

# The Economist

Saudi Arabia upends sport  
Soft resistance in Hong Kong  
The attack on universal values  
How green is your EV?

AUGUST 12TH-18TH 2023

## COSTLY AND DANGEROUS

Why Biden's China strategy isn't working



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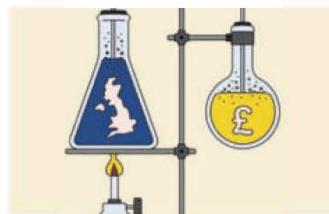
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 to take part in "a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."

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Imran Khan, Pakistan's former prime minister and main opposition leader, was sent to prison for three years after being found guilty of "corrupt practices" in relation to gifts he received in office. He has also been barred from politics for five years. Mr Khan says the charges have been trumped up by his enemies. Owing to an army-led crackdown on his supporters over the past three months, protests against his arrests were subdued.

Rahul Gandhi, the leader of India's opposition Congress party, returned to parliament after the country's Supreme Court suspended his conviction for defamation. Mr Gandhi was found guilty in March in what he claims is a politically motivated case. The Supreme Court said that the convicting court had failed to explain why it had given Mr Gandhi the maximum sentence of two years in prison, which had triggered his disqualification from parliament.

A report by UN investigators found that Myanmar's armed forces had stepped up their "widespread and systematic attacks against civilians", carried out through indiscriminate bombing campaigns and the torching of villages. The investigators are building a case to hold "individual perpetrators" accountable for war crimes.

**Ukraine attacked Russian vessels** in the Black Sea. It launched sea drones at both naval ships and tankers near the port of Novorossiysk, a major export hub and naval base for Russia. The strikes, which have sent oil and wheat prices up, are retaliation for

Russia withdrawing from the UN-brokered grain deal in July. Shipping-insurance costs soared.

Russia tried to break the main opposition leader, Alexei Navalny, by extending his prison term to 19 years. The vocal blogger, who survived a poisoning attempt in 2020 and is serving time in a high-security prison, will be moved into greater isolation at a penal colony reserved for the worst of criminals. "You, not me, are being frightened and deprived of the will to resist," he told supporters in a message posted online.

#### Meloni's credit-rating sinks

Italy's conservative government, led by Giorgia Meloni, imposed a one-off 40% **wind-fall tax on banks** for not passing on interest-rate increases to savers. The tax will fall on the income that banks reap from the gap between lending and deposit rates (as bank stocks plunged in reaction the tax was capped at 0.1% of total assets). Other European countries, such as Spain, have introduced similar levies.

At least 41 migrants died when their boat sank off the Italian island of Lampedusa. The vessel had sailed from Tunisia, the latest hot-spot used by traffickers to send migrants on the perilous journey across the Mediterranean to Europe.

**Spain's** coalition squabbles continued, after a close result in July's election. The far-right Vox party said it would support a minority government of the centre-right People's Party (PP) to keep a left-wing coalition out of power. But that did not help the PP make new friends—hours after the announcement, its most likely ally, the moderate Basque Nationalist Party, ruled out its backing of the PP.

**Poland's** president set October 15th as the date for the country's parliamentary elections. The Law and Justice (PiS) party is leading the polls, but it is

unlikely to clinch the majority it needs to govern alone. Since coming to power in 2015, Poland's conservative government has clashed with the EU over the rule of law, but proved to be a stalwart NATO ally in Ukraine. A referendum on the EU's migration policy could also be held on election day.

One of the candidates in Ecuador's forthcoming presidential election was shot dead at a rally. Fernando Villavicencio had made corruption and crime the focus of his campaign, issues he had investigated as a journalist. He said he had received threats from a gang leader recently.

The eight South American countries that are home to the Amazon basin created an alliance to work together to crack down on deforestation and other illegal activities at a summit in Brazil. The agreement could amplify the region's voice on environmental problems. But it lacks firm commitments. The other countries failed to sign up to Brazil's goal of zero deforestation by 2030.

Diplomatic efforts to reinstate the elected government in Niger appear to have made no progress. Victoria Nuland, a senior American diplomat, was not given an audience with General Abdourahamane Tchiani, the leader of the coup, or with Mohamed Bazoum, the ousted president. Mediators from the UN and African Union could not enter the country.

The civil war in Sudan that broke out in April has forced more than 4m people from their homes, including almost 900,000 who have fled to neighbouring countries, according to the UN. The ongoing fighting has destroyed large parts of the capital, Khartoum.

Voters in the Central African Republic lifted a two-term constitutional limit on the president and extended each term from five to seven years. Opposition members questioned the result, which will

allow Faustin-Archange Touadéra to seek a third term as president.

Data breaches in Britain prompted calls for more vigilance. The Electoral Commission said that hackers had accessed internal emails and voter data. Separately, Northern Ireland's police force accidentally disclosed the names and locations of its staff. The sensitive information could imperil officers. Northern Ireland's terrorism-threat level was raised to the highest category this year.



Dozens of people were killed as wildfires swept across the Hawaiian island of Maui, destroying much of Lahaina, a historic tourist town. The flames were fanned by strong winds and drier-than-usual local conditions.

Voters in Ohio roundly rejected a ballot measure supported by the Republican legislature that would have made it harder to modify the state constitution. The real issue at stake was **abortion**. Another measure is being put forward for November that would insert a right to abortion in Ohio's constitution.

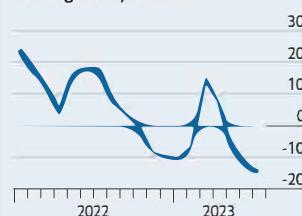
#### Stating the obvious

Ron DeSantis at last acknowledged that Donald Trump was defeated in the presidential election of 2020. "Of course he lost," exclaimed Mr Trump's main challenger for the Republican nomination in the next election. Mr DeSantis senses a new line of attack given Mr Trump's mounting legal woes. Many other Republicans still refuse to admit that Mr Trump lost.

America escalated its **tech wars with China** when Joe Biden issued an executive order banning future private-equity and venture-capital investments in certain advanced technologies in China, namely artificial intelligence, quantum computing and semiconductors. All companies investing in those industries in China will also have to inform the government of their activities. The administration said the decision was taken on grounds of national security, but it risks undermining an effort to ease diplomatic tensions with Beijing.

#### China's goods exports

% change on a year earlier



Source: Refinitiv Datastream

**China's** consumer-price index fell by 0.3% in July, year on year. The index of factory-gate prices slumped by 4.4%. China had been teetering on the brink of deflation for months, as the rebound from lockdowns fizzled out. The value of Chinese exports declined by 14.5% in July at an annual rate, the biggest drop since the start of the pandemic.

The competition between America and Europe to attract investment in **chipmaking** heated up when TSMC, a big Taiwanese semiconductor company, said it would build a factory in Germany. TSMC is spending €3.5bn (\$3.8bn) on the project; the German government is stumping up another €5bn. The EU recently approved the Chips Act, a package of subsidies that aims to double the EU's global share in chipmaking from 10% to "at least" 20% by 2030.

**SoftBank's** Vision Fund made its first investment gain in over a year during the latest quarter, though the Japanese tech conglomerate racked up

another heavy net loss. SoftBank said it would begin to invest again, especially in AI, but would do so "timidly, with fear in our hearts". Meanwhile a slew of tech giants, including Amazon, Apple, Nvidia and Samsung, were reported to be lining up to take stakes in **Arm**, a chip designer, when SoftBank floats the firm on the stockmarket in September.

**WeWork**, one of SoftBank's worst bets in recent years, warned of a "substantial doubt" about its "ability to continue as a going concern". The provider of shared working spaces said that a surplus of commercial property and economic uncertainty had contributed to its problems. Its stock slumped. WeWork was once valued at \$47bn. It is now worth around \$275m.

#### Blown off course

Siemens Energy, a big provider of **wind power**, warned that its losses this year are expected to reach €4.5bn (\$5bn) because of ongoing problems with rotor blades and bearings in certain onshore turbines. It also said that offshore projects "already committed to contractually cannot be completed profitably if implemented by the customer". Vestas, the world's

biggest provider of wind turbines, reported a quarterly loss (though it hopes to turn an annual profit). As demand for wind power has soared, the industry is beset by rising costs, supply-chain problems and backlogs.

Novo Nordisk released the results from the latest trial of its **obesity drug**, Wegovy, which found that patients who took the treatment had a 20% lower chance of suffering a heart attack or stroke. Meanwhile Eli Lilly upped its revenue and profit forecasts amid surging sales of its diabetes and weight-loss medicine. The share prices of both companies hit record highs.

After a turbulent few years, during which it got caught up in Hong Kong's political upheavals and was hit hard by the pandemic, **Cathay Pacific** reported a six-month net profit of HK\$4.3bn (\$550m), its best first-half performance since 2010. The airline expects to reach 70% of its pre-pandemic capacity by the end of the year, compared with 3% a year ago.

**Disney** reported another drop in subscribers for its streaming services, but the business's loss in the latest quarter narrowed to \$512m from over \$1bn

a year ago. The company announced more big price rises, lifting the cost of subscribing to the ad-free version of Disney+ by 27%.

**Simon & Schuster**, one of the big publishing houses in America, was sold to KKR, a private-equity firm, for \$1.6bn. The deal comes less than a year after an attempt by Penguin Random House to take over its smaller rival was blocked on antitrust grounds.

#### Get back to your desk

Zoom has told employees to **return to the office** at least two days a week. In May the company's boss, Eric Yuan, said it was hard to force workers back and that letting "employees work anywhere has sort of become a fashion". Zoom's technology enabled the shift to remote working during the pandemic more than anything else. Praised as a permanent change to working patterns, there is now a move by corporations to curtail the practice. Even America's federal government is clamping down on working from home.

**Saudi Aramco's** profit dived by 38% in the second quarter, year on year. The Saudi state oil company made a mere \$30bn.



# Costly and dangerous

## Joe Biden's China strategy is not working

**O**N AUGUST 9TH President Joe Biden unveiled his latest weapon in America's economic war with China. New rules will police investments made abroad by the private sector, and those into the most sensitive technologies in China will be banned. The use of such curbs by the world's strongest champion of capitalism is the latest sign of the profound shift in America's economic policy as it contends with the rise of an increasingly assertive and threatening rival.

For decades America cheered on the globalisation of trade and capital, which brought vast benefits in terms of enhanced efficiency and lower costs for consumers. But in a dangerous world, efficiency alone is no longer enough. In America, and across the West, China's rise is bringing other aims to the fore. Understandably, officials want to protect national security, by limiting China's access to cutting-edge technology that could enhance its military might, and to build alternative supply chains in areas where China maintains a vice-like grip.

The result is a sprawl of tariffs, investment reviews and export controls aimed at China, first under the previous president, Donald Trump, and now Mr Biden. Janet Yellen, America's treasury secretary, has travelled to Delhi and Hanoi to tout the benefits of "friendshoring", signalling to company bosses that shifting away from China would be wise. Although such "de-risking" measures would lower efficiency, the thinking goes, sticking to sensitive products would limit the damage. And the extra cost would be worth it, because America would be safer.

The consequences of this new thinking are now becoming clear. Unfortunately, it is bringing neither resilience nor security. Supply chains have become more tangled and opaque as they have adapted to the new rules. And, if you look closely, it becomes clear that America's reliance on Chinese critical inputs remains. More worrying, the policy has had the perverse effect of pushing America's allies closer to China.

All this may come as a surprise, because, at first glance, the new policies look like a smashing success. Direct economic links between China and America are shrivelling. In 2018 two-thirds of American imports from a group of "low-cost" Asian countries came from China; last year just over half did. Instead, America has turned towards India, Mexico and South-East Asia.

Investment flows are adjusting, too. In 2016 Chinese firms invested a staggering \$48bn in America; six years on, the figure had shrunk to a mere \$3.1bn. For the first time in a quarter of a century, China is no longer one of the top three investment destinations for most members of the American Chamber of Commerce in China. For the best part of two decades, China claimed the lion's share of new foreign-investment projects in Asia. Last year it received less than India or Vietnam.

Dig deeper, though, and you find that America's reliance on China remains intact (see Finance & economics section). America may be redirecting its demand from China to other countries. But production in those places now relies more on Chinese inputs than ever. As South-East Asia's exports to America have risen, for instance, its imports of intermediate inputs from Chi-

na have exploded. China's exports of car parts to Mexico, another country that has benefited from American de-risking, have doubled over the past five years. Research published by the IMF finds that even in advanced-manufacturing sectors, where America is keenest to shift away from China, the countries that have made most inroads into the American market are those with the closest industrial links to China. Supply chains have become more complex, and trade has become more expensive. But China's dominance is undiminished.

What is going on? In the most egregious cases, Chinese goods are simply being repackaged and sent via third countries to America. At the end of 2022, America's Department of Commerce found that four major solar suppliers based in South-East Asia were doing such minor processing of otherwise Chinese products that they were, in effect, circumventing tariffs on Chinese goods. In other areas, such as rare-earth metals, China continues to provide inputs that are hard to replace.

More often, though, the mechanism is benign. Free markets are simply adapting to find the cheapest way to supply goods to consumers. And in many cases China, with its vast workforce and efficient logistics, remains the cheapest supplier. America's new rules have the power to redirect its own trade with China. But they cannot rid the entire supply chain of Chinese influence.

Much of the decoupling, then, is phoney. Worse, from Mr Biden's perspective, his approach is also deepening the economic links between China and other exporting countries. In so doing, it perversely pits their interests against America's. Even where governments are worried about the growing assertiveness of China, their commercial relationships with the biggest economy in Asia are deepening. The Regional Comprehensive Economic Partnership, a trade deal signed in November 2020 by many South-East Asian countries and China, creates a sort of single market in precisely the intermediate goods in which trade has boomed in recent years.

For many poorer countries, receiving Chinese investment and intermediate goods and exporting finished products to America is a source of jobs and prosperity. America's reluctance to support new trade agreements is one reason why they sometimes see it as an unreliable partner. If asked to choose between China and America, they might not side with Uncle Sam.

## Putting the risk into de-risking

All this carries important lessons for American officials. They say that they want to be precise in how they guard against China using a "small yard and high fence". But without a clear sense of the trade-offs from their tariffs and restrictions, the risk is that each security scare makes the yard bigger and the fence taller. The fact that the benefits have so far been illusory and the costs greater than expected underscores the need for laser focus.

Moreover, the more selective the approach, the greater the likelihood that trading partners can be persuaded to reduce their reliance on China in the areas that really matter. Without it, de-risking will make the world not safer, but more dangerous. ■



## Saudi and global sports

# Kicking up a storm

## Sport is a dynamic, capital-intensive business, not a museum exhibit

**S**PORTS FANS have seen plenty of surprises this summer. Carlos Alcaraz won Wimbledon, ending years of domination of tennis by the trio of Novak Djokovic, Roger Federer and Rafael Nadal. In golf the victors of the US Open and Britain's Open were outsiders who were given odds of winning of 1% or less. On August 6th the all-conquering US women's football team crashed out of the World Cup after Sweden scored a winning penalty. The ball crossed the goal line by only a few millimetres.

Yet the biggest shock has been off the field, as Saudi Arabia has barged into the sports industry (see Briefing). Pumped up on petrodollars and desperate to reinvent itself under Muhammad bin Salman (MBS), its 37-year-old de facto ruler, it has spent \$10bn on players, teams and leagues, upending golf and football. That has upset Western fans, activists and politicians, who see it as "sportswashing" human-rights abuses, and complain about the desecration of the hallowed trophies of sport.

*The Economist* is no cheerleader for MBS, but this sports-venting does not bear scrutiny. The West trades widely with Saudi Arabia, the deals will not make its bad human-rights record worse, and it is not clear that the country could or would monopolise and destroy any global sport. In a turbulent world many fans see their teams as a source of pride and stability. But many forget that sport is also a business that is being disrupted. It needs to be open to new capital and fresh ideas.

Sport has long seen investment splurges, whether by media tycoons or Russian oligarchs. Even by those standards the Saudi effort is big. In football it is paying for some of the world's top players, including Karim Benzema, to play in a revamped domestic league. It controls Newcastle United, an English club, and may bid for the World Cup in 2030. In golf a Saudi-backed tournament is merging with the PGA Tour, America's men's circuit. The kingdom sponsors Formula 1, has deals in wrestling and boxing and is eyeing winter sports and e-sports.

Do not imagine that this is a modern version of Arab royals buying racehorses that catch their eye. Saudi Arabia's plan is state-backed and more systematic than that. The kingdom views sport as a way to reinvest oil revenues and catalyse reform at home by creating a bigger services industry and boosting tourism. MBS is a volatile strongman, but he is also overseeing some liberalisation, including of women's rights. The spread of a globalised, consumerist, sporting culture may help Saudi Arabia shift social norms away from austere religious conservatism.

The Saudi spree mirrors a surge in institutional capital flows into sport. Since early 2020 over \$100bn of private-equity cash has been deployed. America's baseball, basketball, hockey and football leagues contain brands with reliable cashflows (partly because these are self-regulating cartels). Europe's soccer teams, which may be relegated, are riskier but sometimes undervalued given their big fan bases. Other sovereign buyers are active. Qatar, which hosted last year's World Cup, has Paris St Germain, a French club, and a stake in the Washington Wizards, a basketball team. Bloomberg reckons 17 of Europe's top 98 soccer clubs are now backed by sovereigns or institutional capital.

Many of these new investors see digital disruption as an opportunity. Revenues are in jeopardy, as viewers abandon traditional television, and in America "cut the cord" on cable packages that bundle sports. For old media firms this is a nightmare: Disney is looking for an investor to take a stake in ESPN, its huge, declining sports network. For nimble owners of teams and brands, digital disruption holds the promise of reaching audiences directly, with a more immersive, interactive experience.

Fans often fear change will ruin something that they love. However, sport is not just a competition between players, but also for an audience—and rival forms of entertainment do not stand still. Italy's Serie A football league is a warning of what happens if reform is too slow. Its revenues are falling, its teams are underperforming and they are mostly lossmaking. European football costs over \$7bn a year to run, excluding players' wages, and does not break even. It can benefit from fresh money.

Besides, disruption can lead to improvements that bring in new fans. England's Premier League broke off from the rest of the game in 1991 and is now one of the world's most successful tournaments. India's Premier League, launched in 2008, drew millions to Indian cricket. Formula 1 has found a younger audience in the Netflix show, "Drive to Survive" and direct-to-consumer streaming. Who knows what will come from Apple's \$2.5bn investment in streaming MLS, America's soccer league; or Qatar's backing of Padel, a rival to tennis, with 25m players.

The case for disruption, then, is clear. However, Saudi Arabia faces two other objections. The first is that it is a state actor that is not motivated by profits and has vast resources. Sport requires a competitive balance, so if an owner buys all the best players their team can in theory win all the time and the game suffers. This risk needs to be watched. However, despite decades of crazy money, no team has managed to dominate football. Saudi Arabia's spending on players is worth only 6% of European football's annual operating costs. Its rebel league shook-up golf.

## Big fan

The second objection is Saudi Arabia's rotten record on human rights, including the murder of Jamal Khashoggi, a journalist. Foes of the West like Russia face sanctions, which include sport. Yet the kingdom is not in this category. America and Europe did \$140bn of trade with Saudi Arabia in 2022, including in oil and weapons—both more strategically sensitive than putting. And although some club owners gain influence, controlling sports assets does not seem to blind the Western public or their governments. Even Roman Abramovich, an oligarch who bought Chelsea to court Britain's elite, has not escaped sanctions. As Qatar found with gay and labour rights in the 2022 World Cup, sponsorship can sometimes bring more scrutiny.

An ever-expanding list of activities are restricted around the world on grounds of national security, well-being or morality: think of semiconductors, social media, and energy and arms. Adding sport to the list is an own goal. ■



## The Chinese economy

# Strait-forward

### China's authorities must do more to fight deflation

FOR THE past two years, policymakers in most of the world's biggest economies have faced an excruciating stagflationary dilemma. They have wrestled simultaneously with high inflation, which demands steep interest rates, and fears of a recession, which would normally call for policy easing.

The exception is China. It is now struggling with both slowing growth and dangerously low inflation: stagnation, not stagflation. New figures show that consumer prices fell by 0.3% in July, compared with a year earlier. Officials were quick to blame volatile food prices. But the deflationary pressure is more widespread. The prices charged by exporters and other producers are tumbling. A property developer's missed bond payments on August 6th were a stark reminder of China's ongoing housing slump. And the economy's nominal growth rate (which does not strip out the effects of inflation) has dropped below its real, inflation-adjusted rate. This implies that many prices across the economy are falling.

This combination of slow growth and deflationary peril is troubling. But it is not a dilemma. The textbook response to both problems is stimulus, which should revive spending, lift growth and dispel deflation. Scylla and Charybdis are on the same side of the strait.

China's government is seeking to put things right by cutting red tape and setting consumer-friendly regulations, but it has neglected two obvious instruments: interest rates and central-government spending. The central bank has cut rates by only 0.1 percentage points. Given falling inflation, the real cost of borrowing is rising. And although the finance ministry wants local governments to issue bonds faster, it is loth to do more itself. The burden is falling on the most stressed part of China's fiscal machinery—its local governments and their financing vehicles.

Several unhelpful beliefs may be inhibiting the Chinese au-

thorities. First is the view that stimulus is futile. Some economists argue that firms and households will not borrow because they are already saddled with debt and fear for China's economic future. Yet that only strengthens the case for more forceful fiscal easing, which would stabilise employment, improve the incomes of private borrowers, and thereby relieve feelings of economic insecurity. Moreover, it seems strange to argue that monetary easing cannot work before it has really been tried.

Some of China's officials also seem to have fallen for the fallacy that you have to reflate a tyre through the puncture hole. Aware that consumer confidence is low, they have zeroed in on such things as extending amusement parks' hours and making it

easier to trade in old appliances. In fact, the best way to bolster confidence and spending is to create jobs and lift wages. And the best way to do that is macroeasing, not micro fiddling.

China's government may also believe that economic stimulus is at odds with longer-term economic reform. Xi Jinping, its leader, is understandably eager to promote "high-quality" growth—innovative, well-paid, green and resilient—rather than "low-quality" growth, such as spending on redundant infrastructure, cheap manufacturing or speculative homebuilding. China's policymakers know that past stimulus sprees have left behind unoccupied flats and lightly used roads.

Yet reform and stimulus need not conflict. Further public investment in green infrastructure—or flood prevention—would both boost demand and help China adapt to a changing environment. Further easing of China's *hukou* restrictions, which deny some urban public services to migrants from the countryside, would let labour move more freely, and increase consumption. If policymakers do not do more to dispel deflation, China's growth, of high or low quality, will be needlessly slow. ■



## The next commodity boom

# Cash and quarry

### Latin America must not squander its chance to become a commodity superpower

OVER FIVE centuries Latin America and its 2bn hectares of land have been a vital source of food, fuel and metals for the world. First looted by colonisers for gold, silver, cotton and sugar, it later supplied rubber and oil to Europe and the United States. Now Latin America faces a chance to become the 21st century's commodity superpower (see Americas section). This time, it must use that chance to boost development at home.

The transition to clean energy will spark decades of demand for the metals needed to multiply solar and wind parks, power lines and electric cars. Latin America holds more than a fifth of the global reserves for five critical metals. It already dominates the mining of copper, pervasive across green technologies, and holds nearly 60% of the world's known resources of lithium,

used in all main e-vehicle battery types. It is also rich in silver, tin and nickel. And it will benefit even if the green transition sputters, thanks to recent discoveries of oil that could see it quench 5-10% of the global demand by 2030.

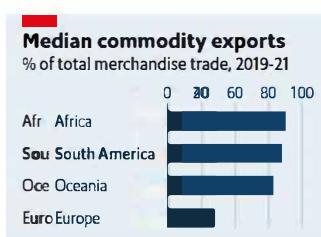
As the world goes greener it will also become more populous. By 2050 it may have nearly 10bn mouths to feed, up from 8bn now. That will fuel demand for the carbs, proteins and delicacies that Latin America produces aplenty. It already supplies more than 30% of the world's corn, beef, poultry and sugar, and 60% of the world's soyabeans. Eight out of ten cups of the world's Arabica coffee are made from the region's beans. By 2032 its net food exports may exceed \$100bn, the largest in the world by far.

The region's draw as a trading partner will be accentuated by ➤

► superpower rivalries. As the West scrambles to diversify away from China, it wants more deals with Latin America, a largely neutral and peaceful region. As monied rivals also eye its riches, a new great game is under way: just last month Vale, a Brazilian mining company, sold 13% of its green-metal arm to Saudi-owned entities for \$3bn; China earmarked \$1.4bn to develop lithium production in Bolivia; and Europe pledged to invest €45bn in Latin American green projects.

The problem is that Latin America's affair with commodities has rarely been happy. Past struggles over the spoils have catalysed coups, inequality and populism. Hugo Chávez, a Venezuelan despot, squandered his country's oil boom, spending lavishly while underinvesting in the industry and stuffing it with cronies. Oil windfalls in Colombia and Ecuador led to premature deindustrialisation. As export receipts have surged, so have domestic currencies, strangling other export industries and tying the region's fate to a volatile market. Latin America has endured countless booms and busts. Local economies are lopsided: on average, 80% of its countries' exports comes from the export of raw materials.

To do better this time round, Latin American countries must get several things right. First they need to make sure the boom does indeed take place. At present, politics is holding it back. As left-wingers and populists have gained power, many countries in the region have passed or threatened laws that would raise



taxes, nationalise reserves or shut out foreign investment. It is right and proper that governments want to maximise their rents, especially given how often they have been robbed in the past. But if they seek to take too much, or keep changing their minds, their reserves will not soon be tapped.

Sharing the bounty with communities that live near mines is also crucial. Locals complain that extraction endangers their livelihoods. This year protests stopped work for months at a Peruvian copper mine accounting for 2% of the world's supply.

Those communities are frequently ignored by national governments; mining firms have too often been involved in scandals or ruined the local environment. Unless both do more to alleviate grievances, progress will remain precarious. Money, often fought over by local bosses, cannot solve it all.

And governments should spend their money wisely. When prices are high they should stash some of the windfall in rainy-day funds that they can tap into to prop up state budgets when times get tough. Instead of splashing cash in a bid to build cutting-edge battery factories from scratch, governments should invest in the basics that enable new industries to emerge: education, health, infrastructure and research. The World Bank estimates that Brazil's infrastructure-financing gap until 2030 is almost \$800bn, 3.7% of GDP each year. Latin America has a historic chance to grow out of its resource trap. It should seize it. ■

#### Democracy and human rights

## Authoritarians are on the march

**They argue that universal values are the new imperialism. Here is why they are wrong**

THE FALL of the Berlin Wall in 1989 held out the promise that growing prosperity would foster freedom and tolerance, which in turn would create more prosperity. Unfortunately, that hope disappointed. Our analysis this week (see International section), based on the definitive global survey of social attitudes, shows just how naive it turned out to be.

Prosperity certainly rose. In the three decades to 2019, global output increased more than fourfold. Roughly 70% of the 2bn people living in extreme poverty escaped it. But individual freedom and tolerance evolved differently. Many people around the world continue to swear fealty to traditional beliefs, sometimes intolerant ones. And although they are much wealthier these days, they often have an us-and-them contempt for others.

The World Values Survey takes place every five years. The latest results, which go up to 2022, canvassed almost 130,000 people in 90 countries. Some places, such as Russia and Georgia, are not becoming more tolerant as they grow, but more tightly bound to traditional religious values instead. At the same time, young people in Islamic and Orthodox countries are barely more individualistic or secular than their elders. By contrast, the young in northern Europe and America are racing ahead. Countries where burning the Koran is tolerated and those where it is a crime look on each other with growing incomprehension.

On the face of it, all this supports the campaign by China's Communist Party to dismiss universal values as racist neo-imperialism. It argues that white Western elites are imposing their

own version of freedom and democracy on people who want security and stability instead.

In fact, the survey suggests something more subtle. Contrary to the Chinese argument, universal values are more valuable than ever. Start with the subtlety. China is right that people want security. The survey shows that a sense of threat drives people to seek refuge in family and racial or national groups, while tradition and organised religion offer solace.

This is one way to see America's doomed attempts to establish democracy in Iraq and Afghanistan, as well as the failure of the Arab spring. Amid lawlessness and upheaval, some people sought safety in their tribe or their sect. Hoping that order would be restored, some welcomed the return of dictators.

The subtlety the Chinese argument misses is the fact that cynical politicians sometimes set out to engineer insecurity because they know that frightened people yearn for strongman rule. That is what Bashar al-Assad did in Syria when he released murderous jihadists from his country's jails at the start of the Arab spring. He bet that the threat of Sunni violence would cause Syrians from other sects to rally round him.

Something similar happened in Russia. After economic collapse and jarring reforms in the 1990s, Russians thrived in the 2000s. Between 1999 and 2013, GDP per head increased 12-fold in dollar terms. Yet that did not dispel their accumulated dread. President Vladimir Putin consistently played on their ethno-nationalist insecurities, especially when growth later faltered. ■

► That has culminated in his disastrous invasion of Ukraine.

Even in established democracies, polarising politicians like Donald Trump and Jair Bolsonaro, former presidents of America and Brazil, saw that they could exploit left-behind voters' anxieties to mobilise support. So they set about warning that their political opponents wanted to destroy their supporters' way of life and threatened the very survival of their countries. That has, in turn, spread alarm and hostility on the other side.

Even allowing for this, the Chinese claim that universal values are an imposition is upside down. From Chile to Japan, the World Values Survey provides examples where growing security really does seem to lead to tolerance and greater individual expression. Nothing suggests that Western countries are unique in that. The real question is how to help people feel more secure.

China's answer is based on creating order for a loyal, deferential majority that stays out of politics and avoids defying their rulers. However, within that model lurks deep insecurity. It is a majoritarian system in which lines move, sometimes arbitrarily or without warning—especially when power passes unpredictably from one party chief to another.

A better answer comes from prosperity built on the rule of law. Wealthy countries have more resources to spend on dealing with disasters, such as pandemic disease. Likewise, confident in their savings and the social safety-net, the citizens of rich countries know that they are less vulnerable to the chance events that wreck lives elsewhere.

#### Universal and valuable

However, the deepest solution to insecurity lies in how countries cope with change, whether from global warming, artificial intelligence or the growing tensions between China and America. The countries that manage change well will be better at making society feel confident in the future. And that is where universal values come into their own. Tolerance, free expression and individual inquiry help harness change through consensus forged by reasoned debate and reform. There is no better way to bring about progress.

Universal values are much more than a Western piety. They are a mechanism that fortifies societies against insecurity. What the World Values Survey shows is that they are also hard-won. ■

#### British science

## Eyes on Horizon

### Britain should rejoin the European Union's main research programme without further delay

RISHI SUNAK claims to want to promote British science and research. The prime minister rightly says the country has great strengths in areas that range from artificial intelligence to life sciences, though it also faces some obstacles (see Britain section). One of these is its post-Brexit absence from Horizon, the European Union's (and the world's) biggest collaborative research programme.

The Brexit trade agreement signed in late 2020 by Boris Johnson, Mr Sunak's predecessor but one, provided for Britain to remain associated with Horizon. But the plan for this fell through because of a fierce row over the Brexit terms for Northern Ireland. When Mr Sunak settled the Northern Irish question in the Windsor framework, in February, the EU repeated its promise of an early deal on Horizon. Although the terms for this were broadly agreed on by early July, nothing was settled. Mr Sunak's decision whether to associate with Horizon may come soon.

British scientists are clamouring to get back as soon as possible, but for Mr Sunak there seem to be three arguments against. One is a value-for-money concern that, after missing out on two years of Horizon's current seven-year cycle, the Treasury might end up paying in more than it gets out. The second is a desire for Britain to control its own research programme, rather than outsource a chunk to Brussels. And the third is a dislike among hardline Tory Brexiteers for any closer links to the EU.

None of these stands up to scrutiny. On value for money, Britain's strong research base has in the past made it a big net beneficiary of Horizon. A provision also exists for financial adjustment to compensate for the years it has missed. It is anyway wrong-headed to treat a programme like Horizon in zero-sum terms. Its biggest advantage lies in the cross-fertilisation of ideas that

benefits all participants, no matter which countries are paying in. Its main output is research, not money.

Taking back control has superficial appeal, and the government is trumpeting its planned Britain-only project, Pioneer, as a fallback if it does not join Horizon. Yet Britain has a poor record of government support for research. A domestic programme cannot match either the size or the collaboration offered by Horizon, which has the added advantage of a seven-year budget that cannot easily be raided by grasping finance ministries.

As for dislike of the EU, even fervent Brexiteers should see Horizon in a more positive light. Hardliners often argued that Britain could keep many benefits of membership despite leaving

the club. It would be difficult to find a better example of how this can be done than Horizon. The programme's strengths have persuaded many non-EU members, from Israel to Ukraine, to sign up as associates. New Zealand has just joined. Canada and Japan hope to follow. That makes Britain's absence look odder still.

Perhaps the hardliners calculate that a failure to rejoin Horizon would severely dent wider hopes for improved relations between Britain and the EU. If the two sides cannot agree over Horizon, which is in the Brexit trade deal, what hope is there of other new agreements? Yet Mr Sunak and the opposition leader, Sir Keir Starmer, both claim to want better arrangements in such areas as the movement of people, trade in electric vehicles and technical standards.

Researchers and universities say the delay over Horizon has already had a cost in lost grants and weaker cross-border collaboration. Rejoining would help attract investment and talent from abroad. Going it alone would not. If Mr Sunak is serious about supporting British science, he should stop dithering and sign up to Horizon without delay. ■



**Singapore responds**

The Banyan column in your issue of July 29th makes a serious charge: that Singapore's Corrupt Practices Investigation Bureau (CPIB) cannot be independent because it reports to the prime minister, who appoints its head. This misrepresents the process. The CPIB does not require the prime minister's permission for its investigations. It sought his concurrence before initiating a formal investigation of the minister for transport, S. Iswaran, because it involved a cabinet minister. The prime minister concurred within a day of receiving the director of CPIB's report.

No prime minister of Singapore has ever prevented the CPIB from investigating anyone. But even if the prime minister does not consent to CPIB investigations, under the constitution the director of the CPIB can still proceed with the investigations if he obtains the concurrence of the president. This is a constitutional provision unique among Westminster-style democracies. There are also safeguards for the appointment or removal of the director of the CPIB which require the concurrence of the president.

In the case of two ministers renting state-owned bungalows in Ridout Road, it was the prime minister himself who asked the CPIB to investigate the matter. It conducted a thorough examination and found no evidence of wrongdoing or corruption. The Attorney General's Chambers (AGC) concurred with the finding.

The leader of the opposition accepted the CPIB's finding, stating in Parliament that he did not believe anybody was making an allegation that the ministers were corrupt. When the CPIB completes its investigation of Mr Iswaran, its findings will be submitted to the AGC, which will decide what to do with them. Such is the CPIB's fearsome reputation for thoroughness, few Singaporeans doubt its ability to see

any case of corruption to its logical conclusion.

This is why *The Economist*'s charge that simply because the CPIB reports to the prime minister it can't be independent strikes many Singaporeans as deeply offensive and uninformed. Would *The Economist* suggest that the head of Scotland Yard is not independent because he is appointed on the advice of the home secretary, in consultation with the mayor of London?

If indeed the CPIB is so lacking in independence as *The Economist* makes out, how could it be possible that Singapore has consistently ranked high in Transparency International's Corruption Perceptions Index. In the latest 2022 index, Singapore was ranked fifth, behind only three Scandinavian countries and New Zealand, and ahead of every other Asian country. Britain was ranked 18th.

The prime minister, as well as his successor, Lawrence Wong, the deputy prime minister, are as determined as their predecessors were to investigate any case of corruption, no matter whom it involves, thoroughly and transparently. Singaporeans and foreign investors alike can be certain of this.

T.K. LIM  
High commissioner  
of Singapore  
London

**Still in the office**

The portrayal of working from home as a matter of diverging choices and preferences between firms and workers is fundamentally misleading ("The WFH showdown", July 15th). The evidence offered by online surveys, such as those cited in your article, overrepresents the views and conditions of workers who have been already digitalised and are mostly located in advanced and well-connected urban areas across the world.

On the contrary, where administrative data allow a more detailed and nuanced picture, it is immediately apparent that many firms and

workers have never had any choice as to whether to work from home or not.

Limited broadband access, a lack of managerial capabilities and the small size of many firms prevent most workers and companies from even considering working from home as a possibility, let alone fight over it. It would be healthy for managerial and public-policy debates to maintain a foot in the reality of most employees and employers. This reality is often worlds away from the digital environment of San Francisco's Bay Area, where some scholars have announced the end of the workplace far too soon.

PROFESSOR RICCARDO CRESCENZI  
DR DAVIDE RIGO  
Department of Geography  
London School of Economics

**A secretary of state**

Your review of Calder Walton's excellent book, "Spies", misquoted a quote by Henry Stimson ("Hi, spy", July 22nd). As I note in my forthcoming history of American intelligence, "Vigilance Is Not Enough", Stimson did not say in 1929 that the reason for closing America's code-breaking agency was "gentlemen do not read each other's mail". He wrote that line 19 years later in his memoirs. However, his co-author, McGeorge Bundy, said it did express Stimson's views at the time.

MARK LOWENTHAL  
Nitze School of Advanced  
International Studies  
Washington, DC

**The well-established party**

Lexington's comment that Abraham Lincoln has been the only candidate elected to the presidency from a third party requires clarification (July 22nd). By the time of Lincoln's election in 1860 the Republicans could hardly be called a third party as they had succeeded the Whig Party, which disbanded in 1856, as the main opposition to the Democrats. Although the Know Nothing party also opposed the Demo-

crats, the Republicans cemented their role by gaining a majority in the House of Representatives in 1858. Moreover, in the 1856 presidential election the Republicans' first-ever presidential candidate, John Fremont, came second with 33% of the vote.

VINCENT MENG  
Exton, Pennsylvania

**The more things change...**

I read your Technology Quarterly on in vitro fertilisation (July 22nd) with great interest. I went through IVF in 1989 and had a successful frozen embryo transfer at a clinic in Virginia. Reading your articles through tears, it brought back all the sharp memories of hope, anticipation, pain and anguish that these IVF cycles can cause. It was a roller-coaster of emotions, time and money. Insurance did not cover any of the procedures then.

I was hoping to read how far IVF has advanced in recent years, but not so. The process is still too expensive and not much has changed except the willingness of some clinics to hone their skills at peddling hope and unproven costly add-ons to women seeking their help. It is such a shame to hear that modern-day snake-oil salesmen exist in IVF.

BONNIE MCINTYRE  
Billings, Montana

**Market logic**

Reading Buttonwood's column on the mystery of gold prices (July 15th) recalled a comment that is often attributed to Clem Sunter, a futurologist, when he worked in the gold division at Anglo American: "The price of gold will go up, and the price of gold will go down, but not necessarily in that order".

MICHAEL ACOTT  
Cape Town



## Scoring political goals

Saudi Arabia is spending a fortune on sport. Critics call it "sportswashing"

ON AUGUST 11th Saudi Arabia's biggest football competition, the Saudi Pro League, will kick off for the 2023-24 season. Last season's tournament did not exactly set pulses racing. Just 9,300 fans attended games on average. For three of the past five seasons the top scorer has been Abderrazak Hamdallah, a Moroccan who has not played for any of the world's top clubs.

But this season may be different. Mr Hamdallah's team, Al Ittihad, has just signed Karim Benzema, winner of the 2022 Ballon d'Or award for best player in the world, from Real Madrid, and N'Golo Kante, a star midfielder from Chelsea. Cristiano Ronaldo, a five-time winner of the Ballon d'Or, moved to Al Nassr, another Saudi club, in January from Manchester United. Former Liverpool winger, Sadio Mané, joined him there, while Liverpool's captain, Jordan Henderson, signed for Al Ettifaq. The list goes on. Teams in the Saudi league have spent more than \$480m on fees this summer, catapulting them among

the biggest spenders in global football.

The Pro League's moves are just one part of a multi-billion dollar push by Saudi Arabia into global sports, backed by Muhammad bin Salman, known as MBS, the country's crown prince and de facto ruler. It goes far beyond football and is roiling global golf, Formula 1 motor racing, boxing and more. MBS's ambition is to use sport to modernise Saudi Arabia, and to transform the outside world's perception of the desert kingdom of 36m people.

The Saudi splurge is happening just as the global sports industry is being shaken by digital disruption and a new wave of private-equity investment. Cynics accuse MBS of vanity projects and "sportswashing"—using sport to whitewash the country's reputation for human-rights abuses. Saudi officials bridle at such criticism. Fahad Nazer of the Saudi embassy in Washington, DC, says the idea that the country is sportswashing "could not be further from the truth". He says such claims reek of "eth-

nocentrism": everything has been done with Saudi Arabia and its citizens—not Westerners—in mind, he says.

Many observers believe the moves will change not just Saudi Arabia, but global sport itself, wresting the initiative from stuffy Western guardians of teams and tournaments and introducing a dynamic new force. The spending has been going on for several years but until recently its full scope was obscured by a scatter-gun approach. Investments and negotiations have taken place in multiple layers of the sports industry, including buying players, purchasing foreign clubs, developing domestic clubs and buying or developing tournaments at home and abroad.

These deals have been pursued by a squad of Saudi entities including the government itself, the Public Investment Fund (PIF), a sovereign wealth fund, and even Saudi Aramco, the oil firm that is the world's most profitable company. The scope is impressive, with at least \$10bn spent across half a dozen major sports.

### Howay, the lads

In 2021 a Saudi-led consortium took control of Newcastle United, a storied but struggling English Premier League (EPL) team, for \$391m. As well as developing its domestic league, there is intense speculation that Saudi Arabia will launch a bid to host the World Cup, perhaps in 2030, fol-

▶ lowing in the footsteps of neighbouring Qatar in 2022. Gulf money is thought to have supported a 2021 attempt to create a European super league, which collapsed after opposition from fans.

In golf, America's main body, the PGA Tour, has just agreed to a merger with LIV Golf, a Saudi upstart tournament that threw the sport into turmoil by offering top players hundreds of millions of dollars to switch their allegiance. Europe's DP World Tour, another organising body, is also part of the deal. Donald Trump, whose courses host LIV events, describes it as a "beautiful and glamorous deal". Elizabeth Warren and Ron Wyden, two left-leaning senators, recently condemned "the Saudi regime's latest attempt to sanitise its abuses" in a public letter to the US Justice Department.

Saudi Arabia hosts a new Formula 1 Grand Prix in Jeddah and is building a track near the capital, Riyadh; Saudi investors were reported to have considered bidding \$20bn for the whole of Formula 1 last year. The Saudi sports minister dismissed the reports as "purely speculation". Aramco remains a major sponsor of F1.

An official at the men's ATP tennis tour has admitted to "positive" talks with possible investors, PIF among them. The women's tennis tour, the WTA, is considering whether to hold an event in Saudi and an official recently visited. The kingdom now hosts big boxing matches, wrestling bouts and e-sports events. Despite its climate, it has also been selected to host the Asian Winter Games in 2029.

### A league of their own

Why is the country splurging on sports? Vanity and envy play a part. Many Saudi royals are fans. They have invested in teams elsewhere and now want some of their own. They also want to be taken seriously among the global sports elite. Yasir Al-Rumayyan, governor of the PIF, is a golf nut. Documents released as part of recent congressional hearings into the PGA Tour-LIV deal suggest that one idea proposed as part of the transaction was that he might gain membership of Augusta, America's most exclusive club.

Saudis have watched as their neighbours have stepped up. The race began in 1993, says Danyel Reiche of Georgetown University in Qatar. That was when Qatar first hosted an ATP men's tennis tournament (Boris Becker won). It spent \$200bn preparing to host the 2022 World Cup. One of its royals also owns Paris St Germain, a top French club. Manchester City, owned by an Abu Dhabi royal, is now the world's most valuable football brand.

But the Saudi plan goes far beyond perks for its elites and keeping up with the neighbours. Buoyant energy prices and production mean that its oil exports are expected to surpass \$166bn this year, or 16%

of GDP. With a global energy transition looming, the kingdom's "Vision 2030" plan aims to diversify its economy away from oil by developing new industries and liberalising the economy, including by getting more women into the workforce. The PIF is a key player, using its more than \$700bn of funds to redeploy capital into new areas of the economy and make strategic investments in brands and technology.

The kingdom wants the Saudi Pro League to attract investment and fans. It aims to welcome 100m visitors a year by 2030 (there were 64m in 2021). Officials hope the league will quadruple its revenue to \$480m by then, though that still pales beside, for instance, the EPL, which generated ten times as much last year.

Sport, it is hoped, will have a spillover effect on the rest of the economy. Part of this is a rebranding exercise in a region known for religious strife, extremism and war. "It is better for everyone to be working together for prosperity in the region, not in conflict, and the Saudis want to be seen at the forefront of it," explains Steven Cook of the Council on Foreign Relations, a think-tank in New York.

A better brand and more events can boost the tourism sector, which the government hopes will increase from 3% of GDP in 2019 to 10% in 2030. When you want to become a holiday hotspot, star-power helps: Lionel Messi, perhaps football's greatest player, is a Saudi tourism ambassador and posts sun-drenched snaps to his 482m followers on Instagram.

Sport may even be useful as a mechanism to complement social reform. The Saudi government has in recent years become more accepting of the sexes mixing in public and has taken some steps to rein in its over-zealous religious police. Women were finally allowed to drive in 2018. Now it is backing women's sports as well as men's. The Saudi women's football team gained its first ranking from FIFA in March. All of this may make the country more attractive to female tourists.

Across the region, hosting sports events

has "generally been positively perceived by residents," says Wadih Ishac, an assistant professor in sport management at Qatar University. Mr Nazer of the Saudi embassy in Washington points out that 70% of the Saudi population is under 35 and that young people love the sporting events.

The master plan faces two big risks. The first is that its business models may not work. Gulf owners can clearly run sports businesses well. Manchester City has thrived under its UAE investor (though in February the EPL accused it of allegedly breaking financial rules, a charge the club denies). During the first year of Saudi ownership, Newcastle United spent around £100m (\$126m) and moved out of the relegation zone. In the second, the club came fourth, qualifying for the Champions League, Europe's main club competition, for the first time in 20 years.

Still, within Saudi Arabia, sport is a state-backed, rather than an entrepreneurial, concern, with the problems that can entail. In June some top football clubs, previously under the control of the Ministry of Sports, were notionally privatised. But PIF has a 75% stake in four teams. Aramco, the oil firm, has another team and NEOM, a metropolis being built in the desert, has one in the second division, too. "It's almost like football clubs have become quangos in Saudi Arabia," says Simon Chadwick of Skema Business School in Paris. Rather than a new dynamic engine of the economy, sports could become a manifestation of its old, state-run patronage system.

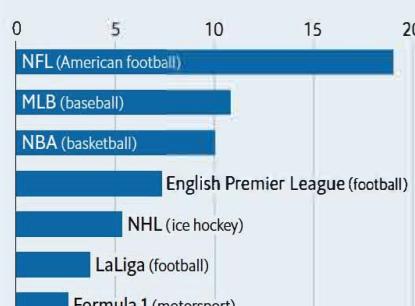
In order to attract stars, salaries must be huge. Mr Benzema reportedly signed a two-year contract worth \$440m and Mr Ronaldo is rumoured to be earning \$200m per year. Al Hilal this summer offered a record-smashing bid of €300m (\$330m) to Paris St Germain for Kylian Mbappé, a French star, who so far has declined. Phil Mickelson, a golfer, pocketed \$200m from LIV Golf despite once describing the Saudis as "scary motherfuckers" (he later apologised). Colossal wage bills mean even the most successful European teams struggle to make money. Over half of the teams in the EPL made losses in 2022, and overall the leagues in Italy, Germany and Spain are in the red. (Exor, which has a stake in The Economist's parent company, is also an investor in Juventus, an Italian football club, and Ferrari, an Italian carmaker.)

Thanks to its oil wealth, the Saudi experiment will not break the bank. According to PIF's annual report in 2021, leisure and entertainment accounted for just 1.6% of its assets. But the combination of low domestic revenues and high costs may mean many Saudi sports ventures cannot sustain themselves or compete globally without subsidies.

Saudi Arabia may face some of the same issues with football as China, which tried

### Ripe for investment

Sports-league revenues\*, 2022 or latest, \$bn



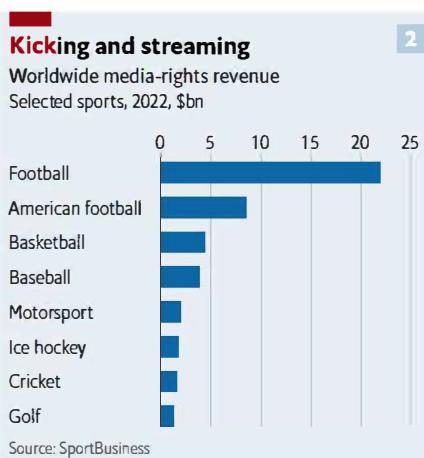
\*Ticket sales, media rights, sponsorships and merchandise  
Sources: Deloitte; Forbes; RunRepeat; Sportico; The Athletic

► to raise the fortunes of its Chinese Super League in the past decade. Expensive imported stars may grumble about the standard of football and there will be plenty of scepticism about the sustainability of the current level of spending. But the state's backing for the league will negate the financial problems and political scrutiny which have hampered the Chinese project. The Saudis are also trying to attract younger talent, and not just be like the United States, where many top players from European clubs have traditionally gone to play out their twilight years.

But Saudi's smallish domestic audience may also impede its ambitions. There is an example of an emerging economy taking a dominant role in the business operations of a global sport. In 2008 India launched the Indian Premier League (IPL), a cricket tournament. Last year the rights to show matches over the next five years were sold for more than \$6bn, making it the world's second-most lucrative sports league per game after the NFL, an American-football competition. India's financial clout has given it a powerful voice over cricket worldwide. But the foundation of India's success has been the sheer scale of the audience there, with 1.4bn cricket-mad citizens. Saudi cannot rival that.

The second big danger is that the surge triggers a backlash. Sport can be a sensitive industry in which to invest and Saudi Arabia's status as an autocratic state does not help. Several human-rights groups have accused the Saudis of sportswashing, for instance when FIFA awarded them the Club World Cup for 2023.

It is a new spin on an old idea, of nasty regimes using sports to show off their political models, as Mussolini did with the World Cup in 1934 and Hitler with the Olympics in 1936. East Germany and the Soviet Union had state-sponsored doping



programmes in the 1970s and 1980s. More recently China was accused of sportswashing when it hosted the Winter Olympics last year, as was Russia when it staged the football World Cup in 2018. Qatar faced plenty of blowback in 2022, too.

Today critics point to Saudi Arabia's dearth of democratic freedoms and suppression of women's and gay rights. The gruesome murder of Jamal Khashoggi, an outspoken journalist, at the Saudi consulate in Istanbul in 2018 has not been forgotten, nor has the kingdom's central role in the bloody war in Yemen (see Middle East & Africa section).

### Insular peninsula

Yet Saudi Arabia's autocratic politics will probably not prevent it from taking a growing role in global sports. Qualification for the Champions League has gone a long way to stilling criticism of Saudi investment in Newcastle United. President Joe Biden, having described the kingdom as a "pariah" in 2019, is now keen to repair America's alliance. But its reputation may make deals more fiddly. The proposed PGA Tour-LIV

golf merger has created a stink and is being assessed by the US Justice Department to see if it violates antitrust law.

PGA Tour executives were hauled before a Senate committee last month. Senator Richard Blumenthal complained that a gagging clause in the deal, which could stop players from badmouthing Saudi Arabia, is "about as broad a non-disparagement clause as I have ever seen". The deal's backers at the PGA Tour are doubtless keen to suggest the Saudis will have a backseat role: probably a very different vision from that of MBS, in which the Saudis are in control and no longer just the "dumb money".

But even if some deals do not transform the country in the way MBS hopes, Saudi Arabia is part of a broader shift that is changing global sports. The surge in capital from the kingdom is part of the rise of a new cohort of sovereign and private-equity funds that are investing in sports at scale. Bloomberg reported that private-equity firms spent \$51bn on sports transactions in 2021, nearly double the total of 2017.

Ownership rules are being liberalised as clubs and tournaments seek new sources of capital to stay competitive. American sports leagues are the world's best at raking in money (see chart 1). Since 2019, several big American leagues have relaxed their rules to allow minority investments by institutional investors. In July Qatar's investment authority reached a deal to buy 5% of the parent company of the Washington Wizards, an American basketball team.

Digital disruption has also finally reached live sports, which had been one of the last bastions of traditional television (see chart 2). Increasingly viewers who have "cut the cord" on television instead watch sports through streaming services which offer live games but also on-demand highlights, analysis and other digital add-ons. This digital shift is being accompanied by unexpected swirls and shifts in audiences. For example, Formula 1, once notable for having little presence in the United States, is now gaining some traction there, boosted by tie-ups with Netflix.

Saudi's sports splurge partly reflects the dynamics within the kingdom: a new flood of petrodollars; MBS's ambition to create a more socially liberal society and to restore his tarnished reputation in the West. But the moves also reflect a sense that there is a new window of opportunity in global sports: to grab bigger and newer audiences, to create different kinds of events and tournaments and to reinvent old ones.

The latest annual report from PIF, released this week, includes the announcement of a sports-specific investment vehicle, hinting at broader future plans. Mr Benzema and Mr Ronaldo are likely to be hitting the back of the net come the autumn. The kingdom itself has plenty of other goals of its own. ■





# Opinion **Peace?**

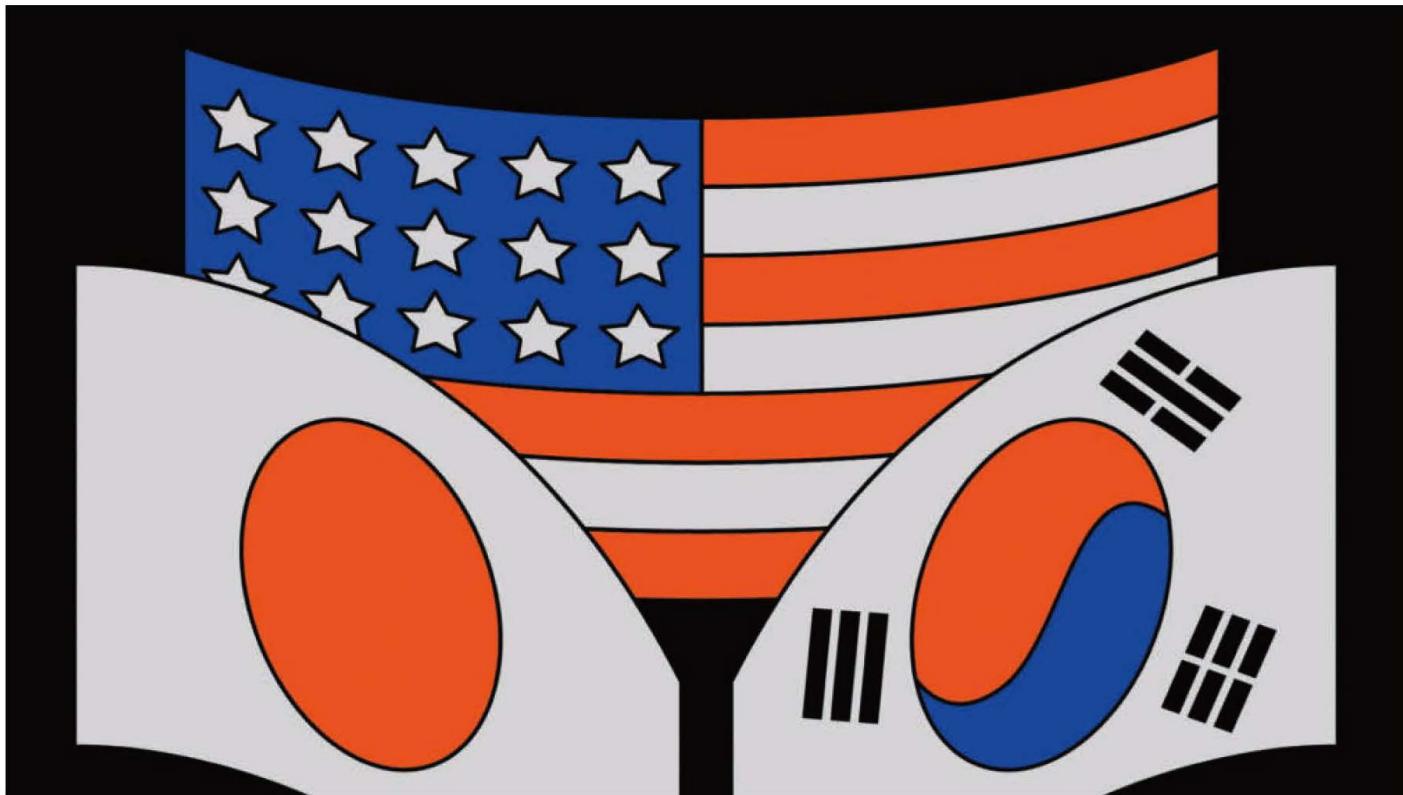
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## East Asian geopolitics

# Camp friends

SEOUL AND TOKYO

### America wants to institutionalise co-operation with Japan and South Korea

CAMP DAVID, the American president's country residence, occupies a special place in diplomatic lore. The wooded grounds have been the setting for intimate meetings and historic negotiations, including a wartime confab between Franklin Roosevelt and Winston Churchill and peace talks between Israel and its Arab neighbours. On August 18th President Joe Biden will host Japan's prime minister, Kishida Fumio, and South Korea's president, Yoon Suk-yeol, for the first-ever standalone summit between the three countries' leaders. Officials hope the meeting will enter the annals by cementing ties between America and two key allies whose bitter history has often divided them.

These days China's assertiveness, North Korea's belligerence and Russian aggression are bringing the three closer. The governments' strategic visions "have never been this closely aligned", boasts Rahm Emanuel, America's ambassador to Japan. A recent rapprochement between Japan and South Korea has helped, too. The summit will focus on deeper defence ties. Technology and supply chains for energy and

semiconductors will also be on the agenda. The leaders will probably issue a joint declaration laying out their shared interests in military and economic security.

Though short of a formal three-way alliance, such steps herald a strategic shift in the Indo-Pacific. Under Moon Jae-in, Mr Yoon's left-wing predecessor, security co-operation stalled and intelligence sharing dried up as Japan and South Korea bickered over Japan's colonial-era atrocities, much to China's and North Korea's delight. Yet since Mr Yoon took office in 2022, South Korea has sought to put such gripes aside. In May Mr Kishida made the first official visit by a Japanese leader to Seoul, South Korea's capital, in more than a decade.

The three countries' armed forces are

working together again. The American, Japanese and South Korean defence ministers met in June and pledged to begin sharing intelligence about North Korean missile launches in real time. Closer co-ordination between the three sends a signal to North Korea and other would-be belligerents that if "we are attacked, we can deal with the situation", says Wi Sung-lac, a former South Korean diplomat and nuclear negotiator. Since Mr Yoon came to power they have stepped up defence exercises. In May a Japanese destroyer flying a controversial Imperial-era flag made a port call in South Korea; Mr Yoon's government played down the incident—a small sign that present-day security concerns are taking precedence over historical grievances.

Trilateral discussions have taken on a wider scope. When the governments talk, "they don't just talk about the Korean peninsula, they talk about the Indo-Pacific more broadly," notes Christopher Johnstone of the Centre for Strategic and International Studies, a think-tank in Washington, DC. Japan and America see South Korea as a key player in South-East Asia, where both seek to counter Chinese influence. Warming relations have allowed conversations on semiconductors to deepen, too: Samsung is reportedly planning to invest in a new chip factory in Japan.

China is paying attention. Chinese officials have been pushing to restart high-level trilateral talks between China, Japan and South Korea, which have withered in recent years. "This is what summit envy" ➤

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looks like," Mr Emanuel quips. During a recent forum in Qingdao, Wang Yi, China's top diplomat, addressed Japanese and South Koreans attending. "No matter how blond you dye your hair, how sharp you shape your nose, you can never become a European or American," he said.

Crude appeals are unlikely to lure Japan or South Korea away from America. Yet there are limits to how close the three can get. Mutual suspicion between Japan and South Korea still runs deep. Japan's constitution makes it difficult to enter new formal alliances. For South Korea, a Japanese military presence or role on the peninsula remains controversial. Even sharing intelligence is "difficult to accept for Korean people", says Choi Eun-mi of the Asan Institute, a think-tank in Seoul.

The three countries also have different security priorities. For South Korea, the focus remains North Korea. Japan is more concerned about China and potential conflict over Taiwan, which South Korea is hesitant to discuss. America had hoped to launch a trilateral dialogue on extended nuclear deterrence, the commitment to use America's nuclear forces to defend allies. But approaches to nuclear issues in South Korea and Japan differ. "Japan wants extended deterrence to be as invisible as possible, whereas South Korea wants it to be as visible as possible," says Sahashi Ryo of the University of Tokyo. Japan and South Korea both gripe about America's trade policies. Yet South Korea is more reluctant to alienate China.

Domestic politics in all three countries threatens to undo diplomatic progress. Most South Koreans agree that the relationship with Japan ought to improve, but many feel that Mr Yoon has papered over Japan's crimes. His proposed solution to a long-running court case over colonial-era forced labour is no more popular than it was when he announced it in March. Constrained by his party's nationalist conservative wing, Mr Kishida is unlikely to offer further concessions. If a candidate from Mr Moon's party, which is ideologically ill-disposed towards the Japanese, were to be elected in 2027, Mr Yoon's work might come to naught. A second term in America for Donald Trump, with his disdain for alliances, would be similarly damaging.

Thus the most important aim of the upcoming summit is to begin locking in the gains of recent months. The leaders need to institutionalise their relationship, creating structures that cannot easily be dismantled by their successors, Mr Sahashi says. That may mean scheduling regular trilateral meetings and perhaps even creating a formal leaders' hotline. As Mr Johnstone puts it, such steps, especially when announced in a setting like Camp David, "become something harder for future leaders to walk away from". ■

## The South China Sea

# Dangerous shoals

MANILA

A rotting warship becomes a flashpoint for Sino-American rivalry

**S**HE BEGAN life as USS LST-821, an American wartime landing ship for tanks. As the USS *Harnett County*, she became a base for river boats and helicopter gunships during the Vietnam war. Later as South Vietnam's *My Tho*, she carried refugees fleeing the fall of Saigon in 1975. Now a rusting hulk named the BRP *Sierra Madre*, she is serving in what may be her most celebrated role yet—as a Philippine outpost defying mighty China.

A small band of Philippine marines have been living in her carcass since 1999, when she was deliberately run aground on the Second Thomas Shoal, part of the Spratly "islands" around 200km from Palawan, the nearest big Philippine island. The point was to assert the Philippines' claim to the reef and portions of the South China Sea. For its part, China claims almost the entirety of the sea, and has built up several reefs into military bases. The *Sierra Madre*, though it sits more than 1,000km from China's Hainan, is a persistent thorn in its side, and a potential flashpoint for wider Sino-American rivalry.

On August 5th Chinese ships prevented Philippine boats from resupplying the *Sierra Madre*, not least by using water cannon. The Philippine government summoned the Chinese ambassador to protest against its "aggressive" behaviour. China, which suspects that the ship is being repaired to ensure its longevity, accused the Philippines of having violated its sovereignty for the past 24 years and demanded the removal of the ship.

In doing so, China is disregarding a ruling made in 2016 by an international arbitration court, which dismissed most of its claims to "historic rights" as invalid under the UN Convention of the Law of the Sea. The Spratlys were not islands, it found, so could not generate exclusive economic zones. The Second Thomas Shoal lay within the Philippines' zone.

Tensions have worsened of late. China's military build-up gives it a greater presence around disputed features such as rocks and atolls, notes Harrison Prétat of the Centre for Strategic and International Studies, an American think-tank. The Philippines has become more vocal about China's bullying and has moved closer to America under President Ferdinand "Bongbong" Marcos Jr. America is strengthening its various security accords with countries across the region.

America has warned China that "an armed attack on Philippine public vessels, aircraft, and armed forces"—including coastguard ships—would trigger the mutual-defence treaty with the Philippines. What America intends to do is less clear. Its warships conduct "freedom of navigation" patrols to challenge Chinese claims. Its coastguard is training local forces in the western Pacific. Joint naval patrols with the Philippines are expected soon, but Ian Storey of the ISEAS-Yusof-Ishak institute in Singapore thinks they will probably be symbolic. China will be hoping that, if it prevents repairs long enough, the *Sierra Madre* will soon collapse into the reef.



Staking a claim

## Indian politics

## Comeback kid

DELHI

### Rahul Gandhi's return to parliament boosts India's opposition

IT WAS NO less welcome for being overdue. On August 7th Rahul Gandhi, leader of India's main opposition party, Congress, reclaimed his seat in parliament after the Supreme Court suspended his controversial conviction for defamation. Mr Gandhi's return to the fray, ahead of a general election due next May, looks like a vindication for the many who considered his conviction to have been a political stitch-up orchestrated by supporters of Narendra Modi. It has also increased a spurt of momentum behind the prime minister's opponents, who recently clubbed together to form an anti-Modi alliance.

The Indian National Developmental Inclusive Alliance (INDIA), which includes Congress and most other opposition parties, appears to have put Mr Modi on the back foot, a rare occurrence, over his party's handling of ethnic violence in the north-eastern state of Manipur. Though Mr Modi's Bharatiya Janata Party (BJP) is still likely to win re-election next year, handing the prime minister a third term, a resuscitated opposition could make the election more interesting—and the future of Indian democracy appear more robust.

Mr Gandhi was convicted in March by a lower court in Gujarat, the prime minister's home state, of defaming anyone called "Modi" through some intemperate criticisms of the prime minister. The charge against him had been brought by a minor BJP politician, called Purnesh Modi, who is unrelated to the prime minister, but claimed nonetheless to have been deeply wounded by Mr Gandhi's remarks. The Congress leader was sentenced to two years in prison—the minimum sentence required to trigger automatic disqualification from parliament.

The controversy interrupted a tentative improvement in Mr Gandhi's helmsmanship of a party previously led by his father, grandmother and great-grandfather, all Indian prime ministers. Long regarded as unserious, spoilt and ill-suited to politics, Mr Gandhi had spent five months walking across India on a *yatra*, or political pilgrimage, during which he had sought to burnish his image by advancing a vision of unity and equality to counter what he called the BJP's "politics of hate".

Besides permitting Mr Gandhi to return to politics, the court's decision could represent an additional political fillip for Congress and its 25 partners in the anti-Modi

**Man on a mission**

alliance, reckons Rahul Verma of the Centre for Policy Research, a think-tank in Delhi. "It's convincing evidence for the public that he was unfairly treated." A sense of the 53-year-old Mr Gandhi battling adversity, as millions of Indians do daily, could be a useful counterpoint to his image as a gilded princeling. He will also now have an early opportunity to show off his new battle scars. On August 8th, the day after he resumed his parliamentary seat, the opposition bloc tabled a motion of no confidence in Mr Modi over his handling of the Manipur violence. Mr Gandhi took the floor on August 9th to launch an attack on the BJP, saying it was "setting the country on fire".

Mr Modi's opponents are in dire need of a break. In 2014 the BJP became the first party in three decades to win a parliamentary majority; in 2019 it increased its majority; and there is little sign of its popularity waning. The Hindu-nationalist party currently controls half of India's state governments and, in Mr Modi, has by far the country's most popular politician. Roughly 75% of Indians approve of his leadership. It will take more than Mr Gandhi's return, and hounding of the government over the situation in Manipur, where an estimated 70,000 people have been displaced, to seriously erode that advantage.

Congress and its partners would need to find an attack-line more relevant to most Indians' daily lives, reckons Neelanjana Sircar of Ashoka University, near Delhi. "Without a genuine opposition narrative it is hard to imagine the alliance making much of a dent in the BJP's popularity," he says. Mr Sircar believes that Mr Gandhi's focus, developed during the *yatra*, on economic inequality and those left behind by India's economic growth, holds promise. It will still be hard to erode Mr Modi's overwhelming dominance. But even if Mr Gandhi has his work cut out, he is at least now back at work. ■

## Pakistan

## Enter the generals

ISLAMABAD

### Imran Khan's jailing heralds tighter military control of Pakistani politics

FIFTY MILES—and five years—separate Imran Khan's greatest political triumph and the nadir, for now, of his political career. At one end is Parliament House in Islamabad, where the assembly that elected him prime minister of Pakistan in 2018 wrapped up its term on August 9th, with power due to be handed to a caretaker administration. At the other is the district jail in Attock in Punjab province, where Mr Khan began a three-year prison term for "corrupt practices" on August 5th.

Mr Khan denies wrongdoing and has unsuccessfully appealed the conviction. He says the charges are politically motivated, which the government denies. The conviction, which comes with a five-year ban from politics, is the culmination of a campaign by Pakistan's powerful army to remove Mr Khan and his party, Pakistan Tehreek-e-Insaf (PTI), from the political fray. It also heralds a period of more active involvement in politics by the generals.

The case has exposed a taste for cash and bling that is at odds with Mr Khan's idea of himself as a pious anti-corruption crusader. Yet the nature of the conviction, for violating electoral laws that are rarely enforced, hints at the former prime minister's true crime: challenging Pakistan's army. Like many Pakistani politicians before him, Mr Khan started out as a general's favourite. Yet the army eventually tired of his political grandstanding and his mismanagement of Pakistan's faltering economy. In April 2022 he was removed from office in a vote of no confidence.

Unlike some of his predecessors, Mr Khan refused to go quietly, attacking the generals in a series of rallies across the country and claiming that they tried to assassinate him last November. After he was briefly arrested in early May, his supporters smashed up military installations. The army, unused to and enraged by such displays of defiance, dismantled his party and rounded up his supporters. Eventually, Mr Khan was nabbed for good.

Mr Khan's forced exit from politics heralds more ambitious plans. Assisted by the outgoing prime minister, Shehbaz Sharif, and a pliant parliament, the army has rearranged Pakistan's hybrid system decisively in its favour. Among the scores of laws tweaked or introduced before parliament's lights were switched off, several granted sweeping new powers to the armed forces and intelligence agencies, alarming civil-►

► rights groups. The incoming caretaker government has been given the power to negotiate with the IMF and sign foreign investment deals. It may also stick around for longer than the 90 days prescribed by the constitution. The day Mr Khan was arrested the government ratified a new census which could require a fresh demarcation of electoral constituencies. The outgoing law minister says this could delay elections by at least five months. The caretakers will in effect report to the army until then.

Mr Sharif's indulgence of the army is explained by the state of the economy. He se-

cured a \$3bn IMF emergency agreement last month to ward off the possibility of default. But the price is steep: higher energy tariffs, high interest rates and a market exchange rate, none of which is popular with voters. The later the election, the more time Mr Sharif and his allies will have to put distance between themselves and unpopular decisions.

Yet Mr Sharif may be tempting fate. Nine months into the job, newly victorious in his battle with Mr Khan and his supporters, General Asim Munir, who heads the armed forces, is growing assertive. He is

spearheading a new economic council and is busy touting Pakistan's investment potential to Gulf states that have grown tired of doling out cash to Pakistan. More than their money, he may be eyeing their political support. "We are probably moving towards a new political order, a controlled democracy where civil liberties are curtailed in the name of economic development," says Ahmed Bilal Mehboob, president of the Pakistan Institute of Legislative Development and Transparency. In perennially chaotic Pakistan, order can seem attractive to an ambitious general. ■

## Banyan Influence campaign

*Myanmar's junta craves international recognition. It is beginning to get it*

RUNNING A MILITARY dictatorship comes with certain perks, as Myanmar's generals know very well. Unchecked power allows for the capture of a state's economy and the suppression of dissent with near-impunity. Opponents can be intimidated or, if necessary, locked up or killed.

Yet running a military dictatorship also comes with certain downsides. Apart from the need to maintain an expensive apparatus of oppression, the chief one is that nobody likes you. Many in Myanmar despise the junta. Much of the world has shunned the army ever since it seized power in a coup in February 2021, when it ended nearly a decade of civilian governance in Myanmar. The UN does not recognise it. The Association of South-East Asian Nations (ASEAN) has banned it from meetings. America and the EU have imposed multiple rounds of sanctions on individuals and businesses associated with it. Plenty of other countries refuse to engage or do business with it.

Sanctions eat into state coffers and the lack of international respect makes it harder to establish legitimacy within the country. Both undermine the junta's efforts to win a decisive victory in Myanmar's bloody civil war, in which it has slaughtered thousands of its own citizens since it returned to power.

As a result the regime craves few things as much as international recognition. It has hired foreign lobbyists to improve its image abroad and invited foreign journalists to advise it on how to make its conduct appear more palatable to the world. It stages religious events to burnish its own image.

Of late it appears to be making some headway in its efforts. On August 1st General Min Aung Hlaing, the army

chief, inaugurated a giant marble statue of the Buddha to mark an important Buddhist holiday. Monks visiting from eight countries were present at the ceremony. On the same day the regime announced a partial amnesty for prisoners, and a reduction in the sentence of Aung San Suu Kyi, the civilian leader ousted in the coup in 2021. Ms Suu Kyi is widely seen as a symbol of Burmese democracy, particularly by foreigners. Myanmar, was the message, is run by benevolent rulers who deserve the recognition of foreign observers.

In July Don Pramudwinai, Thailand's foreign minister, paid a secret visit to Naypyidaw, the capital. The reduction in Ms Suu Kyi's prison sentence from 33 to 27 years was an act of reciprocity for that visit, argues Min Zin of the Institute for Strategy and Policy, a Burmese think-tank. It allows Thailand, which shares a 2,400km-long border with Myanmar, the chance to claim that its diplomatic efforts to engage the junta are making the regime slightly less horrible.

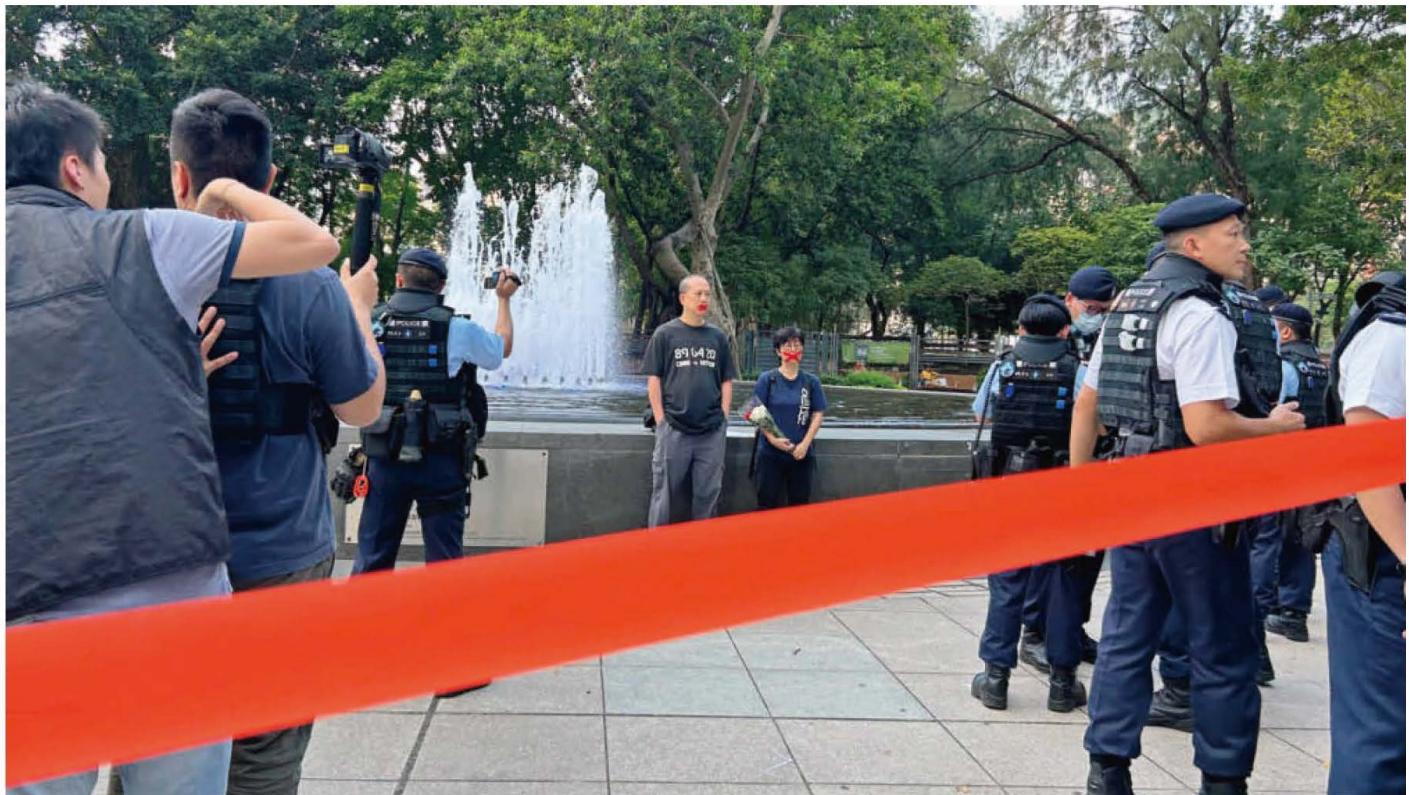
Such outreach has begun to undermine the united front against the junta formed

by ASEAN. Myanmar's authoritarian neighbours in mainland South-East Asia—Thailand, Cambodia and Laos—are keen to re-engage with the generals, despite the junta's atrocities. The more democratic ASEAN members—Indonesia, Malaysia, the Philippines and Singapore—seem increasingly prepared to be swayed. In late July, the leaders of Malaysia and the Philippines met to discuss allowing neighbouring countries more "flexibility" to deal with Myanmar. That is likely to continue, especially as Laos, a one-party state backed by armed forces, prepares to take over as chair of ASEAN.

China has given the generals' quest for recognition an additional boost. Fearful that the civil war in Myanmar will destabilise China's borders, Chinese diplomats have pressed the country's multiple ethnic armed groups battling the army not to support the forces of the National Unity Government (NUG), Myanmar's main opposition movement. That has helped the army's strategy to divide and conquer, reckons Morgan Michaels of the International Institute for Strategic Studies, a London-based think-tank. It has also served to undermine the chief force competing with the junta for recognition as the legitimate government of Myanmar.

Despite such support, the junta still struggles to impose control over vast swathes of the country. In late July it decided to extend a state of emergency for the fourth time. The generals also postponed a sham election they had planned for August, apparently worried that it could embarrass rather than legitimise them. Yet given the recent initiatives by Thailand and China, the junta may gain some of the international recognition it craves even without regaining full control.





## Politics in Hong Kong

# Widening the net

HONG KONG

**Officials in Hong Kong warn of hidden threats to stability. Many residents wonder whether this heralds an even wider clampdown on dissent**

**A**N EXPLOSION OF anti-government dissent in Hong Kong in 2019 prompted China to impose a draconian national-security law on the territory to prevent further protests. Officials say this has helped: Hong Kong has achieved a "major transition from chaos to order", they insist. But even after thousands of arrests and numerous trials, both under the new law and dredged-up statutes from the colonial era, the authorities are twitchy. Increasingly, they warn of "soft resistance" that could trigger fresh unrest. A new phase may be unfolding in Hong Kong's war on dissent.

For more than three years, fear instilled by the national-security law and other signs of China's tightening grip on the territory has deterred most people with political grievances from attempting to stage demonstrations. Until they were scrapped in December, covid-related restrictions on public gatherings may also have helped to keep protesters off the streets. Some of those who were at the forefront of the months-long upheaval in 2019 have fled. Since then, Hong Kong has seen its biggest wave of emigration in decades and the la-

bour force has shrunk by over 5%.

Though cowed, Hong Kong still feels different from cities on the Chinese mainland. Controls on speech, news media, books and culture are less sweeping. China's "great firewall" does not surround its internet: sites such as Facebook and Google are not blocked in Hong Kong. In the rest of China, the Communist Party is omnipresent. In Hong Kong it operates largely out of sight, its watchful eyes not so keenly sensed in people's day-to-day lives. Opportunities for the government's critics to express themselves have become scarcer (since 2019 pro-democracy types have been purged from Hong Kong's political institutions). But they do, precariously, exist.

On July 28th Hong Kong's High Court rejected a government request to ban a fa-

vourite protest song that demonstrators sang in 2019, saying an injunction could undermine "freedom of expression". (The government has filed an appeal.) Such a ruling would be unthinkable on the mainland. Equally unimaginable would be the kind of access given to the public (including foreign visitors—no ID required) to observe Hong Kong's national-security trials. These are grim, juryless spectacles, but local media give accounts of proceedings. Citizen journalists help provide extra detail of defendants' feisty testimony.

But many Hong Kongers wonder how much longer the territory can retain these shreds of distinctiveness. Their fears have been stoked by officials' remarks about soft resistance. No authoritative definition has been given of the term, but it appears to refer to a broader range of activity than the crimes of subversion, secession and the like that are covered by the national-security act and the territory's anti-sedition law (a long-disused relic of British rule that is enjoying a new lease of life). The way the term is often used by party-controlled media suggests it could apply to any political activity that the government dislikes.

It was a mainland official, Luo Huining, who raised the idea that Hong Kongers were putting up soft resistance. In 2021 Mr Luo, who was then the central government's most senior emissary in Hong Kong, called for such behaviour to be "regulated by law". He did not elaborate.

In recent months officials in Hong Kong have picked up on the theme. Their ➤

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► strident tones on the subject suggest a push from Beijing. "Various acts of soft resistance continue to occur and spread through online media, cultural and artistic channels," said John Lee, the territory's chief executive, in June. "These latent forces could erupt at any time, endangering national security and disrupting social peace." Later that month he told state television that such acts required Hong Kong to be "especially vigilant". On July 24th, in response to a local newspaper, Hong Kong's security chief, Chris Tang, said there must be "absolutely no compromise" on the matter. "It is imperative that we fight soft resistance with all our strength."

The court's decision not to outlaw the protest song, "Glory to Hong Kong", is a hiccup. The anthem's circulation online has been cited by pro-government media as an example of soft resistance (as has the alleged leniency of some judges when sentencing protesters). But the impact will be minor. Two of the song's lines echo the words of a protest slogan—"Liberate Hong Kong, revolution of our times"—which the government has declared subversive. Police have swooped on the handful of individuals who have dared to play the tune in public since the imposition of the national-security law. The court's ruling is unlikely to encourage more to try.

### Blurred red lines

Officials' talk of soft resistance replicates a tactic often used by their counterparts on the mainland: that of sowing fear with vaguely worded warnings rather than explicit reference to laws. Mr Lee, the chief executive, said "destructive forces" in Hong Kong were often engaging in soft resistance "below the red line of lawbreaking". The idea, it appears, is to keep people well clear of that line by blurring it. Hong Kong's two main party-controlled newspapers, *Ta Kung Pao* and *Wen Wei Po*, attack those who stray too close. Their commentaries are widely assumed to reflect the views of mainland officials who pull the strings of Hong Kong's government from behind the scenes.

Leticia Wong is someone in their sights. She runs a small bookshop called Hunter in Sham Shui Po, one of the city's poorer neighbourhoods and a magnet for young, upwardly mobile people in search of cheap accommodation. Ms Wong, who is 30, resigned from her elected post on a local council in 2021 after the government required every public-office holder to swear an oath of loyalty to the People's Republic. She believed she would be disqualified for being insincere. Ms Wong opened Hunter last year, offering books related to the protests of 2019 and other sensitive topics.

Even under the national-security law, specific books are rarely banned in Hong Kong. Last year, however, five speech ther-



apists were jailed for sedition. Their crime was to publish a children's book that seemed to portray Hong Kongers as sheep fending off wolves (apparently representing China). And self-censorship abounds. Libraries have removed works they believe may fall foul of the new law: books about the pro-democracy upheaval that engulfed mainland China in 1989, for example, or those written by Hong Kong's jailed activists. In May Mr Lee said public libraries should ensure they do not "spread any kind of messages that are not in the interests of Hong Kong". He also noted that books about the Tiananmen Square protests could be found in private shops. If people "want to buy, they can buy", he said. That is true, but the campaign against soft resistance may change that.

In May an article in *Ta Kung Pao* featured Ms Wong and her bookshop. "Her anti-China, chaos-inducing evildoing in Hong Kong has long been known to everyone," it said. "After the implementation of Hong Kong's national-security law, she still did not repent...She continued engaging in soft resistance by selling books that are anti-government or confrontational." Ms Wong laughs at this—such accusations drive up footfall, she says. "More people come to buy books and see if I'm still alive." Nearly a third of her customers are from the mainland, she reckons.

Ms Wong still pushes the envelope. In July she organised a book fair in a room above a nearby clothing shop. It provided a handful of independent publishers with space to display works of a kind unlikely to be seen in the territory's official book fair that was being held in a convention centre. A popular offering at Ms Wong's event was "Deaf Voice in Court", a book about the travails of defendants with hearing difficulties, including someone charged with assaulting a policeman during the protests in 2019. *Ta Kung Pao* said that among the "main attractions" of the official event was an updated edition of "An Outline for the Study of Xi Jinping Thought on Socialism

with Chinese Characteristics for a New Era". Mr Xi is China's leader.

But Ms Wong is pessimistic. "I don't think they are smart enough to leave some room for Hong Kong people like me," she says. On Facebook, she hinted at the political pressures facing her. She said she thought her bookshop would not survive to put on another fair next year.

The soft-resistance label is being attached even to people who are far removed from the front lines of dissent. In May a full-page article in *Wen Wei Po* attacked activists who have been campaigning on behalf of residents of Hong Kong's notorious "subdivided flats": small apartments that have been converted into multiple dwellings, often with only just enough room to fit in two bunk beds (see chart). Such accommodation has been multiplying in recent years to satisfy demand from people who are on years-long waiting lists for public housing, or unable to afford the sky-high prices of property.

Chinese officials say grievances over Hong Kong's acute shortage of affordable housing were a leading cause of the unrest in 2019. The city's government has vowed to speed up construction of subsidised flats. Yet *Wen Wei Po* suggested that complaining about these efforts could spark renewed unrest. It said vigilance was needed against people who use the housing issue as a form of soft resistance by arousing "negative emotions among citizens". A sinister-looking graphic showed recent tiny housing-related protests morphing into tear-gas filled scenes from 2019.

### Soft resistance may get harder

Eyes are now turning to new security-related legislation that the government says it will enact this year or next. Doing so is mandated by Article 23 of Hong Kong's constitution, the Basic Law, but public misgivings—highlighted by a massive protest in 2003—have delayed the task until now. Ominously, Mr Tang, the security chief, told *Wen Wei Po* in July that drafters of the bill were "paying attention to soft resistance" as well as "loopholes" in existing law involving the internet.

Kiwi Chow, a film-maker, is feeling the chill in his business. Two years ago his documentary about the unrest of 2019, "Revolution of Our Times", became a hit among Hong Kongers abroad (cinemas in the territory will not show it). His most recent movie, a romantic comedy, has nothing to do with politics. Yet his mere association with a protest-related film sent investors and actors scurrying. To complete it, he had to raise money from friends. His family fears he may be arrested at any time, he says. But he brushes off the government's warnings about soft resistance. "I won't try to guess what they want, because that would keep haunting me." ■

## Decision-making amid destruction

## Raining down

BEIJING

## Devastating floods give a glimpse of the government's priorities

**O**N THE ARID north China plain around Beijing, people usually complain there is too little water, rather than too much. But in recent weeks a typhoon named Dok-suri made its way unusually far inland. On July 28th the storm made landfall on China's eastern coast. Its remnants arrived in northern China the next day, bringing rains heavier than any recorded since China's last imperial dynasty.

Beijing and the surrounding province of Hebei were hardest hit. In just four days 331mm of rain fell on the capital, as much as it usually sees in six months. The capital's centre escaped the worst of the flooding, but suburbs and towns to its south and west suffered. Over 1.6m people were evacuated. Tens of thousands of homes were destroyed. Bridges and roads were damaged. Power outages and mountainous terrain hampered relief efforts.

The rains then moved to the broad plains of north-eastern China, where much of the country's rice and maize is grown. Rivers overflowed, drowning crops and flattening greenhouses. Locals are bracing for another typhoon that is expected to hit north-eastern China on August 11th, after passing through North Korea. At least 61 people are known to have died; the toll will rise as others are still missing.

China's state-run media are full of stories of heroic rescues. The People's Liberation Army and thousands of firefighters were mobilised for evacuation efforts, in which several local officials died. Li Qiang, China's prime minister, has promised to rebuild people's homes in time for winter. About \$160m of government funds have been released from ministries so far to help farmers. Regulators are pushing insurance companies to pay out for damage done to property.

But not all are happy with how authorities have dealt with the floods. Some online criticise the apparent uselessness of the government's "sponge cities", which use greenery and storage tanks in a bid to soak up and collect stormwaters. Such cities appear to have been inundated despite such protective measures. Others complain that Beijing was prioritised at the expense of lesser places. Some residents in Zhuozhou, a small city in Hebei, have claimed online that floodwaters were diverted towards them to ease pressure elsewhere. Hebei's Communist Party boss had called for the province to "act as a protec-

Chinese propaganda in London

## Of spray-paint and slogans

## A wall in Brick Lane becomes a canvas for protest

**I**N THE WINTER of 1978, two years after the death of the Communist leader Mao Zedong, Chinese intellectuals began pasting political posters on a wall near Beijing's Forbidden City. Chinese authorities tolerated this "Democracy Wall" at first. But they soon clamped down. A curious inversion of this episode unfolded in London around August 6th when Chinese art students daubed Communist Party slogans on a wall in Brick Lane, a street famed for its curry houses and arts scene. Spray-painted in bright red paint against a white background were 24 large Chinese characters outlining the party's 12 "core socialist values". They included "harmony", "patriotism" and "rule of law".

The slogans are widely displayed across China as part of a campaign launched by its supreme leader, Xi Jinping, to popularise party ideals. But they are rarely seen abroad. Their sudden appearance in Brick Lane sparked an immediate backlash—including from many Chinese. Within hours, the slogans were covered in more graffiti. The word "no" was added before the Chinese characters for "democracy" and "freedom".

Above the word "equality", someone wrote "But some are more equal than others." Others decried the Chinese government's recent crackdowns in Hong Kong, Tibet and Xinjiang.

Images of the wall soon spread on Chinese social media, triggering debate. Some nationalists hailed the artists as patriots while others suggested they had conceived an indirect form of protest, knowing the slogans would be defaced. The artists themselves added to the confusion. In a printed statement on the wall, they said their work was "a silent reminder" of the lack of free speech in China. But on Instagram, one suggested the aim was "to decolonize the false freedom of the West". He later denied any political intent and expressed concern for his family's safety.

Tower Hamlets, the London council that oversees Brick Lane, said it removed the graffiti after being alerted by security-camera operators. It warned that graffiti were punishable with fines starting from £80 (\$102). The Democracy Wall protesters did not get off so lightly. Their figurehead, Wei Jingsheng, was jailed for almost 15 years.



Inspecting the party wall

tive moat for the capital".

The authorities have defended themselves. State-run media have pointed out that although sponge cities can be overwhelmed in extreme circumstances, they can still help reduce the impact of floods. Officials have also denied that Zhuozhou was sacrificed for Beijing. They have, though, acknowledged that flood water is released into less densely populated areas

in extreme circumstances.

This tactic is in fact written into flood-control laws—although many of those who live in such areas did not appear to know about them. The Ministry of Water Resources says that some people "have given up their homes to protect everyone", and will be compensated. Beijingers, no doubt, will appreciate this cold logic. But it may sting those in small towns nearby. ■

# Chaguan | China's patriarchy lives on

*In the interests of order, the party sides with a reactionary majority*



**I**N THE TEA-GROWING hills of southern China, bonds of blood make villages strong. Most residents of Lüchuwu, a village in the pine-clad highlands of Fujian province, share just two surnames between them. The clout of the Su family, in particular, is shown by a white-walled, red-pillared shrine bearing the inscription: "Su Clan Ancestral Hall". Yet if family ties bind places like Lüchuwu, those bonds are also conditional. A woman may be born and brought up in a village that her ancestors built. But if she marries a man from elsewhere, custom deems her lost to her birth family and home village, as a *waijianü*, or "married-out daughter".

That harsh tradition has caused individual tales of heartache for centuries. To cite a cruel old saying, a married-out daughter was deemed as worthless as "thrown-away water". But today, the collective financial losses suffered by China's married-out women are growing. More rural land is rented out to agricultural companies or other businesses. Other land attracts compensation payments when local officials build on it. Since the 1990s China has encouraged the creation of local shareholding co-operatives to manage village assets and to distribute dividends.

Individual villages and co-operatives can and do take collective rights away from women who marry outsiders. Many such women lose their rights, though their household registration, or *hukou*, remains lodged with their birth village. Some women are dis-owned even after returning to the house where they were born, perhaps coming home to care for ageing parents, or after being widowed or divorced. In contrast, lots of men spend years in another province and marry a bride from far away. As long as their *hukou* is with their home village, they keep land rights.

This would seem to clash with national law, for gender equality is enshrined in China's constitution. A growing number of village women agree. They have filed petitions, staged peaceful demonstrations and gone to court to defend land rights. Lüchuwu village is made up of five sections, or hamlets. Different groups of women have filed lawsuits in all five sections.

Impressed, Chaguan headed to Fujian to meet some of them. He found a plaintiff surnamed Su—naturally—in her cement-walled, tile-floored village home. Mrs Su's *hukou* remains in Lüchuwu, where she was born and raised. She returned home after

the birth of her youngest child, having spent some years in a coastal province running a small shop. Her young children study in a nearby school. Until her father's death this year, both her parents lived in the village. She gave a donation when the Su clan hall needed repairs. Still, because she bore children to a man from another province (who still works as a migrant in a coastal city) she is deemed an outsider. A member of a group of 29 litigants, Mrs Su won her lawsuit. She has a county-court judgment upholding her membership of the village collective and awarding her over 50,000 yuan (almost \$7,000). That was her share of compensation after village land was taken by the government.

After Mrs Su's legal victory, she says neighbours turned "vicious". A local official told her she was a thief who should be arrested, and called court judgments good only "for wiping your arse". Surprisingly often, villages reject a court's jurisdiction over land rules that they set, and in truth the law is fuzzy. Defying the ruling, Lüchuwu officials have offered Mrs Su ever-larger sums to settle the case, though always less than 50,000 yuan. She wants her land rights acknowledged, though, and village bosses are not budging. She shares a name and ancestors with neighbours, she sighs. "But now nobody talks to me. It's all about money, right?"

Mrs Su is surely correct. A neighbour, asked about the recent lawsuits, snaps that she lost out on land revenues from her own home village after she married a man from Lüchuwu. That being so, she does not see why any other married-out woman should fare better. Over tiny cups of tea in his office, the village party secretary, Su Qiang, describes long months of negotiations between women plaintiffs and village section chiefs, haggling over possible cash settlements. Puffing his way through a chain of Zhonghua cigarettes, Mr Su agrees that the sticking point is rights to land.

The village has made concessions. Mr Su is proud of persuading locals to amend rules that stripped land rights from youngsters at university or in the army. Unlike some places, Lüchuwu offers a single share of land to families with two daughters and no sons (a family with two sons would get a share for each of them). But the party secretary growls that if today's plaintiffs secure their demands, perhaps 70 more women would qualify for the same rights, and most locals oppose giving *waijianü* "a single cent".

## Avoiding the wrath of a sexist majority

In truth, appeals to tradition are only half the story. Two of the oldest plaintiffs from Lüchuwu remember the Mao era, when a village *hukou* and membership of an agricultural collective were a burden, not a potential source of dividends. Both old women are "married-out daughters". When fees were needed to build a school, half a century ago, they were deemed collective members. Now that village land generates money, they are outsiders. Nationwide, conflicts about village membership exploded after the 1990s, as land near towns soared in value. In 2016 Central Party School researchers surveyed over 1,300 villages in three provinces: 84% of women and their families had lost membership rights.

The National People's Congress is pondering changes to the law to improve the definition of village land rights and membership of rural collectives. Reformers see a chance to advance gender equality. Alas, appeasing majority opinion weighs heavily on officials whose greatest duty, arguably, is *weiwen*, or stability maintenance. The Communist Party came to power promising to emancipate women from feudalism. Now it co-opts ancestral clans and their patriarchal values. China's rulers are obsessed with order, as an adjunct to power. And power is in the party's blood. ■



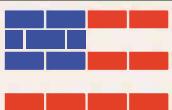
Made in America

## Chipping in

WEST LAFAYETTE, INDIANA

America is building factories, but will the workers come?

### REBUILDING AMERICA'S ECONOMY



JUDGED BY ONE measure, America's new industrial policy is off to a roaring start. Enticed by subsidies, companies are pouring money into semiconductor plants and electric-vehicle factories. With investment in manufacturing facilities running at a record high, President Joe Biden's claim that the future will again be "made in America" seems more credible than it once did.

The next step is less certain. America is building factories, but can it find the workers to operate them? With the jobless rate near a five-decade low, firms are already struggling to find staff. As scores of new factories are built, the gaps will grow.

Semiconductors are the most important test case for America's manufacturing revival. Over the past couple of decades makers of computer chips have largely left America. The country still has world-class semiconductor researchers and designers, but has been denuded of a workforce that

turns silicon wafers into electronic circuits at scale. Hoping to reverse that tide, the CHIPS Act passed last year will see the government dole out \$50bn over the next half-decade (see Business section).

A baseline estimate from the Semiconductor Industry Association, a trade body, is that by 2030 America's chip sector will face a shortage of 67,000 technicians, computer scientists and engineers, and about 1.4m such workers throughout the wider economy. Set this against the total of roughly 70,000 students who complete undergraduate degrees in engineering in America each year, and the scale of the deficit becomes apparent. Whatever the pre-

cise gap, it marks the difference between foundries running at full capacity with labour bills under control, or ending up mired in high costs and low productivity.

One of the sites at the centre of America's ambitions offers an early glimpse of the problem. The Taiwanese Semiconductor Manufacturing Company (TSMC), the world's largest maker of chips, plans to invest \$40bn in two factories in Phoenix, Arizona, greatly boosting America's ability to craft large volumes of ultra-small semiconductors. If it is successful, it will suggest that America can reclaim a position at the cutting-edge of chip production.

The first of TSMC's factories was due to start production next year. But in July it announced that the launch would be put back to 2025 because it could not find enough workers with the expertise to install equipment at such a high-tech facility. Mark Liu, TSMC's chairman, said the firm would send technicians from its home base in Taiwan to train its American staff.

"My nightmare is investing in all of this infrastructure and then not being able to build the workforce," says Shari Liss of SEMI Foundation, a microelectronics lobbying group. The fact that many share her worry is at least a useful spur. A report in January from the Brookings Institution, a think-tank, said America needed a "surge of national, state and local actions" to provide enough workers for the chips sector. The outlines of that are taking shape.

The most immediate hole, as illustrated by TSMC's troubles, is in the construction ➤

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**31 Trump's trial balloons**

**— Lexington is away**

► industry. The Commerce Department reckons that about 100,000 builders may be needed for the first phase of investments in semiconductor fabrication plants, or fabs. The government cannot conjure such a labour force out of thin air. But it has made its subsidies contingent on companies explaining the steps they will take to recruit and train construction workers.

An official in the Commerce Department says the government wants companies to collaborate on building up a construction workforce. "Workers that are trained for one project will then be beneficial for other fabs that get built," the official says. In this respect TSMC's plan to import Taiwanese trainers is less a bug than a feature, helping to transmit knowledge.

Once the fabs are built, they will need technicians to operate them. Such workers, responsible for tasks like inspecting tools and products, have historically required two years of training at a community college or a vocational school. But companies and educators have started experimenting with much shorter courses.

Most eye-catching are quick-start programmes that promise to churn out technicians in just ten days, offered by Maricopa Corporate College in Arizona and Portland Community College in Oregon. The Portland college, supported by Intel, an American chipmaker, offers students stipends of \$500 a week, and the one in Arizona guarantees its students interviews with TSMC. Still, no company is about to put candidates with just ten days of training anywhere near the multi-million-dollar machinery inside their fabs.

The more realistic goal is to whet people's appetites for a career in semiconductors. "Our intent is to reach out to people who may think they lack the skills for this type of job," says Gabriela Cruz Thompson of Intel. She notes that the firm has been more successful at recruiting women and minorities to the quick-start programmes than to traditional two-year courses.

There may soon be more in-between options. This autumn Columbus State Community College in Ohio, where Intel is building two fabs, will offer a first-of-its-kind one-year programme. The aim is for students to "finish job-ready" for Intel.

The next rung up the work ladder in fabs are the engineers who run them. Universities near some of the plants under construction, including Arizona State and Ohio State, have expanded their offerings of semiconductor courses as part of degrees in engineering and physical sciences. Leading the charge is Purdue University in Indiana: last year it launched a semiconductor degree programme for both undergraduates and graduates.

The aim of Purdue's "lab-to-fab" model is to collaborate more closely with companies. As part of a \$49m upgrade of its

"cleanroom" facility, it gives students access to the sorts of conditions and materials they would encounter in commercial enterprises, along with testing their mettle in the head-to-toe bunny suits they must wear to keep chips free of contamination.

This summer Purdue introduced an eight-week course that included a \$10,000 stipend for students, funded by companies that hope to attract would-be workers before they are seduced by Silicon Valley. And in an industrial park at the south-west edge of campus, SkyWater, an American chip foundry, will build a \$2bn fab. "Students will be able to wake up in their dorm, turn right and go to their classes, and then turn left and do an internship," says Mung Chiang, president of Purdue.

### Fab opportunities

Ms Cruz Thompson says that Intel expected 100 or so people to register for quick-start courses. But about 900 did. At Purdue enrolment has also been very strong. In May Handshake, a job platform for recent graduates, reported that applications for full-time jobs at semiconductor companies were up by 79% compared with last year, versus 19% in other sectors. "Students...realise that chips are the new oil," says Vijay Raghunathan, Purdue's director of semiconductor education.

Unfortunately, America is limiting its access to one obvious source of talent. Immigrants account for about 40% of highly skilled workers in America's semiconductor industry. They are funnelled through a couple of visa programmes, with strict caps. Those caps are fixed, meaning that as the industry expands they will become more restrictive. Politicians on the right, including Donald Trump, have floated eliminating the visa openings altogether.

America's chip firms are already configured for a small but skilled workforce. As they outsourced manufacturing abroad they grew more specialised at home, putting America at the commanding heights of the global industry. Qualcomm, Nvidia and others became world leaders in developing and designing advanced chips. It was a highly profitable division of labour.

Now America is trying to retake a foothold in the industry's lower tiers, relearning basic skills such as cutting wafers into chips and packaging them in hard plastic casing. The political imperative is to guard against excessive reliance on China. For companies there is also a logic in diversifying supply chains and bringing manufacturing closer to research operations.

The welcome news for those wanting to bring about this shift is that colleges and universities are tilting in their direction. But it remains a gargantuan gamble: not so much on the future as on bringing America back to a manufacturing past that it once made commercial sense to leave behind. ■

### Murders

## Shot down

### CHICAGO

**Murder rates are falling in a majority of American cities**

ON A HOT Wednesday afternoon the office of Chicago CRED, a charity run by Arne Duncan, a former secretary of education, is buzzing. In the car park and inside, dozens of workers dressed in bright vests reading "Peacekeeper" mill around. Each morning they meet at the squat building off 103rd Street in Roseland, a neighbourhood on the far South Side, to share information—who is arguing, what fights or gunshots have already been reported, where gangs might be feuding. The workers then spread out into the neighbourhood in an effort to stop shootings before they happen. By 2.30pm the place is quiet.

According to Terrance Henderson, CRED's outreach supervisor and a former gang member himself, this work helps explain why violence has dipped in the neighbourhood. "The summer has been going pretty well," he says. "We had a horrible first quarter," he adds, when three people were shot outside a Walmart and a local rapper was shot, starting a feud. But "We was able to stabilise that early in the spring." So far this year, in Roseland and West Pullman, the areas the office covers, the number of murders is down by five compared with the same period last year, or by roughly 20%. Across Chicago, the number of murders counted by the police so far this year is down by about 5% compared with last year. Compared with 2021, when violence peaked, it is down by 20%.

It is not only Chicago (where the crime rate has, to the annoyance of residents, be-

### Streets apart

US cities, homicides, Jan 1st-Aug 6th 2023\*  
% change on a year earlier



\*Or latest available †Of cities with at least 250,000 people or an average of ten or more murders a year in 2015-19

Source: AH DataLytics

▶ come a national obsession) in which violence appears to be falling. Surveys of the biggest cities suggest that murder rates are down in a large majority of them this year. According to the Council on Criminal Justice, a research group, the homicide rate in 30 of America's biggest cities was 9% lower in the first half of this year than last. Another survey of 109 cities tracked by AH Datalytics, a New Orleans-based analysis firm, shows a drop of 12% this year (see chart on previous page). Some of the biggest falls have been in cities that were especially hard-hit, such as Minneapolis. It is a hint that the wave of violence that rolled across America from the summer of 2020 may have crested.

The most plausible explanation, suggests Daniel Webster, a criminologist at Johns Hopkins University in Baltimore, is that "we are past covid and the economic and social disruptions that it caused." Explaining why violence rose in 2020 is also tricky. Social services were closed because of the pandemic; the murder of George Floyd by a police officer in Minneapolis led to protests that worsened relations between police and people in the most hard-hit neighbourhoods; lots of cops retired; gun sales soared. All those factors, however, are now returning to something more like normal, notes Mr Webster. There are "all sorts of things that can affect the murder rate", says Jeff Asher, of AH Datalytics. While individual police forces or groups like CRED try to claim credit, in fact the drivers of the decline "are national".

Yet local factors may also matter. Jens Ludwig, of the University of Chicago's crime lab, agrees that the end of the pandemic is the most plausible explanation. But he notes that violence often goes in cycles. "When crime rates go up, both the government and private citizens take more preventive measures." Police forces remain almost as understaffed today as they were a year or two ago. But NGOs like CRED have expanded enormously, and not only in Chicago. That is "a very plausible part of this story as well", he says. Private security has also expanded. And there may be more subtle behavioural changes, such as parents more strictly controlling their teenage children to keep them out of fights.

Even with the fall so far this year, in most cities violence generally remains higher than it was in 2019. By August 6th 2019 there had been 300 murders in Chicago; the equivalent figure this year was 378. A few crimes, such as car theft, seem to be continuing to rise prodigiously. And things can change fast. Murders have risen sharply this year in Memphis, where the death of a black 29-year-old, Tyre Nichols, at the hands of police in January led to widespread protests. Spikes in violence often follow police killings. The murder rate has also continued to rise in Washington,

DC, where the justice system has been gummed up by the ongoing prosecution of people accused of rioting and invading the Capitol on January 6th 2021.

One worry is that cops remain in short supply, and city governments face a squeeze in the coming years. Much of the cash that has been spent on initiatives like violence interruption is temporary. "What happens when federal pandemic-relief money runs out?" asks Mr Ludwig.

Still, the decline so far will hearten mayors—and Democrats generally. Rising murder rates have been a big problem for the party, which has a troubled relationship with police unions. In the 2022 midterms, 61% of voters told Pew that violent crime was "very important" in determining how they would vote. Republicans ran adverts pointing to surging murder rates all over the country. Explaining why the country has turned a corner may be tricky. But if the murder rate continues to drop, Joe Biden will happily claim the credit. ■

### A musical anniversary

## Hip-hop hooray!

1520 SEDGWICK AVENUE, THE BRONX

**The 50th anniversary of hip-hop shines a light on its New York City birth**

ON AUGUST 11TH 1973 Cindy Campbell, hoping to raise money to buy school clothes, hosted a "jam" in the rec room of 1520 Sedgwick Avenue, the apartment building where she and her family lived. Admission for girls was 25 cents. For "fellas" it was 50 cents. Her 18-year-old brother, Clive, better known as Kool Herc, DJ'd.

His turntables, mixer, enormous speakers and amplifiers pumped out tunes and

beats into the wee hours. He repeated instrumental breaks to lengthen the most danceable part of songs. The "break" dancers became known as b-boys and b-girls. A friend, Coke La Rock, hyped up the crowd. It was not called hip-hop yet, but that "jam" is widely recognised as the start of a culture and society-changing type of music that became more than just a genre.

The Bronx was the centre of the new movement. DJs played on the city's streets and in its parks, siphoning electricity from lamp-posts to pump up the volume. Grandmaster Flash and the Furious Five attracted throngs of fans first at block parties, parks and then at clubs. Before he was even a teenager, Grandmaster Wizzard Theodore invented record "scratching". Most songs were party anthems until Melle Mel's "the Message", hip-hop's first socially conscious song and one of the best hip-hop singles ever. Its scathing lyrics depicted a bleak Bronx and resonated beyond New York's five boroughs. "Broken glass everywhere. People pissing on the stairs, you know they just don't care... Don't push me 'cause I'm close to the edge".

Chuck D, Public Enemy's front man, once said that "Rap is Black America's TV station. It gives a whole perspective of what exists and what black life is all about." Darryl McDaniels, the DMC of Run-DMC, the first hip-hop group to go platinum, is still in awe of hip-hop's pioneers. "When I saw a flyer with Grandmaster Flash's and Melle Mel's names on it, it was like Batman and Spider-Man really exists." He is disappointed that many top rappers today perform without a DJ. "It's not hip-hop."

The four elements of hip-hop are the DJ, the MC, b-boys and graffiti. At first the MC (master of ceremonies) amped the crowd, but eventually took centre-stage with rhymes and witty lyrics. The b-boys and b-girls popped and locked during the DJ's breaks. Modern graffiti, which began in ▶



Nothin' in the world that Run'll ever lack

► Philadelphia, became an art form in New York City. Eric Felisbret, author of "Graffiti New York", says that graffiti is often the "stepchild" of hip-hop, probably because it was difficult to commodify. Hip-hop now includes language (bling), film, fashion and politics (Eric Adams, New York's mayor, calls himself the hip-hop mayor).

Hip-hop has gone from block parties in the Bronx to become a global phenomenon (see Culture section). "You never thought that hip-hop would take it this far," as Biggie Smalls astutely observed in his 1994 hit "Juicy". Auction houses that sell Old Masters paintings now have hip-hop collections on the calendar. "There's a small supply and high demand for the materials," says Cassandra Hatton, global head of science and pop culture at Sotheby's. At a recent anniversary auction, early hip-hop flyers and Polaroid photos were hot commodities. Monica Lynch, a former president of Tommy Records who launched the careers of Queen Latifah and Naughty by Nature, contributed to the auction.

City Hall has organised block parties in each borough to celebrate the anniversary. LL Cool J, a hip-hop legend, hosted a concert with an impressive line-up, which included Run-DMC, Roxanne Shanté, an early female rapper, and De La Soul. Yankee Stadium will also stage a celebratory concert. "We gotta use the anniversary as an opportunity," says Mr McDaniels. Hip-hop "still has a lot of work to do".

Hip-hop artists are of their communities. A Tribe Called Quest reminisced about Linden Boulevard in "Check the Rhime". Fat Joe rapped of Trinity Avenue. Cam'ron's rhymes include his childhood address: "I'm from 101 West to Hund-fortieth, the shit is live. 5th floor." Run-DMC rapped about Christmas in Hollis, their Queens neighbourhood. "Place has a whole lot to do with hip-hop," says A.D. Carson, a professor of hip-hop at the University of Virginia, "even if the places are digital places or digital space."

RayZa, a Bronx rapper who is also a guide for Hush Hip-Hop Tours, points out almost breathlessly all the hip-hop landmarks on a recent tour of the South Bronx and Harlem. Forest Houses is where Fat Joe grew up. Disco Fever nightclub, now a furniture shop, is where Grandmaster Flash spun. West 139th Street is where Jay-z rapped with Big L. A mural depicts Big Pun. And the rec room at 1520 Sedgwick Avenue.

To many, including RayZa, it is sacred ground. "Without that room, the culture wouldn't exist. There'd be no Jay-z, no LL Cool J, no Roxanne Shanté, no me, no Ice-T, no Ice-Cube, no NWA. Imagine no NWA." RayZa is certain that thousands of years from now, people will look at the rec room the way we look at the pyramids. "It's gonna come to a point where they're gonna charge thousands of dollars to touch it." ■



Right-wing cinema

## The sound of free cashflow

CHICAGO

How to make a giant profit with a mediocre movie

TWENTY YEARS ago Barbra Streisand sued a photographer who had taken an aerial shot of her home. Her effort to suppress the photo brought it to the attention of millions. Hence the "Streisand effect": try to censor something and you risk making it bigger. Today a new name is needed for a related phenomenon: claiming to be repressed to generate hype. "Sound of Freedom", a new film about Tim Ballard, an anti-sex-trafficking activist, is a case study in how the culture war can be turned into profit.

On July 20th the film, which was released on July 4th, became the first post-pandemic independent movie to make \$100m at the box office in America. It is now up to \$164m. Though trailing "Barbie" and "Oppenheimer", it has made more money than the latest offering of "Mission Impossible", a money-spinning franchise. It cost less than \$15m to make and its star, Jim Caviezel, last appeared in a notable movie, "The Passion of the Christ", in 2004. It has had almost no advertising—of the normal sort.

The film is a reasonably enjoyable action movie. It follows a version of Mr Ballard's life story, as he is radicalised by his work combating child porn at the Department of Homeland Security, quits and tries to rescue children himself. He infiltrates rebel-held territory in Colombia, single-handedly beats to death a slave-driving child-rapist and rescues his victim, then miraculously flees by stolen speedboat amid a storm of gunfire.

Left-leaning critics contend, accurately, that the film is not a realistic depiction of sex trafficking. The children

are too young; such kidnapping is rare; and most victims are exploited by people they know and trust. Scenes of Mr Ballard reuniting a trafficked Honduran child with his father at the offices of Immigration and Customs Enforcement, filmed at a time when in real life that agency was separating Central American children from their parents, are jarring. Yet the simple depiction of a good Christian American fighting evil foreign white slavers also explains its success.

Mr Caviezel, a conspiracist-minded devout Catholic, has argued that critics are "quaking in their boots" because he is taking on sex-trafficking. Mr Ballard, who has compared himself to Abraham Lincoln, has accused "the godless leftist media" of being so keen to discredit him that they are "running interference for human traffickers". Rumours on social media that cinemas have tried to stop people from watching it by turning off the air-conditioning inside became so widespread that the CEO of AMC, a big cinema company, had to deny it.

This, it turns out, is good marketing. Donald Trump has screened the film at one of his golf clubs. Tim Scott, a Republican senator and presidential candidate, called it an "amazing, gut-wrenching, emotional movie". Fans have eagerly bought tickets for others.

Mr Ballard recently left Operation Underground Railroad, his charity, amid allegations about his behaviour. Who knows what all this means for the fight against sex trafficking. But what it means for the film's maker, Angel Studios, is clear: lots and lots of money.

## The election-stealing case

# How strong is Donald Trump's defence?

NEW YORK

### His lawyers are previewing a fraught strategy—but one tack could work

DONALD TRUMP'S trial for allegedly trying to steal the 2020 election from Joe Biden will not begin for months. But the contest to shape public opinion began on August 1st after Jack Smith, the special counsel, set out four charges. With help from conspirators making false claims of election fraud, Mr Smith alleges, Mr Trump pushed state officials to replace legitimate electors with fraudulent ones, organised fake electors in seven states, sought help from the Department of Justice (DoJ) and pressed Mike Pence, his vice-president, to alter the results on January 6th 2021.

A former president has never before been indicted for trying to steal an election, let alone in the midst of a campaign to take back the White House. Whereas the DoJ is trying to keep the law and the politics separate (tricky as that is), Mr Trump and his lawyers endeavour to merge them at every turn. After being instructed not to influence jurors or witnesses at his arraignment on August 3rd (on pain of being jailed), Mr Trump wrote an all-caps social-media post promising he would be "coming after" anyone who would "go after" him. He also posted complaints about Mr Smith and Mr Biden, and attacked the objectivity of the judge assigned to his case.

Requests for a venue change and for Judge Tanya Chutkan's recusal are not likely to be granted. But there may be a political pay-off for Mr Trump: an excuse to paint his trial as rigged from the start. Similar themes emerged this week in a squabble over whether Judge Chutkan should issue a "protective order" during discovery, the pre-trial process when the two sides inform each other of the evidence they plan to present to the jury. Worried that Mr Trump would "improperly press his case in the court of public opinion", Mr Smith urged the judge to bar the defence from publicising this information. Judge Chutkan will soon rule on this matter.

Only once the trial begins will Mr Smith's full evidence—and all of Mr Trump's arguments—come to light. But of the four defences that have been floated, it seems three won't get Mr Trump very far.

The most prominent, if least convincing, argument points to the First Amendment. One of Mr Trump's lawyers, John Lauro, claimed on Fox News that everything for which his client is being prosecuted is "core political speech", as he was simply "petitioning the government"

when he was labouring to stay in power. But Mr Lauro acknowledged on NBC News that Mr Trump's entreaties to Mr Pence to refuse to certify the election amounted to a "technical violation of the constitution". Later, he said Mr Trump's suggestions were merely "aspirational".

Plenty of laws criminalise conduct-laden speech—from deceiving a customer to "your money or your life"—without violating the First Amendment. As Justice Hugo Black wrote in 1949, freedom of speech does not afford "immunity to speech or writing used as an integral part of conduct in violation of a valid criminal statute".

### Trial balloons

Mr Lauro also told CBS News that his client was "following the advice of John Eastman", a "legal scholar", when he put pressure on Mr Pence. But along with Kenneth Chesebro, architect of the fake-electors plot, Mr Eastman and four other unindicted and officially unnamed advisers are accused of conspiring with Mr Trump to steal the election. That nullifies the advice-of-counsel defence, as it does not apply when the lawyer "is a partner in the venture", a circuit court has held.

A third errant trial balloon suggests that Mr Trump is immune from prosecution. Although presidents have long been immune from most forms of legal action while in office, the Supreme Court has never held that they retain immunity when they leave the White House. There is no

plausible reason for forbearance from prosecuting ex-presidents: immunity exists so that lawsuits do not "unconstitutionally undermine the capacity of the executive branch to perform its constitutionally assigned functions".

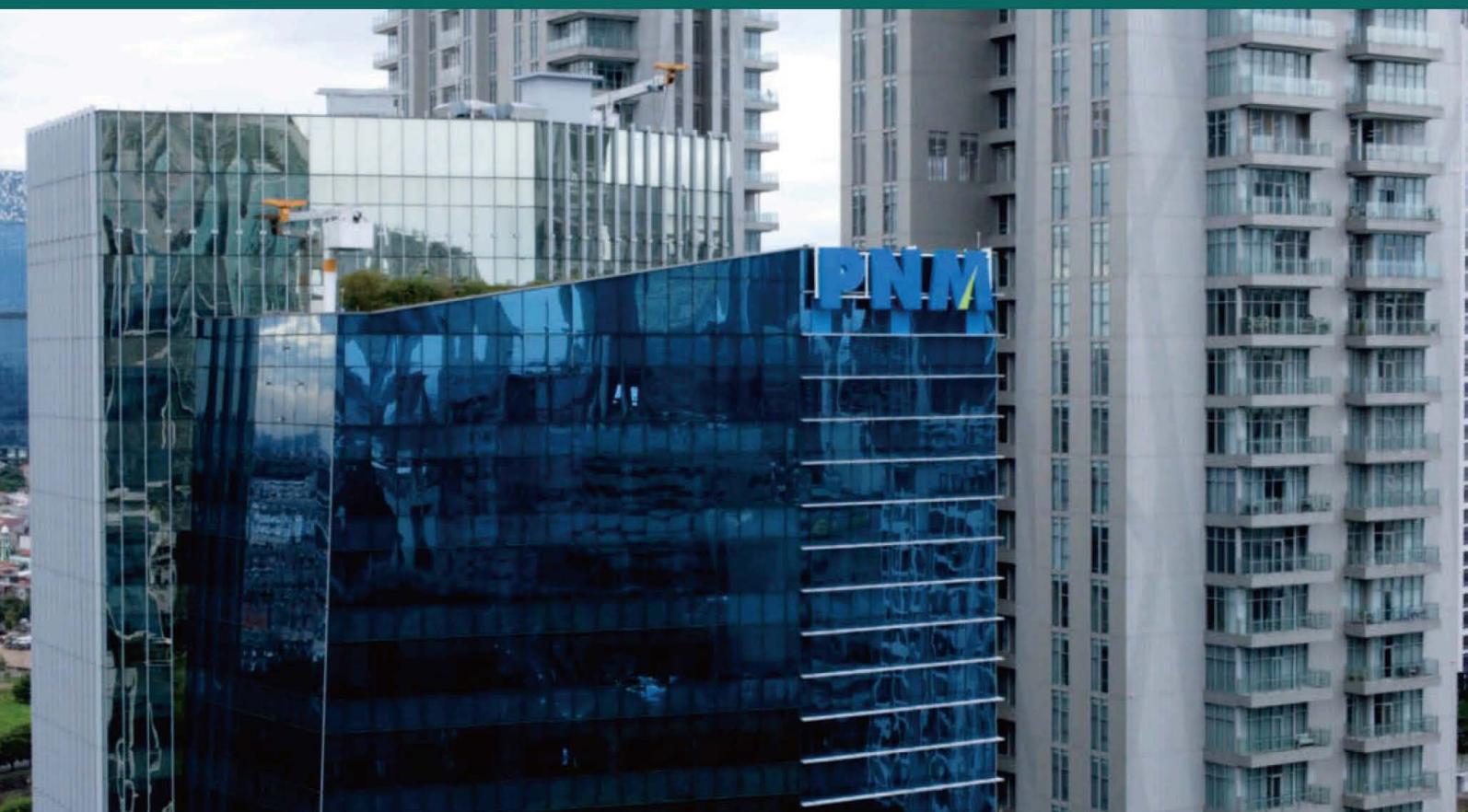
That still leaves a fourth, more plausible, line of defence: Mr Trump's state of mind. Mr Lauro has said that in his "heart of hearts" Mr Trump believed he won the 2020 election. Mr Smith cites evidence that he must have known that he lost. Many lawyers and advisers in his inner circle told him so repeatedly.

Even if Mr Trump's lawyers can persuade a jury he never accepted his loss, does that mean he lacks the requisite intent for criminal wrongdoing? Not necessarily, says Ryan Goodman, a New York University law professor, in a Twitter thread. That irrational belief might have impelled his criminal acts, but the acts themselves are still criminal. Even if he believed he won, Mr Trump could not lawfully press Georgia's secretary of state to find 11,780 votes by threatening "criminal punishment and threats to the official's personal safety". Nor could he "purposefully submit what he knows to be false claims of election fraud to courts" or "pressure the vice-president to outright reject electors".

However, intent is slippery. If Mr Lauro can persuade one juror that his client's scheme to reverse the election was protected speech stemming from strongly held beliefs, Mr Trump could walk (since jury verdicts must be unanimous). The ex-president's legal team faces a dilemma, too. His testimony would be needed to buttress the intent or advice-of-counsel arguments. But given Mr Trump's penchant for ad-libbing and lying, no defence lawyer would be wise to risk putting him on the stand. That leaves a Catch-22: evidence of Mr Trump's state of mind could save him—or subject him to still greater legal peril. ■



Conspiratorial, or aspirational?



# PNM Indonesia

## Developing Indonesia one loan at a time

Since its beginning in 1999, PNM, or PT Permodalan Nasional Madani, has strived to serve Indonesia's population by utilising their specialised skills and services for the greater good. The local state-owned financial institution provides lending programmes, commercial coaching, and business support to underprivileged entrepreneurs who run small and medium-sized businesses. Today, PNM is the largest micro-lending firm in the world and still focuses on providing financial and intellectual support to micro and ultra-micro businesses. PNM's most successful programmes target specific demographics, such as female business owners, and have inaugurated an invigorated era of women-led, ultra-micro entrepreneurs far and wide throughout Indonesia.

In the mid-1990s, Indonesia was going through a financial crisis that shook the country's economy. When compared to the US Dollar, the weakened Indonesian Rupiah led to sky-high prices of essential commodities and widespread bankruptcy. The Indonesian government identified that one of the critical issues concerning the country's socioeconomic status was extreme poverty, and helping to create an ecosystem of small and medium enterprises was believed to be the answer to help the underprivileged. PNM was created in this context to support Indonesian entrepreneurs by offering economic and intellectual tools. The lending firm has grown and adapted throughout the years to engage in extensive social, political, and economic issues to become a solution to the poverty problem and to lead Indonesia towards a better future.

PNM has successfully implemented a world-class financial inclusion program for over 14 million Indonesians spread over 17,000 islands. Their accomplishments could be analysed from various angles, but ultimately it comes down to dissecting their unique operations and innovative strategies.

Regarding business operations, all of PNM's initiatives have resulted from extensive in-house research and development efforts. Through their research department, PNM analysed pre-existing ministerial demographic information and noticed that female customers and female-run businesses were sometimes left out of the financial system and that there were no specific policies or programmes to include them. The enormous potential for women entrepreneurs in Indonesia was facing challenges due to traditional cultural oversights. Through PNM's product development department, the Mekaar programme was finally created in 2015 to close the gender gap. The Mekaar programme provides services for under-privileged women owners of ultra-micro and micro businesses, whether they choose to begin from scratch or are looking to build on their already established micro-enterprises.

PNM's Mekaar programme was built upon the pillars of business capital financing, the habit of saving, and increased entrepreneurial competence. The first of its kind, this programme focuses on women who may have the skills to run a business but could not access capital in traditional institutions due to being unable to present collateral. In

order to avoid these women turning to unofficial lending organisations PNM developed a system to include them in the financial system and bridge the gap for ultra-micro funding. In order to access these loans, the only requirement for customers is to present an identity card, a family card, and a signature from a spouse, partner, or family member. After being accepted into the programme, clients must attend weekly group meetings to make payments, receive benefits, and engage in courses through the Account Officers (AOs). The AOs are hand-selected and serve as support in the field, with the goal of helping their group's businesses thrive. A joint liability scheme is created in each group to serve as a strategy to secure payments and help PNM maintain stability in its loan portfolio while simultaneously boosting the company's performance.

Today, the holding company formed between PNM, BRI (Bank Rakyat Indonesia), and Pegadaian (Indonesian state-owned Pawnbroker) for the expansion of the Mekaar has achieved more than 14.6 million active customers. Even during the dark days of the global pandemic in 2020, PNM saw that countless Indonesian women stepped up to contribute to their families' economic well-being by starting their own businesses.

With regards to the strategy, PNM decided to play an active role within their local communities by participating in activities addressing three crucial pillars: reducing extreme poverty even in remote areas, local socioeconomic growth, and building women's capacity in leadership roles.

Indonesia is an archipelago nation, presenting particular geographical challenges when attempting to reach the most remote areas and potential customers. By placing PNM offices strategically around the country, the company has the potential to play a key role in transforming the social environments in which they operate. In addition, in local cultures, word of mouth is the best and most reliable way to spread the news about the next best thing. PNM understood that in order to expand their business, they would need to be on the ground in these local markets. The company placed Account Officers in strategic areas and took a traditional route when working with or attracting new clients by partaking in door-to-door visits or engaging in community events.

The AOs play a fundamental role in assisting customers and facilitating the selection of a group leader. The group leaders are the figures that play a more active role in the communities, such as helping fellow customers with payment deadlines, extensions, and conveying information. AOs act as focal points for business improvement but also serve as agents of change for the group members to expand their business offerings or markets to take them to new heights. Indonesia has a deep culture of gathering, conversing, and



helping your neighbours; group meetings with AOs reflect this deep-rooted cultural value. Group meetings help PNM's agents to connect with customers and to build strong bonds within the community.

Merry Herleni is one of the Mekaar programme's success stories. After attending various group meetings and participating in the ASEAN Summit, her local cuisine products were showcased to over 800 people. Within hours, her products were completely sold out and bought in bulk. There are tens of thousands of similar stories of how PNM and AO's have given these ultra-micro, female-run businesses an international platform and boost.

One feature that makes the programme unique is how the product itself was re-engineered according to the market's necessities. The strategic issue of empowering women, especially those underprivileged or living in poverty, and figuring out how financial institutions can play a role was a challenge accepted and has attracted international attention to learn more. Social re-engineering was a crucial factor in the success of the Mekaar programme and is constantly under research and development to be adjusted to current demographic, economic, geographical, and social conditions. The main goal is to integrate businesswomen into the entrepreneurial and economic sectors, whether it be through lending, mentoring, or providing education, along with literacy related to gender equality, something that may be difficult in culturally enforced areas.

PNM's goal is to continue to assist clients through microlending and education via financial literacy, to increase the quantity and quality of income generation. The institution is firmly committed to helping the government in various connected programmes to alleviate extreme poverty, widespread literacy that support the customers' business and other programmes initiatives such as access to clean water and sanitation to enhance customers welfare. As of May 2023, PNM has provided services to ultra-micro businesses in Indonesia through 4,539 service offices in 35 out of 38 provinces and 431 cities, and with their word-of-mouth community and innovative programmes, they'll keep growing until they've reached their goals.



Find out more at [pnm.co.id](http://pnm.co.id)

PNM

Permodalan Nasional Madani



**Commodities in the 21st century**

## Raw potential

SAN PEDRO DE ATACAMA AND SÃO JOSÉ DO RIO PRETO

### A growing and greening world needs Latin America's commodities

**T**HREE GROUND approaching the salt flats in Chile's Atacama desert is pock-marked with white crystals. Underneath sit vast deposits of lithium salts, the ore for the soft, light metal used to make high-capacity batteries. Pumps run by SQM, a Chilean company that is the world's leading producer of the stuff, hum as they pull up mineral-rich brine. In evaporation ponds, the liquid forms a patchwork of emerald and blue on the blindingly bright crust.

The operation is the start of a supply chain that ends in the lithium batteries that power electric vehicles (EVs). The global EV fleet will grow at least ten-fold by 2030, to 250m, according to the International Energy Agency, a forecaster. Since 2018 SQM's annual lithium output has tripled to 180,000 tonnes, a quarter of the global total, and it will probably rise to 210,000 tonnes by 2025.

Latin America is no stranger to supplying the world with raw materials, but it

could be on the verge of a boom. Three forces are pushing the region to become this century's commodity superpower. The green transition is increasing demand for metals and minerals that Latin America has in large supply, as well as the renewable energy to process them. The region already supplies more than a third of the world's copper, used in wiring and wind turbines, and half of its silver, a component of solar panels. Its fertile land produces enough grain, animals, coffee and sugar to help feed a growing global population. And lastly, geopolitical tensions between the United States and China are causing countries to look fondly upon investing in a relatively neutral region.

But Latin America's experience with

raw materials is as chequered as it is long. Argentina owes its name to the Latin for the silver shipped from its ports after it was extracted by conquistadors in Bolivia and Peru; Brazil's descends from the brazilwood tree, exploited by Europeans in the 16th century. The countries' vast riches subsequently helped spark coups, populist takeovers, crime and corruption. Meanwhile the region's economies remain lopsided, its GDP per person is worth a quarter of that of the United States, and inequality is high. Can Latin America manage to reap the rewards of this new boom?

### Material prospects

Fully 21 of 33 countries in Latin America get more than half their export revenue from commodities; rising to over 60% for all 12 countries in South America. They mainly flog minerals and food rather than energy, which dominates only in Venezuela and Colombia. Being overly dependent on commodities is often a problem, but now it could be more of an opportunity.

Demand fed by the green transition is likely to be more durable than the oil, coal and steel boom of the 2000s. That was fuelled by China's industrialisation, which slowed in the mid 2010s when there were fewer new factories to build. By contrast, the energy transition is global and requires investment over decades. Low-carbon

→ **Also in this section**

**36 An assassination in Ecuador**

► technologies are much hungrier for minerals than their dirtier equivalents. An electric car contains three to four times more copper than a petrol-fuelled one. Installing one megawatt of capacity in an offshore-wind farm requires six times more scarce metal than in a gas-fired plant. CRU, a data firm based in London, reckons there could be an unmet need of 7m-8m tonnes per year of copper by 2035.

In the race to fill such gaps, Latin America stands out. The region holds vast deposits of critical minerals and metals (see chart 1). Despite mining copper for decades, Chile and Peru together retain 30% of the world's exploitable reserves of the metal. Latin America is home to almost 60% of known lithium. Bolivia has tin, used as a solder in electrical components. Brazil has graphite, another battery metal. Further discoveries there are likely since only 30% of the country's subsoil has been studied, says Alexandre Silveira, Brazil's mining minister.

The metals are often easier to extract in Latin America than elsewhere. It is cheaper to get lithium by evaporation than to drill it from rocks, as is done in Australia and China. Brazil's magnetic rare earths lie close to the surface. Latin America needs far better roads and ports, but its infrastructure is not as bad as in many mining regions in Africa and parts of Asia.

Mining and processing minerals are energy-intensive. But many countries in Latin America can tap cheap, green electricity for it. Renewables make up 45% of Brazil's energy use, one of the highest rates in the world, and the infrastructure to transmit this clean energy is growing. Chile aims to produce the cheapest green hydrogen by 2030, thanks to its 6,500km (4,000 miles) of coastline, sunny north and windy south.

Even in hydrocarbons, in which Latin America has not traditionally been a global player, it can benefit. A record 60bn barrels of oil were found across the region in the 2010s; another 10bn have since been discovered. Together Argentina, Brazil, Guyana and Mexico could produce the equivalent of 11m barrels per day by 2030, according to Rystad Energy, a consultancy—nearly as much as Saudi Arabia today. The oil will be worth extracting even as demand ebbs: all of these fields are profitable at \$45 a barrel or less, while crude trades at \$83 today.

The rising demand for Latin America's food is also likely to be long-lived. By 2050 the global population is forecast to grow by 1.5bn to 9.7bn and its middle class to double to 6bn people. Latin America is the world's largest net food exporter (see chart 2 on next page) thanks to huge tracts of farmland and a relatively small population. The region provides 60% of the world's traded soybeans, which China imports to feed its 450m pigs. It also supplies more than 30% of the global supply of



maize, beef, poultry and sugar. Net exports are expected to rise by 17% in the next decade to hit \$100bn.

Grand expansion plans are visible at the port of Santos, in the Brazilian state of São Paulo. Among rusty buildings, COFCO International, the trading arm of China's state foodmaker, is building a second terminal that will boost its export capacity from 3m tonnes to 14m by 2026. Brazil accounts for 40% of COFCO International's global investment.

The third pillar favouring Latin America is geopolitics. As the rivalry between the United States and China intensifies, countries are diversifying where they import from and invest in. Latin America is relatively neutral, peaceful, open to investment, and close to manufacturing sites in North America. The United States' Inflation Reduction Act mandates that from 2027 80% of the market value of the critical minerals used to make EV batteries must be extracted or processed in the United States or one of the countries with which it has a free-trade agreement, as Chile, Peru and Mexico do.



Beefing up production

All this presents Latin America with a huge opportunity. But the region needs to act in order to turn prospects into reality.

Cash is one ingredient. Wood Mackenzie, a data firm, estimates that between now and 2040, at least \$575bn of investment is needed to meet global demand for copper. By 2030 nearly \$40bn is required for lithium. Last year more money was spent in Latin America than in any other place on exploring for eight green metals. Appian Capital, a London-based private-equity investor in mining, is ready to deploy 70% of its capital in Latin America in the next ten to 15 years.

Yet the region continues to punch below its weight. Even though its pipeline of projects looks decent—amounting, on paper, to some \$100bn in capital expenditure on copper alone by 2030—traders complain that mines are always five years away from getting started. Africa has fewer projects on paper but a similar number of “committed” new mines—with all the necessary permits and finance.

#### Act now

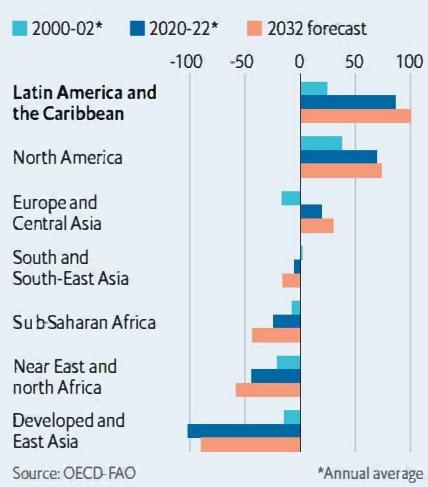
Other obstacles abound. Chile's copper ores have been reduced to low-grade deposits, forcing miners to dig deeper to produce the same amount. Climate change is making investors anxious. Earlier this year floods forced copper mines to close in Chile and Peru.

Mining projects themselves can endanger the environment, prompting activists and regulators to act. Operations at a Peruvian copper mine that produces 2% of global supply were halted in February by protests. Sonia Ramos of Ayllus Sin Fronteras, an NGO in San Pedro de Atacama, is worried about lithium mining affecting water; her community has struggled with supplies since large-scale copper mining started 50 years ago. Between 2017 and 2021 it took an average of 311 days for new mines in Chile to get approval, compared with 139 between 2002 and 2006. Last year its regulator temporarily blocked a \$3bn extension at a site run by Anglo American, a mining giant, because it could affect nearby glaciers. The government unblocked it. But increasingly, politicians get in the way.

Investors need legal certainty because capital invested in new mines or wells is recouped only years into the project. But that is elusive. It is not just the fiery rhetoric of the raft of left-wingers and nationalists in Latin America that is causing jitters. Governments are looking to get more value from their materials by imposing more rules. In May Chile voted to raise the top tax rate on copper miners from 41-44% to nearly 47%, among the highest in the world. SQM paid fully 60% of its profits to the state in 2022. President Gabriel Boric has suggested he wants majority state participation in mining concessions, once the ►

### Feeding the world

Agricultural trade balance, \$bn  
2014-16 prices



▶ current contracts expire. Mexico's President Andrés Manuel López Obrador has nationalised his country's lithium deposits.

If Latin America manages to take advantage of the boom, it may then struggle to manage the risks involved in a sudden influx of riches. Buoyed by current-account surpluses, domestic currencies appreciate, making non-commodity exports less competitive. Labour and capital flow to extractive industries, depriving others of scarce resources. Both make the domestic economy more dependent on a volatile sector. Following the end of the most recent commodities boom in 2013, regional economies grew at an average annual rate of only around 1% compared with 4.1% in the decade before. Swings in commodity prices loom: the green transition is likely to advance in fits and starts, and geopolitical rifts can stem exports overnight.

Tools exist to mitigate such threats. Central banks can intervene in foreign-exchange markets to keep a lid on the currency. Exporters can hedge against price fluctuations by buying futures and options on derivatives markets. Smart fiscal rules can dictate that a share of proceeds be saved when prices are high. Yet governments in the region are more focused on grabbing a share of the proceeds than on planning for the risks. Many lack the technocratic nous to implement fixes. Fiscal rules are often ignored. Only six countries have non-partisan public-finance watchdogs. Save for Chile's, Latin America's 24 sovereign funds lack serious guardrails against raids by governments. During the pandemic, the governments of Colombia, Mexico and Peru all exhausted their national kitties, notes Diego López of Global swf, a data firm in New York.

Latin American governments also want to run with the windfall, by developing local processing and manufacturing that us-

es the materials. Argentina's first lithium-battery plant is expected to start operations in September. Chile offers a 25% discount on lithium to companies that will use it to develop the local supply chain. That could make sense, but creating new industries is easier said than done.

Refineries are vulnerable to rises in the costs of materials and energy: in December Brazil's largest copper processor filed for bankruptcy protection. High-value industries require skills and innovation, but Latin America educates too few engineers. The region invests annually just 0.6% of its GDP in research and development, less than a quarter of the average in the OECD, a club of mostly rich countries. Analysts reckon most batteries will be built in or close to the United States, China and Europe, where EV markets are most developed. (EV demand is low in Latin America.)

History counsels caution. Latin America will have to act with savvy if it wants to exploit the resources and to make the most of the income. Prospects look best for a tried and tested trio of Chile, Peru and Brazil. It will not be easy. But with the right approach, the commodities rush presents a historic opportunity to transform not just the face of the Atacama desert but the region's fortunes. ■

### Ecuador's election

## Bloody campaign

QUITO

### The killing of a presidential candidate shows rising political violence

**I**N THE 1980s and 1990s Latin America was part of the global wave of democratisation. In the past few years it has been part of the global retreat. Populists from Mexico to Brazil have tested the strength of institutions. Nicaragua has entrenched its dictatorship. El Salvador has one in the making in Nayib Bukele. The other Northern Triangle countries of Guatemala and Honduras have been increasingly influenced by corruption and criminal actors.

The latest place to be hit is Ecuador. As we went to press, a leading candidate for presidential elections in little more than a week was assassinated on the campaign trail. Fernando Villavicencio, 59, was shot dead on August 9th while leaving an event at a school in downtown Quito, the capital. Nine other people were injured, including a candidate for congress.

Mr Villavicencio was a significant figure. The former journalist made his name for exposing corruption scandals, especially under the government of Rafael Correa between 2007 and 2017. He continued

to do so after turning to politics, first as a congressman then as a presidential candidate. He had been campaigning on combating state corruption, and said he would renegotiate deals with foreign oil and mining companies to secure a bigger share. He was vocal on the need to tackle rising crime in the country and determined to combat Colombian and Mexican drug gangs.

Officials at home and abroad, including President Guillermo Lasso, were quick to condemn the killing, and blame criminal groups for his death. "Ecuadorian democracy has been seriously wounded," said Fundamedios, a local journalism advocacy outfit. Mr Correa described Ecuador as a failed state. Police have arrested six people on the outskirts of Quito, the capital. One suspect was shot and died shortly after during the crossfire.

Mr Lasso declared a 60-day state of emergency but vowed the vote would go ahead. The killing is the latest event to rock the country that stood out as a success story in the early 2000s as it used oil rents to improve life. Political turmoil has grown. Two attempts to impeach Mr Lasso led him to resign and dissolve congress in May, triggering early elections. The country's crime rate has soared as drug traffickers and gangs have worked together, with the murder rate outstripping that of Mexico and Colombia in 2022. Violence has spilled over into the political realm. Last month Agustín Intriago, the popular mayor of the port city of Manta, was murdered.

Ecuador's experience is not far from the norm in the region. Political violence that had largely subsided in the 1990s, even as criminal violence grew, is once again on the rise. In January right-wing supporters of former Brazilian President Jair Bolsonaro attempted to seize the congress and supreme court buildings and presidential palace after he lost the election. Mexico's midterm elections in 2021 were the most violent yet: more than 80 politicians were killed, including 35 candidates, mainly by criminal groups. ■



Targeted on the trail



## Niger's coup

# The drums of war are growing louder

DAKAR AND NIAMEY

Hopes are fading that the elected government will be restored peacefully

NASSIROU MAHAMADOU, a vegetable-seller perched on a stool in Niamey, the capital of Niger, does not look like a fighter. Yet at the mention of threats by Niger's neighbours to use force to reinstate Mohamed Bazoum, the elected president who was ousted in a coup on July 26th, he swells with anger. "If they come here, we [civilians] are going to war alongside the army." He is outraged that the Economic Community of West African States (ECOWAS), the regional bloc, is considering sending troops to battle the junta, even as it has done little to fight the jihadists that he says are the bigger threat. "ECOWAS has weapons to attack Niger but not to kill the terrorists," he says. "It's a disgrace."

The regional bloc had threatened to use force if Mr Bazoum were not reinstated by August 6th. Yet as the clock ticked down to that deadline, the coup leaders showed no sign of giving up power. Instead they filled a stadium with cheering supporters (pictured), who beheaded a rooster painted in the colours of France, the former colonial

power. As the deadline day ended, the junta closed Niger's airspace altogether, claiming that two other African countries had been preparing troops for deployment to Niger. It said Niger's armed forces were "ready to defend the integrity of our territory". It later ratcheted up tension by accusing France of violating its airspace and freeing terrorists, without providing any evidence. France denied the claims.

The rising tension highlights two related, and disturbing, trends in the region. The first is the rapid spread of jihadist terrorism over the past decade as groups affiliated with Islamic State and al-Qaeda have pushed into the Sahel, a desperately poor and arid region south of the Sahara. Among

the worst-affected places are Burkina Faso, Mali and Niger, where more than 10,000 people were killed in armed conflict last year. The second trend is the retreat of civilian rule, as men in uniform have overthrown elected governments that were losing popular legitimacy because they have failed to end the jihadist terror. Since 2020 there have been coups in Burkina Faso, Chad, Guinea and Mali. In Burkina Faso and Mali the putsches have been followed by a spiral of deteriorating security.

The leaders of the coup in Niger also claimed to want to restore security. Yet Mr Bazoum's government had been making progress against the jihadists through talks, demobilisation programmes and help from the roughly 1,500 French troops in Niger. Deaths in conflict in the first six months of this year were lower than in any equivalent period since 2018. Instead, the coup appears to have been motivated by the personal ambition of generals.

Many leaders in the region hoped to halt this contagion of coups, not least because left unchecked it might give ambitious generals in their own armies ideas. Among the most strident is Bola Tinubu, the recently elected president of neighbouring Nigeria who chairs ECOWAS. Because he was briefly detained by a junta in 1994 he detests putschists. Others in the region tend to agree with him. "It's one coup too many," said Aissata Tall Sall, Senegal's minister of foreign affairs.

## → Also in this section

39 Why Nigerians emigrate

39 Fragmented Yemen

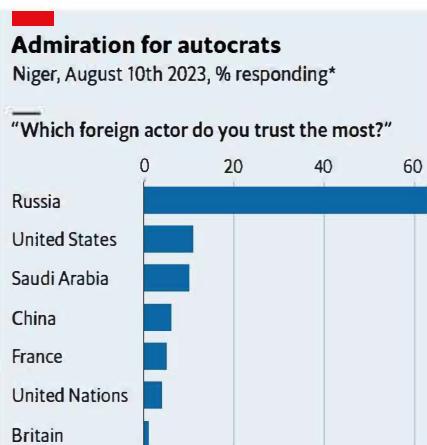
40 Iraq's bank heist

After the deadline passed, hopes of reinstating Mr Bazoum through diplomacy suffered further blows. Victoria Nuland, a senior American diplomat, met members of the junta in Niger but described talks as "difficult". She was blocked from meeting either Mr Bazoum or General Abdourahmane Tchiani, who overthrew him. On August 8th a mediation team from ECOWAS, the UN and the African Union was refused entry to the country.

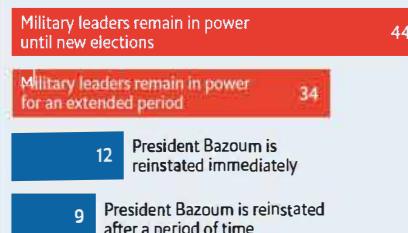
The snub came after defence chiefs of ECOWAS said they had finalised plans for sending in a force. Benin, Guinea-Bissau, Ivory Coast, Nigeria and Senegal all indicated they would contribute (see map). Yet the junta in Niger has allies of its own. The military rulers of Burkina Faso and Mali declared that they would consider any intervention in Niger to be a declaration of war on their own countries. Members of Niger's junta have also travelled to Mali. There, according to Wassim Nasr, a journalist and researcher, they requested assistance from Wagner, a Russian mercenary group that has operated in Mali since 2021.

ECOWAS, having drawn a line in the sand, may find it difficult to accept anything less than a full reinstatement of Mr Bazoum. Instead the junta named 21 ministers in a cabinet led by Ali Lamine Zeine, an economist, shortly before an ECOWAS summit was due to be held on August 10th to decide on the bloc's next steps. Even if ECOWAS is willing to accept this government, it would probably still insist on Mr Bazoum's liberation. Yet General Tchiani may see holding him as his best protection against another coup, or counter-coup, argues Niña Wilén of Lund University.

Still, an ECOWAS invasion is not inevitable. War is "the option of last resort", a high-level government official involved in



#### "How would you like the situation resolved?"



\*Polling is indicative due to a small sample that over-represents educated urban men

Source: Premise Data

Akpabio, advised ECOWAS "to strengthen their political and diplomatic options". Several reports suggest that a majority of senators at the meeting were against sending in troops. Under the constitution, Nigeria cannot deploy forces abroad without Senate approval unless there is an "imminent threat or danger" to national security.

ECOWAS has also struggled to win the support of other regional powers that share borders with Niger. Abdelmadjid Tebboune, Algeria's president, said he was "categorically against any military intervention", which would be considered a "direct threat to Algeria". Chad also opposes the use of force.

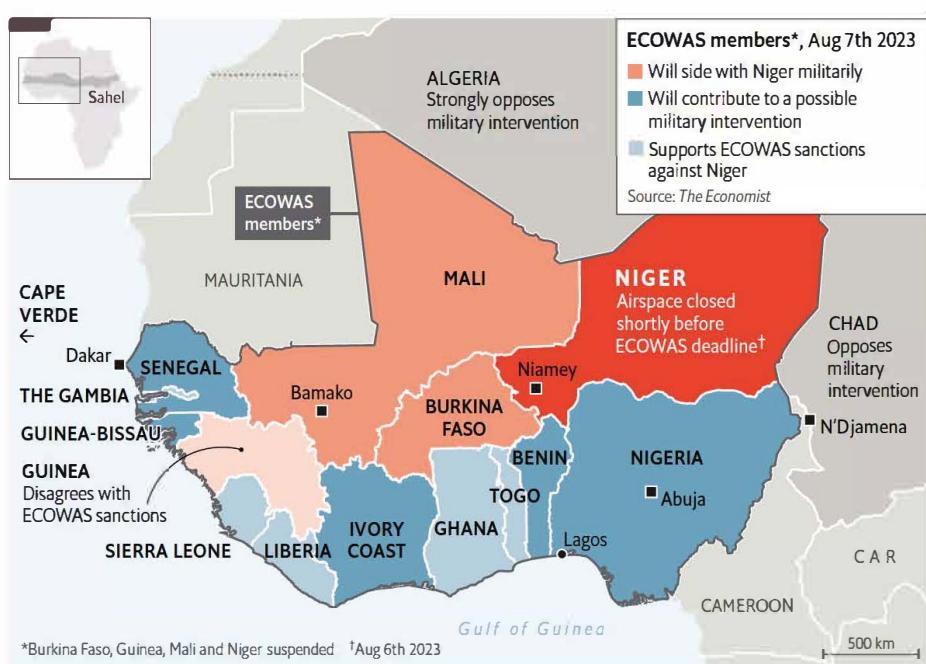
#### Gauging the mood

A key consideration for ECOWAS must surely be whether foreign troops would be welcomed or opposed by Nigeriens themselves. On August 8th Rhissa Ag Boula, a former rebel and then minister under Mr Bazoum, announced the creation of a "resistance council" to reinstate the president. It says it supports an ECOWAS military intervention. "We are going to mobilise all over the country to denounce [the junta]," Mr Ag Boula told *The Economist*.

Whether it will gain support is unclear. Canvassing by Premise Data, a polling firm, for *The Economist* in the first survey conducted since the coup found that 79% of respondents support the actions of the junta, and that 78% think it should stay in power "for an extended period" or "until new elections are held" (see chart). A slim majority of 57% said they were not in favour of an intervention by regional or international organisations. Of those supporting foreign intervention, an alarming 53% said they preferred it to be by Russia, presumably because they think it would support the putschists, as Wagner has done in Mali. Just 13% chose America, 11% the African Union and a paltry 6% preferred ECOWAS. These findings are not necessarily representative of opinion across the country because the poll was conducted quickly, with a small sample, made up mainly of men in the capital. Even so, it provides an indication of the mood.

There are other big hurdles facing an ECOWAS force. One is cost. "Nigeria is too broke to conduct this operation, so needs funding for it," says Cheta Nwanze of SBM Intelligence, a research firm in Lagos. France has said it supports efforts by ECOWAS to reinstate Mr Bazoum but has not said if its armed forces would back an ECOWAS intervention or whether its treasury would help fund the operation.

Moreover, an ECOWAS mission would be far more complex and risky than any the bloc has mounted in decades. In 2017 a Senegalese-led force moved against the long-time president of the Gambia, Yahya Jammeh, after he refused to accept the result of



► an election he had lost. He folded as soon as troops pressed in. Yet Niger is more than 100 times larger than the Gambia and it has a Western-trained army that seemingly supports the junta, which is holding its legitimate president hostage.

A closer parallel might be Sierra Leone, where in 1997 a group of soldiers ousted the elected president during a civil war. Some eight months later, after the putschists allied with gang-raping rebels, ECOWAS forces rolled in and reinstated the president. Although the mission was successful, albeit against a ragtag army, the Nigerian-led force was accused of human-rights abuses

and of bombing civilian targets.

Mr Tinubu may hope that large parts of Niger's army will refuse to fight if ECOWAS troops cross the border. Yet if they do resist, the region's troops may find themselves stuck in a three-way fight between the junta's forces and the jihadists. Even if an intervention succeeded in restoring Mr Bazoum, he could be perceived as a puppet of foreign forces. "I pray to God that Bazoum comes out of this alive," says a former adviser in the presidency. Yet even he counsels against ECOWAS sending in troops. "It will destroy human life for nothing and sink our country into war." ■

## The emigration rush Call for the doctor, call Nigeria

ABUJA

**The country's enduring problems are driving its own professionals abroad**

A CURRENT BUZZWORD in Nigeria is *japa*, a Yoruba verb meaning to run, flee or escape. So many Nigerians, most notably doctors and nurses, are seeking jobs abroad that politicians are bemoaning the "*japa syndrome*"—and have been debating ways to stem the outward flow. No one yet has an answer.

Meanwhile hospitals are losing qualified staff at an alarming rate, as droves of doctors and nurses head for America, Britain, Canada, the Gulf states and elsewhere in search of better pay and working conditions. In the past eight years, by one count, at least 5,600 doctors have left for Britain, leaving only 24,000 registered doctors to cater for a burgeoning population of around 220m. The Association of Resident Doctors fears that 85% of those left behind are planning to emigrate, too.

MPS complain that countries such as America, Canada and Saudi Arabia,

which often stage recruitment drives for doctors in Nigerian cities, are in effect exploiting the country's highly subsidised medical-education system at the expense of Nigeria's own suffering people. The government has been half-heartedly scrambling for clever ways to persuade medical professionals to stay. A parliamentary bill proposed that new doctors would be legally bound to stay in Nigeria for at least five years after qualifying. In the face of the doctors' threat to go on strike if this were enacted, the government backed down.

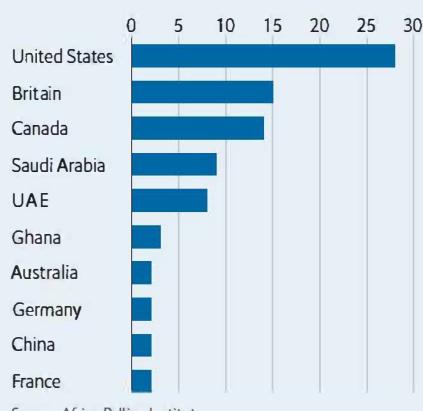
Many thousands of other talented Nigerians are trying to leave. Britain offers a "global talent" visa valid initially for five years and doles out thousands of student visas. The recipients often fail to return home. Many of those less fortunate strike out across the Sahara desert, putting their lives in the hands of smugglers and traffickers to take them on perilous voyages across the Mediterranean to Europe. Some drown, or end up in thrall to Arab slavers in Libya or in vile detention camps across north Africa.

On the plus side, those who succeed abroad provide a huge inflow of remittances. Last year, they sent back an estimated \$20bn, on top of \$148bn in the previous seven years: far more than arrived in foreign direct investment.

In the short run, the desire to leave is too ardent for governments to stop. All told, 73% of Nigerians in 2021 wanted to go, according to the Nigeria Social Cohesion Survey, which was up by 41 percentage points on the previous one, in 2019. With corruption and physical insecurity rampant, annual inflation at 23%, and 63% of adult Nigerians deemed "multidimensionally poor", it is no surprise that the *japa syndrome* is stronger than ever.

### California dreaming

Nigeria, "which country would you consider relocating to?", 2022, % responding



### Yemen

## One state, two states, or no state?

**The Houthis may dominate the country as the coalition against them crumbles**

FRAGMENTED STATES in the Middle East are no rarity—think of Iraq, Libya, Palestine and Syria—but Yemen is the most disunited of all. Rent by civil war for the past eight years, it is a patchwork of competing factions. Last year a ceasefire between Saudi Arabia, which supports a toothless but internationally recognised government, and the Houthi rebels, who control a large swathe of territory including the capital, Sana'a, promised to stabilise the country and, on paper, to hold it together. Instead, the fragile ceasefire has enabled the Houthis to tighten their grip on the area under their control and has weakened the forces arrayed against them. After fighting those of Saudi Arabia and the United Arab Emirates (UAE) to a draw, the Houthis look poised to win the peace.

At least nine different factions have been vying for power. The Presidential Leadership Council (PLC) that Saudi Arabia created last year claims to be Yemen's legitimate government. The Saudis, who pay for it, recently promised another \$1.2bn to keep it afloat. The PLC claims to control the entire country but probably has the smallest footprint of all Yemen's power-seeking factions. It is restricted to a mere wing of the presidential palace in Yemen's second city, Aden, near Yemen's southern tip (see map). Most of the PLC's members live in the Ritz-Carlton Hotel in Riyadh, the Saudi capital, where Crown Prince Muhammad bin Salman (MBS), the kingdom's de facto ruler, has been known to keep troublesome politicians and family members in a sort of gilded cage. The PLC's eight representatives are often at loggerheads with each other.

After the Houthis captured Sana'a in 2014, Saudi Arabia and the UAE rallied a medley of alliances within Yemen to fight back. But of late these two heavyweights of the Arabian peninsula have fallen out, causing their coalition in Yemen to unravel. The UAE backs secession for the south in the guise of the Southern Transitional Council (STC) led by Aiderus al-Zubaidi, a former general, though he is a member of the Saudi-backed PLC.

Gulf rivalries encourage Yemeni wrangling. The southerners under Mr Zubaidi fly a separate flag over a swathe of what used to be a separate country, once known as the People's Democratic Republic of Yemen before it unified with the north in 1990. The UAE under its assertive leader, Muhammad bin Zayed al-Nahyan, proba-

bly has its eye on the ports and oil wells of southern Yemen. Though it has drawn down its forces since 2019, it still supports Mr Zubaidi militarily and has bases of its own on his turf.

The Saudis now seek to frustrate the UAE's ambitions by stoking the local aspirations of Yemen's old principalities and tribes against Mr Zubaidi's would-be breakaway state. They also hope to carve a north-south land passage through to the Indian Ocean. In recent weeks the Saudis have backed the formation of a "national council" in the Hadhramaut and a "tribes' alliance" in Shabwa, more than 500km east of Mr Zubaidi's seat in Aden. Tensions have already spilt into violence. Militias loyal to the Hadhramaut council in Seiyun have clashed with protesters supporting Mr Zubaidi. Both sides have tussled for control of Mukalla, another southern port.

Other chunks of Yemen also threaten to break away. Pockets of al-Qaeda still lurk in the remote hinterland of the Hadhramaut. The governorates of Marib and Taiz have close ties to Islah, a faction close to the Muslim Brotherhood, an Islamist movement backed by the gas-rich Gulf state of Qatar. Fearful of losing out to richer Gulf states, Yemen's eastern neighbour Oman may wish to bring the abutting Yemeni province of Mahra under its wing.

This fragmentation is manna from heaven for the Houthis. Twenty years ago they were a rugged band of rebellious northern tribes who followed a branch of Shia Islam and often had to hide in mountains and caves from the authorities in Sana'a. Now they dominate the country. Their leadership is united, bonded by a religious glue. With arms and training from Iran and its Lebanese Shia proxy, Hezbollah, they have kept hold of Sana'a and the northern coast down to the port of Hodeida, despite years of Saudi-backed Yemeni counter-attacks. They responded to aerial bombardments by the Saudis with missile and drone attacks deep inside Saudi Arabia and even the UAE. In March 2022 they forced MBS to call a ceasefire.

The Saudis have since tried to win the Houthis back onside. They lifted their siege of Hodeida, let flights to Sana'a resume and sent a delegation to negotiate with the Houthis without consulting the PLC. They let a Houthi commander fly with his followers to Saudi Arabia for the annual *haj*, or pilgrimage, in Mecca. And while starving Yemen's secessionist south of funds, they have proposed paying the salaries of the Houthi administration. Some of MBS's advisers have even suggested that, following the kingdom's rapprochement with Iran last March, the Saudis may forge a full-blown alliance with the Houthis.

The ceasefire, however, has only emboldened the Houthis against the Saudis. They are celebrating a victory of the poor-

est Arab state over the richest—and are demanding reparations. In sermons their leader, Abdelmalik al-Houthi, portrays himself as the rightful ruler of the *umma*, or Muslim world, thanks to his descent from the Prophet Muhammad. Some Houthis even dream of conquering Mecca and Medina, Islam's holiest places, claiming them as historic parts of Yemen. When a Saudi delegation arrived in Sana'a in April, they were derided as aggressors, not peacemakers. "The Saudis have given in to most of the Houthis' ridiculous demands and got nothing in return," says Abdelghani al-Iryani, a Yemeni former mediator.

#### Give them an inch...

Since the ceasefire the Houthis have reinforced their ideology in their own territory, for instance by banning the charging of interest, and have tried to spread their reach elsewhere. No sooner had the Saudis lifted their siege of Hodeida than the Houthis attacked Aden and declared a boycott of any goods imported from the south. Late last year they attacked the south's oil installations. More recently they have mobilised their forces around the city of Taiz, a redoubt held by the internationally recognised government that was once Yemen's industrial base.

Many Yemenis now fear the official government may fall. While the Saudis promise handouts to the Houthis, they have sharply cut funds to their Yemeni allies. "They're paying Ronaldo almost as much as they pay 33m Yemenis," complains Bara Shiban, a Yemen-watcher in London, referring to a Portuguese footballer recently bought by a Saudi club. Houthi attacks have also deprived the south of oil and customs revenues, further eroding the government's economic base. A rial there is worth about a third of its value in the Houthi-controlled north. Ali al-Bukhaiti, a former Houthi spokesman exiled in Britain, reckons that Yemen may yet re-emerge as a single state, whatever its inhabitants desire. "At the end of the day, the Houthis will gobble them all up." ■



#### Iraq's finances

## Catch the thieves

BAGHDAD

A tax-collection scandal has rattled rulers, past and present

SURRED BY a recent exposé in *The Economist*'s sister publication, *1843*, of the theft of \$2.5bn of state funds, the Iraqi authorities have called on America, Britain and Interpol to help arrest and extradite suspects who have sought refuge abroad. Four senior men in Iraq's previous government under Mustafa al-Kadhimi are wanted. An investigation had been launched by his government last year, but then the case was largely left to languish, despite promises of action by Muhammad al-Sudani, his successor as prime minister.

Responsibility for further action seems to have been shunted onto Western and Middle Eastern governments. The accused quartet—a former finance minister, an intelligence chief, a senior adviser and a private secretary to Mr Kadhimi—have been living in Dubai, London and Washington.

The Iraqi courts have seized the Iraqi properties of Ehsan Abdeljabbar, another previous finance minister, who launched the investigation; he is abroad, too. A businessman also at the scandal's centre, Nur Zuheir, was freed on bail in November; he too travels abroad. Mr Abdeljabbar and Mr Zuheir strongly deny any wrongdoing.

Mr Kadhimi's allies say this is a witch-hunt by Mr Sudani to deflect attention from powerful Iraqis friendly to the present regime who are also under suspicion. They say that Shia Islamist militia leaders who back Mr Sudani worked with Mr Zuheir to raise funds and that the anti-corruption watchdog commissioned by Mr Sudani has a link to a Shia militia.

Corruption has been a staple of Iraqi politics since the Americans overthrew Saddam Hussein in 2003, but the massive tax scam reported in *1843* shows Iraqis for the first time in detail how state coffers have been raided. Politicians across the ethnic and sectarian spectrum have united to squirrel away oil and tax revenues worth hundreds of billions of dollars.

Attempts to improve transparency by digitalising government finances and hiring international auditors have been repeatedly scuppered. While Mr Sudani says the investigation is robustly going ahead, he knows that previous prime ministers have been ejected by Shia Islamist factions who depend on dirty money. This is good news for Mr Zuheir. "Nur will never be put on trial," says an observer tracking the case. "So many top people are involved, they'll never give him a platform to talk." ■



## Turkey

# Slow turn

ISTANBUL

### President Erdogan wants to make nice with the West, on his terms

**L**ESS THAN three months ago, Turkey's president, Recep Tayyip Erdogan, was busily accusing America of conspiring to topple his government, talking up his "special relationship" with Russia, and threatening to prevent Sweden from entering NATO. Today, after an unexpectedly easy victory in his country's presidential elections in May, he is making eyes at the West. Mr Erdogan has promised to wave through Sweden's accession to NATO, which he has been blocking for nearly a year, has stepped up his support for Ukraine by openly backing that country's own dreams of membership of the alliance, and has called on the European Union to resume accession talks with Turkey. He has also courted Western investors by shelving his disastrous policy of lowering interest rates in the face of rising inflation.

The recent moves have already begun to pay dividends for Turkey. America seems poised to sell it \$20bn-worth of F-16 warplanes and upgrade kits, a deal previously held up by Congress. Joe Biden, the Ameri-

can president, may soon welcome Mr Erdogan, whom he has repeatedly snubbed, to the White House. He and other NATO leaders are also looking to the Turkish strongman to convince Vladimir Putin to reopen the Black Sea to Ukrainian grain exports; a deal negotiated by Turkey to let food exports out has been halted by Mr Putin since July 17th. Mr Erdogan may have a chance to do so later this month, when the Russian dictator is expected in Turkey. Even the EU has made noises about "re-engaging" with Turkey.

#### Up to a point

But Mr Erdogan's overtures, which are more tactical than strategic, and born mostly of economic necessity, do not amount to a reset. Europe's diplomats play down any chances of a genuine rapprochement as long as Mr Erdogan continues to bully and lock up his critics, to allow corruption to thrive, and to suborn state institutions. Turkey's leader sees no need to tackle or even to acknowledge any of the

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above difficulties. "Turkey has no problems with democracy, rights and freedoms," he said at a recent NATO summit held in Lithuania.

Turkey's relations with America are indeed improving, but this is because, as with the EU, they had almost reached rock bottom. Turkish officials chafe at continuing American support for Kurdish insurgents in Syria, whom Turkey considers terrorists. American ones berate Turkey for having enabled Islamic State to set up a caliphate on its doorstep, and for buying weapons from Russia. Sentiment towards Turkey is no warmer in Brussels. Mr Erdogan has attempted to trade his backing for Sweden for progress in Turkey's stalled accession talks with the EU. But nothing of the sort is about to take place. The best Turkey can hope for with Mr Erdogan at the helm, analysts and European diplomats say, is an upgrade to its existing customs union with the EU, and even agreeing on that may take years. At the very least, European leaders ought to involve Turkey in discussions on foreign policy, suggests Selim Yenel, a former Turkish ambassador to the bloc. So far, they have declined to do so. "They don't want to offer Erdogan any gifts," he says. "But they will have to live with him for the next five years."

Turkey's return to economic orthodoxy has also been half-baked. The end of an exceptionally loose period of monetary policy that saw inflation approach triple digits ➤

► last autumn has been less dramatic than expected. Over the course of two months, the central bank, headed by its new governor Hafize Gaye Erkan, has increased interest rates by a cumulative nine percentage points, far less than market-watchers prescribed. Combined with the slowdown in the bank's sales of foreign reserves, which had propped up the Turkish lira ahead of the elections, this has triggered another currency rout. The currency has lost almost a quarter of its dollar value since the vote, while inflation, which had slowed in the first half of the year, has shot up again, to 48% year-on-year in July. Mrs Erkan herself sees it climbing to 58% by the end of the year, more than double the bank's previous forecast. But incremental changes are better than no changes at all. Western investors, who had stayed away from Turkey for years, are trickling back in, albeit cautiously. Foreigners have bought \$1.8bn of Turkish stocks since early June.

Mr Erdogan has also raised eyebrows by taking a more hawkish line on Ukraine. Days before the NATO summit in July, he told the country's president, Volodymyr Zelensky, whom he was hosting in Turkey for the first time since the start of Russia's invasion, that Ukraine "deserves NATO membership". He also angered the Russians when he allowed Mr Zelensky to return home with five Ukrainian commanders previously captured by Russian troops in Mariupol and transferred to Turkey as part of a prisoner swap. Mr Erdogan had earlier promised Mr Putin the men would remain in Turkey until the end of the war.

Before the elections, Mr Erdogan could not afford to antagonise Russia, which gave him a hand by postponing gas payments and by wiring billions in cash to finance Turkey's first nuclear power plant. Now, however, Turkey's leader feels less vulnerable to pressure from Russia, says Emre Ersen, an academic at Marmara University. Mr Putin might not like what he has been seeing from the Turkish leader of late, says Mr Ersen, but there is not much he can do to push back. Turkey is a key destination for Russian exports, tourists and oligarchs, as well as a potential mediator in talks with the West.

But this does not mean a pivot away from Russia, either. After two decades in power, Mr Erdogan has perfected the art of transactionalism. He has turned Turkey into a "swing state in international politics", says Soner Cagaptay of the Washington Institute. That is why any talk of a return to the West is misplaced. Mr Erdogan's Turkey no longer perceives itself as part of the Western bloc, but as an autonomous actor, able to do business with whomever it wants. "If its interests align with Russia, it works with Russia," says Mr Cagaptay, "and if its interests align with the us, it works with the us." ■

## Ukraine

# After the retreat

IZIUM

### In north-east Ukraine the war is still close, upending daily life

PEOPLE ACROSS a vast stretch of north-eastern Ukraine face a grim new reality. Much of Kharkiv province was occupied last year by the Russians before being liberated in September. Yet few of those who fled have returned. Those who have, or who never left, find themselves in smashed-up towns or spookily empty villages, living in constant fear of missile attacks—and the return of all-out war.

In recent weeks several hundred evacuees, including 194 children, from the small town of Vovchansk have passed through the city of Kharkiv before being dispatched elsewhere. Their town, now supposedly free, lies hard by a part of the border where, in May, a Ukrainian-sponsored Russian militia made an incursion into Russia's Belgorod region. Russia has not stopped shelling over the frontier since its forces were driven out of the area, but the attacks have increased since Ukrainian forces began their counter-offensive in early June.

Since the Russians were driven back from the suburbs of Kharkiv, the city, Ukraine's second biggest, has seen a recovery of sorts. Hundreds of thousands of people who fled at the beginning of the full-scale invasion have returned, although around one-third of the city's original inhabitants have not, says Nataliya Zubair, a political activist. And of the 1.2m people that she estimates are now in the city, 200,000 have been displaced from elsewhere. They may never return to their homes in small towns, where there are even fewer jobs and opportunities than

Kharkiv, or to rural areas, where mines and unexploded ordnance have made it dangerous to farm.

Another reason that people are not returning is schooling. In Kharkiv, where all education has been online since the invasion began, there is a fierce debate about whether to allow some in-person teaching to resume in September, even though most schools lack proper shelters.

In Izium, 125km south-east of Kharkiv, there is no such discussion. Volodymyr Matsokin, the deputy mayor, says that four of the town's nine secondary schools have been destroyed and the rest so badly damaged that they cannot function. In the playground of the once-elegant School 4 (pictured), opened in 1882 and now just a shell, weeds are the only life. But unreliable internet services in front-line towns means that online schooling for the children that remain is a patchy affair.

On the roads there is a constant flow of troops moving to and from the front. Most people on the streets in Lyman (13km from the current front line) and Kupiansk (7km) are soldiers. Municipal and apartment buildings lie in ruins. There is little work; many of those that remain rely on meagre pensions and social-security payments.

The fear that began with the invasion has not dissipated with liberation. In Lyman, a Grad missile-launcher speeds through town. Ten minutes later missiles streak overhead towards Russian lines. Outgoing artillery can be heard on the outskirts of Kupiansk. Retaliation can come at any time. On August 5th the Russians struck a blood-transfusion centre there.

In Izium, Olena and Ala, both in their 70s, sit on stools selling fruit and vegetables they have grown to eke out a living. During the occupation they were too frightened to leave their homes. Now business is poor because there are so few people in town. Ala's husband was ill and died a week after the Russians arrived. Olena's ►



Russia's education policy



► husband catches fish, which she dries, salts and sells. Her block was almost empty during Russia's occupation. Even now, she says, only a third of the flats have anyone in them.

In Lyman your correspondent encounters Valentin, an electrical engineer. Returning home from his shift along an otherwise empty street where half the windows are boarded up or broken, he says that power has at least been restored to all homes. But there would not be enough for industry, he says, if there were any.

Of some 25,000 people in Lyman before the invasion, just 7,000 are estimated to remain. Before the war about half of the population was pro-Russian, says Valentin. But the "anarchy" of the occupation, when the town was garrisoned by drunken, ill-disciplined troops lustful for loot, turned many of them against Russia, he says. And some of those who continued to support the Russians left town when Vladimir Putin's troops retreated.

Soldiers in Kupiansk and Lyman say that though the lines in this region have not moved much, morale is holding up. But it is becoming clear to all that the war will not be over soon. Recent battles have been particularly bloody. Ukraine does not give casualty figures, but Daniil Zhmuidov, a combat medic, says he believes that 1,500 soldiers died in the Lyman sector alone in the first two weeks of July.

Andrey, a soldier in Lyman waiting by his car to be told where he should deploy next, readily admits to frustration that the counter-offensive is not yielding rapid advances. Unrealistic expectations were built up by people like Kyrylo Budanov, Ukraine's military-intelligence chief, he says. It would have been better "not to say anything" rather than risk disappointment. Andrey was a musician in Kyiv before the invasion. "But this is our new life," he says. "We have to accept it." ■

## Spain

# With friends like these

MADRID

## Forming a government is no easy matter

HARDLY ANYONE predicted a near-draw in Spain's elections, and yet the Socialists of Pedro Sánchez, the prime minister, and the opposition centre-right People's Party (PP) ended up taking about a third of the vote each on July 23rd. Even with their preferred coalition partners, Vox for the PP and Sumar for the Socialists, both are however short of a majority. So small parties, nearly all of which lost seats, now hold the key to governing Spain again, and the hunt is on for allies.

No significant party beside the PP will vote to create a government that includes, or depends on the support of, the hard-right Vox party, leaving the PP without any obvious routes to reaching a majority. Mr Sánchez and Sumar, his radical-left partner party, are trying to bring five regional parties together to support him as prime minister for another term. Four of these are separatist. Spain, in other words, cannot be governed without the support of those who want to break it up.

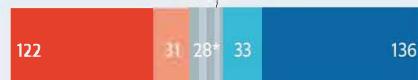
The Basque parties are the more straightforward ones to deal with. EH Bildu, a left-wing party that is the heir to the political wing of ETA, a disbanded separatist terrorist group, has already offered its support to Mr Sánchez, saying it would do so to keep the far right out of power. The Basque Nationalist Party, though committed rhetorically to independence, are a pragmatic bunch that have done well, running the region for most of the post-Franco era and winning favourable treatment for its residents. Both these parties helped Mr Sánchez after the previous election, when he also formed a minority government.

The two Catalan separatist parties are more problematic. They held an unconstitutional independence referendum in 2017. Madrid temporarily revoked Catalonia's autonomy, and jailed some of its lead-

## Every little helps

Spain, general election results  
Seats in Congress, July 24th 2023

176 needed for a majority



Socialist Party   Sumar   Vox   People's Party  
 \*Seven other parties: Esquerra Republicana (7); Junts (7); EH Bildu (6); Basque Nationalist Party (5); others (3)  
 Source: Ministry of the Interior

ers. Others went into exile. Mr Sánchez has since pardoned nine of those leaders, and reformed the penal code to remove the crime of sedition. But the separatists think that progress on their demands has now stalled, and are trying to take advantage of their new bargaining power to restore it.

Esquerra Republicana, which currently runs the region, is the more pragmatic of the two parties. It supported Mr Sánchez's appointment last time. Before taking a summer break, Pere Aragonès, the regional president who hails from the party, held a press conference in which he hinted at what more he might want in exchange for Esquerra's continuing support for the prime minister.

One major subject of concern is financing. Catalonia owes around €71bn (\$78bn) to the central government. And on the same day María Jesús Montero, the national finance minister, hinted at a reform of territorial financing. Some kind of write-off of that debt is in theory possible. But as soon as the idea was floated, other regions began clamouring for the same.

In an effort to generate goodwill, Yolanda Díaz, the leader of Sumar, has floated another proposal: to allow the use of regional languages alongside Spanish in the Congress of Deputies, the lower house of parliament. They are already allowed in the Senate. Letting them into the more powerful Congress would be a recognition of Spain's diversity. It would also annoy Spaniards of a nationalist bent. But that might be a small price to pay if it worked.

The separatists' fundamental goals, though, remain out of reach. They are an amnesty for everyone involved in the referendum (many are still awaiting trial), and a new referendum. Both aims are shared by Esquerra and Junts, the other Catalan separatist party. But Junts is the more intractable. It is still led by Carles Puigdemont, who called the referendum in 2017 and now lives in exile in Belgium, where he serves as a member of the European Parliament.

Junts did not support Mr Sánchez when he formed his previous government. And before the elections, Mr Puigdemont said flatly that "Sánchez will not be prime minister with the votes of Junts." Now he seems to be weighing his options (and enjoying sending cryptic and barbed tweets). Kremlinologists of the party are analysing Junts' other leaders, who range from purist to pragmatist, wondering who has his ear, and hence whether a deal may be possible. Another referendum is not on the cards (Spain's constitutional court would again forbid it). So the question is whether some combination of money, language, amnesty and inducements yet unnamed might get a coalition formed. But a government cobbled together in this way would be extremely unstable. ■

# Charlemagne | Mare nostrum Balticum

The Baltic is delighted to be a NATO lake



**S**OAKING UP THE midsummer sun at Lazy Beach, a stripe of white sand as delicious as its name, Charlemagne was blissfully unaware of a looming danger. Alarmingly near to this idyll on the Polish shore of the Baltic Sea the armies of four hostile eastern states—Cinereus, Griseus, Murinus and Plumbeus—had stormed into central Germany. Spearheaded by commandos of the notorious Brückner organisation, the invading horde was now thundering north towards the Baltic. Even as pale flesh pinkened, children splashed and a breeze tickled the tall pines in the forest behind the Lazy dunes (in fact it has a crossed L, so the proper pronunciation of Plaża Łazy is PLAH-zha WAH-zí), some 250 NATO warplanes roared into the cerulean heavens to smash the intruders.

The invasion was, of course, a fantasy, though not of Charlemagne's making. It was NATO's own boffins who conjured up this imaginary invasion, setting the scene for a giant war game. Staged across northern Germany in mid-June and involving some 10,000 airmen from 25 countries, Air Defender 23 was the alliance's biggest-ever air exercise.

For decades, such an invasion from the east seemed all too plausible. During the cold war the Western alliance was hopelessly outgunned in the Baltic region. NATO planners assumed that neutral Sweden and Finland would sit warily by as a superior Soviet, East German and Polish flotilla ferried communist troops onto Danish and West German beachheads.

All that changed when the Berlin Wall came down. In 1990 East Germany vanished. Nine years later Poland joined NATO. In 2004 formerly Soviet-occupied Estonia, Latvia and Lithuania followed suit. Finland jumped on board in April and Sweden is clambering up the ladder as fast as it can. Long the dominant power in the Baltic region, Russia now occupies barely a tenth of the sea's 8,000km (5,000 mile) shore—and a lot of that frontage is made up of soggy estuarine islands. True, its second city, St Petersburg, remains the biggest on the Baltic. But Russia's other bit of seashore, the enclave of Kaliningrad, a wedge of former German East Prussia squeezed between Poland and Lithuania, is a strategic dead loss, militarily sustainable only through nuclear threat. In reality the Baltic Sea is now *mare nostrum* to NATO as much as the Mediterranean was to ancient Rome.

For this Russia can only blame itself. Had it not invaded Ukraine, the formidable forces of Sweden and Finland might never have joined the Western allies. Kaliningrad would have been reachable by road, instead of the narrow air corridor across the Baltic that its residents have had to rely on since their NATO neighbours closed the border crossings. And exercises like the one that disturbed Charlemagne's summer rest might have become a thing of the past.

Vladimir Putin, Russia's leader and something of a history buff, could have read a few more books. This is not the first time that Russian aggression in Ukraine and the Black Sea has bounced back to hit it in the Baltic. In the mid-19th century Russian encroachments into the Ottoman Empire caused growing alarm in Britain and France. But when the allies acted to contain Russia, launching what became known as the Crimean war, the first place they struck was not in the south. Their gunboats took advantage of the hostilities to destroy Russian fortifications in the Baltic, putting a stop to more than a century of Russian expansion to the west.

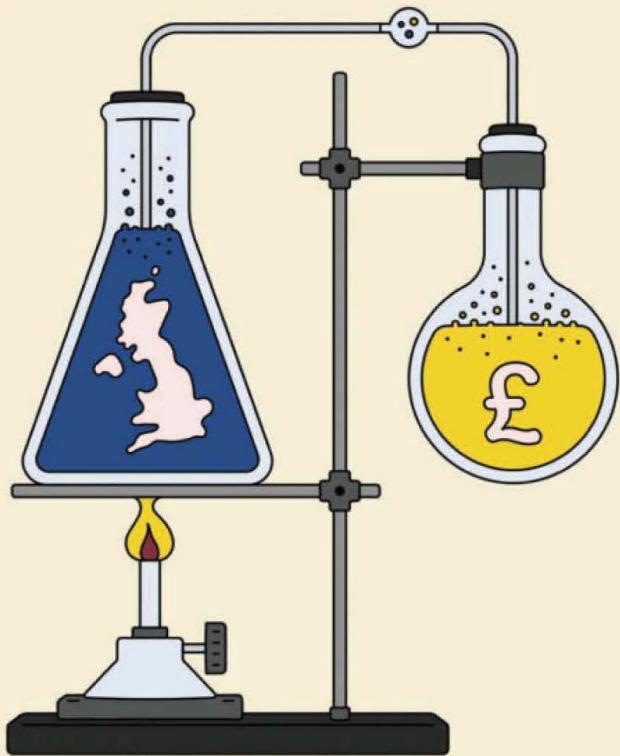
Why this interest in a cold, blustery inland sea? The fact is that for the past millennium the Baltic has been nearly as crucial and contested a trading link as the Mediterranean. The Hanseatic League, an archipelago of independent German-speaking trading cities spread across the sea's southern shore, prospered by dealing in timber, twine, grain, metals and wool, among other things. For centuries Denmark was a regional superpower, its claim to *dominium maris Baltici* only eclipsed by a rising Sweden in the 17th century. But Sweden's warrior king, Charles XII, got cocky, marching all the way to Ukraine to undercut the rising might of Russia's Peter the Great. Charles's catastrophic defeat at Poltava, south-west of Kharkiv, in 1709 heralded Russia's emergence as an empire. On the Baltic it captured Estonia and half of Latvia in 1721, the other half and Lithuania in 1795, and Finland in 1809. Germany's unification in 1871 produced a powerful competitor, since it happened to own most of the sea's southern shore. But Germany blew its chances in two ghastly world wars.

## The next Med

Not far off the pretty shore of Lazy Beach lie the wrecks of the *General von Steuben*, the *Goya* and an ocean liner, the *Wilhelm Gustloff*. These number among the 158 merchant vessels that Soviet pilots and submariners managed to sink in 1945 as the dying Third Reich evacuated some 1.2m civilians and soldiers from East Prussia to escape the Red Army's advance. On their final voyages the three ships carried, respectively, 4,500, 7,000 and 10,600 crammed passengers, nine-tenths of whom drowned.

Short of a nuclear war, that kind of thing seems unlikely to happen again any time soon. Excluding Russia, the Baltic just now is not only strong and peaceful but also rich, happy (Denmark and Finland have for years topped global indexes of life satisfaction), and dynamic, particularly on the sea's post-communist eastern shores. Just watch tourists off their cruise ships gawp at the cute little robot couriers and street cleaners that trundle through the charming, spotless streets of Tallinn, Estonia's capital.

Dozing off on Lazy Beach, Charlemagne recalls that scientists say that by the end of the century surface temperatures in the Baltic may rise two or even three degrees centigrade on average. But this is a sweet dream: to complete the lovely setting of forest and sand, a plunge into the new *mare nostrum* promises not a sharp ice-bucket challenge but a cooling, gentle embrace. Like the Mediterranean but without the clutter. ■



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#### The life-sciences industry

## Doubling down

ABERDEEN

### Official efforts to boost the life-sciences sector are welcome, but only a start

MANY CITIES hope that success in one industry may beget success in another. Take Aberdeen, which grew rich from oil exploitation in the North Sea. By a decade ago, the Granite City laid claim to more multimillionaires per head of population than anywhere else in Britain. Now a local tycoon, Sir Ian Wood, hopes to foster growth in a different sector. In May, with government funding, his development agency, Opportunity North East, opened a university-backed research facility to help startups in the city expand their commercial initiatives.

His bet is on life sciences, a term encompassing high-tech efforts in making pharmaceuticals, biotechnology or medical devices. The city already has a decent record here. Professor David Blackbourn of the University of Aberdeen says ten companies have been spun out from his institution. One, TauRx, based in a former bus depot, is trying to develop a treatment for Alzheimer's and has raised over \$800m since its founding in 2002. Its innovation,

tested in human trials, targets tau tangles (abnormal clumps of protein that stick to neurons in the brain). Regulators will soon determine if that treatment is sufficiently effective. Its chief operating officer, Glenn Corr, calls it a "life and death" moment for the company.

For life sciences in general much is also on the line. Since coming to office last year, Rishi Sunak has set great store by developing high-skilled sectors, such as artificial intelligence and the life sciences, arguing that they will bring long-term gains to the economy. Life sciences gained prominence during covid-19. The world's first randomised trial for covid treatment was conducted by the University of Oxford and then an effective vaccine for covid was developed by AstraZeneca, a British-Swedish company. It saved millions of lives.

Already some 300,000 people are employed in the sector and the government talks of that number surging. To that end, Mr Sunak's administration has set out several ways that Britain aims to make matters

easier for life-sciences startups. Will Quince, a health minister, says the "ecosystem" in which small firms operate puts too many obstacles in the way of those eager to grow. Both politicians talk of sweeping them away.

How much is really changing? Britain undoubtedly has advantages in advanced research. It is home to world-beating universities in life sciences in Cambridge, London and Oxford (see table on next page), and in spots like Aberdeen. British universities publish some of the most-cited academic publications in life sciences, though the country falls a bit short in getting patents filed. It would help if academics were spurred harder to apply for them.

But academic excellence needs nurturing. Many had expected that, by now, Britain would have rejoined Horizon Europe, the EU's fund (and the world's largest) for research and innovation, worth some £85bn (\$108bn). Boris Johnson, when prime minister, said this would happen after Brexit. Mr Sunak had seemed poised to unveil a deal to do so in July. He did not, apparently because of worries about paying in necessary funds. A decision may be taken soon. An alternative British-only scheme, called Pioneer, is widely seen as a second-best option.

Beyond the universities, a second series of hurdles block Britain's startups. Here, again, the country enjoys distinct advantages, so should be able to prosper. Around ➤

► a third of all life-sciences-focused startups in Europe are reckoned to be there, more than in any country on the continent. That is partly because of abundant talent, an entrepreneurial culture and sufficient funding for early-stage growth.

But the startups face at least three more big challenges: painfully slow processes for getting trials for drugs or other products under way; the high cost of property (with knock-on effects on labour costs); and difficulty in securing access to large-scale capital to allow promising firms to grow. On each of these, the government has taken some welcome steps.

Excessive delays in firms being able to conduct clinical trials are beginning to improve. The problems were created in part because the underfunded medicines regulator, the MHRA, took longer than most counterparts in other countries to let firms administer the first dose of a medication in a trial. Waiting for most of a year to get a trial started is "a really long time when your patent clock is ticking", laments Lisa Patel of Istesso, a firm developing drugs to treat auto-immune diseases. (As 90% of products under trial end up failing, the faster the process is done, the sooner researchers can move on.)

As a backlog at the MHRA caused by the covid pandemic eases, trial efficiency is improving. Another measure for the regulator is whether companies can recruit trial participants quickly enough. By May, according to official data, 73% of trials signed up their target number of patients on time, up from just 23% in May last year. The government also promises to tackle a shortage of staff at the MHRA, which had held it back.

The main reason for optimism, meanwhile, is an independent review that reported in May, by Lord O'Shaughnessy, which offered 27 recommendations including several to accelerate the regulatory process. The government sounds eager to implement many. These include creating networks to help speed up clinical trials, giving NHS staff incentives to sign up their patients, and finding ways for new technologies to be rolled out sooner in the NHS.

Government efforts to tackle the high cost of property are more limited. Many startups want to be in the "golden triangle" near Cambridge, London and Oxford, where finding space for labs, or for staff to live, is painfully pricey. Officials have announced plans to develop new lab space in Cambridge, and to build more homes there. Campuses are expanding in Oxford; private developers in London are building labs and offices for the sector, notably in Kings Cross and Canary Wharf. Such increased activity by private actors is an encouraging sign.

The third problem of raising larger-scale capital is the biggest challenge.



Whereas venture funds for startups remain plentiful, investment for those moving to later stages has long been too hard to obtain. Last year only 22 life-sciences companies in Britain raised £30m or more in funding rounds. In America nearly 400 did so. Worryingly, life-sciences firms collectively were able to raise only £3.3bn in equity finance last year, down from £7.2bn the year before.

The government has tried to make up some of the shortfall. Since 2021 British Patient Capital, a subsidiary of the government-funded British Business Bank, has co-invested in eight later-stage biotechs. It also provides investment to specialist venture-capital funds. "But we really need to try to attract in much more private-sector capital to make a dent in what are quite significant funding gaps," says Catherine Lewis La Torre, its outgoing chief.

### A head start on brains

Top ten universities for life sciences, 2023

Rank	University, country	Score, %
1	Harvard University, United States	98.6
2	University of Oxford, Britain	94.0
3	Johns Hopkins University, United States	91.0
4=	Massachusetts Institute of Technology, United States	91.2
4=	Stanford University, United States	91.0
6	University of Cambridge, Britain	91.0
7	Imperial College London, Britain	89.1
8	University of California, San Francisco, United States	88.6
9	University College London, Britain	88.3
10	Karolinska Institutet, Stockholm, Sweden	88.2

Source: QS World University Rankings

In this, the biggest gain would be if more long-term capital from pension funds found its way to the firms. The government wants those who run defined-contribution pension schemes to invest in unlisted outfits, including life-science companies. In July the chancellor, Jeremy Hunt, said nine large investment funds had agreed to allocate at least 5% of their pension savings in such unlisted firms by 2030, up from 1%. If that came to pass, it would potentially add billions of pounds in funding for such firms.

Steve Bates, chief executive of the BioIndustry Association, calls that a game-changer. He argues that the combined benefits of hurdles coming down at home and others going up elsewhere (such as draft legislation in the EU that could limit the patent life of pharmaceuticals) make Britain look increasingly attractive to those trying to expand in the sector.

Maybe so, but other big challenges will prove much harder to overcome. England remains a small market for pharma companies, accounting for only 2% of global pharmaceutical sales, whereas America makes up nearly 50%. Pharma firms complain about an NHS drug-pricing policy, now being renegotiated, which obliges them, in effect, to accept a discount that is currently worth 26.5% on the value of sales of most branded medicines. Those that produce new tech also grumble that the NHS has been far too slow in adopting their innovations, and changing habits here will not be quick.

The London Stock Exchange looks increasingly moribund. Brexit has not made it easier to manufacture in Britain, whereas exporting to the EU has become more complicated. Britain is a diminishing actor in export markets: its firms account for 4.3% of global pharma exports, with both production volumes and export values dropping over the past decade. Nor has Britain been able to draw hefty levels of foreign direct investment into its life-sciences firms: in 2022 these shrank by nearly half, to £1bn. By contrast Ireland's more than doubled, to £3.7bn.

In one area, British firms do reasonably well: startups find that bigger firms are often keen to buy them. Of the ten British companies with the largest venture rounds in 2018, one has since been bought by an American pharma company, Pfizer, and another by a Swiss one, Roche. Such exits are a boon to founders, some staff and potentially to future patients. They should encourage more new firms to be founded. British buyers may themselves also grow by taking over minnows. But it's not what Mr Sunak has in mind when he talks of creating a superpower in the life-sciences. One measure of success, in future, will be how many businesses can grow up without being forced to sell out. ■

## Bagehot | Beware the hobby lobby

*British politicians muck with hobbyists at their peril*



**H**OBBIES SHAPE a nation. For proof, drive to Bransdale, a grouse-shooting estate on the North York Moors. Providing a home for red grouse, a fast plump bird that is hard to shoot, requires a landscape as artificial as any garden. Controlled burning creates a mix of young and old heather, giving the bird something to eat and somewhere to live respectively; potential predators such as stoats are removed by skilled full-time gamekeepers. It is beautiful, barren and familiar.

Grouse shooting sculpts the British countryside. About 7% of British land is given over to the sport. In Scotland, roughly 15% of the country is grouse moor. At 16,000 acres, Bransdale is the same size as Bradford, England's tenth-biggest city. Considering the 12,500 or so people who do it each year could fit inside the ground of Oxford United, who play in the third tier of English football, it is a remarkable footprint. A niche pastime gives the country's uplands their unique look.

The sport, whose season begins on August 12th, is only the most extreme example of a hobby shaping Britain. Yet the power of hobbyists can be seen in everything from the regulation of polluting cars in London to rows over sewage. Hobbyists are the most powerful yet overlooked force in British politics. Call it the hobby lobby. Its influence is everywhere.

People overstate the power of better-organised and well-funded lobbyists. Capital rarely has its way. Britain's finance sector, which accounts for roughly 10% of tax revenue, had its business model battered by the Conservative government, which left the EU with a deal that offered little for the country's banks. Workers have fared no better. In a supposed age of union militancy, most of them have managed little better than inflation-matching pay rises. Governments grumble about unions, but they do not quake.

By contrast, when hobbyists come calling, governments tremble. Images of raw sewage being pumped into Britain's waterways have hurt the Tories as much as a failing health service or rising taxes. Why? Because wild-swimmers have established themselves as one of Britain's potent hobby lobbies. The Outdoor Swimming Society, which does what it says on the tin, had 300 members in 2006. It now boasts nearly 200,000. Believe it or not, England's waters are in a better state today than in the 1990s. In contrast to

the 1990s, however, a sewage spill today means a retired English teacher from Sussex cannot go for her weekly dip. Woe betide any government who denies her that.

Wild-swimmers are not the first to whip the government to their will. The Campaign for Real Ale (Camra), an association of beer lovers, is probably Britain's most successful hobby lobby. It campaigned for years against the "tie", which forced landlords to buy overpriced beer from the brewers that owned the freehold of their pub. An industry worth £20bn wanted to keep it; the hirsute activists won. The government scrapped it in 2014. Even the Treasury whimpers in the face of Big Hobby. Britain's tax code is littered with exemptions for small-time brewers, to encourage people to turn a brewing hobby into a job.

In a crisis, the wishes of hobbyists come first. During the pandemic, MPs inundated the government with pleading to let garden centres reopen, recalls one baffled adviser. The calls were heeded. An exemption from lockdown followed. Horticulturalists sometimes shape matters of state. Northern Ireland's garden centres provided the emblematic example during Britain's negotiations with the EU over the province. A generation ago, talks in the province involved secret haggling with terrorists; now it involves placating Ulster's rosebush tenders.

Hobbyists are able to secure carve-outs of even controversial policies. London's "ultra-low emission zone" charges polluting cars £12.50 a day to enter the capital, triggering a backlash in the city's car-dependent fringe. Sadiq Khan, the London mayor, stuck with the policy, arguing the controversy was a price worth paying for cleaner air. Classic cars, however, are exempt. White van drivers gripe about their diesel vehicles being hit; someone poolting around Richmond Park in a 60-year-old MG, however, has no such problem. A fight with hobbyists is not worth having.

Taking on hobbyists is painful, after all. Sir Tony Blair regretted two pieces of domestic legislation the most: one was the Freedom of Information Act, which let nosy citizens see what their government was doing; the second was the Hunting Act, which banned fox hunting in England and Wales. "If I'd proposed solving the pension problem by compulsory euthanasia for every fifth pensioner I'd have got less trouble for it," recalled Sir Tony. Explanations for the anger ranged from its cultural footprint to the jobs it guaranteed in rural areas. A more important fact was overlooked: people hunted foxes because they enjoyed it. When the government stopped them, they were furious.

### You will take my hobby from my cold dead hands

Perhaps this explains why grouse shooting has survived so long. Activists loathe the sport. Up to 500,000 birds are killed each season. But neither main party has any plans to ban it. The Royal Society for the Protection of Birds has 1.2m members, but its royal charter forbids it from directly opposing "field sports". People who love watching birds are matched by those who love to shoot them. When two hobbies collide, stalemate can follow.

Politicians fear the hobby lobby. They should learn from it instead. The most influential party in British politics over the past decade was the UK Independence Party, which was always more of a hobby than a project for political power. Leaving the EU was a curious obsession for a few odd men, but they got their wish in the end. Politics has professionalised in the past few decades. Yet skilled operators in the Labour and the Conservatives were no match for a bunch of dedicated amateurs. In British politics, the hobbyist will always have his way. ■



### Global values

## Thinking for themselves

**People's principles were expected to align as countries got richer. What happened?**

**I**N 1981 OVER 40% of the world's population lived in extreme poverty. But economic growth was starting to accelerate in developing countries. And Ron Inglehart, a professor at the University of Michigan, was organising a worldwide survey team to test the theory that, as peasant farmers escape poverty, they begin to think and behave differently, as people in the past had done when they joined the middle classes.

They might give a higher priority to education, to widening their children's knowledge, than their own parents had done. They might give greater weight to their own experience and reasoning, and less to religious books or royal authority. And perhaps these new ways, these basic values, would start to converge around the world. Such matters, Inglehart thought, could be tested by asking questions which revealed underlying values such as "How important is religion in your life?", "Would you be happy living next to a foreigner?" and "Can you trust most people?"

Forty years later, only 8% of the world's population is still in extreme poverty; more than half, on some measures, count

as middle class. The World Values Survey (wvs), Inglehart's baby, has become the world's biggest social-research network. Every five years or so its researchers sally out into the field interviewing, at last count, almost 130,000 people in 90 countries. Yet its latest wave of results, which covers 2017-22, provides only partial endorsement of the idea that basic values tend to converge as people get richer. In significant ways, the differences between how people think in different parts of the world seem to be widening.

Inglehart (who died in 2021) argued that security—or, to be precise, insecurity—is at the root of how people think and what they value. In an insecure world in which children or crops can be wiped out by disease or drought overnight, family is often the only defence against disaster, while church, mosque or temple are the main providers of consolation or explanation. But as wealth spreads, basic insecurity recedes. In a more stable environment, people may think more for themselves.

Inglehart thought this process occurred in two slightly different forms. He invent-

ed ways to measure each (see charts on the next page). The first assesses the influence of customary sources of authority, such as family and religion. At one end of this spectrum lies respect for tradition. At the other, secular beliefs and more scientific thinking. He called this the "tradition-secular" axis. Your position on it depends on answers to questions such as "Do you believe in God?" and "How important is obedience in children?"

The second measure assesses people's attachment to an in-group. At one end lies close association with an ethnicity, nation or race; there is a sharp division between "us" and "them". At the other, greater individualism and thinking for yourself. This is based on questions such as "Can you trust most people?" or "Would you ever sign a petition?" This is a kind of political-tribalism index, though the researchers are too polite to call it that. Together these indices create a map of global values.

### Mapping differences

Neighbouring populations loosely cluster together: Europeans in one area, Latin Americans in another, Islamic countries in a third, etc. And values tend not to change quickly. As Pippa Norris, one of Inglehart's co-authors, says, "If they do, they are opinions, not values." But in recent decades there has been a substantial shift—and an extraordinary one. Orthodox countries have become more traditional and so have shifted downwards on the map. Latin American ones have become less so and ➤

- ▶ have moved up towards more secular values. In the past English-speaking countries were clearly distinct from Protestant Europeans (with stronger religious affiliations) but the two groups have since become much harder to distinguish.

Take the map from the survey wave ending in 1998. In some ways it looks similar to today's. In both, Protestant Europeans are the most secular and individualistic. Catholic Europeans hold similar views, though less strongly. In Islamic and African countries, religion and family hold sway. What the wvs calls "Confucian" countries, including China, Japan and South Korea, are a mixture. They hold secular values as strongly as Europeans; when responding to assertions such as "Where religion and science conflict, religion is always right", they are even less likely to agree than Germans or Dutch. But they are nothing like as tolerant as those nations towards gay people and other minorities.

Two decades ago a group of countries combined religious conviction with support for individualism and self-expression, that is, a sort of hybrid of traditional and modern values. They included America, Ireland and some Latin American countries, such as Venezuela. This amalgam put them at the bottom-right corner. Many Orthodox countries (such as Russia and Romania) showed the inverse: weak religious values but strong "tribal", or collective, ones. They were irreligious ethno-nationalists, clustered in the top left.

## Alone in a crowd

If you look at the map of 1998, you will see countries scattered across all four quadrants. In the map of 2023, by contrast, most are in just two. The outliers of bottom right and top left are fewer. Most countries are now aligned along a diagonal that starts in the bottom left, with strong traditional and collective values, and rises towards the top right, with more secular values and individualism. In 2023 there is a clear “best fit” line. In 1998, there was not.

On the face of it, this shift suggests that people do think differently as they escape from poverty and insecurity. The diagonal line implies that countries are either traditional-cum-collective or they are rational-cum-individualistic. The poorest countries are (mostly) at one end and the richest are (mostly) at the other. Eventually, presumably, poorer countries will shuffle along the diagonal.

Perhaps. But at the moment, the wws findings suggest this is not happening without obstacles and detours. If poorer countries were indeed converging with rich ones in terms of values, you would expect that they would be the ones where values are changing fastest, whereas the countries they are catching up with would be more stable. In fact the survey finds the

opposite. Countries that are already the most secular and individualistic are changing fastest and becoming even more secular; those that are most traditional and clannish are changing less and sometimes becoming more traditional, not less.

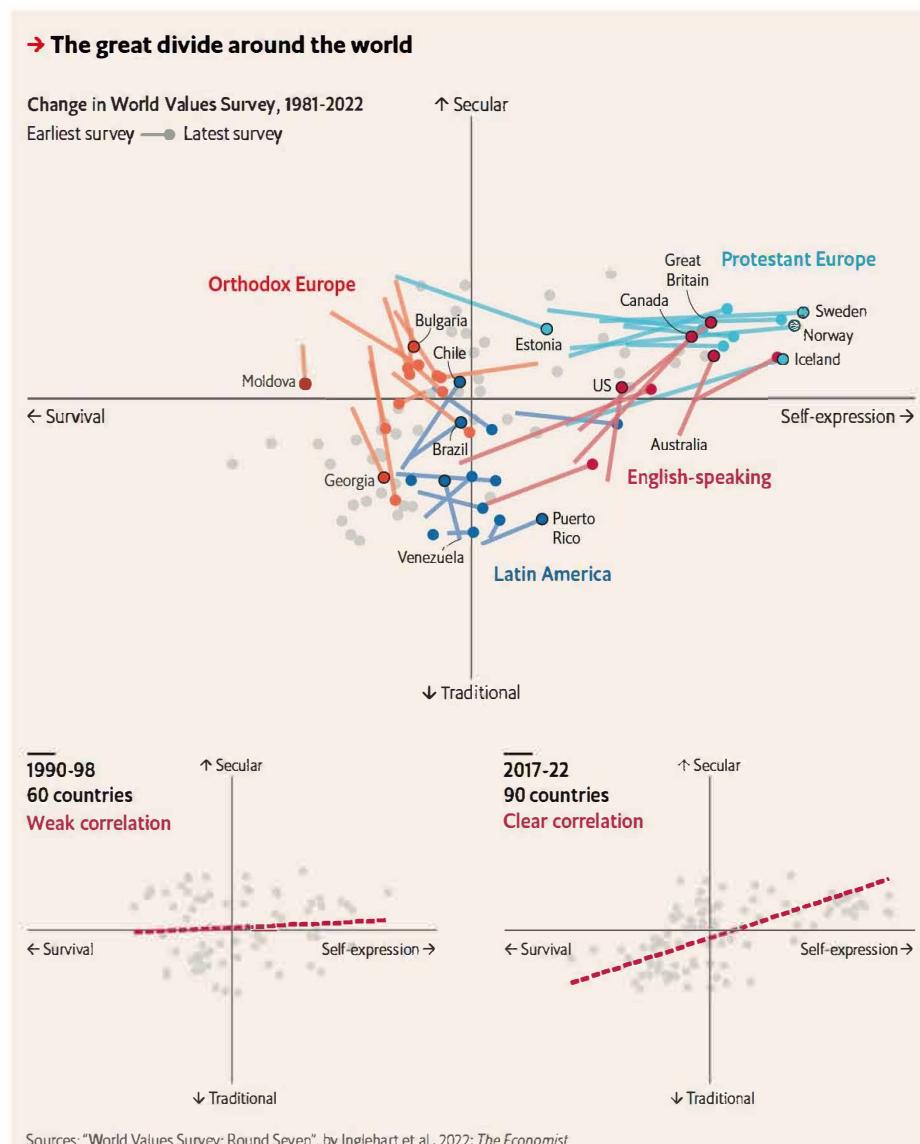
In 1998, 38% of Protestant Europeans and 32% of Muslims said most people could be trusted. By 2022 trust in Europe had risen (with more than half of Europeans saying that they trusted people) but it had plummeted in Islamic countries, where just 15% of respondents said people are trustworthy. In 1998 Catholic Europeans and Latin Americans also had comparable levels of trust. By 2022, the proportion of Catholic Europeans who said they trusted people was three times higher than that of Latin Americans.

Just as mistrust of strangers is a measure of collective values, so is unwillingness to sign petitions. This is because clanish societies tend not to believe that governing authorities will act in their interests, and for fear of reprisals. In 2022

nearly half of respondents in Latin American and Orthodox countries said they would never sign a petition. That marked a big increase in Latin America since 1998, and a small one in the Orthodox places. In contrast, the number of Europeans who said they would never sign a petition fell markedly, to levels roughly half those in most of the rest of the world.

On measure after measure—from thinking that children ought to be obedient, to tolerance of homosexuality, to agreeing that “When religion and science conflict, religion is always right”—European countries have moved in the direction of greater individualism and secularism in the past 25 years. That is also true of America. Though Americans have long been somewhat more religious than most Europeans, over time they have moved towards greater individualism and secularism at least as much as Europeans have.

In 1981, for example, 47% of Americans described themselves as non-religious (saying God was not important in their lives).



► lives, that they did not attend church services and so on). The share in Sweden was 58%. By 2022 the share in America had risen by 14 points, almost matching Sweden's. Meanwhile, Orthodox, Islamic and Latin American countries have seen either smaller changes or, in some cases, movement towards more traditionalism and collectivism. That does not necessarily invalidate the idea that global values will one day converge. But it does suggest that day may be some way off.

### Looking at the gap

The findings raise three further questions. First, how long can this gap continue to widen? In particular, can Europeans and Americans really go on getting ever more individualistic and secular? "People keep asking me if there is a limit," says Christian Welzel, a professor at Leuphana University in Lüneburg, in Germany, and another of Inglehart's co-authors. "But I haven't seen any sign yet." Dr Welzel has trawled through the wvs data by age cohort. He finds that in every region each generation becomes more individualistic and secular than the one before.

In Europe, the gap between old and young is especially large, and many times greater than in Islamic or Orthodox countries. This implies that the shift towards more self-expression will continue in the next generation. In America there is a values gap between the more religious and more secular parts of the country, which could in theory imply that the religious areas (in the South and Midwest) might not be taking part in the drift towards secularism. Yet even this seems wrong. The gap between the most and least religious states has not changed materially since 1981. Whatever it is that is causing America's unusually polarised politics, it is not—the wvs suggests—a result of a fundamental shift in what people believe in different parts of the country.

Second, what are the political and geopolitical implications? At a broad level, values and politics are obviously and intimately connected. Traditional values seem to be more associated with autocracies; one-person-one-vote systems embody individualistic values. It can be no coincidence that during the past decade authoritarian populists have done especially well in two of the regions where the slowdown or reversal of secular-rational values has occurred: Orthodox countries (such as Russia and Belarus) and Latin America.

In Orthodox, Latin American and Islamic countries support for democracy also plummeted, as measured by the share of the population saying they thought it was good or fairly good to have a strong leader who does not have to bother with parliament or elections. In all three regions the share saying they thought this rose by be-

tween one-third and two-thirds between 1998 and 2022. That hardly bodes well for the future of democracy.

Even so, there is no simple relationship between values and politics, as the example of American religious voters suggests. The persistence of the devout and traditionalist right in Europe and America is clearly connected with discontent at spreading individualism in those places. But it is not so clear whether voters have changed and organised themselves into more powerful far-right parties, or whether the parties have simply managed more successfully than in the past to sell their politics to voters who have not changed that much themselves.

A similar point can be made about values and geopolitics. International conflicts over values seem to be spreading. Barely a day goes by without clashes between Western and non-Western governments over LGBT+ rights. After President Joe Biden criticised Uganda's introduction of a harsh anti-gay law earlier this year Anita Among, the Ugandan parliament's speaker, said, "The Western world will not come to rule Uganda." And when Recep Tayyip Erdogan, Turkey's president, threatened to block Sweden's application to join NATO because a man in Sweden had burned pages from the Koran, he was appealing to Turks' strong religious convictions. But to many individualistic Swedes the book-burner had every right to free expression, as long as he obeyed the law.

Disagreements about values also pervade the superpower rivalry between America and China. Chinese leaders complain endlessly that there are no such things as "the so-called universal values of the West" (as Xi Jinping, China's president, puts it). They say that appeals by the American government to such values are a mere smokescreen for a new kind of imperial-

ism. Dilma Rousseff, a former president of Brazil, calls Western liberalism "this imposed value system".

Even so, many of these conflicts would surely have happened regardless of differences over values. China would have challenged America for strategic and technological reasons. Turkey might have blocked Sweden to extract concessions from NATO. Vladimir Putin, Russia's president, claims to have invaded Ukraine because that country, once an integral part of the Orthodox world, is imbibing European habits of thought which (Mr Putin thinks) threaten Russia. But Mr Putin had many reasons for his fateful decision, paranoid as well as calculated. The point is not that differences in values are artificial. But they may not be determinative. To authoritarian governments, "values" are an excuse as well as a set of beliefs.

Third, what does all this mean for arguments about "universal values"? The wvs implies that secular and liberal values are no more universal than religious and authoritarian ones. The two sets of values sit at opposite ends of the same spectrum of opinion; both are ways in which people adapt to their circumstances, whether secure or insecure. In that sense Mr Xi and others who share his views have a point: such values are not universal. But they are not entirely conditional upon a country's history or political culture.

### Come together

As a rule of thumb, as prosperity spreads, life expectancy rises, fertility rates fall, and education expands, people tend to move towards the secular/rational end of the spectrum. Mr Welzel describes this as a shift in mindset from "prevention focus" (in which people's main concern is preventing harm and loss to themselves and their family) to what he calls "promotion focus" (under which people seek self-expression and freedom of choice about how to live their lives).

The wvs, however, finds that the speed at which this shift happens varies greatly across different countries. In some places it even goes into reverse. Different generations adjust more or less readily. Governments intervene to slow things down if it suits them. Getting wealthier is not necessarily enough to trigger the shift in values, because countries that are getting richer can often feel less secure.

For all these reasons, traditional ways of thinking persist and the convergence of values widely expected to accompany economic growth is far from complete. Yet the impact of greater security on people's values does not go away. Slowly, unsurely, religious and authoritarian values tend to lose some of their appeal; secular and liberal values tend to gain. And the battle over values plays out between the two poles. ■



## American business

# The view beyond the Valley

### Most parts of the non-AI economy are doing surprisingly well

TEN MONTHS ago the spectre of recession haunted corporate America. Inflation was rampant, profits were depressed and the Federal Reserve was tightening the screws. Instead, inflation has moderated, the jobs market remains tight and recession is no longer a certainty. The prospect of an elusive “soft landing” has combined with hype over the productivity-boosting promise of artificial intelligence (AI) to give investors a fillip. This year the S&P 500 index of big firms is up by nearly a fifth.

Markets are especially bullish about a few large technology companies and carmakers. These are among the S&P 500's most AI-obsessed members, according to our early-adopters index (which takes into account factors such as AI-related patents, investments and hiring, see chart 1 on next page). They have done well in the here and now, too: all reported respectable second-quarter results in the latest earnings season, which wraps up soon. But what about the health of the broad swathes of the

American economy that are less affected by all the tech hype? Here the picture is more complex, but ultimately reassuring.

Start with the bad news. Some of the businesses least prepared for an AI future are suffering in the present. Health-care companies look sickly: UBS, a bank, estimates that their profits slumped by nearly 30% compared with last year (see chart 2). CVS Health, a chain of chemists (ranked 218th in our AI index), is slashing 5,000 jobs after its earnings sank by 37%. Energy firms made half as much money in the sec-

ond quarter of 2023 as they did a year earlier, when Russia invaded Ukraine, pushing up oil and gas prices. With other commodity prices also down, in part owing to weak demand from a sluggishly growing China, materials firms' profits fell by 30%.

As a result, overall earnings for S&P 500 firms are estimated to have slid by 5% in the second quarter, year on year, reckons FactSet, a data provider. That is the biggest decline since early in the pandemic.

Yet the pain has been concentrated in a handful of sectors. Dig deeper, and much of the non-AI economy looks surprisingly robust. Capital-goods manufacturers, such as Caterpillar and Raytheon (which come in at 204th and 340th in our ranking), are reckoned to have collectively increased their revenues by more than 8% in the second quarter, and their profits by twice as much—perhaps thanks in part to President Joe Biden's taste for industrial policy. Even the oil-and-gas giants are doing better than the headline numbers suggest. The largest of them, ExxonMobil (ranked 236th), made nearly \$8bn in net profit—down by 56% year on year but, bar that record-breaking result in 2022, still its highest second-quarter figure in nearly a decade.

The resilience is perhaps most obvious for businesses with fortunes tied to the condition of the American consumer, who remains in rude health. Peddlars of staples, such as foodstuffs and household goods,

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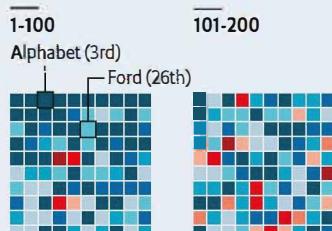
**56 Schumpeter: How green is your EV?**

## Artificial colouring

S&P 500 companies, by rank in the AI-early-adopters index\*, 2023

Sector (highest to lowest average rank):

IT and communication services	Financials	Health care	Consumer discretionary
Industrials	Consumer staples	Materials	Energy and utilities
			Real estate



101-200

201-300

301-400

401-500

Source: The Economist

\*Based on factors including AI-related investments, patents and hiring

▶ saw their profits rise by 5% year on year, according to UBS. For purveyors of non-staple consumer goods, earnings shot up by 40%. On August 1st Starbucks, a coffee-shop colossus (ranked 116th in our AI index), reported a quarterly operating profit of \$1.6bn, up by 22%. The next day Kraft Heinz, a seller of ketchup and baked beans (ranked 253rd), said it made \$1.4bn in operating profit, two and a half times what it did a year ago.

Consumer-goods firms have held on to pricing power. Confectioners, for example, are charging 11% more for chocolates than they did last year, according to the Bureau of Labour Statistics. Hershey (331st) has offset the rising cost of cocoa—and then some. Its operating profit rose by 23%, to \$561m. PepsiCo (245th) lifted prices of its soft drinks and snacks by 15% in the second quarter alone. Its operating profit bubbled up by three-quarters, to \$3.7bn. It now expects to increase sales by 10% and net profit by 12% this year, up from an earlier forecast of 8% and 9%, respectively.

Americans aren't just spending on sweets and cola. Air travel is recovering

rapidly, particularly for international trips. American Airlines (266th in our AI index), Delta Air Lines (193rd) and United Airlines (183rd) collectively reported net profits of \$4.2bn last quarter, the most since 2015. Hotels are inundated with leisure and business travellers. Hilton (a chain ranked a lowly 420th) said that its revenue per available room, a preferred industry measure, was up by 12%, year on year.

How long can the bonanza last? Shoppers are gradually drawing down the savings they accumulated during the pandemic, when they received stimulus cheques from the government but lacked ways to spend them. Between August 2021 and May this year, households spent over \$1.5trn of these savings, according to the Federal Reserve Bank of San Francisco.

At that rate they will burn through the \$500bn or so they still have before the end of the year. Although unemployment remains near historic lows, at 3.5% in July, wage growth has slowed. The resumption of student-loan repayments in October, after the Supreme Court struck down Mr Biden's plan to cancel some student debts altogether, could see consumer spending fall by as much as \$9bn a month, according to Oxford Economics, a consultancy.

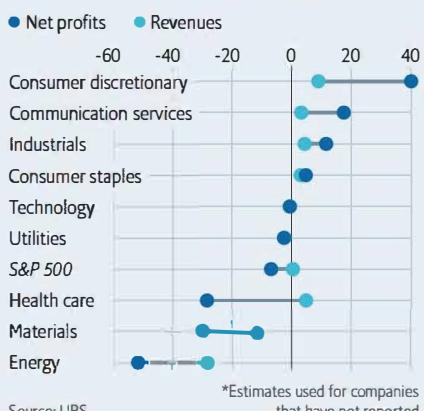
If rising interest rates eventually curb demand, firms will find it harder to continue raising prices, leaving margins more vulnerable. Higher rates will also knock businesses with weak balance-sheets. In the first half of this year 340 companies covered by S&P Global, a credit-rating agency, declared bankruptcy, the highest number since 2010. More could suffer a similar fate, especially if a recession does hit.

That eventuality is not completely out of the question. Goldman Sachs, a bank, thinks there is a 20% chance of a recession in America in the next 12 months. Citigroup, another lender, expects a downturn at the start of 2024. If that happens, not even the AI-friendliest firms will emerge completely unscathed. ■

## I don't need no machine learning

S&P 500 index, Q2 2023

Selected sectors, % change on previous year\*



\*Estimates used for companies that have not reported

Source: UBS

## The delivery business

# Logistic nightmares

## A boom in transporting goods fizzles out

ON AUGUST 6TH Yellow, one of America's biggest trucking firms, declared bankruptcy and announced it would wind down operations after 99 years in business. It collapsed under the weight of falling sales and a mountain of debt. That is a heavy blow for its owners and 30,000 staff. It is also emblematic of a sharp reversal taking place in the American logistics industry.

Beginning in 2020 lavish stimulus cheques, combined with a lockdown-induced squeeze on services spending, led American consumers to splurge on goods. Appliances, cars and furniture clogged up ports, warehouses and truck depots. Online deliveries surged as shoppers shunned stores, adding to demand. As consumers groaned over lengthy delays, revenues in the logistics industry soared, increasing by roughly a third between the start of 2020 and mid-2022, according to America's Census Bureau. Firms in the industry hired 1m workers and built 1.8bn square feet (nearly three Manhattans) of new storage space on hopes that the frothiness would continue.

Now, as the forces that fuelled its rise fizzle out, America's logistics boom is turning to bust. Consumers are trading the material for the experiential, opting to splash out on holidays and hospitality rather than Hoovers. Goods spending, adjusted for inflation, has stagnated, leaving retailers with excess inventories. Consumers are also returning to physical stores, reducing the number of miles their goodies need to travel to reach them. Revenues in the logistics industry have now clocked up three consecutive quarter-on-quarter declines (see chart). The Cass Freight Index, a

## I don't like trucking

United States, logistics services  
Quarterly revenues, \$bn



Source: US Census Bureau

► measure of rail and truck activity, is down by 5% over the past year. The volume of goods flowing through American ports in July was 14% lower than in the same month last year, according to Descartes, a supply-chain-technology company.

As demand has slumped, so, too, have prices. The cost of "dry van" shipping—the most common way to transport non-perishable goods on the road—is 21% lower than in early 2022, according to DAT Freight & Analytics, a logistics-data provider. That, in turn, is squeezing margins and putting less competitive firms out of business. Some 20,000 truck operators, nearly 3% of the national total, have ceased activity since mid-2022, says ACT Research, another data provider.

Those that have survived are shedding staff. American parcel-delivery firms have jettisoned 38,700 workers since October last year when employment in the sector peaked, based on data from the Bureau of Labour Statistics. Warehouse operators have cut 60,800. More retrenchments are likely to come, given the frenzied hiring of the past few years. Lay-offs in the industry have thus far fallen short of what one might expect given the stagnation in consumer spending, argues Aaron Terrazas, chief economist of Glassdoor, an employment portal. Having long suffered from labour shortages, many firms have been reluctant to lay off workers, reckons Tim Denoyer of ACT Research.

Investments are being slashed, too. The number of warehouses under construction in America has fallen by 40% from a year ago, observes Prologis, a warehousing giant. Amazon, America's biggest online retailer, doubled its warehouse footprint in the country during the pandemic. In the past year the e-empire has either postponed investments in, scrapped plans for or closed 116 properties, reckons MWPVL, a logistics consultancy.

Troubles with unions are adding to the industry's headache. Earlier this year dock-workers at several west-coast ports went on strikes linked to pay negotiations. UPS and FedEx, America's two largest parcel-delivery businesses, have also faced unrest. Yellow's management blames its collapse on the Teamsters union, which blocked a restructuring plan.

Optimists hope the sector will start moving again in the second half of the year, once retailers finish clearing their excess inventories and start restocking their shelves. Analysts expect UPS, whose revenues have shrunk year on year for the past three quarters, to return to growth before the end of 2023. FedEx is expected to be growing again by next year. That may well come to pass, provided the American economy continues to be surprisingly strong. But it will be cold comfort for the businesses that will have gone bust along the way. ■



## Semiconductors

# Let the chips rise where they may

## How real is America's chipmaking renaissance?

**A**MERICAN CHIPMAKERS account for a third of global semiconductor sales. They design the world's most sophisticated microprocessors, which power smartphones, data centres and, increasingly, artificial-intelligence (AI) models. But neither the American firms nor their Asian contract manufacturers make any such leading-edge chips in America. Given chips' centrality to modern economies—and, in the age of AI, to war-fighting—that worries policymakers in Washington. Their answer was the CHIPS Act, a \$50bn package of subsidies, tax credits and other sweeteners to bring advanced chipmaking back to America, which President Joe Biden signed into law on August 9th 2022.

On the surface, the law appears to be having an impact. Since 2020, when it was first floated, chipmakers have announced more than \$200bn-worth of investments in America. If all goes to plan, by 2025 American chip factories (fabs, in the lingo) will be churning out 18% of the world's leading-edge chips (see chart 1). TSMC, a Taiwanese manufacturing behemoth, is splurging \$40bn on two fabs in Arizona. Samsung of South Korea is investing \$17bn in Texas. Intel, America's chipmaking champion, will spend \$40bn on four fabs in Arizona and Ohio. As the CHIPS Act celebrates its first birthday, and as the administration prepares to start doling out the money, both Democrats and Republicans, ►

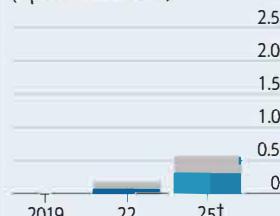
## Leading on the edge

Microprocessor-production volume

By location of production, wafers\* per month, m

■ Taiwan ■ United States ■ China ■ Rest of world

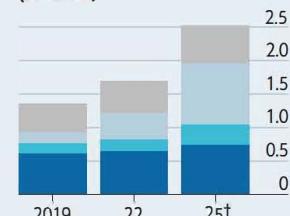
Leading-edge  
(Up to 3 nanometres)



Advanced  
(4-18nm)



Trailing-edge  
(20-65nm)



Source: SEMI

\*300-millimetre equivalents; excludes memory, optical chips and micro-electromechanical systems †Forecast

► who agree on little else these days, regard it as a bipartisan triumph.

Any triumphalism may, however, be premature. Leading-edge fabs being built in America are slower to erect, costlier to run and smaller than those in Asia. Complicating matters further, the chipmakers' American investment binge comes at a time when demand for their wares appears to be cooling, at least in the short term. That could have consequences for the industry's long-term profitability.

The Centre for Security and Emerging Technology, a think-tank, estimates that in China and Taiwan companies put up a new plant in about 650 days. In America, manufacturers must navigate a thicket of federal, state and local-government regulations, stretching average construction time to 900 days. Construction, which makes up around half of the capital spending on a new fab, can cost 40% more in America than it does in Asia.

Some of that extra cost can be defrayed by the CHIPS Act's handouts. However, that still leaves annual operating expenses, which are 30% higher in America than in Asia, in part owing to higher wages for American workers. If those workers can be found at all: in July TSMC delayed the launch of its first fab in Arizona by a year, to 2025, because it could not find enough staff with semiconductor industry experience (see United States section).

The planned American projects' smallish size further undermines the economics. The more chips a fab makes, the lower the unit cost. In Arizona, TSMC plans to make 50,000 wafers a month—equivalent to two "mega-fabs", as the company calls them. Back home in Taiwan, TSMC operates four "giga-fabs", each producing at least 100,000 wafers a month (in addition to numerous mega-fabs). Morris Chang, TSMC's founder, has warned that chips made in America will be more expensive.

C.C. Wei, the current chief executive of TSMC, has hinted that the company will absorb these higher costs. He can afford to do this because TSMC will continue to make

the lion's share of its chips more cheaply at home, not in America. The same is true of Samsung, which will spend nearly 90% of its capital budget in South Korea. Even Intel is investing as much in foreign fabs as in American ones (see chart 2). As a result, if all the planned investments materialise, America will produce enough cutting-edge chips to meet only about a third of domestic demand. Apple will keep sourcing high-end processors for its iPhones from Taiwan. So, in all likelihood, will America's nascent AI-industrial complex.

The law may have unintended consequences, too. Chip firms that accept state aid are barred from expanding fab capacity in China. This may put firms like TSMC and Samsung, which have plenty of Chinese customers, off investing more in American fabs. It is also leading Chinese chipmakers to invest in producing less fancy semiconductors. The hope is that lots of older-generation chips can do at least some of what fewer fancier ones are capable of.

According to SEMI, an industry group, in 2019 China made a fifth of "trailing-edge" chips, which go into everything from washing machines to cars and aircraft. By 2025 it will produce more than a third. In July NXP Semiconductor, a Dutch maker of trailing-edge chips, warned that excess supply from China is putting downward pressure on prices. In the long run, this could hurt high-cost Western producers—or even drive some of them out of business. In July Gina Raimondo, America's commerce secretary, acknowledged that China's focus on the trailing edge "is a problem that we need to be thinking about".

Hardest to predict is the CHIPS Act's effect on the semiconductor industry's notorious boom-and-bust cycle. Usually chipmakers would be boosting capacity at a time of rising demand. Right now the opposite is true. Pandemic-era chip shortages have been replaced by a glut, now that consumers' insatiable appetite for all things digital seems, after all, to be sated. TSMC's sales declined by 10% in the second quarter, year on year, and the firm now expects

a similar drop for the whole of 2023. Intel's revenue was down by 15% in the same period. Samsung blamed a chips glut for its falling revenues and profits.

Chip executives point out that prospects for their industry remain rosy. They are probably right that demand is bound to revive at some point. Yet "inventory adjustments" (reducing oversupply, in plain English) are taking longer than expected. And when inventories finally adjust, the business that emerges may be less lucrative. Since early 2021 Intel, Samsung and TSMC have lost a third of their combined market value, or nearly half a trillion dollars. A few more anniversaries may be needed before the CHIPS Act's impact on American economic security can be properly evaluated. Investors are already making up their minds. ■

### Ride-hailing

## Not-so-super pumped

### Can Uber and Lyft ever make real money?

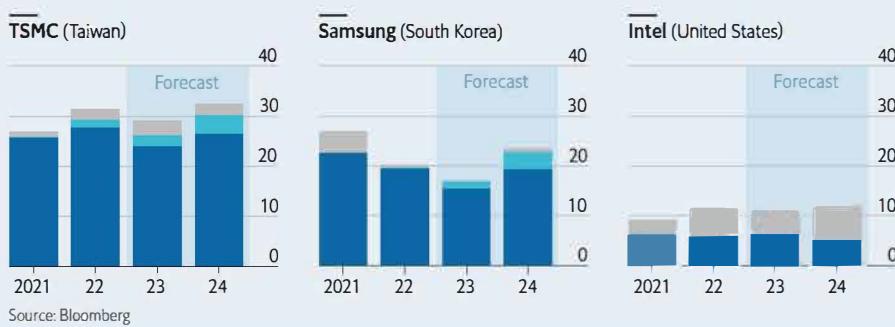
IT HAS BEEN a bumpy journey for investors in Uber, the world's biggest ride-hailing company, since it was listed in 2019. In its first six months as a public company Uber's share price plunged by a quarter as doubts swirled over whether the perennial lossmaker would ever turn a profit. Thereafter it has seesawed, soaring amid the pandemic-era craze for tech stocks, then diving back down as rising interest rates spoiled investors' appetite for businesses reliant on cheap funding.

Since its nadir in July last year signs of greater financial discipline have pushed the price of Uber's shares back to where they first traded in 2019. Costs have come down; fares are up. This month the company reported an operating profit of \$326m for the second quarter of the year, its first time in the black. Uber's glee was heightened on August 8th when Lyft, its domestic arch-rival, reported yet another operating loss, of \$159m. Lyft's market value remains in the doldrums, down by 85% from the level at which its shares began trading publicly in 2019, six weeks before Uber's.

Still, for Uber, breaking even is a low bar for success. Even adding in the latest profit, the company has clocked up \$31bn of net losses since its first available results in 2014. Investors now have \$21bn of invested capital tied up in the company. Annualising its most recent quarterly operating profit implies a return on that capital of roughly 5% after tax. That is less than half the company's current cost of capital, sug-

### Add fab

Semiconductor manufacturers, construction and equipment costs, \$bn



Source: Bloomberg

▶gesting that investors' money could be more fruitfully deployed elsewhere.

The hope, of course, is that Uber's profits, having broken above ground, will now soar into the stratosphere. Hold your horses. In the past five years over 60% of the firm's revenue growth has come from businesses other than ride-hailing. Most important has been food delivery, which surged during the pandemic. Uber's profit margin—before interest, tax, depreciation and amortisation—when ferrying meals is less than half that when ferrying people.

Uber promises that the business will

continue becoming more lucrative as it matures. Yet margins for DoorDash, which generates nearly three times Uber's food-delivery sales in America, are barely better. In freight, Uber's third line of business, the company is losing money as it fights for space in a crowded industry in the throes of a downturn (see earlier article).

A further concern is Uber's focus on expansion beyond America, where it is now scarcely growing. Although it does not split out profits by geography, its margins are probably best in America, where it captures nearly three-quarters of sales in the

ride-hailing market. Elsewhere, it faces stiff competition from local rivals: Bolt and FREENOW in Europe, Gojek and Grab in South-East Asia, and Ola in India. That will keep a tight lid on margins.

Investors' bet on Uber was predicated on the idea that ride-hailing is a winner-takes-all business. That justified torching billions of dollars in a race for market share, which Uber is, seeing Lyft's woes, indeed winning—at least at home. Whether taking it all turns Uber into the colossal cash machine investors once hoped for is another question. ■

## Bartleby Back in the air

*What not to do when you are flying for business*

THE COVID-19 pandemic has, thanks to Zoom, killed off many work trips. But not all of them. Some in-person meetings far afield are coming back. And so is business flying. Plenty of obvious edicts of air-travel etiquette are effortlessly acquired, along with air miles, merely by flying frequently. As a sophisticated traveller, you probably know the drill by heart. Still, air-rage incidents are up markedly compared with pre-pandemic times—by 50% in America and a whopping 200% in Britain. Some people could do with a refresher.

Many rules of aeroplane decorum apply to all travel. But as a business traveller, you represent not just yourself but also your employer, whose logo you may well be sporting on your jacket or laptop bag. So hewing to them is critical. They begin to apply before you board the aircraft. Arrive at the gate early and in style—do not run for your life only to be panting embarrassingly or even worse, hold the plane and make 200 people wait impatiently while you browse gadgets at Duty Free. Queue-cutters and pushers have their own place in hell.

Once on board, remember the basics. Do not keep your headphones on when spoken to, make a fuss when you are told that the chicken tikka is finished or, heaven forbid, perform any personal grooming in public. Bare feet on the seat or bulkhead are a no-no. Aggressive typing on your laptop is, too. Manspread-ing and “galley yoga” in the flight attendants’ work area are to be avoided.

Be wary of booze. Alcohol's effects are more pronounced 30,000 feet above ground, even in a pressurised cabin, because of lower oxygen levels. If you tend to feel nauseous when cabin pressure changes during take-off and landing, avoid the vodka during the flight.

Unruly, entitled passengers tend to be boozing passengers—and vice versa. You don't want to become a TikTok sensation, and nor does your employer. Cabin crew, trained to be courteous and professional, should be matched in tone.

Economy class is the trickiest. As airlines are packing more seats on planes in coach, legroom is scarce and your own meal tray encroaches on your space. This does not excuse putting your feet up on tray tables, slamming back your seat when you recline or handing the flight attendants rubbish while they are distributing food. Overhead bins are meant to be shared. So are armrests. You have no control over who sits next to you but you have agency. If you find yourself elbow to elbow with Chatty Cathy, it is alright to say “excuse me” and slip on your noise-cancelling headphones.

You should probably avoid working on anything remotely sensitive. As your company's chief of security no doubt regularly reminds you, some people are nosy. Even those who aren't may inadvertently sneak a peek at your spread-

sheet. Take the time to think about strategy or read that management book you have been meaning to for months.

Corporate dress codes may have relaxed but opt for transatlantic athleisure only if you have time to change before heading to your meeting after you land. Boarding the red-eye in pyjama bottoms is not OK. Elasticated waistbands are acceptable. Yoga pants and flip-flops are not; they clash with the spirit of work—especially if colleagues and clients might be on the same flight. And you never know whom you might run into at the luggage carousel.

For those lucky enough to work for firms with fat travel budgets, business class helps attenuate these problems. You can work more freely and never need to kick the seat in front of you to let the passenger in the row ahead know they are reclining too comfortably (which, incidentally, you should not do in economy either). Even so, remember you are not alone. Do not violate other passengers' personal space with your body, voice (just because you are a senior vice-president at Goldman Sachs does not mean others want to listen to your phone conversation while you board) or odour (splash on your hypnotic sandalwood cologne in moderation).

Most of these challenges are eliminated if you fly first class. You get a personal suite, à la carte dining, vintage champagne and, on some flights, doorstep baggage pick-up, check-in and drop-off by airline employees (though even that probably doesn't excuse flip-flops). Or so this guest Bartleby is told. When she suggested corroborating it herself for the purposes of research, her request was regrettably denied. You will have to work this part out on your own. Fasten your seatbelt, and enjoy the flight.



## Schumpeter | The EV obesity epidemic

*The supersizing trend is unsustainable, unsafe and eventually will become unprofitable*



YOUR COLUMNIST has just had the bittersweet pleasure of driving along America's Pacific coast, wind blowing through what is left of his hair, in a new Fisker Ocean electric suv. Sweet, because he was in "California mode"—a neat feature that with the touch of a button lowers all windows, including the back windscreen, pulls back the solar-panelled roof, and turns the car into the next best thing to an all-electric convertible. Bitter, because once he had returned the trial vehicle, he had to drive home in his Kia Niro ev, which is smaller, shorter range and has no open roof—call it "rainy Britain mode". The consolation was that it is about a tonne lighter, and if you drive an ev, as Schumpeter does, to virtue-signal your low-carbon street cred, being featherweight rather than heavyweight should count.

Except it doesn't. Just look at the future line-up that Fisker, an ev startup, unveiled on August 3rd. It included: a souped-up, off-road version of the Ocean, which Henrik Fisker, the carmaker's Danish co-founder, said would be suitable for a monster-truck rally; a "supercar" with a 1,000km (600-mile) range, and a pickup truck straight out of "Yellowstone"—complete with cowboy-hat holder. Granted, there was also an affordable six-seater called Pear. But though Fisker says sustainability is one of its founding principles, it is indulging in a trait almost universal among car firms: building bigger, burlier cars, even when they are electric.

There are two reasons for this. The first is profit. As with conventional cars, bigger evs generate higher margins. The second is consumer preference. For decades, drivers have been opting for suvs and pickup trucks rather than smaller cars, and this now applies to battery-charged ones. Ev drivers, who fret about the availability of charging infrastructure, want more range, hence bigger batteries. BNEF, a consultancy, says the result is that average battery sizes increased by 10% a year globally from 2018 to 2022. That may help make for a more reassuring ride. But eventually the supersizing trend will prove to be unsustainable and unsafe.

Already it is verging on the ludicrous. General Motors' Hummer ev weighs in at over 4,000kg, nearly a Kia Niro more than its non-electric counterpart. Its battery alone is as heavy as a Honda Civic. General Motors also recently unveiled a 3,800kg Chevrolet Silverado electric pickup, which can tow a tractor and has a range

of up to 720km. This year Tesla plans to start production of its electric "Cybertruck", described by Elon Musk, its boss, as a "badass, futuristic armoured personnel carrier". Such muscle trucks may be the price to pay to convince hidebound pickup drivers to go electric. Yet size matters to suburbanites, too. The International Energy Agency, an official forecaster, calculates that last year more than half the electric cars sold around the world were suvs.

For now, carmakers can argue that however big the electric rigs, they have a positive impact on the planet. Though manufacturing evs—including sourcing the metals and minerals that go into them—generates more greenhouse gases than a conventional car, they quickly compensate for that through the absence of tailpipe emissions. Lucien Mathieu of Transport and Environment, a European NGO, says that even the biggest evs have lower lifetime carbon emissions than the average conventional car. That is true even in places with plenty of coal-fired electricity, such as China.

But in the long run the trend for bigger batteries may backfire, for economic and environmental reasons. First, the bigger the battery, the more pressure there will be on the supply chain. If battery sizes increase there are likely to be looming scarcities of lithium and nickel. That will push up the cost of lithium-ion batteries, undermining carmakers' profitability.

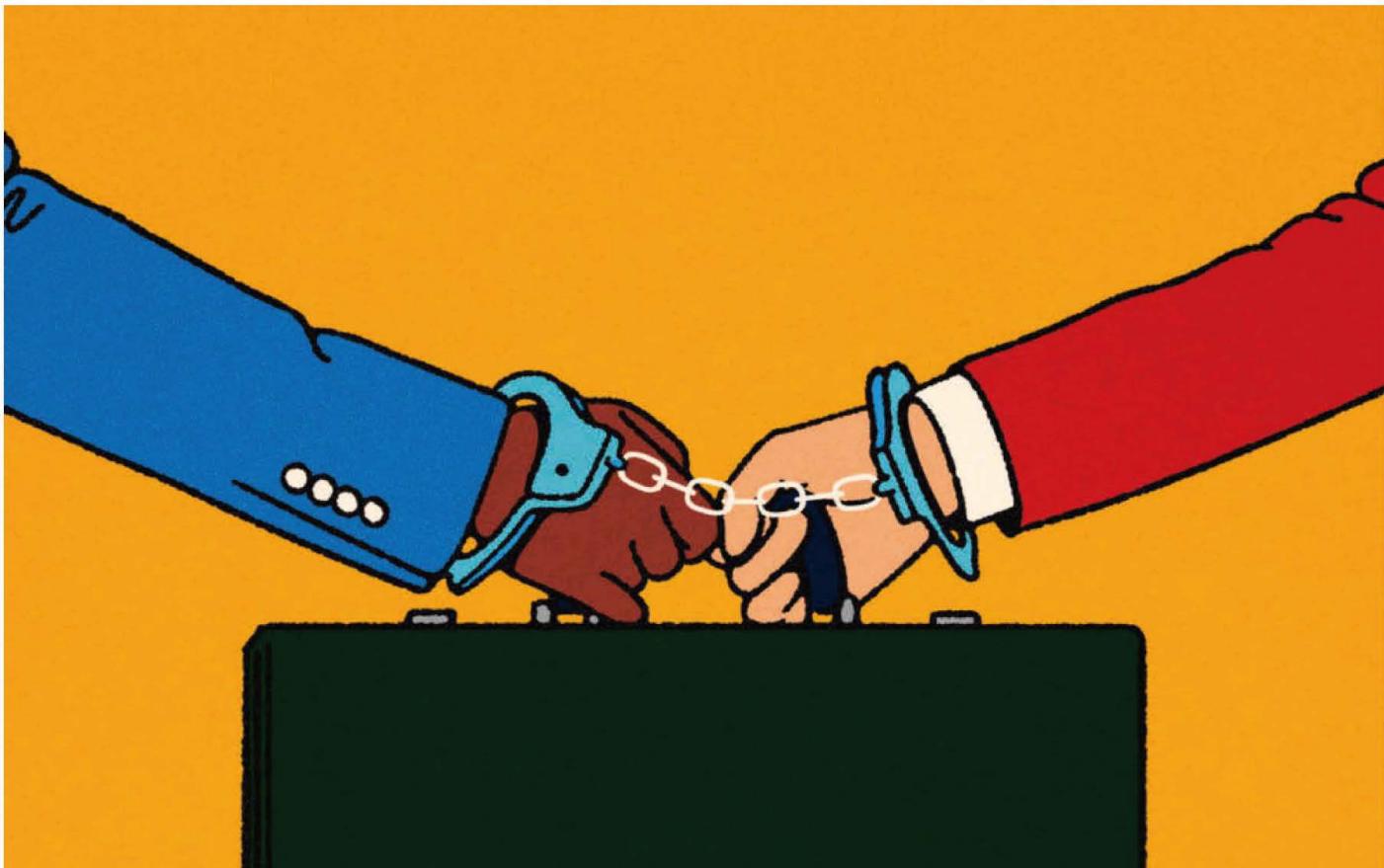
Second, to charge bigger batteries in a carbon-neutral way requires more low-carbon electricity. That may create bottlenecks on the grid. Third, the more pressure on scarce resources vital for ev production, the harder it will be to make affordable electric cars critical for electrifying the mass market. That will slow the overall decarbonisation of transport. Finally, there is safety. Not only is a battle tank that does zero to 100 kilometres per hour in the blink of an eye a liability for anyone that happens to be in its way. Tyres, brakes and wear and tear on the road also produce dangerous pollutants, which get worse the heavier vehicles are.

Governments have ways to encourage evs to shrink. The most important is to support the expansion of charging infrastructure, which would reduce range anxiety and promote smaller cars. Taxes could penalise heavier vehicles and subsidies could promote lighter ones. At the local level, congestion and parking charges could have similar effects. At a minimum, carmakers could be required to label the energy and material efficiency of their vehicles, as makers of appliances do in the European Union.

### Derange anxiety

Ultimately, the industry is almost sure to realise the folly of pursuing size for its own sake. The penny is starting to drop. Ford's CEO, Jim Farley, recently said carmakers could not make money with the longest-range batteries. His opposite number at General Motors, Mary Barra, has taken the unexpected step of reversing a plan to retire the affordable Chevy Bolt ev. In Europe, carmakers like Volkswagen are building smaller, cheaper evs. Tesla is said to be planning a compact model made in Mexico.

The pressure is partly coming from competition. Felipe Munoz of Jato Dynamics, a car consultancy, says China prizes battery efficiency above bigness and is hoping to muscle in on overseas markets with lighter, cheaper brands, such as BYD (see Graphic detail). Innovation in batteries based on solid-state or sodium-ion chemistry may also make evs more efficient. For the time being, drivers with money to splurge will no doubt relish flaunting their low-carbon credentials from the vantage point of a large suv or monster truck. And so they should—until they realise that they may be making electrification less accessible to the rest of humanity. ■



Phoney decoupling

## Rising tigers, hidden dragon

SINGAPORE

America and China are slashing trade links with one another. Aren't they?

WHEN IT COMES to tracing the geography of global supply chains, few companies provide a better map than Foxconn, the world's largest contract manufacturer. This year the Taiwanese giant has built or expanded factories in India, Mexico, Thailand and Vietnam. The Chinese production sites once loved by Western companies are firmly out of fashion. Souring relations between the governments in Washington and Beijing have made businesses increasingly fretful about geopolitical risks. As a consequence, in the first half of the year, America traded more with Mexico and Canada than it did with China for the first time in almost two decades. The map of global trade is being redrawn.

At first glance, this is almost exactly as desired by America's policymakers. Under first Donald Trump and then Joe Biden, officials have put in place an array of tariffs, rules and subsidies. The latest arrived on August 9th: an executive order introducing screening for outbound investment, and

banning some investment into Chinese quantum computing, artificial-intelligence projects and advanced chips. America wants to weaken China's grip on sensitive industries and, in a motivation that mostly goes unspoken, prepare for a possible invasion of Taiwan by its adversary. This attempt to "de-risk" trade with China is the cornerstone of the White House's foreign policy. Yet despite extensive efforts, and the reshaping of trade seemingly evident in headline statistics, much of the apparent de-risking is not what it appears.

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Instead of being slashed, trade links between America and China are enduring—just in more tangled forms. The American government's preferred trading partners include countries such as India, Mexico, Taiwan and Vietnam, in which it hopes to spur the "friendshoring" of production to replace imports that would have come from China. And trade with these allies is rising fast: just 51% of American imports from "low-cost" Asian countries came from China last year, down from 66% when the Trump administration's first tariffs were introduced five years ago, according to Kearney, a consultancy. The problem is that trade between America's allies and China is also rising, suggesting that they are often acting as packaging hubs for what, in effect, remain Chinese goods. This flow of products means that, although America may not be buying as much directly from China as before, the two countries' economies still rely on each other.

For evidence, look at the countries that benefit from reduced direct Chinese trade with America. Research by Caroline Freund of the University of California, San Diego and co-authors investigates this dynamic. It finds that countries which had the strongest trade relationships with China in a given industry have been the greatest beneficiaries of the redirection of trade, suggesting deep Chinese supply chains still matter enormously to America. This is ➤

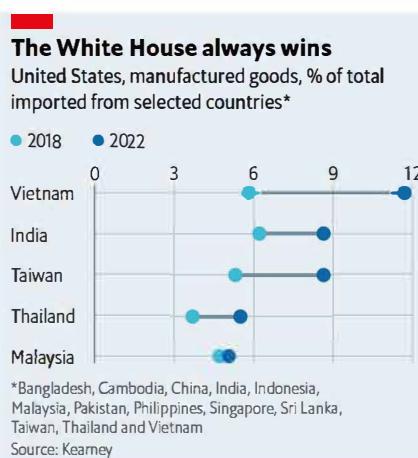
even truer in categories that include the advanced manufacturing products where American officials are keenest to limit China's presence. When it comes to these goods, the share of American imports arriving from China declined by 14 percentage points between 2017 and 2022, whereas those from Taiwan and Vietnam—countries that import heavily from China—gained the greatest market share. In short, Chinese activity is still vital to the production of even the most sensitive products.

Exactly how the rerouting works in practice differs across countries and industries. A few products can be sourced only in China. These include some processed rare earths and metals where Chinese companies dominate entire industries, such as the gallium used in chip production and the lithium processed for electric-vehicle batteries. Sometimes exports to America and the rest of the West from their allies are nothing more than Chinese products that have been repackaged to avoid tariffs. Most often, though, inputs are simply mechanical or electrical parts that could be found elsewhere at greater cost by an assiduous importer, but are cheaper and more plentiful in China.

### Pass the parcel

All three types of phoney decoupling can be found in China's backyard. The latest official data, published in 2018, concerning exports by the Association of South-East Asian Nations (ASEAN), a regional club, show that 7% by value were actually attributable to some form of production in China—a figure that is probably an underestimate, given how difficult it is to disentangle trade. Fresher data suggest that China has only grown in importance since then. The country has increased its share of exports to the bloc in 69 of 97 product categories monitored by ASEAN. Electronic exports, the largest category, which covers everything from batteries and industrial furnaces to hair clippers, have exploded. In the first six months of the year Chinese sales of these goods in Indonesia, Malaysia, Thailand, the Philippines and Vietnam rose to \$49bn, up by 80% compared with five years ago. There is a similar pattern in foreign direct investment, where Chinese spending in crucial South-East Asian countries has overtaken America's.

Factories farther afield are also humming with Chinese activity, perhaps most notably in the car industry. In Mexico the National Association of Autopart Makers, a lobby group, has reported that last year 40% of nearshoring investment came from sites moving to the country from China. A rich supply of intermediate goods is duly following. In the past year Chinese companies exported \$300m a month in parts to Mexico, more than twice the amount they managed five years ago. In central and



eastern Europe, where the car industry has boomed in recent years, phoney decoupling is even more conspicuous. In 2018 China provided just 3% of automotive parts brought into the Czech Republic, Hungary, Poland, Slovakia, Slovenia and Romania. Since then, Chinese imports have surged, thanks to the rapid adoption of electric vehicles, where the country increasingly dominates production. China now provides 10% of all car parts imported into central and eastern Europe, more than any other country outside the EU.

Tighter trade links between America's allies and China are the paradoxical result of America's desire for weaker ones. Firms panicked by worsening relations across the Pacific are pursuing "China plus one" strategies, keeping some production in the world's second-largest economy, while moving the rest to countries, such as Vietnam, that are friendlier to Uncle Sam. Yet American demand for final products from allies also boosts demand for Chinese intermediate inputs, and produces incentives for Chinese firms to operate and export from alternative places. Although Apple, the world's largest company by market capitalisation, has moved production outside China in recent years, this comes with a caveat: much of the production still relies on Chinese companies. The tech giant lists

25 producers in Vietnam on its official suppliers list. Nine are from mainland China.

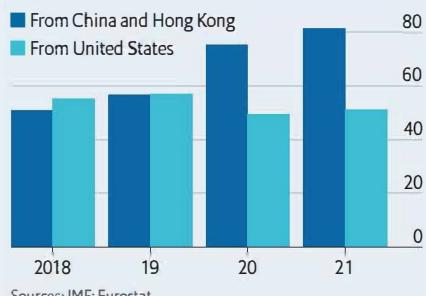
How worried should American policymakers be? In the worst-case outcome—a war in which supplies of goods between China and America are almost completely severed—dealing only indirectly with China or with Chinese firms on the soil of third countries is probably an improvement on Chinese production. Moreover, companies are adapting to security rules so as to reduce costs for consumers. But this also carries risks: a belief that decoupling is under way may obscure just how critical Chinese production remains to American supply chains.

The fact that so much production in Asia, Mexico and parts of Europe ultimately relies on imports and investment from China helps explain why so many governments, particularly in Asia, are at best fair-weather friends to America, at least when it comes to shifting supply chains. If forced to choose between the two countries once and for all, exporters would suffer mightily. A recent study by researchers at the IMF models a scenario in which countries must pick between America and China, with their decision on which of the two superpowers to side with determined by recent voting patterns at the UN. Such a scenario, the researchers calculate, would reduce GDP by as much as 4.7% for the worst-affected countries. Those in South-East Asia would be struck particularly hard.

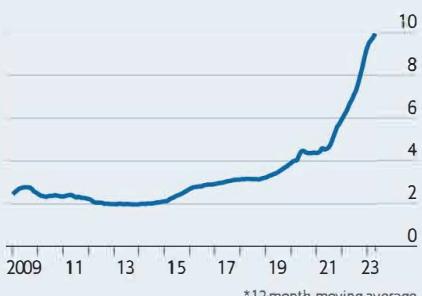
Given that most countries are desperate for the investment and employment that trade brings, America has been unable to convince its allies to reduce China's role in their supply chains. Many are content to play both sides—receiving Chinese investment and intermediate goods, and exporting finished products to America and the rest of the West. Ironically, then, the process driving America and China apart in trade and investment may actually be forging stronger financial and commercial connections between China and America's allies. Needless to say, that is not what President Biden had in mind. ■

### Beneath the bonnet

Direct investment in Indonesia, Malaysia, Philippines, Thailand and Vietnam, \$bn



Eastern Europe, car parts imported from China, % of total\*





**What recovery?**

## Absent demand

HONG KONG

### Deflation and default haunt China's economy

IT CAN SOMETIMES be difficult to wrap one's head around the world's second biggest economy. But three headlines in the space of two days—August 8th and 9th—captured the predicament that China now faces. Exports fell by more than 14% in dollar terms. Country Garden, one of the country's biggest property developers, missed two coupon payments on its dollar bonds. And annual consumer-price inflation turned negative. In sum: China's export boom is long over. Its property slump is not. And, therefore, deflation beckons.

Ever since China imposed its first brutally effective lockdown on Wuhan in early 2020, its economy has been out of sync with the rest of the world's. When the country abandoned its ruinous zero-covid controls at the end of last year, many economists hoped that the exceptionalism would continue, and that China would stage a rapid recovery, even as other big economies courted recession. The expectation also raised a fear. Analysts worried that China's renewed appetite for commodities and other goods would put upward pressure on global inflation, making the lives of central bankers elsewhere even harder. Neither the hopes for growth nor the fears of inflation have been realised.

Instead, China is now struggling to meet the government's modest growth target of 5% for 2023 ("modest" because last year provides such a low base for comparison). Far from becoming an inflationary

force in the global economy, the country is now flirting with falling prices.

According to the data released on August 9th, consumer prices dropped by 0.3% in July compared with a year earlier. Viewed in isolation, that is no great cause for alarm. A solitary month of mild deflation is not sufficient to turn China into the next Japan. Consumer inflation has been negative before—in 30 months this century, and as recently as 2021. Moreover, July's figure says almost as much about pork's past as it does about China's economic future. Prices for the country's favourite meat were unusually high in July last year. They have since fallen by a quarter, contributing to the negative headline number.



But consumer prices are not the only ones in the trough. The prices charged by producers (at the proverbial "factory gate") have now declined year-on-year for ten months in a row. Those fetched by China's exports dropped by more than 10% in July, according to estimates by analysts at UBS, a bank. And the GDP deflator, a broad measure that covers all the goods and services produced in the country, fell by 1.4% in the second quarter compared with a year earlier. That is only its sixth decline this century and its steepest since 2009.

Many economists foresaw the drop in pork and food prices. They assumed, however, that it would be offset by a faster increase in the cost of services, as China's economy gathered steam. They also expected that the property market would stabilise, which would prop up demand for other goods, both upstream (in products such as steel and construction equipment) and down (in those such as furniture and household appliances).

After a brief revival in the early months of the year, property sales are faltering again. Those in 30 big cities fell by 28% in July compared with the year before. Declines in rents and the prices of household appliances both contributed to the negative turn in consumer prices in July. Country Garden also blamed "a deterioration in sales", among other things, for its failure to pay its bondholders on the expected date this month. The company has a 30-day grace period before it falls into default.

China's government is also now up against the clock. In recent weeks a rotating cast of committees, ministries and commissions has unveiled a variety of measures to improve the economy. A 31-point plan to encourage private enterprise announced that the government would remove barriers to entry and strengthen intellectual-property rights. A 20-point plan to expand consumption touted cheaper tickets for scenic spots, among other goodies. A 26-point plan to increase labour mobility promised to make it easier for rural migrants to settle in cities (and easier for foreign businesspeople to get visas).

Yet if the property market does not improve, deflationary pressure will persist. The longer it lasts, the more difficult it will be to reverse. Thus a more forceful fiscal and monetary push is required. UBS calculates that the government's deficit, broadly defined, shrank in the first half of this year, providing less support to the economy. Meanwhile, the central bank has barely cut interest rates, reducing its short-term policy rate from 2% to 1.9%. That is not enough to keep up with the decline in inflation, which means the real cost of borrowing is rising (see chart). In order to defeat deflation, the budget deficit will have to widen. And the central bank's efforts will need to go beyond 0.1 point. ■

## Equity risk premium

# Worth the cost?

### The American stockmarket is at its most expensive in decades

**T**RY A LITTLE, and it is never too hard to argue that the stockmarket looks risky and a crash must be coming. But in the long run such arguments are usually best ignored. Since 1900 American shares have posted an average real return of 6.4% a year. Over three decades, that would transform the purchasing power of \$1,000 into \$6,400. Bonds, the main alternative, do not come close. With an average historical return of 1.7% a year, they would generate a measly \$1,700. Cash would do worse still.

The lesson for today's investors, many of whom were caught out by this year's bull market, might seem obvious. Forget about a downturn that may or may not materialise. Just buy and hold stocks, and wait for returns that will erase any number of brief dips. Unfortunately, there is a catch. What matters today is not historical returns but prospective ones. And on that measure, shares now look more expensive—and thus lower-yielding—when compared with bonds than they have in decades.

Start with why stocks tend to outperform bonds. A share is a claim on a firm's earnings stretching into the future, which makes returns inherently uncertain. A bond, meanwhile, is a vow to pay a fixed stream of interest payments and then return the principal. The borrower might go bust; changes to interest rates or inflation might alter the value of the cash flows. But the share is the riskier prospect, meaning it needs to offer a higher return. The gap between the two is the "equity risk premium"—the 4.7 percentage points a year that stocks have historically earned over bonds.

What of the next few years? Estimating the return on a bond is easy: it is just its

yield to maturity. Gauging stock returns is trickier, but a quick proxy is given by the "earnings yield" (or expected earnings for the coming year, divided by share price). Combine the two for ten-year Treasury bonds and the S&P 500, and you have a crude measure of the equity risk premium that looks forward rather than back. Over the past year, it has plummeted (see chart).

Now consider the equity risk premium's moving parts: earnings, Treasury yields and share prices. Both expected earnings and Treasury yields are roughly where they were in October, when share prices hit a trough. But since then shares have risen a lot, shrinking their earnings yield and bringing it closer to the "safe" Treasury yield. This might mean three things. Investors might believe earnings are about to start growing fast, perhaps because of an AI-fuelled productivity boom. They might think earnings have become less likely to disappoint, justifying a lower risk premium. Or they might fear that Treasuries—the benchmark against which stocks are measured—are now more risky.

Sustained earnings growth is the dream scenario. The second option, though, is less rosy: that investors have let their revived animal spirits get ahead of them. Ed Cole of Man Group, an asset manager, argues the squeezed equity risk premium is a bet on a "soft landing", in which central bankers quash inflation without a recession. This has become easier to envisage as price rises have cooled and most countries have so far avoided downturns. Yet surveys of manufacturers still point to recession in that sector, and the full dampening effect of rate rises may not yet have been felt.

The third possibility is that, rather than cooing over stocks, investors are shunning the alternative. Last year was the worst for bonds in both America (where they lost 31% in real terms) and across developed markets (a 34% loss) in over a century.

After that, says Sharon Bell of Goldman Sachs, a bank, it is unsurprising if some investors are wary of bonds and inclined to splurge on shares, especially if they believe inflation has moved structurally higher—something shares, as claims on nominal earnings, protect against, whereas bonds, deriving value from fixed coupons, do not. At the same time, governments are set to issue ever more debt to cover ageing populations, defence spending and cutting carbon emissions, while central banks have disappeared as buyers. Higher bond yields, and a mechanically lower equity risk premium, will be the result. This would imply a regime change, to one where the equity risk premium has shifted lower for the long term (rather than temporarily, to be corrected by a fall in share prices).

Whatever the reason for the squeeze, investors have now placed their bets on rising profits. In a recent analysis, Duncan La-

mont of Schroders, an investment firm, compared returns on the S&P 500 going back to 1871 with the yield gap against ten-year Treasuries. He found the relationship "has not been helpful in giving a steer on short-term market movements". Over the longer term, though, there is a clear link. For stocks starting with a low yield gap to do well over ten years, "a near-condition has been real earnings growth". Animal spirits can only take you so far before earnings must deliver. They would not have to slip far for even a long-term investor to conclude today's market is too pricey. ■

## Retail investing

# Resurrection

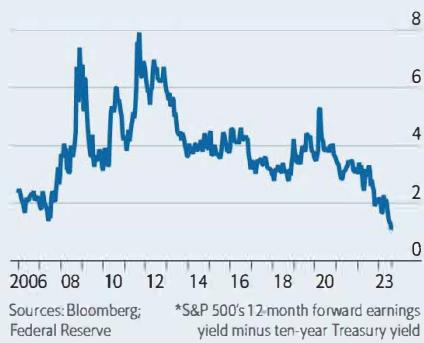
### Meme stocks are back from the dead

**L**AST YEAR was tough for all investors, but Jones that hang out on Reddit suffered more than most. The Roundhill Meme exchange-traded fund, which tracks meme stocks, fell from \$70 a share to \$25. Fellow travellers in the covid-19 bubble, including non-fungible tokens (which use blockchains to sell digital artefacts) and SPACs (blank-cheque initial public offerings), also collapsed, leaving apes (retail investors) with few options but to HODL (hold on for dear life) or cut their losses.

Proclamations of the death of meme investing may, however, have been hasty. Meme stocks are now shooting past the rest of the market, which has itself surged. The meme index is up by nearly 60% this year, outperforming the S&P 500 by 40 or so percentage points. Returns on individual holdings are more bonkers still, even if some stocks have risen from a low base. Shares in SoFi, a fintech firm, have doubled; the market capitalisation of Palantir, a software-maker, has nearly tripled; ►

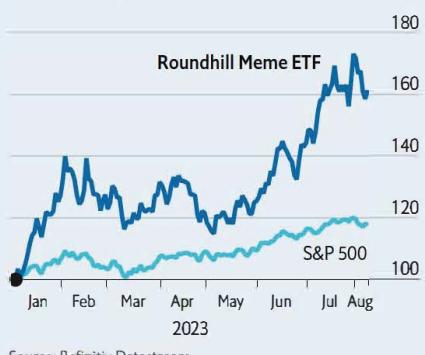
## Premium bonds

United States, equity risk premium\*  
Percentage points



## Diamonds in the rough

Share prices, January 3rd 2023=100



stocks in Carvana, a car retailer, are up by 800%. Apes are going all in, some with their entire 401k retirement plans. There is no clearer evidence of a bull market.

Some of the rallies, at a stretch, even make sense. Redditors view good news as a burst of rocket fuel for share prices. Carvana, which was teetering on the edge of bankruptcy, has averted a crisis by putting up more collateral in exchange for a debt cut. Palantir is riding the AI wave. A judge in Delaware recently rejected plans to further dilute shareholders in AMC, a cinema chain and one of the early meme stocks.

Other rallies are a little more inexplicable. Soon-to-be worthless shares in Bed Bath & Beyond, a defunct retailer, have more than doubled in the past three months. Tupperware, a struggling home-goods firm, saw its shares jump from 60 cents to more than \$4 in late July. Yellow, a bankrupt trucking company, has seen a similar rise in the past few weeks.

Is this all down to meme investors? Apes did pivot to buying bankrupt companies after Bed Bath & Beyond's delisting, with some 25m shares changing hands on the average day in July. But they are not

wholly to blame. Little to no chatter pops up on Reddit in relation to Tupperware or Yellow. Short-sellers may be the true culprits in these instances: they must buy shares sold short to close their positions.

In recent days the bull market has cooled a little. Small shifts in major indices produce enormous swings in meme stocks. On August 7th Yellow's shares dropped by a quarter; Bed Bath & Beyond's by 7%. Investors who bought earlier this year will still be sitting on big profits. Yet they will need to be careful. HODLING could risk some legendary losses. ■

## Buttonwood Upgraded

*Everyone dislikes them. But rating agencies deserve some credit*

FIFTEEN YEARS ago, in August 2008, the world's credit-rating agencies were in the midst of the worst period in their history. The global financial crisis was about to reach its zenith. It was already clear that the allegiances of rating agencies—beholden to both investors in and issuers of debt—had been stretched beyond a healthy limit. The survival of their business model looked uncertain.

In a turn-up for the books, rating agencies have more than survived. Borrowers' demands to have their homework marked have surged. During the market boom of 2021, Moody's Investors Service, one of the "big three" agencies, made almost \$4bn in revenues, compared with \$1.8bn at its peak in 2007. The "issuer pays" business model, in which borrowers are on the hook for having their own bonds rated, creating a conflict of interest for the agencies, has limped on, too, despite endless demands for change. Yet even though they have gone largely unreformed, rating agencies have been on a good run in recent years.

Ironically, rating agencies often spring into the limelight when they are least important. That is what happened on August 1st when Fitch, another of the big three, reduced the American government's rating from AAA to AA+. After all, agencies do not offer superior expertise when it comes to the analysis of rich countries' fiscal health. The economic data that they observe is widely watched by everyone else. In 2015 American money-market funds were liberated from having to use credit ratings as their only metric for deciding whether to invest in securities. Funds can now determine, for instance, that a security represents a "minimal credit risk". This means that downgrades to the ratings of Treasuries matter even less than before.

Companies that provide ratings nevertheless hold two important roles. First, they aggregate, sort and publish information about borrowers, which investors can analyse and use to compare them. Second, they act as a certification stamp on assets. Bank regulators use credit ratings to determine the capital requirements for lenders; funds use them to decide what they should and should not hold.

Rating agencies have a difficult job: not attracting negative attention is about as good an outcome as they can reasonably expect. During the deep financial distress early in the covid-19 pandemic, they quietly managed just that, as the Committee on Capital Markets Regulation, a panel of researchers from academia, banking and business, concluded when later assessing their performance. In 2020, 198 companies rated by S&P Global Ratings defaulted, the most since the global financial crisis. Whereas 11 investment-grade firms failed to repay their debts in 2009, all of the defaults in the first year of the pandemic happened among companies already labelled as riskier speculative grades.

The firms did take flak during the demise of Silicon Valley Bank (SVB) in March. Both Moody's and S&P had given SVB investment-grade ratings. But the bank's collapse, which was facilitated by social media, instant messaging and digital-finance apps, was unusually rapid. And the ratings that were awarded to the bank—of A3 and BBB respectively—were far from the highest notches available. Indeed, a downgrade warning from Moody's the week before SVB's collapse was one of the triggers that revealed the parlous state of the bank's funding. Rating agencies can be criticised for having been asleep at the wheel, or for prompting the crisis, but hardly both.

Research also demonstrates a continued role for agencies in rating emerging-market government debt. One paper by the Bank for International Settlements, a club of central banks, shows that rating changes still have a big impact on credit-default-swap markets in the emerging world, suggesting that investors retain respect for agencies' judgments. Another, published by the World Bank, calculates that the effect of credit ratings may even have risen since the global financial crisis. A one-notch improvement in a developing economy's credit rating in comparison with similar countries raised capital inflows by around 0.6% of GDP in 2009–17, about a third more than in the preceding decade.

Rating agencies are a lightning rod for criticism. Firms that attempt to be the arbiters of risk are bound to get stuff wrong—or worse, play a causal role—during unexpected blow-ups. Even though problems exposed during the financial crisis remain unfixed, rating agencies are still crucial to the working of capital markets. Recently, they have even been doing a pretty good job.



## Free exchange | Fed-X

*The site formerly known as Twitter is not lucrative. But it is a powerful gauge of the economy*



EON MUSK is no fan of the Federal Reserve. At least a dozen times over the past year the owner of X (a firm until recently known as Twitter) has savaged America's central bank for raising interest rates. Last December, for instance, he tweeted that its hikes might go down as the "most damaging ever". But Mr Musk's disdain for the Fed is not mirrored by the Fed's attitude towards X. On the contrary, the central bank's researchers rather like the site, treating it as a compelling barometer of the economy.

This puts X in a peculiar position. Its value as a business remains dubious, which is why Mr Musk has been scrambling to remake it, with changes including (but not limited to) the company's name. Yet its value to the economy is a different story altogether. The firm can serve as a timely indicator of both fundamental trends and market sentiment.

There is a large, growing literature on how to decode economic signals from social-media sites, ranging from Facebook to Reddit. But even in the sea of online information and commentary, Mr Musk's site stands out. Others simply cannot match its volume and frequency. By 2013 Twitter users were already producing more than 5,700 posts a second. By 2016 Instagram's larger user base was producing only 1,000. Three papers recently published by the Fed explore the platform's economic contributions.

The first is as a predictor of markets. Sentiment gleaned from tweets seems to be rather good at presaging short-term movements in both share prices and bond yields. In one paper a group of economists including Francisco Vazquez-Grande sifted 4.4m finance-related tweets posted between 2007 and April 2023 to create a Twitter Financial Sentiment Index. They used a machine-learning model to measure each tweet's sentiments: a message about stocks going to the Moon would be positive; Mr Musk's quips about the Fed would presumably count as negative.

The index, they find, correlates tightly with corporate-bond spreads (the difference between yields on corporate and government bonds, which usually widens as investors turn pessimistic). More than merely shadowing financial movements, posts can even foreshadow them. The overnight index before the stock-market's open dovetails with the coming day's equity returns. A separate paper by Clara Vega and colleagues finds that the site's

sentiment also closely tracks Treasury yields. Indeed, the correlation is stronger with tweets than with sentiment measures gleaned from the Fed's own official communications.

A second use of tweets is as a gauge of economic conditions. Posts about job losses in particular seem to offer timely information about the labour market. Tomaz Cajner and co-authors construct a separate machine-learning model to digest posts with keywords such as "lost job" or "pink slip". Their measure of job losses mirrors official data on employment levels from 2015 to 2023. This correlation is potentially powerful because most government statistics appear with a lag, whereas the tweets are available immediately. Twitter, for example, would have provided a ten-day advantage in detecting the collapse in employment at the height of the covid-19 pandemic in 2020.

The Fed papers also see a third use for tweets: as a bellwether of sorts for monetary policy. Ms Vega and colleagues find that the social-media site fares better than changes in bond yields in predicting monetary-policy decisions on the day of their announcement. The Twitter sentiment index, meanwhile, is good at anticipating shocks from tighter policy such as rate increases. Tweets tend to turn sour just ahead of these moves. (That the site wastes little time in turning bitter will come as scant surprise to regular users.)

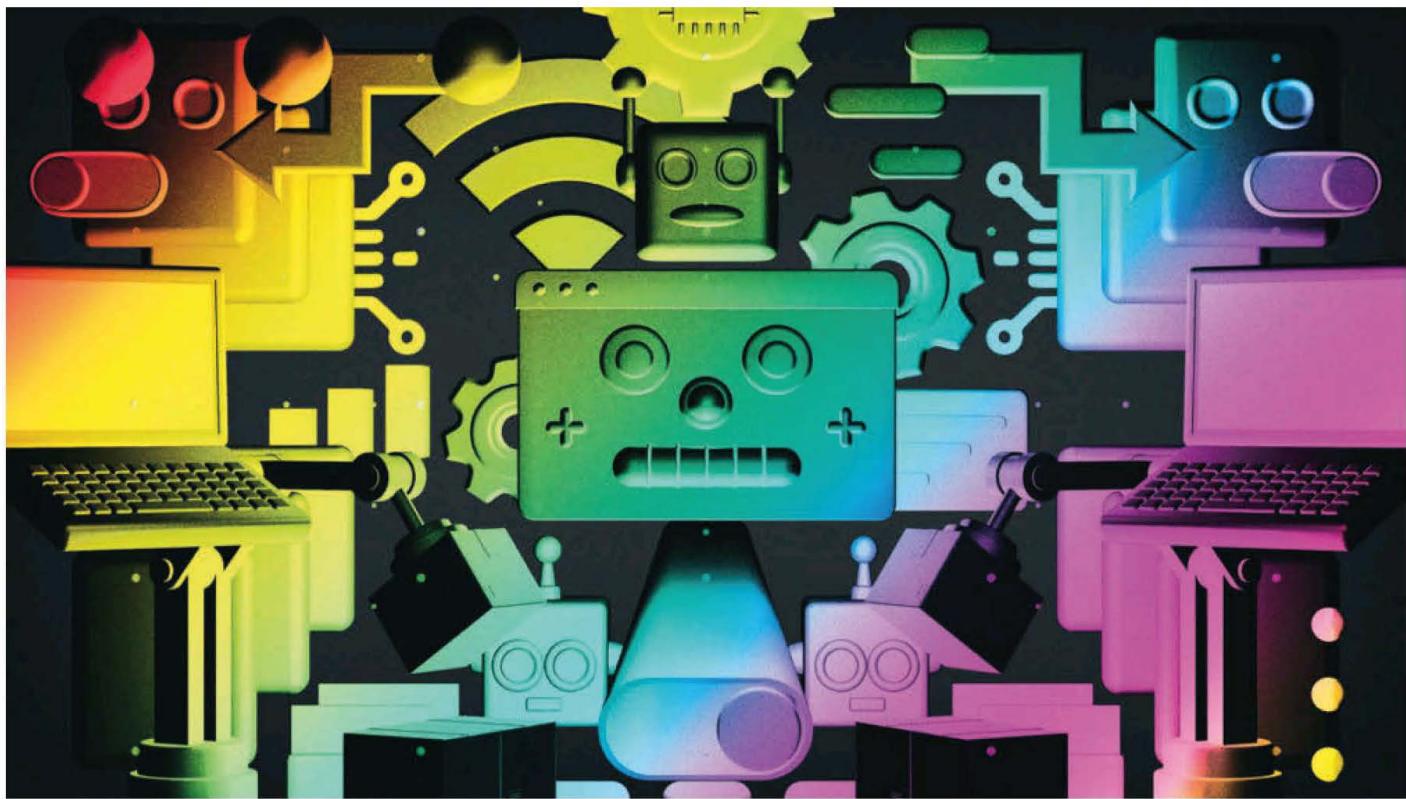
No one is about to ascribe powers of causation to X. The social-media posts instead reflect broader feelings that are already coursing through financial markets. Still, the cornucopia of tweets does provide an additional way of measuring such sentiment, which, if proved valid over time, would be highly valuable.

Beyond the Fed, some analysts are also finding other potential applications. Agustin Indaco of Carnegie Mellon University in Qatar calculates that the volume of tweeting alone can account for about three-quarters of cross-country variation in GDP. Rather like satellite images of night lights, tweets may therefore be a way of observing economic health without relying so heavily on tardy official statistics. This metric may work best in poorer countries, where heavy posting on social media would be a proxy for the state of telecommunications and use of smartphones.

### Marking the spot

If X is so economically useful, why is it not more lucrative? The various papers do not venture so far as to examine the gulf between Twitter's struggle for profitability and its evident utility—not just as an economic tool but as a platform for sharing information, opinions, jokes and more. Mr Musk was onto something when he described the firm as a "common digital town square". The problem in economic terms is that a town square falls into the category of public goods such as parks and clean water. Although public goods can be privately owned, it is notoriously hard to extract profits from them given that, by definition, it is difficult to charge people for all the benefits they confer.

Mr Musk is doing his darnedest to shift the economic equation at X by giving additional privileges to users who pay \$8 a month for the site's blue-check verification. Tweets by users who cough up now receive extra promotion, among other benefits, appearing more often in the feeds of other people on the site. That, however, poses a trade-off. Paid-for tweets may start crowding out better-informed posts from users who would rather not subscribe to the site. Over time, a social-media site that prioritises payment over credibility will function less well as a town square and, by extension, as an economic indicator. The gain to X's finances would be a loss to the Fed's economists. ■



## Advanced manufacturing

### Coding the factory of the future

FORT MILL, SOUTH CAROLINA, AND DEVENS, MASSACHUSETTS

If it can be designed on a computer screen, it can be built by robots

**I**N A FACTORY on the Carolinas' border, Stanley Black & Decker is assembling cordless electric drills. As part-finished drills travel in boxes along a conveyor belt, a robotic arm photographs and scans them for defects. Another robot nestles electric motors into the drills' casings. A third one places and tightens screws. A single piece of software oversees the entire production line, which is capable of pumping out 130 cordless power tools every hour under the supervision of just seven humans. The assembly line it replaced in China needed up to 40 workers and rarely produced more than 100 an hour.

"Thirty years from now we will laugh at our generation of humans, putting products together by hand," predicts Lior Susan, the boss of Bright Machines, a San Francisco-based company that installed the plant's software. It is not that the design of the electric drills or the various steps involved in making them have changed. Rather, it is the way the automated machines doing the work are being driven by instructions that have been encoded into software having been in effect cop-

ied from the brains of Chinese factory workers, who mostly did the job manually.

Making things this way resembles a model used by the semiconductor industry, where chips are designed using software that directly links to the automated hardware which fabricates them. For the Fort Mill plant, and other firms starting to employ such software-defined manufacturing systems, it promises to transform the factory of the future by allowing more-sophisticated products to be designed and put into production more quickly. All of which promises big cost savings.

#### Make this please

To understand why, consider a simplified version of how a new power tool is made. A team of designers come up with a fresh feature, say a longer-lasting battery. They map out every element of the new product,

→ Also in this section

65 Bugs that promoted drug resistance

65 A flying taxi rank

from the battery compartment to the circuitry, that needs to be changed as a result. It is complex work, not least because a small change to one component can have a big impact on another, and so on.

The design is then "thrown over the wall" to the people responsible for making it. Sometimes that is a third-party factory, often in China. Engineers, designers and production staff exchange information and meet up, constantly tweaking the design in response to the various successes or failures involved in making a series of prototypes. Little things, such as a screw that cannot be tightened correctly because it is hard to reach with an electric screwdriver, might result in a return to the drawing board—which nowadays is mostly a computer-aided-design (CAD) program.

Eventually, all the kinks are ironed out (hopefully) and the new product is ready for production. The finer details of how all this was achieved, however, are likely to remain locked up in the minds of the workers assembling the prototypes. Humans are, after all, incredibly flexible and often come up with workarounds.

This process has been employed for decades, yet is inherently uncertain and messy. Designers cannot predict with any confidence what things the factory can or cannot easily accommodate. As a consequence, the design team may purposely leave some features a bit vague, and be put off innovative ideas for fear of being told it cannot be made or is impossibly costly.

When the hardware is controlled by ➤

► software, rather than by humans, all this changes. Designers can dream up new products with a far greater certainty that they are manufacturable. This is because the constraints of the production line—even fiddly details like the positioning of screws—are encoded in their CAD programs. Those programs, in turn, are directly connected to the software which controls the machines in the factory. So, if a design works in a digital simulation, there is a good chance it will also “run” on the production line.

This tight integration of manufacturing hardware and CAD software has been a boon in semiconductor manufacturing, where vast machines etch circuits into silicon just a few nanometres (billions of a metre) wide. Chip designers with firms such as Apple, Nvidia or Qualcomm use specialised programs, largely produced by two companies, Cadence and Synopsys, to sketch out circuits. The design files are then sent directly to silicon foundries, such as TSMC, in Taiwan, for production.

“Until the advent of those tools, people were laying out integrated circuits by hand,” says Willy Shih of Harvard Business School. Mr Shih imagines the impossibility of attempting to do that today with, for instance, Apple’s M1 chip, which contains 114bn transistors. Producing such complexity is only possible in a system where software allows humans to ignore the detail and focus on function.

Stanley Black & Decker has not yet turned its CAD tools loose on Bright Machines’ system to design new products. But the idea is that they soon will. “What Cadence and Synopsys did to semiconductors is what we will do to product design,” says Bright Machines’ Mr Susan.

#### Layer by layer

Some companies have already started designing products this way. VulcanForms is a foundry, but one that makes metal components rather than chips. It operates out of a former aircraft hangar in northern Massachusetts, where its vast computer-controlled machines focus 100,000 watts of invisible laser light onto a bed of powdered metal. The powder melts and fuses into intricate patterns, layer by layer, until a component with dimensions specified to within a hundredth of a centimetre emerges. It could be part of the engine in a military drone, or a perfectly formed hip-replacement joint. This is a type of additive manufacturing, more popularly known as 3D-printing. VulcanForms’ machines are driven by CAD software and can produce any metal component with a diameter up to about half a metre.

“When I became familiar with what VulcanForms was doing, I could see predictable patterns that mirrored some of the learning with semiconductors,” says Ray



Stata, the founder of Analog Devices, an American chipmaker, and a member of the foundry’s board. In chipmaking, he says, the software linking designer and manufacturer has produced huge gains in efficiency and economies of scale.

VulcanForms uses software made by nTopology. This lets people without the skills required to operate lasers, to design objects for production by the foundry. It can result in components with previously unmatched levels of performance, because they can be produced as complex geometric structures which are impossible to manufacture any other way, says John Hart, chief technology officer of VulcanForms. Objects can be created at high volumes, such as forging 1,000 spinal implants from a single powder bed. With additive manufacturing, products can also be produced in one go, as single components, rather than being assembled from individual parts. This reduces the amount of material required as the parts tend to be lighter. It also cuts down on assembly costs.

Software-defined manufacturing has an impact on some of the big trade and political challenges faced by companies. For firms that are increasingly uncomfortable with relying on Chinese manufacturers, it can make reshoring production a more viable option. Mr Susan puts it in martial terms: “Manufacturing is a weapon. When we give design files to China, we give the source code of that weapon to our enemy.”

There will be implications for manufacturing jobs. Although automation usually means a reduction in the number of people assembling things on the shop floor, it also creates some jobs. Technicians are required to program and maintain production systems, and in offices successful companies are likely to boost the numbers working in design, marketing and sales. These jobs, though, require different skills

so retraining will be necessary.

Mr Shih also notes that factories themselves, not just the machine tools and processes within them, are coming under the thrall of software. He cites Tecnomatix, a subsidiary of Siemens, a German industrial giant, whose software lets designers lay out an entire factory so that the making of new products can be simulated in a virtual environment, known as a digital twin, before manufacture begins in its physical counterpart.

If the future of manufacturing is following semiconductors, then there is still some way to go. Producing mechanical objects is not the same as etching elaborate circuits that have no moving parts. For a start, things are far less standardised, with components having all sorts of end uses. “We’re just at the beginning with mechanical structures,” says Mr Stata. “The whole process of putting materials together in an additive method is in its very early stages. The flexibility and possibility that opens up is mind-boggling.”

Yet some of the implications are becoming apparent. Products could reach a level of performance and precision which is simply unachievable when their production is limited by human hands. Laying out a factory floor in two dimensions to accommodate human workers will become a thing of the past. Factories designed by software will be denser, much more complex three-dimensional places, full of clusters of highly productive, highly automated machinery.

These factories of the future may be almost deserted places, attended to by a handful of technicians. But with software also taking care of the intricacies of production, they will be easier to use by people developing and designing new products. That should free their imaginations to soar to new levels. ■

## Drug resistance

# Parasites all the way down

### Tiny hitchhikers on viruses could promote resistance to antibiotics

**F**ROM CAESAREAN sections to chemotherapy, antibiotics make much of modern medicine possible by keeping bacterial infections at bay. That is why the growing bacterial resistance to those drugs is so worrying. The United Nations estimates that by 2050 infections with drug-proof bacteria could claim up to 10m lives a year, more than double the current toll.

A problem with tackling such resistance is that scientists have an incomplete sense of how it arises. One way is essentially random: a chance mutation in a particular bacterium may make a certain drug less lethal. If that bacterium survives a dose of treatment, its descendants will inherit that same resistance. But the speed at which bacterial drug resistance spreads means that cannot be the whole story. "I always felt there were additional mechanisms of evolution. And probably more powerful ones," says John Chen at the National University of Singapore.

In a paper in *Cell*, Dr Chen and his colleagues identify one such mechanism. It centres not on the bacteria themselves, nor the viruses that are known to infect them, but on yet more rudimentary genetic parasites that exploit these viruses in turn.

The fact that bacteria can transfer genes horizontally, to other unrelated bugs, as well as vertically to their offspring, is well known. Some are exchanged via small loops of DNA called plasmids. Others are transmitted by bacteriophages, specialised viruses that infect bacteria. When a phage latches on to a bacterium, its DNA forces the bacterium to make more copies of the virus until it bursts. Sometimes, small fragments of bacterial DNA can be erroneously included with the new viruses. If they infect another bacterium, the hitchhiking DNA can end up integrated into the new host's genome. But such "transductions" cannot fully explain the speed with which bacteria evolve resistance either. It happens rarely, and transfers only small chunks of DNA when it does.

In 2018 Dr Chen identified another mechanism, known as lateral transduction. This happens when phages, rather than killing their hosts immediately, integrate their genomes into those of their prey. When the phages replicate, they read their own genes from the bacteria's genome, but sometimes grab copies of long neighbouring stretches of bacterial DNA too, which they carry to infect new hosts.

Dr Chen reckons that phages could in this way end up stealing up to a quarter of their host's genome. He estimates that lateral transduction is thousands of times faster than other mechanisms, making it a candidate as the chief driver of microbial drug resistance. In practice, this means a bacterium with no previous exposure to antibiotics could acquire the genes necessary for resistance in a matter of minutes.

But the story does not end there. Dr Chen examined *Staphylococcus aureus*, a bacterium that is usually harmless but which can occasionally cause serious illnesses. Particular chunks of its genome, called "pathogenicity islands" (or SAPIs), seem to behave like genetic parasites; bits of DNA that replicate selfishly without regard for the well-being of their host. In one sense, that makes them an even more primitive form of replicator than a virus.

### Trick or treat

When a bacterial cell playing host to a SAPI is infected by a phage, the SAPIs can command the cell to produce a protein called small transferase. This is similar to the protein that the attacking phage uses as a signal to begin packing its DNA into newly produced phages. That biochemical trick can cause new phages to be packaged not with viral DNA at all, but with long chunks of bacterial genome. "It completely replaces the phage genome," says Dr Chen.

The resulting phages are still capable of

infecting new bacteria. But when they do, they transfer bacterial genes, not viral ones—which may turn out to be useful. And while lateral transduction can happen only when a phage weaves its DNA into that of its host, SAPIs can hijack phages without that happening. "I think this has huge implications for how we understand the evolution of bacterial genomes," says Breck Duerkop at the University of Colorado, who was not involved in the research.

Exactly why such a mechanism exists remains unclear. If SAPIs really are selfish replicators, then hijacking viruses gives them a way to spread and perpetuate themselves. Dr Chen raises the possibility that fortifying their hosts with new, useful genes may also protect the parasites in the long run. "If your host gets outcompeted, you also die," he says. Both phages and SAPIs, therefore, might be more likely to succeed if they can keep their host bacteria armed with the latest genetic technology.

All that will be of interest to evolutionary geneticists, no doubt. But it will be useful information for public-health researchers, too. One question is just how important each mechanism is. And, as SAPIs affect only *S. aureus*, another will be working out whether other bacteria have genetic equivalents. And finally, the antibacterial properties of phages themselves mean that they are increasingly being considered as alternatives to antibiotics. Understanding how they could be hijacked by even tinier parasites would be wise. ■



A flying taxi rank

In the years ahead this will become a familiar sight. In a first of its kind, three electric vertical take-off and landing (eVTOL) aircraft, often called flying taxis, hover in formation near Shanghai, China. The aircraft, being developed by AutoFlight, use upwards-facing propellers to take off and land vertically, and "pusher" propellers for forward flight. Along with eVTOLs from other firms, these aircraft should be approved to operate commercially in the next year or so. At first that is likely to be with pilots in many countries, but eventually they will fly autonomously—as they are here.



### Orwell mania

## Man of the hours

**Interest in George Orwell is strong. But while warning of one kind of "doublethink", was he blind to another?**

#### Wifedom: Mrs Orwell's Invisible Life.

By Anna Funder. Knopf; 464 pages; \$32. Viking; £20

**Julia.** By Sandra Newman. Mariner Books; 400 pages; \$30. Granta; £18.99

FEW WRITERS have achieved the cult status of George Orwell. He is so much a part of the collective imagination that John Rodden, an Orwell scholar, goes so far as to call him "the most important writer who ever lived". He was not the best writer of his time, explains Mr Rodden, author of several books on the writer's "afterlife", but his universal recognition, continuous publication and repeated spikes in popularity are "an unprecedented phenomenon rivaled only by Shakespeare himself".

Orwell's most celebrated novel, "1984", tells the story of Winston Smith, an everyman who embarks on a love affair in defiance of the surveillance state led by Big Brother, the supreme leader, whom some believe Orwell modelled after Josef Stalin. With "telescreens" that snoop on citizens, "thought police" enforcers and a system

called "doublethink" in which both everything and the opposite are equally true, Orwell's fiction has been prescient, invoked to describe the ills of nearly every age. "1984" has repeatedly topped English-language bestseller lists, including in 1954 (the year the BBC did a television adaptation), 1984 and 2003 (the centenary of Orwell's birth). Political events bring Orwell new readers, including Donald Trump's inauguration in 2017 and fomenting of the riot at America's Capitol in 2021. After Russia's invasion of Ukraine, "1984" became the most-downloaded electronic fiction book in Russia last year.

Angst over totalitarianism, the ma-

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nipulation of truth and the spread of surveillance technologies has hardly abated. Today's world is increasingly Orwellian, argues Jean Seaton, director of the Orwell Foundation: consider social-media pile-ons, analogous to the "Two Minutes Hate" the novel's characters spew at enemies of the state. The dangers Orwell flagged are as easily used by the left to bludgeon autocrats as by the right to denounce the left's punishment of "wrongthink".

It is thus no surprise that in 2023, with fears of autocracy and culture wars at fever pitch, the man who wrote so deftly about dark subjects is back in the spotlight. Films in production include a new documentary on Orwell's life and an animated "Animal Farm"; a Russian-language "1984" was recently released. At least three Orwell books have been published in the past year, grappling with subjects including Orwell's relationship with Russia.

Two more books are forthcoming, which look more closely at the women in Orwell's life and work. For all his pre-science and scrutiny of tyranny, Orwell was blind to another sort of repression: towards women. Along with a new biography by D.J. Taylor, a British historian, the books draw on letters discovered in the past 20 years between the writer and various paramours, as well as some written by Orwell's first wife, Eileen, to her best friend. The picture that emerges is disheartening—but hardly unusual for a man of Orwell's time.

Eileen O'Shaughnessy was married to ➤

▶ Orwell from 1936 until her death in 1945. One of the first women to attend Oxford University, she was brilliant and witty but abandoned a master's degree in psychology to wed Orwell. Their life was one of hardship. Eileen struggled to make a remote, unheated cottage a home, nursing the tubercular Orwell back to health while typing up and advising him on his work. She was often the main breadwinner.

Anna Funder's "Wifedom" offers bleak details, including the day Eileen cleaned a blocked toilet, standing knee-deep in excrement, when Orwell appeared at a window to ask, "Teatime, don't you think?" His wife dedicated her life to helping Orwell "fulfil his destiny", one friend wrote, to the point of fatally ignoring her own health. Meanwhile Orwell was conducting numerous affairs. Before and after they married, her husband was a "sexual opportunist" who pounced on women who came his way, Mr Taylor writes.

This philandering had long been known to scholars, less so to the public. In the wake of #MeToo and numerous feminist reassessments of badly behaved male artists, he is "due for a bit of reappraisal from that perspective", says Stefan Collini, an emeritus professor at the University of Cambridge who recently edited a collection of Orwell's essays. "Wifedom" depicts a man who relied extensively on women while erasing them from his own writings. How could it be, Ms Funder asks, that she read "Homage to Catalonia" twice and never realised that Eileen was also in Barcelona, working for a socialist group against Franco's fascists?

#### Invisible woman

As the author of "Stasiland", a prizewinning book on the East German security state, Ms Funder is well-versed in totalitarianism. Her aim is not to "cancel" a thinker she deeply admires. Her inquiry is instead a reaction to realising that she too has vanished into the invisible role of wife, doing the lion's share of parenting and household management to the detriment of her career. Elegantly and imaginatively resurrecting Eileen, Ms Funder comes to see patriarchy as another form of "doublethink", which Orwell defined as "a vast system of mental cheating". Men "imagine themselves innocent in a system that benefits them, at others' cost", Ms Funder writes.

Yet some women take part in their own erasure, a point Ms Funder does not probe deeply enough. Orwell and early biographers wrote Eileen out of history; she colluded by minimising her own suffering. Severely anaemic on the eve of an expensive—and fatal—operation, she wrote to Orwell that "What worries me is that I really don't think I'm worth the money." All this makes it doubly refreshing to see Julia, the heroine of "1984", emerge with full

agency in Sandra Newman's eponymous novel. Such feminist retellings are a booming genre today, with the women of Troy, Shakespeare's wife and mythological goddesses narrating their lives as the protagonists in new books.

For decades feminists have called out the sexism of Orwell's depiction of Winston Smith's lover, Julia, who is presented as a nymphomaniac and honeypot trap, leading to their crushing by the state. "With Julia, everything came back to her own sexuality," Orwell wrote. Whether the writer was himself a misogynist or simply satirising a group of sexist men, the author's estate had long felt there was something missing in the story. They sought a writer who might give a new dimension to the tale, writing a spin-off of "1984" for the 21st century. "The only way to approach it was from a feminist perspective, because the whole regime was so hor-

rifyingly misogynist," says Bill Hamilton, Orwell's literary executor.

Ms Newman's "Julia" offers a female character with a rich inner life. Her Julia is a survivor, more subversive than Winston, adroit at evading control, finding a kind of liberty in "sexcrime". "She imagined freedom as exuberance, a clumsy romping," Ms Newman writes. If Julia entraps Winston, it is because she too has been coerced and victimised. A twisty ending in keeping with the original makes this an enjoyable read even to those unfamiliar with "1984".

Neither Orwell's "troubling" behaviour towards women nor the #MeToo movement inspired the estate's decision to give the new novel its full backing, says Mr Hamilton. Yet this "Julia" cannot help but balance out his blind spots and bring his opus up to date. After all, he is the perennial man of the hour—not only yesterday but today, and almost certainly tomorrow. ■

#### "Oppenheimer" in Japan

## War wounds

TOKYO

A Hollywood film about the atomic bomb is causing consternation in Japan

**T**HE ATOMIC bomb has been dropped, and the mood at the Los Alamos Laboratory is jubilant. J. Robert Oppenheimer (Cillian Murphy), the American physicist responsible for the weapon's creation, appears in front of his cheering colleagues. "It's too soon to tell what the results of this bombing are," he declares, before making a ghastly taunt: "But I'll bet the Japanese didn't like it."

Japan recently observed the 78th anniversary of the bombings of Hiroshima and Nagasaki. At the same time "Oppenheimer" surpassed \$550m at the box office, becoming the highest-grossing second-world-war film ever (not ac-

counting for inflation). It has not been released in Japan, the third-largest film market after America and China. Some have speculated that the film may never make it to the big screen there.

"Oppenheimer" is causing a furore nonetheless. An estimated 210,000 people died in Hiroshima and Nagasaki; around 113,000 who were exposed to radiation from the bombings are still alive. "Oppenheimer", however, focuses on the scientist's perspective and not the destruction wrought by the bombs.

Many Japanese are appalled by the "Barbenheimer" memes on social media which put carefree characters from the "Barbie" film, released on the same day as "Oppenheimer", alongside mushroom clouds. (Warner Bros, the studio behind "Barbie", apologised for sending a kiss-blowing emoji at the meme.) Users coined the hashtag #NoBarbenheimer to criticise these posts and argued they make light of the country's suffering.

Some in Japan want "Oppenheimer" to be released, despite its flaws. Tanaka Miho, an anti-nuclear activist, says the film offers "an opportunity for people all over the world to think about the legacy of the bombings". The subject of nuclear disarmament is pressing as war rages on in Ukraine. In a statement read at the Hiroshima Peace Memorial, António Guterres, the UN secretary-general, lamented that "the drums of nuclear war are beating once again". The Japanese know how awful that sound truly is.



Man-made destruction



**World in a dish**

## La vie en rosé

### How Provençal rosé became the summer tipple par excellence

WHEN TEMPERATURES reach 26°C (78.8°F) in Britain, a few things happen. People strip off their clothes and flock to parks and swimming pools. And they buy rosé. According to Majestic, Britain's largest wine retailer, 26°C is the exact point at which sales of the pink stuff outpace those of red and white. During a heatwave last year, the company sold one bottle every 12 seconds.

Rosé is the ultimate summer tipple. Like a strong, zesty margarita, a chilled glass of pale rosé makes a perfect aperitif. (Unlike a margarita, you can probably enjoy more than two without disgracing yourself.) People have been drinking versions of rosé wine for millennia, starting with the ancient Greeks. More than 2,000 years ago the ancient Romans started cultivating vineyards in Provence, in south-eastern France.

Provence remains rosé's heartland. With 35% of the output, France is the world's leading producer of rosé. It is also its leading consumer: a third of the bottles of wine drunk there are pink in colour. In the past 15 years, exports of Provençal rosé have increased by around 500%. Château d'Esclans sells an eye- and mouth-watering 10m bottles every year. LVMH, a luxury group that owns a number of revered champagne houses and wineries, has in recent years bought Château Galoupet and acquired stakes in Château d'Esclans and Château Minuty, rosé juggernauts. In America, Whispering Angel, a pink wine produced by Château d'Esclans, sells the most bottles of any French wine of any hue.

Travel and social media help explain the wine's global spread. Before the pandemic, France was the world's leading tourist destination. The pale wine came to be seen as sophisticated thanks to glitzy events such as the Cannes Film Festival. Social-media tributes like #roséallday (a celebration of day drinking) and #brosé (a hashtag used by men who enjoy the wine) have brought attention to the drink. Consumers have also realised the wine's versatility, agreeing with Julia Child, a popular television cook, that "rosé can be served with anything." Dry rosés, pleasantly acidic and refreshing (unlike the cloying notes rosé is infamous for, which are common in cheaper varieties), can accompany many cuisines well.

Rosé still remains a target of derision among oenophiles. It has earned the offensive moniker "bitch diesel" (so named because it is pink and has been marketed to women). According to Sacha Lichine, the president of Château d'Esclans, when he first approached potential distributors he would get the door slammed in his face: traditional folk "think that it's not a real wine. They think that it's a Coca-Cola wine," he explains.

Barbara Drew, a master of wine at Berry Bros & Rudd, Britain's oldest wine merchant, suggests that the dismissal of rosé as "not a serious wine" is partly because it generally does not age as well as red, so is not of interest to some collectors and investors. But such squabbles over value ignore rosé's central role in summer culture. Enjoying it is nothing to blush at. ■

### Literary non-fiction

## Chronicle of stories not told

**Tabula Rasa: Volume One.** By John McPhee. *Farrar, Straus and Giroux*; 192 pages; \$28 and £22.99

TO FERRET OUT the best talent, ask practitioners in that field. Attend the doctors' doctor, seek counsel from the lawyer other lawyers retain. So it goes with journalism. John McPhee, aged 92, is a writer's writer. A father of literary non-fiction, he has tackled subjects as varied as fishing and oranges in his 32 books and 60 years writing articles for the *New Yorker*. His book on geology, "Annals of the Former World", won the Pulitzer prize for non-fiction in 1999. (He has been a finalist for the prize four times.)

"*Tabula Rasa*", Mr McPhee's latest book, is different from what has come before. It is a compilation of the many "saved-up, bypassed, intended pieces of writing" he flirted with but did not pursue. At the outset, he compares the project to Mark Twain's autobiography, a series of anecdotes and ruminations dictated in his crepuscular years. Mr McPhee calls his and Twain's efforts "old-people projects": attempts to fight mortality by tackling something that defies completion.

As a young writer, he marvelled at this sort of quest, when Thornton Wilder, an older playwright who left Mr McPhee "moon-, star- and awestruck" at a lunch meeting, described his latest venture. Wilder was cataloguing the 431 surviving plays of Lope de Vega, a Spanish playwright born in 1562. "Why would anyone want to do that?" a perplexed Mr McPhee asked Wilder. Only now, later in life, does he understand: it was something "to do, and do, and do. It beat dying. It was a project meant not to end." That is why Mr McPhee specifies that "*Tabula Rasa*" is only "volume one". He is already working on the next instalment.

Death appears many times in the book, often in the form of people's near-misses. At the age of 12, he tried to go ice skating with a young friend, Julian, but his mother forced him to attend church instead. Julian and a friend died that day: their corpses were found with their arms outstretched, frozen in place as they tried to climb out after the ice had shattered beneath them. For many years Mr McPhee tried to work out how to write about Julian, "whose future has remained beside me through all my extending past".

Not all the almost-never-told stories ➤

► are so sombre. In "Zoom Laude", Mr McPhee writes amusingly about his time teaching his writing course at Princeton at the start of covid-19, with his students forced to do their "free choice" journalism assignments during lockdown.

Reading Mr McPhee's discarded ideas is both informative and personal, a bit like riffling through the waste bin at his desk. Younger journalists will enjoy his chapter on how he finally got started at the *New Yorker*, suffering 15 years of rejections before his first article was accepted. He evokes a bygone era of journalism, when businessmen, such as the publisher Henry Luce, were more accessible to the press. Contracts at magazines like the *New Yorker* specified that staff writers were simply

expected to give their "best efforts".

"Kill your darlings" is an often-repeated admonition offered to aspiring writers: authors should cut the phrases and characters that delight them yet are not essential to making a point. Deciding which "darlings" of story ideas should be killed off is rarely discussed when teaching writing, however, even though subject choice is surely the most important decision a writer can make. In "Tabula Rasa" Mr McPhee demonstrates why ideas that animate writers often never lead to anything, perhaps wisely. But, as he explores what might have been, Mr McPhee also proves how enjoyable it can be to spend time with such an expert storyteller—even on short journeys that never led anywhere. ■

from him on TikTok and at shows: "In London I'm verified; in New York I'm valid."

Far from tightening the West's grip on cool, the internet has dropped rap's already low barriers to entry: anyone with a voice, microphone and internet connection can release a verse. A greater pool of talent is one reason that people in many countries increasingly listen to local rap rather than American hip-hop artists. "People want to see themselves represented," says Aori Sauthon, a rapper and Brazilian hip-hop music executive.

In turn, American artists are taking more cultural cues from global hip-hop. Ice Spice, one of America's brightest new rap talents, uses the British drill sound popularised by artists like Central Cee. Burna Boy, a Nigerian artist, is helping popularise afrobeats, a genre from west Africa and its diaspora, among American rappers. Some think that afrobeats could become as influential as the South has been in shaping hip-hop's sound. (The South spawned trap, a subgenre of rap music characterised by booming drums with melodic, auto-tuned vocals.) American hip-hop has always been inspired by other, global music: early records sampled Ethiopian jazz. But this is the first time that artists in other countries are taking on Americans' dominance in hip-hop so directly.

The rise of global stars dovetails with a second trend, which is hip-hop's surprising wobbles at home. In 2023 a hip-hop album did not top the American charts until July, the longest wait in 30 years. Hip-hop made up 42% of the top 50 most-streamed songs on Spotify in America in 2020 but accounts for just 16% so far this year, according to Chartmetric, a data firm. Country and Latin music have been gaining share.

The charts do not fully illustrate any genre's broader cultural influence, but they have still prompted some soul-searching. Some are concerned that hip-hop is experiencing a "mid-life slump" in America. The easiest explanation is that hip-hop's big-

## Hip-hop turns 50

# Going on tour

**America has dominated hip-hop for decades, but the future of the genre will be decidedly less American**

**T**O UNDERSTAND HIP-HOP'S future, look no further than the lead single on the album "Utopia", by Travis Scott. Mr Scott is American, but the song's beat is part-Brazilian, inspired by *bailes funk*, a cousin of hip-hop born in the favelas. Featured on the track is the Weeknd, a Canadian sensation, and Bad Bunny, a Puerto Rican who raps in Spanish and has been the world's most-streamed artist for three years on Spotify. The song's title is "K-Pop", perhaps referring to the drug ketamine (but also generating interest from fans of Korean pop). One critic has called it a "diabolically stupid plan to create the most popular song in the world", by bringing stars and elements of global hip-hop into a single tune. It worked: the song recently climbed American charts.

Since its supposed origin at a block party in New York on August 11th 1973, hip-hop has become the most popular musical genre in America, together with R&B. (Hip-hop is technically a larger lifestyle category but is often used interchangeably with rap.) It has shaped culture in black America's image and has become so much a part of America's identity that the State Department even runs a "hip-hop diplomacy" scheme, which sends rappers, DJs and breakdancers abroad. Next year break-dancing, which emerged at early hip-hop parties, will officially become a new Olympic sport.

Hip-hop's past 50 years have been heavily American, with many stars and songs emerging there. But America's hip-hop dominance in the next half-century

will not be as great. That is for two reasons.

First, the geographical centre of hip-hop is shifting: first from New York City and Los Angeles, then to southern cities like Atlanta in the 2000s, and now to everywhere. Many of the most influential new hip-hop stars are no longer African-American. Take the very good Bad Bunny, whose song, "Me Porto Bonito", has been streamed 1.5bn times on Spotify since its release last year. (That is around 38% more than the Beatles' most-streamed song, "Here Comes the Sun", released in 1969 and added to Spotify in 2015.) Central Cee, one of Britain's most popular rappers, took drill, a subgenre of rap born in Chicago, repackaged it in London and exported it back to America. Americans learn British slang



►gest American stars, such as Kendrick Lamar and Post Malone, are more established and are less focused on churning out hit releases than they used to be. Some emerging stars, such as Juice WRLD, have died young, and with them the potential for new albums, even if they remain among the most-streamed rappers.

It may also be that listeners feel hip-hop has strayed too far from where it started. What began as an anti-establishment movement in the Bronx has now become the "cultural arm of capitalism", says Tricia Rose, a professor at Brown University who

was among the first people to study hip-hop. Materialism is rampant in lyrics and lifestyles. "Rappers from the favelas now go to Prada to buy socks," laments Mr Sauthon, the Brazilian hip-hop executive. Many criticise the rise of trap and "mumble rap" (a term for rap songs whose lyrics are hard to decipher) for a perceived lack of lyrical depth.

But defenders point out how hip-hop has retained its anti-establishment roots, being invoked by young people and political activists globally, from Pretoria to Palestine. And despite all the talk of a hip-hop

downturn in America, its influence remains indisputable. Morgan Wallen, today's most popular country singer, uses trap-inspired beats and sings with a rap-like cadence. Recent albums from Taylor Swift are replete with swear words. "I'm not sure that would've happened before hip-hop," says Adam Bradley, a professor at the University of California, Los Angeles.

Far from being ready for a mic-drop, hip-hop is just starting a new sort of tour: with more artists from more countries embracing the genre than ever. Middle age has never looked so good. ■

## Back Story The truth about true crime

"A Thread of Violence" is a scrupulous book in a compromised genre

**A**T THE AGE of five, Malcolm Macarthur was kicked in the head by a horse. At least that is how his neglectful mother and a farmhand on his parents' Irish estate recalled it. Wrong, insists Mr Macarthur: he tripped and fell on a rock. Likewise he denies suggestions that he suffered or witnessed regular abuse by his father—experiences that might be linked by "a thread of violence" to the murders he went on to commit.

"A Thread of Violence" is the title of Mark O'Connell's new book about the Macarthur case. As the disputed horse-kick shows, he is careful to separate fact from rumour or surmise. His is a scrupulous, thoughtful work in the ubiquitous, often ghoulish genre of true crime. Yet despite his exacting standards, or because of them, readers may reach a harsher verdict on the genre itself.

The modern true-crime fad is generally traced to "In Cold Blood", Truman Capote's landmark, fabrication-riddled book of 1966; but the idea can be tracked through Victorian "penny dreadfuls" to early-modern murder ballads and beyond. In the 21st century it has been supercharged by cable television, streaming and podcasts, the bingeable formats fitting the suspenseful narratives like a felon's glove. As in the most successful, much-imitated examples—"Serial", "Making a Murderer", "The Staircase"—Mr O'Connell tells what he justifiably calls "a terrific yarn".

By 1982, when he was 37, Mr Macarthur (pictured) had squandered his inheritance. A bow-tied dilettante with academic airs, he resolved to rob a bank and so preserve his "languid liberty". While stealing a getaway car and a gun, he needlessly killed Bridie Gargan, a nurse, and Donal Dunne, a farmer. He was caught in the home of a pal—Patrick

Connolly, Ireland's attorney-general. Charles Haughey, the country's premier, called the affair "grotesque", "unbelievable", "bizarre" and "unprecedented", adjectives soon combined into what, in Ireland, is an enduring acronym: GUBU.

Mr Macarthur was released in 2012. Mr O'Connell tracked him down on the streets of Dublin and weaves together an account of the murders, a chronicle of his talks with the killer and his own reflections. It is not only factual rigour that distinguishes his book from many true-crime tales on page and screen. He is respectful of the horror at its heart, eschewing cliffhangers and gore, and is straight with Mr Macarthur about his plans—rebutting Janet Malcolm's famous claim in "The Journalist and the Murderer" that, because they deceive their subjects, the work of reporters like him is "morally indefensible".

Intellectually, he aims high. Like Dostoyevsky, whom he cites, Mr O'Connell hopes to extrapolate essential verities of human nature from a single, extreme case: "to understand the darkness and violence that run beneath the surface of so many

lives". He wonders how Mr Macarthur copes with his guilt. His ultimate quarry is "for want of a better term, evil".

These are grand ambitions. They have to be if they are to offset the genre's costs, which Mr O'Connell acknowledges and many true-crime fans sense queasily beneath the thrills.

Occasionally true crime exposes police misconduct and helps finger culprits or rectify miscarriages of justice. More commonly it risks distressing victims' relatives (who, as here, often decline to speak to writers or producers). It blurs reality with fiction, not least among the amateur sleuths and vigilantes who obstruct some police inquiries. It services, but never satiates, grisly instincts of *Schadenfreude* and prurience. Bending the mess of life to fit the arc of a character or an episode, it mines suffering for entertainment.

For all the author's tact, Mr Macarthur does not give him what he wants, at vital moments retreating into creepily impersonal evasions (he refers to his murders as "the criminal episode"). The inner truth remains obscured by a "giant redaction mark"; like "a startled animal", it vanishes into shadow if you reach for it.

Guilty people lie to themselves. Rough childhoods can be damaging. Privilege can nurture a warped sense of entitlement. Such are the truisms that Mr O'Connell comes away with. The criminal keeps his secrets. Evil slinks away.

Mr O'Connell is a supple writer and penetrating thinker who secured extraordinary access to a notorious killer. Yet in its frankness and frustrations, his exemplary book may make you wonder how many more books or shows about monsters you should consume. The truth about true crime may be that it is hard to pull off with a conscience.





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### CALL FOR CANDIDATES IMF ADMINISTRATIVE TRIBUNAL

The International Monetary Fund (the “Fund”) is seeking to fill a vacancy on its Administrative Tribunal (the “Tribunal”). The Tribunal is an independent judicial body, which hears and passes judgment on cases involving employment-related disputes between the Fund and its staff members.

Article VII of the Tribunal Statute provides that the Tribunal shall be composed of five Members, including the President, who “shall have no prior or present employment relationship with the Fund, must be nationals of a member country of the Fund at the time of their appointments and must possess the qualifications required for appointment to high judicial office or be jurisconsults of recognized competence.” Article VIII further provides that the Members of the Tribunal “shall be completely independent in the exercise of their duties...[and] shall not be eligible for staff employment with the Fund following the end of their service with the Tribunal.”

Members of the Tribunal are appointed for a four-year term by the Managing Director after appropriate consultation, and they may be reappointed for a maximum of two additional four-year terms. The Fund intends that the new Tribunal Member will commence their first term of office on January 1, 2024.

Decisions of the Tribunal are taken by panels composed of the President and two other Members designated by the President. Sessions of the Tribunal are ordinarily held at the Fund’s Washington, D.C. headquarters, several times a year. The Tribunal handles a caseload of approximately three to five cases per year. Tribunal Members are compensated for time spent on the work of the Tribunal. The Tribunal is served by a headquarters-based Registry. Tribunal Judgments are published on the Tribunal website [www.imf.org/tribunal](http://www.imf.org/tribunal). The working language of the Tribunal is English.

Qualified persons who wish to be considered for this vacancy should submit their applications to [IMFTribunalVacancy@imf.org](mailto:IMFTribunalVacancy@imf.org) by September 6, 2023.



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## Economic data

	Gross domestic product		Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units	
	% change on year ago latest	quarter*	% change on year ago latest	2023†	%		% of GDP, 2023†		% of GDP, 2023†		10-yr govt bonds latest,%	change on year ago, bp	per \$ Aug 9th	% change on year ago
United States	2.6	Q2	2.4	1.3	3.0	Jun	3.9	3.5	Jul	-2.9	-5.7	4.0	120	-
China	6.3	Q2	3.2	5.5	-0.3	Jul	1.2	5.2	Jun‡	2.4	-3.0	2.5	§§	-4.0
Japan	1.9	Q1	2.7	1.3	3.3	Jun	2.9	2.5	Jun	2.9	-5.2	0.6	40.0	144
Britain	0.2	Q1	0.6	0.3	7.9	Jun	6.7	4.0	Apr††	-3.3	-4.3	4.5	233	0.79
Canada	2.2	Q1	3.1	1.7	2.8	Jun	3.4	5.5	Jul	-0.6	-0.9	3.5	83.0	1.34
Euro area	0.6	Q2	1.1	0.9	5.3	Jul	5.5	6.4	Jun	1.8	-3.3	2.5	156	0.91
Austria	1.9	Q1	0.4‡	0.8	7.0	Jul	7.3	5.1	Jun	2.0	-2.4	3.1	163	0.91
Belgium	0.9	Q2	0.8	0.8	4.1	Jul	3.6	5.7	Jun	-1.9	-4.4	3.1	160	0.91
France	0.9	Q2	2.2	1.0	4.3	Jul	5.4	7.1	Jun	-1.7	-5.0	3.1	163	0.91
Germany	-0.1	Q2	0.1	-0.2	6.2	Jul	6.0	3.0	Jun	5.1	-2.3	2.5	156	0.91
Greece	2.3	Q1	-0.3	2.0	2.5	Jul	3.9	11.1	Jun	-6.8	-2.3	3.8	65.0	0.91
Italy	0.6	Q2	-1.4	1.2	6.0	Jul	6.4	7.4	Jun	0.1	-4.7	4.1	106	0.91
Netherlands	1.9	Q1	-1.3	0.9	4.6	Jul	5.2	3.5	Jun	6.5	-2.3	2.9	163	0.91
Spain	1.8	Q2	1.7	2.3	2.3	Jul	3.1	11.7	Jun	1.8	-4.1	3.6	163	0.91
Czech Republic	-0.2	Q1	0.4	0.2	9.7	Jun	10.5	2.6	Jun‡	-1.2	-4.5	4.2	22.0	22.1
Denmark	1.9	Q1	2.3	0.5	2.5	Jun	5.0	2.8	Jun	9.8	0.7	2.8	157	6.78
Norway	3.0	Q1	1.0	1.6	6.4	Jun	4.8	3.3	May††	17.6	12.5	1.4	76.0	10.2
Poland	-0.3	Q1	16.1	1.3	10.8	Jul	12.3	5.0	Jul‡	-1.1	-4.9	5.5	-6.0	4.07
Russia	-1.8	Q1	na	-0.6	4.3	Jul	6.0	3.1	Jun‡	2.4	-3.7	11.2	240	97.7
Sweden	-0.9	Q2	-5.9	1.0	9.3	Jun	7.1	9.2	Jun‡	4.2	-0.3	2.6	115	10.7
Switzerland	0.6	Q1	1.1	1.2	1.6	Jul	2.2	2.1	Jul	6.8	-0.7	0.9	43.0	0.88
Turkey	4.0	Q1	1.3	3.3	47.8	Jul	44.3	8.8	May§	-5.4	-4.8	17.5	139	27.0
Australia	2.3	Q1	0.9	1.6	6.0	Q2	5.5	3.5	Jun	1.5	0.2	4.0	80.0	1.53
Hong Kong	1.5	Q2	-5.1	3.5	1.9	Jun	1.9	2.9	Jun‡‡	9.1	-1.5	3.9	126	7.82
India	6.1	Q1	5.3	6.2	4.8	Jun	5.3	8.1	Apr	-1.3	-5.7	7.2	-17.0	82.8
Indonesia	5.2	Q2	na	4.9	3.1	Jul	3.8	5.5	Q1§	0.9	-2.6	6.3	-76.0	15,190
Malaysia	5.6	Q1	na	3.9	2.4	Jun	2.7	3.5	May§	3.1	-5.0	3.9	-9.0	4.57
Pakistan	1.7	2023**	na	1.7	28.3	Jul	31.2	6.3	2021	-1.5	-7.0	15.9	†††	302
Philippines	4.3	Q2	-3.6	5.3	4.7	Jul	5.7	4.5	Q2§	-5.3	-6.3	6.5	51.0	56.2
Singapore	0.7	Q2	1.1	1.0	4.5	Jun	5.0	1.9	Q2	16.3	-0.7	3.0	33.0	2.2
South Korea	0.8	Q2	2.4	1.3	2.3	Jul	3.0	2.7	Jul‡	1.9	-2.4	3.8	60.0	1,316
Taiwan	1.5	Q2	7.0	0.6	1.9	Jul	2.0	3.5	Jun	12.5	-0.9	1.2	-2.0	31.8
Thailand	2.7	Q1	7.8	3.2	0.4	Jul	1.5	0.9	Jun‡	1.1	-2.7	2.8	48.0	34.9
Argentina	1.3	Q1	2.7	-2.4	116	Jun	116.1	6.9	Q1§	-2.3	-4.2	na	na	285
Brazil	4.0	Q1	8.0	2.4	3.2	Jun	4.8	8.0	Jun‡‡	-1.9	-7.5	10.8	-143	4.91
Chile	-0.6	Q1	3.4	0.1	6.5	Jul	7.7	8.5	Jun‡‡	-3.6	-1.9	5.5	-117	860
Colombia	3.0	Q1	5.9	1.6	11.8	Jul	11.5	9.3	Jun§	-4.0	-4.2	103	-188	4,034
Mexico	3.7	Q2	3.6	2.4	4.8	Jul	5.0	2.7	Jun	-1.9	-3.5	9.0	63.0	17.1
Peru	-0.4	Q1	-2.2	1.3	5.9	Jul	6.5	6.0	Jun§	-1.3	-2.0	6.9	-110	3.70
Egypt	3.9	Q1	na	3.8	35.8	Jun	33.0	7.1	Q1§	-1.0	-6.4	na	na	30.9
Israel	3.8	Q1	3.2	3.0	4.2	Jun	4.1	3.6	Jun	4.7	-2.0	3.9	135	3.69
Saudi Arabia	8.7	2022	na	1.0	2.7	Jun	2.2	5.1	Q1	3.2	-1.4	na	na	3.75
South Africa	0.2	Q1	1.4	0.5	5.7	Jun	5.7	32.9	Q1§	-1.8	-5.7	10.2	-4.0	19.0

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.

## Markets

In local currency	Index	% change on:			index	% change on:		
		Aug 9th	one week	Dec 30th 2022		Aug 9th	one week	Dec 30th 2022
United States S&P 500	4,467.7	-1.0		16.4	Pakistan KSE	48,334.5	-0.9	19.6
United States NAScomp	13,722.0	-1.8		31.1	Singapore STI	3,313.8	-0.3	1.9
China Shanghai Comp	3,244.5	-0.5		5.0	South Korea KOSPI	2,605.1	-0.4	16.5
China Shenzhen Comp	2,038.8	-0.8		3.2	Taiwan TWI	16,870.9	-0.1	19.3
Japan Nikkei 225	32,204.3	-1.5		23.4	Thailand SET	1,528.3	-1.4	-8.4
Japan Topix	2,282.6	-0.8		20.7	Argentina MERV	461,280.8	3.6	128.3
Britain FTSE 100	7,587.3	0.3		1.8	Brazil BVSP*	118,408.8	-2.0	7.9
Canada S&P TSX	20,275.3	0.3		4.6	Mexico IPC	54,220.7	1.8	11.9
Euro area EURO STOXX 50	4,317.3	-0.4		13.8	Egypt EGX 30	17,763.6	1.8	21.7
France CAC 40	7,322.0	0.1		13.1	Israel TA-125	1,908.8	1.7	6.0
Germany DAX*	15,852.6	-1.0		13.9	Saudi Arabia Tadawul	11,286.2	-1.7	7.0
Italy FTSE/MIB	28,308.1	-2.3		19.4	South Africa JSEAS	76,837.4	0.5	5.2
Netherlands AEX	770.2	-0.6		11.8	World, dev'd MSCI	2,976.3	-0.8	14.4
Spain IBEX 35	9,354.4	0.3		13.7	Emerging markets MSCI	1,008.4	-1.1	54
Poland WIG	69,991.5	-1.2		21.8				
Russia RTS, \$ terms	1,004.7	-3.4		3.5				
Switzerland SMI	11,081.5	-1.2		3.3				
Turkey BIST	7,600.7	4.7		38.0				
Australia All Ord.	7,543.4	-0.3		4.5				
Hong Kong Hang Seng	19,246.0	-1.4		-2.7				
India BSE	65,995.8	0.3		8.5				
Indonesia IDX	6,875.1	0.3		0.4				
Malaysia KLSE	1,462.0	1.2		-2.2				

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

## Commodities

2015=100	The Economist commodity-price index			% change on year	
	Jul 25th	Aug 1st	Aug 8th*		
Dollar Index	151.9	148.0	143.7	-3.0	
All Items	143.9	137.6	136.4	0.3	
Food	124.7	121.8	121.5	-6.4	
Industrials	103.3	101.5	101.2	-2.6	
All	159.4	157.6	156.0	-0.7	
Agriculturals†	112.7	110.6	109.9	-0.9	
Metals	173.3	171.6	162.7	-0.7	
Sterling Index	180.3	177.0	172.4	-1.23	
All items	180.3	177.0	172.4	-1.23	
Euro Index	152.5	149.5	145.6	0.1	
All items	152.5	149.5	145.6	-13.8	
Gold	\$ per oz	1,962.0	1,943.1	1,927.5	-0.2
\$ per barrel	83.7	84.9	86.3	8.6	
West Texas Intermediate				-10.5	

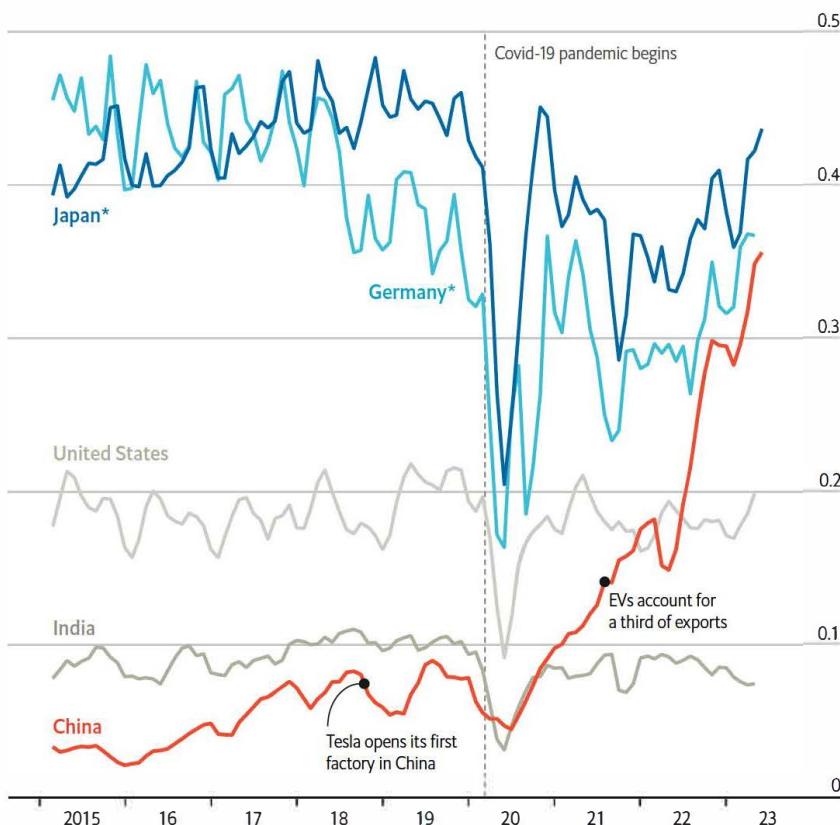
Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Uner Barry; WSJ. \*Provisional

†Non-food

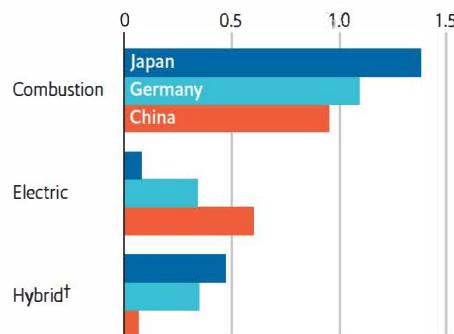
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## → China is now the world's third-largest car exporter, thanks to its dominance in electric vehicles

Passenger-car exports, m  
Three-month moving average



Passenger-car exports by fuel type, m  
January-May 2023



Chinese passenger-car exports, m  
By destination, quarterly



\*No data for hybrid vehicles before 2017 †Includes plug-in hybrid vehicles Sources: UN Comtrade; government statistics

## Charging ahead

### China's car exports are catching up with Germany's and Japan's

CAR ENTHUSIASTS tend to fall into one of two camps: those who fawn over the power and speed of German automotive engineering; and those who think Japanese cars are superior, admiring their reliability and value for money.

For decades the two countries have jostled for position as the world's leading car exporter. But the pair's dominance is coming to an end. Already the world's largest car manufacturer, China is on track to overtake its rivals in exports, too.

Until just a few years ago, attempts by Chinese carmakers to expand into foreign markets had stalled. In 2015 China exported under 375,000 cars a year, fewer than India, and about as many as Germany and Japan shipped in a single month. But in around 2020, the country changed gears. In 2021 China exported nearly 1.6m cars. By 2022 it hit 2.7m. International sales are set to rev up further in 2023. Customs data

show that the country shipped nearly 2m cars in the first six months of the year, or more than 10,000 a day.

China's nascent auto industry mainly exported to poor countries, but now many Western consumers are buying Chinese-made cars for the first time. Exports to Australia tripled year on year in the first half of 2023, to more than 100,000 cars; sales to Spain rose 17-fold to nearly 70,000 vehicles. But many of these cars are Western-branded. Roughly a tenth of vehicles exported in 2022 came from Tesla, an American electric-car brand. MG, which started as a British marque, and Volvo, a Swedish carmaker, are now owned by Chinese companies. Their models also make up a large chunk of the cars sent overseas.

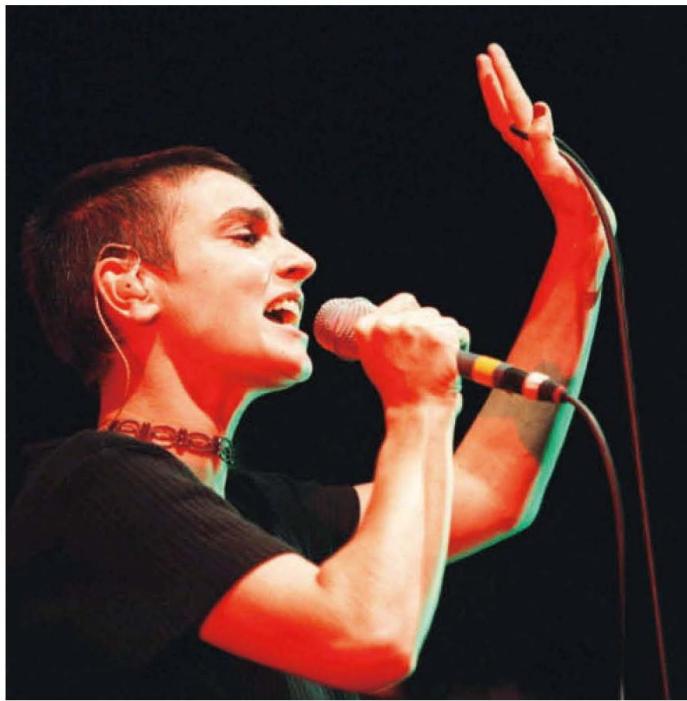
The country's expertise in electric vehicles (EVs) is partly responsible for the surge in exports. For all its manufacturing might, China never mastered internal-combustion engines, which have hundreds of moving parts and are tricky to assemble. The arrival of battery-powered vehicles, which are mechanically simpler and easier to build, helped China catch up. State investment in the EV technology, an estimated 676bn yuan (\$100bn) between 2009 and 2019, put the country in pole position. Today battery-powered vehicles account for a

fifth of car sales in China and a third of exports. In Japan and Germany only 4% and 20% of exports, respectively, are electric.

War has also turbocharged Chinese exports to Russia. After the invasion of Ukraine in February 2022 most Western carmakers ceased their Russian operations. Their exit allowed their Chinese rivals to capture market share. In the first half of 2023 Russia imported nearly 300,000 Chinese cars worth \$4.5bn, a six-fold increase on 2022. In July Chinese cars accounted for nearly 80% of imports, according to Autostat, an analytics firm.

China's export juggernaut looks unlikely to slow soon. AlixPartners, a consultancy, estimates that foreign sales of Chinese-branded cars could reach 9m vehicles by 2030, double Japan's exports in 2022. Although these homegrown brands are still relatively unknown in the West, the cars, which tend to be cheap—on average Chinese-made vehicles cost roughly 40% as much as German-made ones—are popular in emerging markets such as Brazil.

There are still speed bumps ahead. Chinese EV-makers may be chalking up big sales, yet few are making money. The industry is propped up by state subsidies, recently renewed after slowing sales growth. But subsidies may not last forever. ■



## The place where she was

**Sinéad O'Connor (Shuhada' Sadaqat), Ireland's most provocative singer, died on July 26th, aged 56**

NINE YEARS ago "Dr Phil", America's fatherly TV therapist, asked Sinéad O'Connor to show him a picture of the life she hoped for in future. She held out a sketch of a spiky-haired woman in trousers and a stars-and-stripes top, singing into a microphone. He asked her to sign it, and she did: Magda Davitt. To his nonplussed look, she explained hastily that Sinéad O'Connor had gone. She didn't want to be that person any more.

Sinéad frequently went missing. In her place came Scamp, herself as a child, because she was a rascal and tiny and a terrible thief. Then Mother Bernadette Mary, priest of the Irish Orthodox Catholic church, with a big wooden cross swinging round her neck. And Magda, who didn't last very long. Then, when she converted to Islam in 2018, Shuhada' Sadaqat. She put that name on documents alongside her original. As Shuhada' she wore a hijab both when performing and when she was sitting in her cottage up an Irish mountain, on her crimson sofa, chain-smoking Mayfair cigarettes. She had always been a multi-piece jigsaw. Once she got the time, for she never seemed to have it, she needed to lay the pieces out on the floor and see if she could make any sense of them.

To begin, she was resigned to girlhood, but wanted to look like a boy. When her first album, "The Lion and the Cobra" came out in 1987, a squarer-than-square exec told her she should wear short skirts with boots, necklaces and bracelets, and grow her hair long. Immediately she went to a barbershop and had it all shaved off. The barber cried, but she looked in the mirror and saw, without her hair, herself. Ever after she was either close-cropped, or completely shaved. With this went the leather jackets and the Doc Marten boots, the toe-caps slashed to show the steel underneath. For a time she came out as a lesbian, then retracted. She loved men and sex with men, married four of them and had children with three. She doted on them. Motherhood exalted her.

As a performer she played several parts. One was a punk. The

cover of "The Lion and the Cobra" showed her with arms raised, grimacing. But she was only singing. The anger in her—especially in "Troy" where she promised to return, Phoenix from the flame, "being what I am"—rang through the beautiful voice. But she was only a mild sort of punk, really. The next album, "I Do Not Want What I Haven't Got", was calmer. Her music bosses preferred her to look demure and sad, and she could do that too; no one could wring more pathos out of the old Irish songs, "Danny Boy" or "Foggy Dew". And yet, another paradox, she felt almost nothing for Ireland. The whole place was a church in which people, women especially, did not dare raise their voices. The best day of her life was in 1983 when she left. Divorce and homosexuality were still illegal then. The unmarked graves of the Magdalene mothers had still to be uncovered. As a bad-lot teenager, she had spent time in such a place herself. She knew girls who had become suicidal when their babies were taken away. But one of the nuns bought her a guitar, which became her life.

She found world fame in London. It rested essentially on one song, her cover in 1990 of Prince's "Nothing Compares 2U", which she sang on video with a face as pale as death. The song topped almost every chart, and she was a star. But she never wanted to be. Pop stars had to be good girls. She was a handful, a troublemaker. They lived in a sort of prison; she needed to be free. She was just a troubled soul who needed to scream into mikes now and then. Her models were Bob Dylan and Bob Marley, protest singers who made people hear the truths that no one talked about. They didn't want glitter and money and awards. Nor did she.

Fame, however, could be sabotaged. She began by refusing in 1991 to accept four Grammy nominations. This was a protest against many things: child abuse, sexism in the music industry and American jingoism, for playing the national anthem before her concerts. The next year, at the end of performing Bob Marley's "War" on "Saturday Night Live", she held up a picture of the pope on the word "evil", and tore it into pieces. "Fight the real enemy!" she shouted. Meaning paedophile priests, and the church's silence. At once she was labelled a crazy bitch. NBC banned her for life, and her career in America ended. But it was a brilliant stroke. Having a Number 1 had derailed her, and now she had reset her career. It became no easier, but it was on her own terms.

Abuse was something she knew plenty about. Her mother, an alcoholic, hadn't wanted a daughter. So she had made her lie on the floor, arms and legs apart, and stamped on her to try to burst her womb. She made her say "I am nothing, I am nothing", over and over. Sinéad's job was to clean the house. If so much as a lampshade was crooked, the shit was beaten out of her, usually with a hockey stick. She recorded the tortures in her songs; they were her only therapy. And yet, in another paradox, she loved her mother, whose very smell was evil. She missed her, and ached to hug her. It was not unlike the way she both treasured aspects of Catholicism, and hated the church. As a child she had worried that the Holy Ghost, a bird of light, was kept cooped up in a tabernacle by priests who took no joy in their religion. It ought to be out flying.

Amid all these bits of herself, the consistent thread was song. That too went missing from time to time, especially after 2015, when a radical hysterectomy made her lose her mind. Typically she publicised her breakdown, in a desperate video from a Travelodge in New Jersey. After six years of various treatments she re-emerged, only to be knocked down by the suicide of her son Shane, the lamp of her soul, in 2022.

Song might have rescued her even then, as it did when she was a teenager. She had plans for recordings and tours. Music was her deep inner place; she never made sense to anyone, even to herself, unless she was singing. As a bad child, she sang to get into heaven. When music played then, she saw an entity, not human, dark-blue and green and made of space, that took her hands to dance. And she heard it speak: "Some call me music, some the great absolver...If you don't know who to be, you can be me." ■

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