosting the industry, not hindering it. By paying out to victims, insurance firms inflate ransom demands. Companies have sprung up to smooth the process of paying the ransoms, which are often demanded in cryptocurrency. That helps victims recover files—and reassures the criminals that more victims will pay in future. Even the work of ransomware-hunters puts pressure on the crooks to refine their software, pushing them to eliminate bugs and make it bulletproof. The ransomware business is complicated, ruthless and growing fast. Those looking for a guide should start here. ■

Johnson Say no more



Vladimir Putin claims to be defending Russian. He is failing on his own terms

It was as though the communities lived both on top of each other and entirely apart. Andrejs Vasiljevs, who runs a digital-translation company in Riga, recalls the divided schedule of his school in Soviet Latvia. Russian-speaking pupils studied in their mother tongue until one o'clock, then left; next Latvian students came and learned in theirs until the late afternoon. Lolita Cingane, a consultant and former politician, remembers two different schools, but one bus. It picked up the Latvian children first, then the Russians, who would taunt their counterparts by calling them *gansy,* or "Hans" (in effect, Nazis) before alighting at their separate school.

The Latvian- and Russian-language school systems were like "oil and water", says Arvils Aseradens, the leader of Latvia's governing party. Latvians learned Russian as part of their curriculum, but Russians hardly bothered with Latvian. After occupying Latvia in 1940, the Soviet regime brought over hundreds of thousands of Russians in a drive to militarise and industrialise the Soviet republic. It also sought to dilute Latvian culture. Russian became the lingua franca, needed for any serious work. When Latvia regained independence in 1991, the country was 48% non-Latvian.

Independent Latvia inherited the parallel Soviet school system and left it in place for a long time. Successive governments eventually passed laws requiring an increasing proportion of classes in Latvian as pupils move up through the years. In September Latvia's parliament at last set a date for the end of the long transition. By 2025 all schooling must be in Latvian.

Latvians are frank about the reason: Russia's brutal war on Ukraine. Latvians observe that the world now knows what it and the other Baltic republics have long been saying—that Russia will kill to get its old imperial possessions back.

When Vladimir Putin first launched his invasion of Ukraine almost a decade ago, he claimed to be defending Russian-speakers and Russian culture from annihilation. It was a sham, of course: many proud Ukrainians under Russia's hail of artillery and missiles have long been proud Russian-speakers, too.

The countries that the Soviet Union most heavily Russified—Latvia, Estonia and Ukraine—were often tolerant towards their Russian-speakers after independence. Estonia and Latvia required knowledge of the national languages for citizenship; many Russian-speakers never learned them, leaving large numbers stateless. But despite efforts to encourage bilingualism, in all three countries it was possible to live a life almost entirely in Russian. The requirement to speak Latvian in classrooms was often ignored. Many teachers continued to speak Russian, and little effort was made to inspect or discipline them.

With the war, attitudes have hardened. Latvia, in addition to hastening its language transition, recently banned 20 Russian television channels. More controversial still was the tearing down of a monument in Riga celebrating the Soviet victory over Nazism. Some say that they notice Russian-speakers more readily switching to Latvian in public conversations. At a gathering in Riga for Ukrainians who wanted to thank Latvia for its support, says Ms Cingane, the two groups smiled shyly, exchanging few words. The Ukrainians did not speak much English, she notes, and nobody wanted to use the language they had in common: Russian.

In the very country where Mr Putin's soldiers are killing Russian-speakers on a daily basis, the trauma has led Ukrainians, even those brought up in Russian, to switch languages en masse. Friendship groups are increasingly opting to converse in Ukrainian. Poets and academics have changed the language they use professionally. Refugee children in Russian-speaking families are making the extra effort to play in Ukrainian. Companies are changing, too. Oleg Gorokhovsky, a co-founder of Monobank, announced that the app would be switching to Ukrainian, saying: "The Russian language is associated with those who murder, rape, steal."

Mr Putin famously bemoaned the end of the Soviet Union three decades ago as a great geopolitical catastrophe. But his effort to restore Russia's empire and the dominance of its culture has been a calamity of his own making. Even if Mr Putin's war really were for the sake of Russian, it has been a dramatically counterproductive one. Few men in human history have done as much harm to the Russian language.

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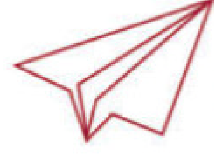

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Economic & financial indicators

Economic data

	Gross domestic product % change on year ago				Consumer prices % change on year ago			Unemployment rate		Current-account balance	Budget balance	Interest rates			Currency units	
	latest		quarter*	2022†	latest		2022†	%		% of GDP, 2022†	% of GDP, 2022†	10-yr gov't bonds latest,%		change on year ago, bp	per $ Oct 19th	% change on year ago
United States	1.8	Q2	-0.6	1.5	8.2	Sep	7.9	3.5	Sep	-3.7	-3.9	4.1		249	-	
China	0.4	Q2	-10.0	3.3	2.8	Sep	2.1	5.3	Aug‡§	2.0	-7.1	2.5	§§	-39.0	7.22	-11.4
Japan	1.6	Q2	3.5	1.8	3.0	Aug	2.1	2.5	Aug	1.8	-6.1	nil		-8.0	150	-23.7
Britain	4.4	Q2	0.9	4.4	10.1	Sep	8.4	3.5	Jul††	-6.2	-6.9	4.1		306	0.89	-19.1
Canada	4.6	Q2	3.3	3.2	6.9	Sep	7.0	5.2	Sep	1.2	-3.6	3.5		192	1.38	-10.1
Euro area	4.3	Q2	3.3	3.0	9.9	Sep	8.4	6.6	Aug	1.3	-4.6	2.4		249	1.02	-15.7
Austria	6.0	Q2	11.5	4.6	10.5	Sep	8.9	5.2	Aug	-0.5	-4.7	3.1		299	1.02	-15.7
Belgium	4.1	Q2	2.2	2.2	11.3	Sep	9.6	5.8	Aug	-1.3	-5.1	3.0		284	1.02	-15.7
France	4.2	Q2	2.2	2.4	5.6	Sep	6.2	7.3	Aug	-1.9	-6.1	2.9		268	1.02	-15.7
Germany	1.7	Q2	0.6	1.4	10.0	Sep	8.3	3.0	Aug	3.9	-4.4	2.4		249	1.02	-15.7
Greece	7.8	Q2	5.0	5.0	12.0	Sep	9.5	12.2	Aug	-6.6	-5.3	5.1		408	1.02	-15.7
Italy	5.0	Q2	4.4	3.3	8.9	Sep	7.8	7.8	Aug	-0.8	-5.9	4.8		383	1.02	-15.7
Netherlands	5.1	Q2	10.6	4.5	14.5	Sep	13.1	3.8	Aug	7.7	-2.2	2.7		268	1.02	-15.7
Spain	6.8	Q2	6.0	4.2	8.9	Sep	9.2	12.4	Aug	0.4	-5.4	3.4		300	1.02	-15.7
Czech Republic	3.6	Q2	1.8	2.2	18.0	Sep	16.7	2.5	Aug‡	-3.8	-5.7	6.0		344	25.1	-12.6
Denmark	3.5	Q2	3.5	2.1	10.0	Sep	8.2	2.7	Aug	8.3	0.8	2.8		263	7.60	-15.9
Norway	3.9	Q2	2.9	2.2	6.9	Sep	6.2	3.1	Jul‡‡	17.3	11.3	1.4		76.0	10.6	-21.2
Poland	4.9	Q2	-8.1	3.5	17.2	Sep	14.4	4.8	Sep§	-3.7	-3.7	8.3		560	4.90	-19.8
Russia	-4.1	Q2	na	-4.4	13.7	Sep	14.0	3.8	Aug§	12.9	-3.1	10.2		258	62.0	14.3
Sweden	4.1	Q2	3.6	2.2	10.8	Sep	9.1	6.6	Aug§	3.0	-0.2	2.2		185	11.2	-23.0
Switzerland	2.4	Q2	1.1	2.2	3.3	Sep	3.4	2.1	Sep	7.0	-1.1	1.3		140	1.00	-8.0
Turkey	7.6	Q2	8.5	5.0	83.5	Sep	72.8	9.8	Aug§	-5.7	-3.8	10.3		-877	18.6	-49.9
Australia	3.6	Q2	3.6	3.2	6.1	Q2	6.0	3.5	Sep	1.9	-2.6	4.0		222	1.59	-15.7
Hong Kong	-1.3	Q2	4.1	0.4	1.9	Aug	2.0	4.1	Aug‡‡	4.1	-6.8	3.9		253	7.85	-0.9
India	13.5	Q2	9.5	6.9	7.4	Sep	7.1	6.4	Sep	-2.3	-6.4	7.5		106	83.0	-9.2
Indonesia	5.4	Q2	na	5.0	6.0	Sep	4.9	5.8	Q1§	1.2	-3.9	7.4		122	15,498	-9.2
Malaysia	8.9	Q2	na	6.0	4.7	Aug	3.4	3.7	Aug§	1.9	-6.1	4.5		90.0	4.72	-11.7
Pakistan	6.2	2022**	na	6.2	23.2	Sep	20.7	6.3	2021	-5.1	-7.6	12.8	†††	213	220	-21.6
Philippines	7.4	Q2	-0.4	7.6	6.9	Sep	5.4	5.2	Q3§	-3.8	-7.8	7.2		225	59.0	-13.9
Singapore	4.4	Q3	6.3	3.5	7.5	Aug	5.7	2.1	Q2	18.9	-1.0	3.5		182	1.42	-5.6
South Korea	3.0	Q2	3.0	2.6	5.6	Sep	5.1	2.4	Sep§	1.8	-3.3	4.4		200	1,426	-17.4
Taiwan	3.0	Q2	-7.0	2.9	2.8	Sep	3.0	3.7	Aug	14.1	-2.0	1.9		134	32.0	-12.8
Thailand	2.5	Q2	2.7	2.8	6.4	Sep	6.0	1.2	Aug§	-0.6	-5.0	3.2		138	38.2	-12.8
Argentina	6.9	Q2	4.2	4.6	83.0	Sep	70.8	6.9	Q2§	-0.6	-4.5	na		na	153	-35.2
Brazil	3.2	Q2	5.0	2.6	7.2	Sep	9.6	8.9	Aug§‡‡	-0.4	-6.2	11.9		37.0	5.28	5.1
Chile	5.4	Q2	nil	2.0	13.7	Sep	11.5	7.9	Aug§‡‡	-7.1	-1.7	6.4		2.0	978	-17.1
Colombia	12.6	Q2	6.0	6.6	11.4	Sep	9.8	10.6	Aug§	-5.1	-4.7	14.4		685	4,810	-21.7
Mexico	2.0	Q2	3.7	2.2	8.7	Sep	8.0	3.3	Aug	-1.0	-2.4	9.9		243	20.1	0.7
Peru	3.3	Q2	2.3	2.6	8.5	Sep	7.7	7.7	Sep§	-3.5	-2.1	8.7		254	3.99	-1.2
Egypt	3.2	Q2	na	6.2	15.1	Sep	12.5	7.2	Q2§	-4.9	-6.5	na		na	19.7	-20.1
Israel	4.9	Q2	6.9	5.7	4.6	Sep	4.5	3.4	Aug	3.5	0.5	3.4		223	3.54	-9.3
Saudi Arabia	3.2	2021	na	9.1	3.1	Sep	2.5	5.8	Q2	14.0	9.0	na		na	3.76	-0.3
South Africa	0.2	Q2	-2.9	1.9	7.8	Sep	6.9	33.9	Q2§	-1.3	-6.2	10.9		149	18.3	-20.4

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds. Source Source: Haver Analytics

Markets

In local currency	Index Oct 19th	% change on: one week	% change on: Dec 31st 2021
United States S&P 500	3,695.2	3.3	-22.5
United States NAScomp	10,680.5	2.5	-31.7
China Shanghai Comp	3,044.4	0.6	-16.4
China Shenzhen Comp	1,981.8	2.7	-21.7
Japan Nikkei 225	27,257.4	3.3	-5.3
Japan Topix	1,905.1	1.9	-4.4
Britain FTSE 100	6,925.0	1.4	-6.2
Canada S&P TSX	18,674.4	2.6	-12.0
Euro area EURO STOXX 50	3,471.2	4.2	-19.2
France CAC 40	6,040.7	3.8	-15.6
Germany DAX*	12,741.4	4.7	-19.8
Italy FTSE/MIB	21,472.1	4.9	-21.5
Netherlands AEX	645.4	2.3	-19.1
Spain IBEX 35	7,583.6	4.4	-13.0
Poland WIG	46,509.2	1.0	-32.9
Russia RTS, $ terms	1,010.2	5.8	-36.7
Switzerland SMI	10,484.1	2.8	-18.6
Turkey BIST	3,880.3	10.3	108.9
Australia All Ord.	6,999.8	2.3	-10.0
Hong Kong Hang Seng	16,511.3	-1.1	-29.4
India BSE	59,107.2	2.6	1.5
Indonesia IDX	6,860.4	-0.7	4.2
Malaysia KLSE	1,415.1	2.5	-9.7

	index Oct 19th	% change on: one week	% change on: Dec 31st 2021
Pakistan KSE	42,226.1	0.5	-5.3
Singapore STI	3,022.8	-2.0	-3.2
South Korea KOSPI	2,237.4	1.6	-24.9
Taiwan TWI	12,976.8	-0.8	-28.8
Thailand SET	1,588.7	1.8	-4.2
Argentina MERV	136,484.2	0.1	63.5
Brazil BVSP	116,274.3	1.3	10.9
Mexico IPC	46,217.4	1.2	-13.2
Egypt EGX 30	10,156.3	3.6	-14.7
Israel TA-125	1,925.3	1.4	-7.1
Saudi Arabia Tadawul	11,795.1	2.1	4.1
South Africa JSE AS	65,652.5	1.7	-10.9
World, dev'd MSCI	2,439.3	3.0	-24.5
Emerging markets MSCI	865.9	0.1	-29.7

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2021
Investment grade	182	120
High-yield	501	332

Sources: Refinitiv Datastream; Standard & Poor's Global Fixed Income Research. *Total return index.

Commodities

***The Economist* commodity-price index**

2015=100	Oct 11th	Oct 18th*	% change on month	% change on year
Dollar Index				
All Items	146.7	144.3	-3.1	-10.3
Food	141.1	138.5	-3.4	6.5
Industrials				
All	151.8	149.8	-2.8	-21.0
Non-food agriculturals	140.2	140.4	-3.1	-6.8
Metals	155.3	152.6	-2.7	-24.2
Sterling Index				
All items	201.9	194.6	-2.3	9.4
Euro Index				
All items	167.5	162.5	-1.7	6.1
Gold				
$ per oz	1,671.4	1,651.7	-0.9	-6.8
Brent				
$ per barrel	94.4	90.2	-0.5	5.8

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

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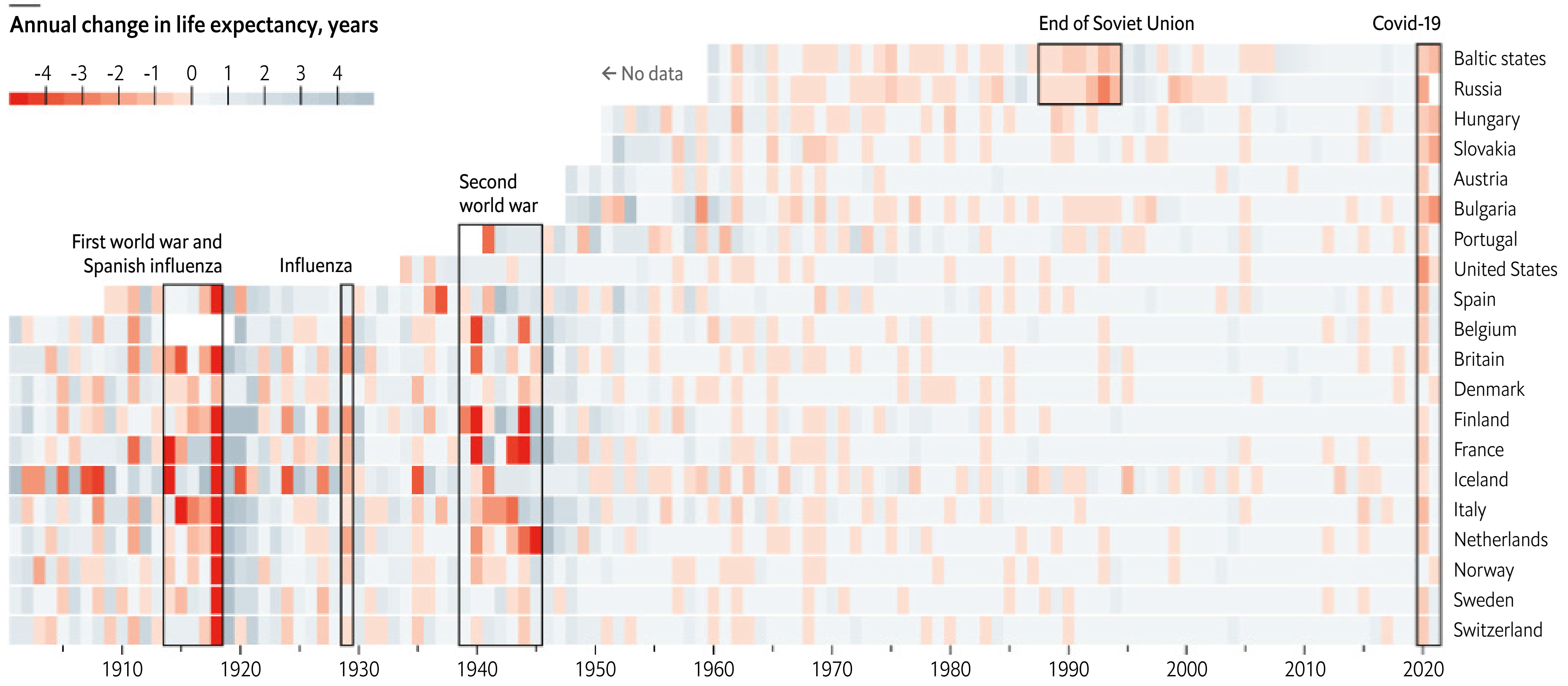
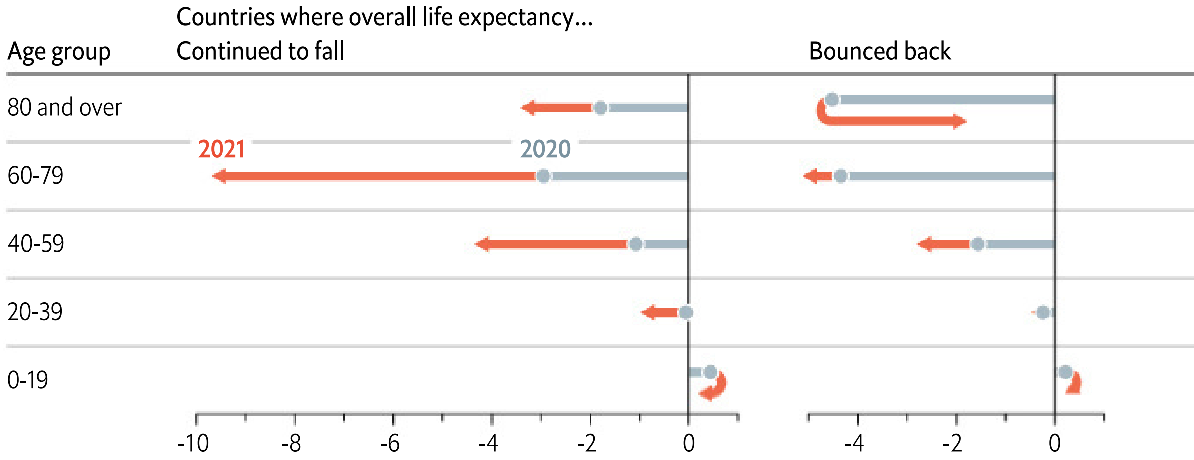
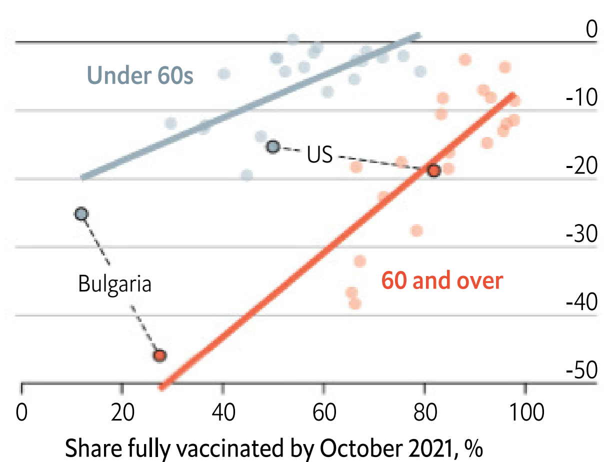
→ **The covid-19 pandemic caused the sharpest decline in life expectancy since 1945**







Source: "Life expectancy changes since covid-19", by J. Schöley et al., *Nature Human Behaviour*, 2022

A tale of two pandemics

In America and eastern Europe, covid-19 got worse in 2021

THE END of the second world war was a turning-point in death rates. A new study in *Nature Human Behaviour* shows that among 16 countries in 1900-45, for each country-year pair in which life expectancy (LE) fell there were 1.65 where it rose. By 1946-2019, this ratio grew to 3.9 to one.

Covid-19 disrupted this trend of ever-longer lifespans. The paper, whose lead author is Jonas Schöley of the Max Planck Institute in Germany, compiled data on death rates by age group in 28 countries, mostly in Europe. The study then calculated how long a newborn baby could expect to live if its odds of dying at each age matched the national average in a given year. By this measure, LE fell in 26 of 28 countries in 2020. The average drop was nine months.

Last year marked a return to rising LE—in western Europe. At the start of 2021, only Denmark and Norway had avoided a decline in LE, while Finland came close. A year later, LE in Belgium, France, Sweden and Switzerland had bounced back roughly to the level of 2019. Seven more countries in the region recovered part of their losses.

In contrast, 2021 was grimmer than 2020 in eastern Europe. In Bulgaria, Hungary and Slovakia, LE declines accelerated in covid's second year. They probably did as well in Russia (for which data were not available), based on *The Economist*'s estimates of excess deaths. Among non-European countries, the main outlier was America, where LE fell by two years in 2020 and a further three months last year.

These divergences closely reflect covid-vaccination patterns. Most countries in the study with high take-up were in western Europe. Those with the lowest rates were mainly former communist countries.

The impact of vaccines stood out even more when changes in LE were broken down by age. One year ago, 82% of Americans aged 80 or older had already been jabbed. In 2021 this group clawed back almost all the loss of LE it accounted for in 2020. America's LE decline last year was instead driven by younger victims. Vaccine hesitancy probably played a role, but so did factors other than covid, such as opioids. Even before 2020, death rates for middle-aged Americans were already rising.

This age-based pattern also appeared elsewhere. In Austria, the Netherlands, Scotland and Slovenia death rates fell in 2021 for people aged at least 80, but rose among those aged 40-59 and 60-79. The middle-aged still make up a small share of deaths from covid. But the gap between them and older people has narrowed, because they are less likely to get jabbed and more prone to risky behaviour. ■

The man who said no

Yurii Kerpatenko, a conductor in Kherson, was murdered sometime in September, aged 46

When the invitation came, it was flattery of a sort. Yurii Kerpatenko was being asked to conduct a concert in Kherson, his native city, to mark International Music Day on October 1st this year. As usual he was to conduct his Gilea chamber ensemble, 15 or so of the best players from the Kherson Regional Philharmonic.

He, and they, were favourites in the city. They played everything: classical selections, opera highlights, "modern and ancient romances", jazz, Ukrainian folk tunes. Since 2000 he had been principal conductor, combining the job for a decade with that of chief conductor at the city's Mykola Kulish Music and Drama Theatre, which also put on events to suit everyone's taste. On concert nights at the theatre, as the audience came in, his musicians would play in the foyer. Yurii in black tie was the first sight concert-goers saw, the guarantee of a good evening ahead. He himself would not be showy, though. Often he simply stood among his players, a solemn and businesslike figure with his glasses and unfashionable fringe, directing them with a steady pumping of both arms or, for swing or a tango, dancing and swaying just a bit.

His own instrument was the accordion, for which he had won prizes since high school. He had gone as far as France and Italy to play. He loved it because, with the violin, it was the sound of Ukraine. His compositions, such as "Autumn Poem", were in the folk tradition, and he played with folk ensembles, too, standing modestly at the back despite his fame. Yet he also encouraged Ukraine to assert its nationhood by looking West. In a campaign called "We are Ukrainians" in 2019 his classical recordings (Verdi and Mozart foremost) were played in the libraries of neighbouring villages, to inspire primary-school children to want to be part of Europe.

It was therefore not surprising that he was asked to conduct an "international" concert on October 1st. But nor was it surprising that he categorically refused. For since March 2nd Kherson, a southern city where the Dnieper river meets the Black Sea, had been under Russian occupation. The citizens had resisted, but were ground down by the enemy's military machine. Protests were broken up with live rounds and hundreds of arrests. Many of those arrested disappeared; other resisters were abducted. In the headquarters of the military-civilian administration, screams rang through the corridors. In the city cemetery, hundreds of new graves were dug in haste. Meanwhile food, water and medicines all became scarce, and those who could do so left the place.

He, however, stayed and spoke out. On his Facebook page his chief emotion was horrified bewilderment. He was a Ukrainian patriot, few more so. He was also a Russian-speaker, brought up on Russian music and Russian culture. The Kyiv Conservatoire, his alma mater, was named after Tchaikovsky and had been backed by Rachmaninoff, composers he adored. He had friends in Russia. But what was Russia now? All KGB and NKVD types, running a concentration camp. Putin was pointing guns at him, trying to turn Ukraine into *Novorossiya*. He couldn't help thinking of Tamerlane, who liked to build pyramids from the skulls of those who would not obey him.

Why did the human species go to war at all? Weren't there better ways, like investment and co-operation? He liked to put up at least some posts that stressed the nobility of man: a list of search engines for academic journals and rare books, with a photograph of the Long Hall in the library of Trinity College Dublin; and a video of Claudio Abbado conducting Mahler's First Symphony, a hymn to Mother Earth. But he also quoted the unflinching warrior code of the samurai: "Live as if you do not exist".

Under the occupation music-making had gone quiet, especially the lighter kind. That seemed right to him. In 2014 he had resigned from the Music and Drama Theatre over something similar. That February, during two days of mourning for the lives lost on the Maidan in Kyiv during the Orange revolution that got rid of Viktor Yanukovich, the theatre director insisted on going ahead with a concert called "Disco, Retro, Jazz". It was an outrage to play such music then, even in the "mournful style" the director daftly suggested, and he refused to conduct. It earned him a reputation as an awkward customer, though also as a man of principle. Both online and off, he made a habit of warring with windmills. He did whatever he had to to protect his orchestras, and music itself.

Clearly the October concert had been dreamt up by the military-civilian junta to promote the lie that Kherson was a peaceful, civilised place under Russian rule. Why, it even put on concerts! The Philharmonic had a new head and new artistic director, both appointed by the Russians, who persuaded the musicians to play. Some needed threatening; others happily complied. For Yurii this collaboration was the most painful, insidious thing he was witnessing in his city. Yanukovich, Moscow's puppet, had been kicked out of Ukraine once and for all, but someone like Volodymyr Saldo, the head of the junta, was local, somehow permanent, one of their own yet not their own, now the enemy's friend.

Sometime in September, it seems, Conductor Kerpatenko delivered his absolute refusal. It was then, around his birthday on the 9th, that his online voice fell silent, and friends and relatives outside Kherson heard no word. In mid-October it emerged that the Russian Special Services had been to his apartment to talk to him. When he gave them a dusty answer, they said they would return. Some days later they came back with a machinegun which they blasted through the front door, killing him at once.

The act would have been just as heinous if he had been a farmer or a shopkeeper. But his status as a musician gave it a particular symbolism. In one of his Facebook arguments, his antagonist had taunted him with the notion of "the art of war". Art and war were surely in stark opposition to each other. To quote Semyon Bychkov, the Russian-born conductor of the Czech Philharmonic and a passionate opponent of Russia's war, "Art…is about spirituality—that means to sustain people, not bring them down. And with that comes a certain responsibility." ■

But everybody had a chance to express his opinion, and at the same time the conference was not made up of sonorous oratory. The thing was too intimate and small. We were too near each other. We were talking to each other face to face, we knew each other pretty intimately, and there was present a pervading and saving sense of humor that laughed the poseur straight off the rostrum and that made for joke and repartee in the midst of serious argument. Of course and in fact let us confess here and now that one thing helped everything else: we were gloriously fed."

W.E.B DuBois, *The Amenia Conference*
(TROUTBECK LEAFLETS, NUMBER EIGHT, 1925), P. 12

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