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FEBRUARY 26TH–MARCH 4TH 2022

Where will he stop?

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Contents

On the cover

Russia's president has begun a war that many thought unthinkable. Ukraine and the West face a grim test: leader, *page 11*. The consequences will reshape European security: briefing, *page 19*. Expect inflation, lower growth and disruption to financial markets, *page 67*. How the Biden administration is countering Russian disinformation on Ukraine: Lexington, *page 32*. China's balancing act, *page 42*. The implications of the Ukraine conflict for the Asia-Pacific region: Banyan, *page 41*

China's techno-dependence The Communist Party wants to end China's reliance on the West in strategic industries. We assess its progress in six of them, *page 59*

South African judges under threat The country must do more to protect them: leader, *page 14*, and analysis, *page 45*

The countries that fake their covid stats Abnormal tallies suggest some countries reported false covid-19 data: graphic detail, *page 85*

A special report on private finance The past decade was golden for private markets. Now they are being dramatically reshaped, *after page 44*

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Contents continues overleaf

The Economist

Volume 442 Number 9285

Published since September 1843
to take part in *"a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."*

Editorial offices in London and also:
Amsterdam, Beijing, Berlin, Brussels, Chicago, Dakar, Dallas, Dubai, Johannesburg, Madrid, Mexico City, Moscow, Mumbai, New Delhi, New York, Paris, San Francisco, São Paulo, Seoul, Shanghai, Singapore, Tokyo, Washington DC

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PLEASE ENJOY RESPONSIBLY

After months of denying any such intention, Vladimir Putin, Russia's president, launched an invasion of **Ukraine**. Russian troops appear to have entered the country not only from Russia itself, but also from Belarus and the Crimea, a Ukrainian territory seized by Russia in 2014. Russian aircraft and missiles struck targets across the country, including near the capital, Kyiv. Russian forces advanced on Kharkiv, the second city, and Mariupol, a strategic port. Mr Putin said he was seeking to "de-Nazify" Ukraine. The Ukrainian government declared martial law. It claimed to be holding back Russian forces in several parts of the country. Large traffic jams formed as civilians tried to flee Kyiv and other cities. Airlines were warned not to fly over the country. The scale of casualties was not immediately apparent.

Mr Putin's attack was immediately condemned by Western countries. Joe Biden said that America would impose swift and severe **sanctions** on Russia. Ursula von der Leyen, the president of the European Commission, promised the same on the EU's behalf. It is time "to up the pain level", said Mark Warner, the chairman of the Senate Intelligence Committee. NATO, the G7 and the EU all called emergency summits of their leaders. Even before the invasion, Germany had suspended the process of starting up Nord Stream 2, an undersea pipeline intended to carry gas from Russia to Germany, deliberately bypassing Ukraine.

In response to the Russian invasion of Ukraine, Estonia invoked a clause of the **NATO** treaty for members under threat. The alliance said it was deploying extra troops to eastern Europe to bolster its members' defences. Mr Putin threatened "consequences that you have never faced in your history" for anyone attempting to interfere in the war.

The **Israeli** justice ministry found no evidence that the police bypassed judicial oversight and hacked the mobile phones of civilians. Israel's attorney-general had ordered the investigation after a newspaper claimed the police spied on activists, businessmen and politicians.

A chemical explosion at a small-scale gold mine in **Burkina Faso** killed 59 people. The number of artisanal and small gold mines in west Africa is growing rapidly, but few are regulated.

Six African countries—Egypt, Kenya, Nigeria, Senegal, South Africa and Tunisia—will receive the technology needed to produce MRNA **vaccines** in a project established by the World Health Organisation.

Britain's prime minister, Boris Johnson, announced an end to all domestic covid-19 restrictions in **England**, including self-isolation for the infected (except for health staff). Some rules on travel remain in force.

America's **Supreme Court** agreed to hear the case of a web designer in Colorado who does not want to offer marriage-related services to gay couples on religious grounds. Four years ago the court sided with a baker who refused to make a wedding cake for a same-sex couple, but the ruling was narrowly tailored to the specifics of that lawsuit.

Canada's capital was cleared after three weeks of protests. Nearly 200 people were arrested and scores of trucks were towed from downtown Ottawa. The self-styled "freedom convoy" had begun as a backlash against vaccine-mandate rules, but broadened into general anti-government discontent. Several civil-liberties groups have threatened to take the government to court over its use of an emergency-powers law to remove the protesters, even though those powers were quickly repealed.

Colombia's constitutional court decriminalised abortions in the first 24 weeks of pregnancy. The decision, in a 5-4 vote, brings the country in line with Mexico, which decriminalised abortions last year, and Argentina, which has legalised them. Until now abortions in the deeply Catholic country were only allowed in limited circumstances, such as rape, and most women had little recourse to them.

The death toll from the recent flooding and landslides in the Brazilian hill town of **Petrópolis**, just north of Rio de Janeiro, rose to at least 200. Around 50 other people are still missing.

Imran Khan, the prime minister of **Pakistan**, offered to hold a televised debate with Narendra Modi, his counterpart in **India**. He hopes this would help resolve some of the issues that have bedevilled relations between two countries, such as Kashmir. The Pakistani government has signalled that it would like to start a dialogue with India on trade. Mr Khan flew to Moscow to meet Vladimir Putin this week to discuss economic co-operation.

A protest in Kathmandu against a $500m aid grant from America to **Nepal** turned violent. Police fired rubber bullets and tear-gas to disperse the crowd. Communist parties in the coalition government claim the grant has strings attached that will limit Nepali sovereignty.

The American Justice Department said it was ending the China Initiative, a contentious Trump-era effort to fight **Chinese security threats**, that critics said unfairly targeted professors of Asian descent. A senior official said the agency would introduce a broader strategy to counter threats from hostile nations, to include countries like Russia and North Korea.

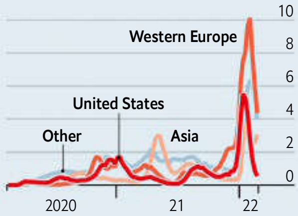
The chief executive of **Hong Kong**, Carrie Lam, ordered the compulsory testing of all 7.4m people in the territory as it fights a surge in covid infections. Residents will have to undergo three rounds of tests starting in mid-March. While other countries are starting to live with the disease, China has stuck to a "zero covid" policy, yet the Omicron variant has overwhelmed Hong Kong's hospitals.

There were tearful reunions in **Australia** as it reopened its international borders for the first time in two years. The country imposed a strict travel ban in March 2020 because of covid. Australians and some others were allowed to return from late last year, but most foreigners could not. Vaccinated visitors will no longer need to quarantine. Australia is now looking to rebuild its tourist industry.

Coronavirus data

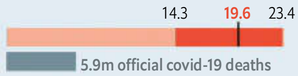
To 6am GMT February 24th 2022

Weekly confirmed cases by area, m



Estimated global excess deaths, m

With 95% confidence interval



Vaccine doses given per 100 people

By country-income group

Sources: Johns Hopkins University CSSE; Our World in Data; UN; World Bank; *The Economist's* excess-deaths model

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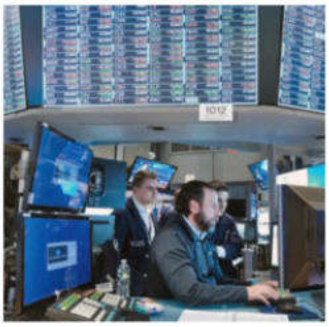


Russia's invasion of Ukraine shook **stockmarkets** that were already unsettled by the crisis. The day before the attack the S&P 500 had already hit its lowest level in eight months, taking it down by almost 12% since the beginning of the year. Before the assault the NASDAQ was also down from the start of January, by 17%. The Moscow Exchange suspended trading when the invasion began. When trading resumed the Moex index of Russia's leading companies plunged by 45% before pulling back some of its losses. The central bank brought in emergency support for Russian banks and banned the short-selling of shares.

Oil prices surged as investors weighed up the risk of Russia's military intervention to the flow of energy supplies. Brent crude passed $100 a barrel for the first time since 2014. Many Western oil firms are also assessing what effect sanctions will have on their considerable assets in Russia. The price of **natural gas** soared in what is an already tight market. The main indicator for gas futures in north-west Europe was up by 30% in early trading.

America held its biggest auction to date of rights to develop **offshore- wind** fields. The sale covered half a million acres in shallow waters off the coasts of New Jersey and New York's Long Island in an area of sea known as the New York Bight. The wind turbines could eventually power 2m homes.

The French government said it would inject €2.1bn ($2.4bn) into **EDF** to tide over the utility's finances as it deals with outages at its nuclear-power plants. EDF reckons it could take a €13bn net hit to its profit this year because of reduced output from nuclear production and the government's insistence that it bear some of the costs of increases to household electricity bills.

The resurgence in commodity prices in 2021 pushed revenues up by 42% at **Rio Tinto**, helping the mining company turn an annual net profit of $21bn and return a staggering $16.8bn to shareholders in dividends for the year. Rio's annual report reiterated its commitment to change its workplace culture following an external investigation into claims of bullying, and sexual and racial harassment. It will implement all of the investigation's recommendations.

Fresh concerns about China's regulatory crackdown on the **tech industry** caused another sell-off in Chinese tech stocks. Meituan's share price swooned after regulators said they wanted the food-delivery platform to reduce its fees to restaurants. Tencent was forced to deny that it was once again the target of another big clampdown. And reports emerged that the authorities were recommencing their inquiries into Jack Ma's Ant Group. The Hang Seng Tech Index of technology companies listed in Hong Kong fell to its lowest level since its creation in 2020.

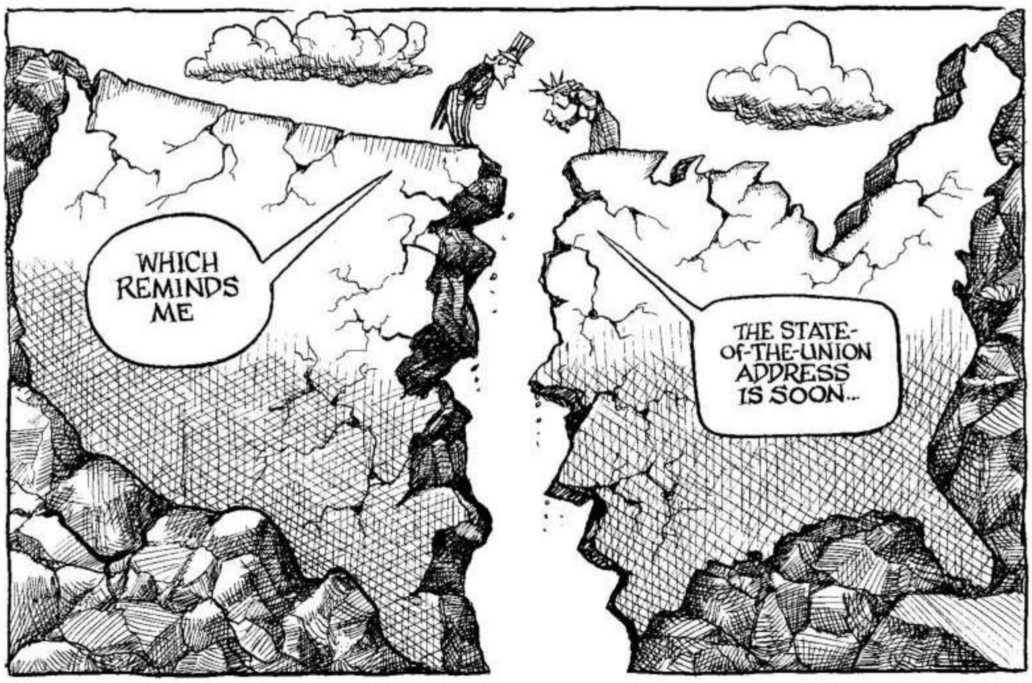
Last year China's regulators also brought in tough new restrictions on the **private-tutoring business**, including a ban on foreign investment in the sector. This week New Oriental, the largest online-tutoring company, reported an $876m six-month net loss, as its income plunged.

Airbus signed an agreement with CFM International, a venture between General Electric and Safran, a French aerospace firm, to develop a combustion engine for aircraft fuelled by hydrogen. The company said it was its most significant step yet "to usher in a new era of **hydrogen-powered flight**". An A380 super-jumbo will be fitted with liquid hydrogen tanks and used for test flights by mid-decade, with an aim of the first zero-emission commercial aircraft entering service by 2035.

Volkswagen announced that it is in advanced discussions to float its **Porsche** sports-car brand in an IPO. The German carmaker is in talks with its biggest shareholder, the holding company that is owned by the Porsche-Piëch family. A stockmarket listing of Porsche would provide VW with the funds to accelerate its roll-out of electric vehicles and battery technology.

Meta made its **Reels platform** available to all users on Facebook worldwide, upping its rivalry with TikTok over short-form video content. Mark Zuckerberg's comment that Facebook is encountering stiff competition from TikTok for attention on social media was a factor behind a 26% fall in Meta's share price on February 3rd. It has fallen by another 16.5% since then.

Carl Icahn launched a fight with **McDonald's** by nominating two directors to its board in a dispute over animal rights. The activist investor is a veteran of boardroom battles, including an unsuccessful attempt to block a buy-out of Dell and a clash with Warren Buffett over an oil-company takeover. His beef with McDonald's is its treatment of pregnant pigs. Mr Icahn thinks they should not be kept in gestation crates. The fast-food chain says it expects these to be phased out. Until then Mr Icahn could uncomfortably hog the limelight with calls for an abrupt end to the practice.

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Where will he stop?

Russia's president has launched an assault on his neighbour. History will judge him harshly

By the time it began, early on a gloomy grey morning on February 24th, the onslaught against Ukraine ordered by Russia's president, Vladimir Putin, had acquired a sickening inevitability. Yet nothing about this war was inevitable. It is a conflict entirely of his own making. In the fighting and the misery that is to come, much Ukrainian and Russian blood will be spilled. Every drop of it will be splattered on Mr Putin's hands.

For months, while Mr Putin had remained in seclusion, amassing roughly 190,000 Russian troops on the borders with Ukraine, the question had been: what does this man want? Now that it is clear he craves war, the question is: where will he stop?

To hear Mr Putin on the eve of the invasion, he would like the world to believe that he will stop at nothing. In his battle speech, recorded on February 21st and released as he unleashed the first volleys of cruise missiles against his fellow Slavs, Russia's president railed against "the empire of lies" that is the West. Crowing over his nuclear arsenal, he pointedly threatened to "crush" any country that stood in his way (see Briefing).

Early reports, some unconfirmed, only underlined the scale of his ambition. There had been speculation that Russia's president might be satisfied with control over Donetsk and Luhansk, regions of eastern Ukraine containing small, Russian-backed enclaves that were the object of last-minute diplomacy. But all that has crumpled in the face of a vast assault.

The reports said that Russian land forces had crossed from the east, heading for Kharkiv, Ukraine's second city; from the south, heading from the Crimea towards Kherson; and from Belarus to the north, heading for Kyiv, the capital. It was unclear in what strength they were moving. But Mr Putin seemingly covets all of Ukraine, just as American and British intelligence reports had claimed all along. In acting, he has set aside the everyday calculus of political risks and benefits. Instead he is driven by the dangerous, delusional idea that he has an appointment with history.

That is why, should Mr Putin seize a large swathe of Ukraine, the gatherer of the lands will not stop to make peace at its borders. He may not invade the NATO countries that were once in the Soviet empire, at least not at first. But, bloated by victory, he will subject them to the cyber attacks and information warfare that fall short of the threshold of conflict.

Mr Putin will threaten NATO in this way, because he has come to believe that NATO threatens Russia and its people. Speaking earlier this week, he raged at the alliance's eastward expansion. Later, he decried a fictitious "genocide" that he says the West is sponsoring in Ukraine. Mr Putin can't tell his people that his army is fighting against their Ukrainian brothers and sisters who gained freedom. So he is telling them that Russia is at war with America, NATO and its proxies.

The abominable truth is that Mr Putin has launched an unprovoked assault on the sovereign country next door. He is obsessed with the defensive alliance to its west. And he is trampling the principles that underpin peace in the 21st century. That is why the world must inflict a heavy price for his aggression.

This starts with massive punitive sanctions against Russia's financial system, its high-tech industries and its moneyed elite. Just before the invasion, when Russia recognised the two republics, the West had imposed only modest sanctions. It must not hesitate now. Even though Russia has set out to build a fortress economy, the country is still connected to the world and, as the initial 45% fall in Russia's stockmarket suggests, it will suffer (see Finance & economics section).

True, sanctions will harm the West, too. Oil prices soared above $100 a barrel on the invasion. Russia is Europe's main supplier of gas. It exports metals like nickel and palladium and along with Ukraine it exports wheat. All of that will present problems at a time when the world economy is struggling with inflation and supply-chain glitches. And yet, by the same measure, the fact that the West is prepared to suffer for sanctions sends Mr Putin the message that it cares about his transgressions.

A second task is to reinforce NATO's eastern flank. Until now, the alliance has sought to live within the pact signed with Russia in 1997, which limits NATO operations in the former Soviet bloc. NATO should rip it up and use the freedoms that creates to garrison troops in the east. That will take time. Meanwhile NATO should prove its unity and intent by immediately deploying its 40,000-strong rapid-reaction force to the frontline states. These troops will add credibility to its doctrine that an attack on one member is an attack on all. They will also signal to Mr Putin that the further he pushes in Ukraine, the more likely he is to end up strengthening NATO's presence on its border—the very opposite of what he intends.

And the world should help Ukraine defend itself and its people. They will bear the burden of the suffering. Only hours into the war came the first reports of military and civilian deaths. Volodymyr Zelensky, the president, called on his compatriots to resist. They must choose how and where to repel Mr Putin and his armies and proxies, should he install a puppet government in Kyiv. NATO is not about to deploy troops to Ukraine—rightly so, for fear of a confrontation between nuclear powers. But its members should give Ukraine assistance by providing arms, money and shelter to refugees and, if need be, a government in exile.

Some will say that it is too risky to challenge Mr Putin in these ways—because he has lost touch with reality, or because he will escalate, miscalculate or hug China. That would itself be a miscalculation. After 22 years at the top, even a dictator with an overdeveloped sense of his own destiny has a nose for survival and the ebb and flow of power. Many Russians, unclear about a crisis that has come from nowhere, may be unenthusiastic about waging a deadly war against their brothers and sisters in Ukraine. That is something the West can exploit.

Accommodating Mr Putin in the hope that he will start to behave nicely would be more dangerous still. Even China should see that a man who rampages across frontiers is a threat to the stability it seeks. The freer Mr Putin is to advance today, the more determined he will be to impose his vision tomorrow. And the more blood will be spilled in finally getting him to stop. ■

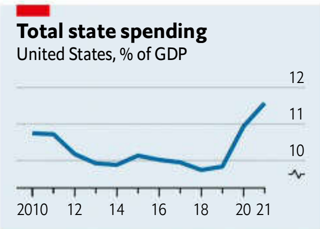
Spending covid-relief money

Wasting a windfall

America's states have more green stuff than grey matter

NEARLY A YEAR has passed since Congress approved the American Rescue Plan Act (ARPA), promising spending of $1.9trn, equivalent to 9% of GDP. Many, including this newspaper, worried that such federal largesse looked excessive. Those fears have been borne out. ARPA helped create a surge of demand that contributed to the inflation that is plaguing America and which is higher than in other advanced economies. It also gave states and local-government agencies over $650bn—more than they knew what to do with.

They are keen to spend it, one way or another. Outgoings from the states reached an all-time high in 2021, and will probably break the record again this year. Some ARPA money is going on sensible investments and into rainy-day funds that will help states weather the next recession. But too many states are lavishing federal dollars on dodgy projects that look better in a campaign ad than on a balance-sheet (see United States section).



State legislators in Massachusetts are fond of diverting money intended to help schools reopen towards building new football pitches instead. More worrying are the efforts to enact new tax cuts and social programmes. Iowa plans to ditch a progressive income tax in favour of a flat tax, while exempting retirement incomes. California's governor, Gavin Newsom, has proposed expanding the state's health-insurance programme to undocumented immigrants—for an additional $2.2bn a year. These initiatives are creating big liabilities that may prove unsustainable in the years to come, as the funds from Washington ebb and America's economy returns to its tamer, pre-pandemic rate of growth.

When that tide goes out it will become painfully clear that states are facing structural problems. Although the federal government has picked up much of the tab during the pandemic for spending on Medicaid, the public health-insurance scheme for the poor, the programme's costs take up an ever-rising share of state budgets. Increasing fuel efficiency has reduced revenues from the petrol tax, the primary means states have of financing transport infrastructure. Many states in the Midwest and North-east are losing people, leaving them with infrastructure that is too costly and too extensive for those who are left.

All the more important, therefore, that state governments use the federal windfall to make their economies more competitive. A few principles should guide them. First, they should favour one-time investments over enduring commitments. Cleaning up pollution and upgrading ancient computer systems are limited projects that will bring benefits for years to come. Many states also have big infrastructure-maintenance backlogs that they would do well to reduce. Second, any new long-term projects should be chosen with an eye to enhancing productivity in a post-pandemic world. Broadband internet, particularly in ill-served rural areas, is a prime example.

Lastly, the temptation of tax cuts and social programmes must be restrained by a regard for the future. Conservative forecasts of tax-revenue growth should be grounded in economic trends rather than the surge in income- and sales-tax receipts during the pandemic. To avoid sudden budget shortfalls, tax cuts can be designed to kick in only above a threshold of revenues, as in North Carolina in the past. And states would do well to pilot social programmes before charging ahead—unlike Colorado, which is spending $13m this year to build the bureaucracy for a universal preschool programme that does not yet exist and whose benefits are unproven.

ARPA is only part of the states' federal bonanza. Still more money from Washington is set to come their way as the $1.2trn Infrastructure Investment and Jobs Act, passed in November 2021, is implemented. Ambitious governors and state legislators are eager to spend their way to re-election. Alas, they risk leaving a fiscal time-bomb for future policymakers to defuse. ■

Private markets

The private-equity delusion

Why private markets are likely to disappoint investors

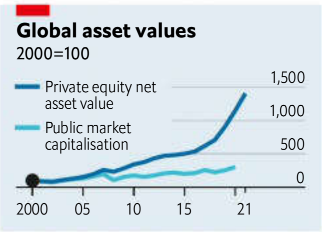
EVERYONE WHO has an investment portfolio or is in a pension scheme knows that they are exposed to the gyrations of the stockmarket. Only some are aware that a rising share of their savings pot has been invested in private assets, including private equity (leveraged buy-outs), privately held debt and infrastructure and property holdings. And most would be surprised to know how big this exposure has become. Private equity and property alone make up almost a fifth of American public pension funds' portfolios. A whopping 39% of large American endowments sits in buy-outs, venture capital and real assets. Private assets have become the opium of the savings industry because they are assumed to generate high returns. As our special report this week explains, this belief may be a delusion.

Private investments have gone mainstream in part because the best private investment firms have been well run and made the most of their opportunities. For example, while private equity has gone through two boom-and-bust cycles since taking off in the 1980s, its blend of financial and operational engineering has added genuine value to thousands of firms. Since the mid-1990s private-equity funds have outperformed comparable share indices over various time periods by two to six percentage points a year. As banks have withdrawn from risk-taking be-

cause of post-crisis regulation, private firms such as Apollo, Blackstone, Carlyle and KKR have filled the void by expanding into debt markets. This has helped private markets to more than quadruple in size since 2008, to over $10trn.

Meanwhile, the clients—institutional investors such as pension funds—have been desperate to pep up returns. The prices of shares are already high, the income you get from bonds has become puny as interest rates have dropped, and an ageing population is putting pressure on the solvency of pension funds. In these circumstances, private markets' record of decent returns is hard to resist. Public pension funds with large deficits, including CalPERS, a Californian giant, are praying that punts on private markets will save them.

You might think this colossal bet would get lots of scrutiny. In fact most criticism of private funds has been directed elsewhere. Left-leaning politicians, for example, worry about barbarian owners destroying jobs, when the evidence of this is patchy at best. Meanwhile the risk that returns will be mediocre is growing.



One reason is the law of large numbers. As cash saturates the industry, it will tend to push down returns. America now has 18,000 private funds, 50% more than five years ago. The jostling will intensify further as large equity managers such as BlackRock and Vanguard push deeper into private markets in response to a clamour from yield-hungry clients. There is even a fast-growing market for second-hand private-equity stakes. For investors this secondary market is double-edged: it makes it easier to trade, but should reduce private assets' "illiquidity premium"—the extra return investors enjoy for sacrificing ease of selling.

Another worry is rising interest rates. Cheap debt is the lifeblood of buy-outs. Not everyone in private markets will suffer from higher rates: they are a fillip for some private-debt strategies, not least those that specialise in restructuring companies in trouble. But dearer borrowing is a net negative for the private-capital industry. A final concern is that governments will, belatedly, clamp down on the tax wheezes that private investment firms have long exploited, such as the deductibility of interest payments and the "carried-interest" loophole, which allows them to book profits as capital gains.

None of this means the industry faces an immediate crisis. Most funds lock up money for years. Some will continue to do well by hunting for bargains, and the evidence suggests that it is easier for skilled investors to outperform in private markets than it is in public ones. Nonetheless the overall pot of money invested in private assets seems likely to face a slow-burning deterioration in performance that leaves returns looking humdrum.

What to do? Most big private investing firms have shifted from becoming niche, hands-on investors to being financial supermarkets, focused most on growing the asset base from which they charge fees. They may need to reinvent themselves, by, for example, finding opportunities that public markets neglect, from building infrastructure to creating renewable energy assets. And they will have to cut high fees as returns become more pedestrian

The ultimate investors in private markets, such as pension funds, can do their bit by insisting on lower fees and greater transparency, or trying to bypass fees by investing in private assets directly. Even so, it will become harder to avoid the reality that private markets are not a magical solution to an era of low investment returns and insolvent pension schemes. It is time to get real about what private markets can and can't accomplish. ■

Democracy in South Africa

Courting trouble

South Africa must do more to protect its judges

When Nelson Mandela opened South Africa's Constitutional Court in 1995, he said it would determine "the future of our democracy". The first president of the democratic era argued that the court was as important to the new constitution as the parliament and presidency. Judges should be "creative and independent" in ensuring that, in contrast to apartheid, no person was above the law, regardless of their race, power or wealth.

By and large, the judges have done their job. The Constitutional Court has defended citizens failed by a callous state, for instance by ordering the government of Thabo Mbeki to provide antiretroviral drugs to people with HIV. It has challenged abuses of power by Jacob Zuma, whose presidency in 2009-18 was defined by widespread looting. Last year the highest court sent Mr Zuma to prison after he disobeyed an order to appear at an official inquiry into corruption during his tenure.

Yet the courts are facing grave threats (see Middle East & Africa section). Populist politicians who loathe the rule of law want to see pliant judges appointed who will bend to their will. Those who believe in the constitutional principles set out by Mandela, including the president, Cyril Ramaphosa, are not doing enough to safeguard his legacy. The mix of relentless attack and pusillanimous defence bodes ill for South African democracy.

Critics accuse judges of overstepping their boundaries and usurping legislation. It is true that the judicial branch has become involved in politically rancorous disputes. But this reflects the failure of the other branches of government to do their jobs. The more politicians from the ruling African National Congress (ANC) have abused their privileges, and the more abject their failure to improve the lot of ordinary South Africans, the more NGOs and opposition parties ask the courts to hold them to account. As Dikgang Moseneke, a retired justice, puts it, "Judges don't look for cases; rather cases look for judges."

What is more, the courts' critics do not really care about the separation of powers. For ANC politicians such as Lindiwe Sisulu, who recently blamed "house negroes" on court benches for South Africa's ills, attacks are a shameless effort to pass the blame. Ms Sisulu has spent more than two decades as a consistently ineffective minister. In other cases cynical self-interest is masquerading as legal criticism. Many spewing vitriol, including Mr Zuma, who has compared judges to apartheid-era rulers,

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Geyer R, Jambeck JR, Law KL. Production, use, and fate of all plastics ever made, 2017
Lebreton, L., Andrady, A. Future scenarios of global plastic waste generation and disposal, 2019

are either facing criminal charges or fear they soon might.

The courts have been weakened from within as well as without. The chief justice helps manage the court system in addition to making rulings. But under Mogoeng Mogoeng, who retired last year, the bench was rarely at its full complement. Cases piled up. The Judicial Services Commission (JSC), a body made up of lawyers and political appointees that advises on court picks, has become a political pantomime dominated by the Economic Freedom Fighters (EFF), a hard-left party. The JSC has rejected strong white candidates for jobs at the highest court. Candidates of all races are increasingly at risk of personal attacks.

Mr Ramaphosa needs to get a grip. He must choose a chief justice who unmistakably adheres to the principles of the constitution. The president could further boost public confidence in the broader criminal-justice system if he sacked the hopeless police chief and police minister, overhauled the dilapidated lower courts and gave prosecutors the resources to go after graft.

South Africa is in a fragile state. The failings of the post-apartheid era are leading ever more of its citizens to question the virtues of democracy. Populists like Julius Malema of the EFF and Herman Mashaba of ActionSA are attracting converts. The simplistic remedies they peddle are alluring. A poll last year suggested that two-thirds of the country would forgo elections if an authoritarian leader could curb crime and hardship.

Mandela's warning

It is therefore vital to protect the Constitutional Court as the last line of defence for democracy. At its inauguration, Mandela warned the country "to stand on guard not only against direct assault on the principles of the constitution, but against insidious corrosion". Both now menace the courts. South Africa must heed his words before it is too late. ■

Workplace automation

Rise of the robots

The world should welcome the rise of smart machines

THE WORD "robot" was coined in 1920 by the Czech playwright Karel Capek. In "R.U.R." ("Rossum's Universal Robots") Capek imagined artificial, fully functional servants. For most of their history, however, robots have been dumb, inelegant mechanical devices sitting out of sight in factories.

Things are starting to change, however. Robots have benefited from rapid innovations in smartphones, which brought cheap cameras and sensors, fast wireless communications and powerful, smaller computer chips. More recent advances in machine learning have added software to make robots better informed about their surroundings and equipped them to make wiser decisions. Robots are leaving carefully managed industrial settings for everyday life and, in the coming years, will increasingly work in supermarkets, clinics, social care and much more (see Science & technology section).

They could not be coming at a better time. Many industries are facing a shortage of labour—the demand for workers has recovered much faster than expected from the pandemic and some people have left the workforce, particularly in America. Warehousing has grown rapidly thanks to the e-commerce boom. Robots are now indispensable, picking items off shelves and helping people pack an exponentially rising numbers of boxes. They are even beginning to trundle slowly along some pavements, delivering goods or food right to people's doors. In a pandemic-ravaged world, short of workers but with lots of elderly folk to look after, having more robots to boost productivity would be a good thing.

And yet many people fear that robots will destroy jobs. A paper in 2013 by economists at Oxford University was widely misinterpreted as meaning that 47% of American jobs were at risk of being automated.

In fact, concerns about mass unemployment are overblown. The evidence suggests robots will be disruptive but ultimately beneficial for labour markets. Japan and South Korea have the highest robot penetration but very strong workforces. A Yale University study that looked at Japanese manufacturing between 1978 and 2017 found that an increase of one robot unit per 1,000 workers boosted a company's employment by 2.2%. Research from the Bank of Korea found that robotisation moved jobs away from manufacturing into other sectors, but that there was no decrease in overall vacancies. Another study, by researchers at the Massachusetts Institute of Technology and colleagues elsewhere, looked at Finnish firms and concluded that their use of advanced technologies led to increases in hiring.

For all that, the march of the robots will bring big changes to workplaces. The skills and firms that are rewarded will shift, too. But that need not be the disaster many fear. One supposed example of "bad automation" is self-service checkouts in supermarkets, because they displace human workers. But this is hardly dystopian—robots could perform work, such as butchering, that is unpleasant or stigmatised (see Bartleby). Checkout staff who retrain to help customers pick items from aisles may well find that dealing with people in need is more rewarding than spending all day swiping barcodes in front of lasers.

Inevitably, some people will be on the losing end of change even as the robots make society as a whole better off. One lesson from the freewheeling globalisation of the 1990s and 2000s is that the growth in trade that was overwhelmingly beneficial triggered a political backlash, because the losers felt left behind (see Free exchange). That is one more reason why firms and governments would do well to recognise the value of retraining and lifelong learning. As jobs change, workers should be helped to acquire new skills, including how to work with and manage the robots that will increasingly be their colleagues.

The potential gains from the robot revolution are huge. In Capek's play, the robots revolt against their human masters and cause mass unemployment and worse. The beginnings of the world's real robots have not matched Capek's satire. There is no reason to think that their future needs to either. ■

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Rights and wrongs of protests

You were wrong to criticise Justin Trudeau's handling of the protests in Canada ("No, Canada", February 19th). These were not protesters. These were occupiers who said they would not leave until their demands were met. You said the police already had ample powers to quell the disorder, and yet it took two court injunctions to stop the incessant air horns and honking. The police had to deal with a core group showing utter disregard for the rights of Ottawa's residents to enjoy their homes. Invoking the Emergencies Act was necessary to remove them.

This was more than a question of free speech. We were dealing with a group of well-funded bullies. This was not a regular protest. This was something else.

MADELEINE CÔTE
Gatineau, Canada

Processing language

Johnson's column on losing native languages was outstanding (January 29th). It is true that a multilingual person's "first language is the one most imbued with emotions." Our "mother tongue" seems to be stored in both the procedural (more emotionally based) and explicit (or verbal) parts of our brains. Subsequent languages have fewer connections to procedural memory, where neurons are fully myelinated at birth, in contrast with those of explicit memory, which are myelinated during the first three years of life.

Ribot's law refers to the clinical finding that people with brain dysfunction may have their first language skills preserved intact. In 1843, Jacques Lordat described a priest from Languedoc whose brain damage created profound language deficits, but only in French, his second language. His native Occitan was unaffected.

Such clinical findings offer a fascinating window into the way our brains process language. In his book on aphasia, Sigmund Freud made the controversial but now generally accepted claim that language is processed in multiple brain regions.

RICHARD WAUGAMAN
Clinical professor of psychiatry
Georgetown University
Washington, DC

I found Johnson's essay both insightful and moving. It made me reflect on my personal journey, growing up in America but speaking only Cantonese until the age of six. Since my mother never spoke English, I was able to keep up with my Cantonese. In 1980, at the age of 31, I went to Hong Kong for the first time to set up my cookery classes there for foreigners who wanted to learn about Chinese cuisine. Being in Hong Kong was a déjà vu experience, as I recognised the streets from Chinese movies I had watched as a child. I was also delighted to find everyone speaking Cantonese and looking like me. My first TV series for the BBC included many clips from Hong Kong. I still love hearing Cantonese, whether on film or in music. Being bilingual has greatly enriched my life and made for a surprising career.

KEN HOM
Chef and author
Bangkok

A Russian precedent

I read your article on the situation in Narva, a town in Estonia close to the border with Russia ("Who's next?", February 5th). Today's 80% ethnic Russian majority is not the result of a "legacy" of Narva belonging to the Russian empire and then to the Soviet Union. In fact, at the end of the 1930s the overwhelming majority of Narva's inhabitants were ethnically Estonian. The demographic change was made first in 1944 by Soviet carpet bombing that destroyed 95% of buildings and forced survivors to flee. The Soviets then did not allow Estonian citizens to return to their hometown, which had become part of a new Soviet military uranium mining complex.

Native Estonians were not considered trustworthy to live in that area. They were replaced by people resettled from the Soviet Union. Today's Russian majority was created by local ethnic cleansing.

TUNNE KELAM
Tallinn, Estonia

Spreading across the country

I read your report on the British government's findings into "levelling up" ("Spreading the jam", February 5th). In our London household we have colleagues who have left the city and are based in places as diverse as Devon, Hampshire, Lincoln and Nottingham, all earning salaries which would put them among the highest earners in those places.

Unfortunately this government appears to view working from home more as an occasion for sloth and indolence than for distributing opportunity equitably across the country. The debate on levels of regional spending may be valid, but it is far easier to believe that levelling up will be advanced by expanding access to well-paid jobs to anybody with an internet connection.

JAMES OSBORNE
London

Uganda's oil projects

With regard to the development of oil projects in Uganda, you state that "land acquisition is always messy, and politics brutal" ("Pipe dreams", February 5th). The East African Crude Oil Pipeline project proves it doesn't have to be. Uganda's stringent legal framework around land acquisition provides important protections for people affected by such projects. New homes, substantial allowances for disturbance and programmes to restore livelihoods are among the compensation packages offered that are above market rates.

People receive an additional annual payment for each year of delay, along with the right to live on and farm their lands until total compensation is paid in full. Indeed, under Ugandan law it is impossible for someone to be relocated or development work commence until they have received compensation in full.

Such laws concerning land acquisition have not merely been created by government, or investors, but have been codified after full consultation with parliamentarians of all parties, local and international NGOs and the affected communities themselves. There are some individuals and NGOs who are opposed to this opportunity for Uganda's economic advancement through fossil fuels. But it is a mistake to believe loud voices mean they are numerous. The numbers speak for themselves. The acceptance rate for compensation packages is over 97%.

IRENE BATABE
Permanent secretary
Ministry of Energy and Mineral Development
Kampala, Uganda

Sexy Gordon Brown

Bagehot described Gordon Brown, a former British prime minister, as "dour" (January 29th). That was not always the case. I remember him running for Lord Rector of Edinburgh University in 1972. He canvassed the student vote surrounded by a group of charming young women who were known as "Brown's Sugars".

JAMES HUNTER
Toronto

A supergroup

You coined an acronym for Meta, Alphabet, Amazon, Microsoft and Apple: MAAMA ("Supersized ambitions", January 22nd). It would be more fitting if they were known as the MAAMAS and the PAAPAS: Profits, Assets, Ambition, Power and Arrogance.

JEFFREY PERKINS
Lowell, Massachusetts

Letters are welcome and should be addressed to the Editor at
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A bad beginning

KYIV, MOSCOW, SLOVYANSK AND WASHINGTON, DC

Vladimir Putin has brought war back to Europe

"THERE WILL be no escalation in the coming week either, or in the week after that, or in the coming month," declared Vladimir Chizhov, Russia's envoy to the European Union, on February 16th. "Wars in Europe rarely start on a Wednesday." And indeed it was early on Thursday, February 24th, as dawn broke over Ukraine, that Vladimir Putin, Russia's president, took to television to declare war on Ukraine in the form of a "special military operation" to "denazify" the country.

Within minutes explosions were heard near Kyiv's main airport, as well as in many other cities. Video footage taken in Ukraine showed cruise missiles slicing through the air and slamming into buildings. Mr Putin had launched what is sure to be Europe's most intense war in a generation—possibly its largest since the second world war. It will shake his regime to its foundations, debilitate Russia's economy and fracture Russian society. It will shatter existing assumptions about European security. It could well send shock waves through the global economy.

As *The Economist* went to press, an initial wave of missiles had struck several of Ukraine's airports and other targets across the country, all of which Russia claimed were military. Armoured forces had then begun rolling in not just from Russia itself but also from Belarus. They were the vanguard of a force of over 150,000 organised in over 110 of the battalion tactical groups which are Russia's basic fighting formation. Russian forces were "literally pouring into Ukraine from Crimea", according to Konrad Muzyka of Rochan Consulting.

Western security officials expect two major Russian thrusts. One, of which the landing in Mariupol would seem to be part, is a pincer movement aimed at encircling and shattering Ukrainian forces around the Donbas region in eastern Ukraine, preventing those forces from retreating west over the Dnieper river. The second is a drive south from Belarus towards Kyiv, which lies just 140km south of the border. Attacks elsewhere in the country will be aimed at disrupting Ukraine's ability to respond to the advances.

The speech with which Mr Putin announced the war's first shots was bloodcurdling. He put his aggression into the context of the West having "tried to finish us off, to destroy us completely," after the collapse of the Soviet Union. The countries of NATO were "supporting Nazis and nationalists in Ukraine who will never forgive the people of Crimea their choice of joining with Russia." No quarter could be given to them. And Russia "is one of the greatest nuclear powers in the world and has certain advantages in the newest weapons. Nobody should be in any doubt that any direct aggression against our country will lead to crushing and most horrible consequences for any potential aggressor."

Oil and gas prices jumped in response to the invasion; the Brent crude benchmark rose past $100 per barrel for the first time since 2014. Global stockmarkets fell. Moscow's exchange was temporarily suspended and plunged on reopening. Civilian airliners were told to stay clear of Ukrainian airspace.

"Russia alone is responsible for the death and destruction this attack will bring, and the United States and its allies and partners will respond in a united and decisive way," said a statement from President Joe Biden. Having imposed an initial round of sanctions earlier in the week, he said he would announce further measures on February 24th. The EU, Britain and other countries look set to follow suit. A G7 video summit was called for later in the day; EU leaders are also due to discuss the crisis.

Ukraine, for its part, was stunned. Its foreign minister, Dmytro Kuleba, tweeted ▸▸

that: "The world must act immediately. Future of Europe & the world is at stake." His predecessor, Pavlo Klimkin, says Ukraine "would not give in." Its best hope, he thinks, lies in the West stepping in to negotiate a ceasefire without further territorial losses. "The alternative doesn't bear thinking about."

The historical centre of Podyl, one of the oldest districts of Kyiv, was much less busy than usual as the day began. But trams continued to operate, and people huddled around the tram stop to discuss the events. Alexander Voltarnist, a 27-year-old, said he would gather together the women of his family and take them home and then register for the army. He has never fought before but says he knows how to handle himself. "There's no sense in running. And all I will say to the crazy maniac is that he has put his nose where it isn't welcome. And we will fuck him over."

Anvil and hammer

Russia's onslaught ended a long period of uncertainty, one which in Ukraine took the form of an almost eerie calm as the country and its leaders resolved not to panic. There was no doubt that Russia was building up an unprecedented amount of firepower within striking range. But the free availability of information about Russia's build-up of troops gathered by Western governments and by open-source intelligence groups was in sharp contrast with Mr Putin's opacity about his plans. Was he really focused on Ukraine? Or on broader regional security concerns that would get taken more seriously if he threatened Ukraine? Or on a piece of theatre tailored for domestic consumption? No satellite could say. Nor, it appeared, could Mr Putin's inner circle.

A speech he gave on Monday February 21st clarified things. Mr Putin was recognising the pro-Russian "republics" of Donetsk and Luhansk in the two Ukrainian oblasts, or administrative divisions, of which those cities are the eponyms; he was also recognising their claim to the rest of the two oblasts. In doing so he triggered a first round of sanctions from Western nations and a state of emergency in Ukraine. But it was the vehemence with which he did so that shocked critically-minded Russians into reassessing their prior belief that a war which they saw as very unlikely to serve Russia's long-term interests was, for that reason, a very unlikely war. The first part of the analysis stood; the second was thrown into doubt.

That was in part because of the insight the performance offered into Mr Putin's sense of his own position. He came across as isolated, aggrieved and aggressive. In the past his talk of restoring the unity of a Slavic, Orthodox Russian homeland brought low by the collapse of the Soviet Union, could be treated as cover for the regime's theft, authoritarianism and failure to deliver on its people's aspirations. Now it looked like a fierce focus. The president presented himself not so much as an elected president but as an emperor looking for a place alongside Ivan the Terrible, Peter the Great, Catherine the Great and Stalin, the giants in the pantheon of transformative Russian rulers and gatherers-in of Russian lands.

The separatist "republics" which the speech was in principle about were created during the crisis which followed what is now known as Ukraine's "Revolution of Dignity" in 2014. In November 2013 Ukraine's parliament had been preparing to sign an "association agreement" with the EU which would have moved the country a lot closer to the union. At Mr Putin's bidding, and with financial inducements, then-president Viktor Yanukovych, a crooked thug from Donbas, scuppered the deal. People protesting his actions were bludgeoned by the security forces in Kyiv's Independence Square, known as Maidan. Far more protesters then took their place on Maidan, occupying it for months.

The following February violence broke out; in three days 130 people were killed, most of them protesters. Mr Yanukovych fled the country. Needing to impose himself, Mr Putin moved to annex Crimea, a peninsula in the Black Sea that many Russians considered Russian rather than Ukrainian. Irregular forces in Donbas supported by Mr Putin started the movements which would become the pro-Russian "republics" in Donetsk and Luhansk.

But Mr Putin's new vision, as outlined in that February 21st speech, goes far beyond supporting the purported rights of the separatists to split their oblasts off from Ukraine. It rejects the very idea of Ukraine as a nation state, casting it instead as "an inalienable part of our history, culture and spiritual space" sundered from Russia by the Bolsheviks at the time of the revolution and then bolstered with territory seized from Hungary, Poland and Romania under Stalin. Mr Putin asserted a Russian claim not just to Donbas, but to a gamut of "historic Russian lands" which includes the Black Sea coast all the way to Odessa.

The enemy on all sides

As he did so he snarled his contempt for Ukrainians: they were ungrateful betrayers of Russia's friendship, mindlessly aping foreigners. If they wanted to be free of the legacy of communism, he said, they should also be free of the territories communism had provided them. State broadcasters helpfully displayed a map of Ukraine in which, shorn of those "gifts", its territory was reduced to a small yellow blob south of Kyiv. For Yulia Mostovaya, the editor of *Zerkalo Nedeli*, a Ukrainian newspaper, the display of emotion from a man schooled in the cool arts of spying was striking. Watch the speech, she says, and "You'll see zero emotions when he talks about NATO or America. When he talks about Ukraine he becomes consumed with a kind of squeamish loathing. He hates everything about us."

Despite that disjuncture of tone, though, one of the clear messages of Mr Putin's speech was that his enemies were all of a piece. Threatening Ukraine is not a way to bring the West to the table: it is a way to push it back from the door by expelling its Ukrainian lackeys. Ukraine was a hostile territory run by Americans trying to take Russia down. It has to be portrayed as such because Russians can be made to hate

On the brink
Ceasefire violations in Donetsk and Luhansk reported by OSCE, by both sides

Source: Organisation for Security and Co-operation in Europe

Americans much more easily than they can Ukrainians.

At a meeting of the national-security council televised before the speech—a grotesque spectacle of fear, humiliation and isolation—Viktor Zolotov, a former bodyguard of Mr Putin's who now commands hundreds of thousands of soldiers in the national guard, put Mr Putin's position simply: "We don't have a border with Ukraine. It is America's border, because they are the masters there, and all these...are vassals. And the fact that they are pumping them up full of arms and are trying to create nuclear arsenals—all this will cost us in future. So we must recognise these republics...and move further, to defend our country." The baseless fear that Ukraine, briefly a nuclear-weapons state after the collapse of the Soviet Union, might become one again is a particularly disturbing casus belli for the millions of Russians fearing war.

Mr Putin needs such trickery. Russian society is currently divided as never before in his reign. Many who would not have agreed with him a year or two ago will nod grimly as they read Kirill Rogov, a political analyst, writing that "the consequences of aggression will cause greater damage to Russia and its economy than the destruction of Ukrainian infrastructure would bring to NATO."

Storm after the calm

If for many in Russia the speech was a shock, for some in Ukraine it was just more of the same. Not only had eight years of conflict made war numbingly familiar. Nearly four months of remorseless military build-up meant it would take something shockingly unfamiliar to stir real panic. In October American intelligence agencies picked up signs that Mr Putin was beginning to move military forces to the Ukrainian border. Around the same time, whether through human sources or intercepted communications, they got hold of plans which showed Mr Putin's intention to invade his neighbour with the largest military force built up in Europe for decades. Bill Burns, the director of the CIA, was sent to Moscow in early November to tell Mr Putin he had been rumbled—but the build-up continued.

As it reached its peak in mid-February, with most of Russia's combat power within striking distance of Ukraine, the Kremlin began claiming that Ukraine had committed "genocide" in the Donbas region and was about to seize it by force. There followed a series of provocations—explosions in Donbas, the shelling of Russian soil and alleged Ukrainian incursions.

No particular moment during this escalation set alarm bells ringing throughout Ukraine, in part because the government eager to reduce damage to the economy as capital took flight, bond yields rose and the currency depreciated, resolutely urged calm. Anastasia, a bartender in Slovyansk, a town in the Donetsk oblast which is 80km or so back from what was, until Thursday morning, the contact line between the Ukrainian army and the separatist forces, spoke for many when she said on February 22nd after that although she was "very scared" by the real prospect of war with Russia, it took more than a single item of news to sway her mood. "I saw it on Instagram," she said of Mr Putin's speech. "I felt nothing, I thought nothing. I am very tired from all this."

Nevertheless, the calm shown by Ukrainians throughout the months of escalation had started to dissipate in the days before the new invasion began. In both Donbas and Kyiv some of those with financial means and flexible lives were making plans to move, either to Ukraine's west or abroad. Some had gone already—as indeed have some wealthy Russians.

On February 22nd Volodymyr Zelensky, the president, reaffirmed his belief that "there will not be an all-out war against Ukraine." But he also brought together the leaders of all the country's factions, including his arch-rival Petro Poroshenko, a man who just a month ago he was threatening with jail, in a show of unity. A new phrase entered the political lexicon in Kyiv: "Oboronnaya koalitsiya," or defence coalition. That evening he called up Ukraine's 200,000 army reserves. The following day he declared a state of emergency across Ukraine.

The hard way

Andriy Zagorodnyuk, a former Ukrainian minister of defence, said at the time that the country's military leadership was working off two base scenarios—one bad, one worse. The first assumed that Moscow would allow itself a strategic pause, perhaps taking the opportunity to rotate tired troops, before moving into the parts of the Donetsk and Luhansk oblasts which the separatists claim but do not occupy. In the past, Mr Putin has often paused, or even taken a tactical step back, to throw opponents off balance. Some of Mr Zelensky's intelligence officials thought the war which would follow might largely be confined to the existing conflict area and territory the separatists seized in 2014 but later lost, such as Slovyansk. Such a war might find more favour with Russians.

That assessment differed starkly from the one offered by America and Britain. They had believed for months that Mr Putin intended something much larger. An action limited to Donbas would have given him little of value: indeed it might have thrown away a good position. While the oblasts in which the two rebel republics sit were still part of Ukraine, the separatist's claims could be used to disrupt Ukraine's policy.

That was the point of the "Minsk accords" negotiated by Russia, Ukraine, France and Germany—the so-called Normandy group. Those accords, which brought a bout of major battles in the Donbas to an end in 2015, required that the separatists be provided with a level of autonomy and veto power that would stop the rest of Ukraine from moving towards the EU, economically, and NATO, militarily. Ukraine would be disunited, fragmented and unable to assert itself as a unitary state: just the sort of neighbour Mr Putin wants for Russia. As Bruno Tertrais of FRS, a French think-tank, puts it, he "seeks a form of castration of Ukraine, to deprive it of its military potential".

By recognising the republics as independent Russia abandoned the route to a neutered Ukraine that the never implemented Minsk Accords had offered it on paper. Its alternative route was to insert a pre-Russian regime by force. If it did not do so, its military action would incur the heaviest sanctions the West was willing to impose without delivering the strategic realignment Mr Putin wanted; big costs for no real benefit.

Ukraine's armed forces are unlikely to withstand this assault for long. The first round of Russian air and missile strikes was almost certainly intended to destroy Ukraine's integrated air defence network; one of the targets hit was an air-defence battery in Vasilkiv, a town near Kyiv. If Russian warplanes have command of the skies its paratroopers and helicopter-borne forces will be able to bypass large concentrations of Ukrainian soldiers in order seize key objectives well behind the front lines, going back on themselves to mop up pockets of resistance later. On the morning of February 24th there were reports that Russia had attempted to land paratroopers at Gostomel airport outside Kyiv. Ukraine claimed to have shot down some of the helicopters and captured Russian personnel

How quickly the government might fall, and whether Russian troops would need to enter Kyiv to bring it down, is hard to predict. One unknown factor is how many Ukrainians will resist—and how many will collaborate. "Meeting with Ukrainian security officials there is a widespread acknowledgment that many of their colleagues—even in some quite senior positions—are working for or sympathetic to Russia", Jack Watling and Nick Reynolds of the Royal United Services Institute, a think-tank, wrote in a report based on interviews with Ukrainian military and intelligence officials conducted this month.

They say that last summer the FSB, Russia's security service, created a 200-strong Ukraine team, the 9th Directorate. In December it reportedly held war-games with the special forces and airborne troops who would lead any invasion. The report also claims that there Russian special forces have two companies, each of 60 to 80 men, in Kyiv and ready to strike: "Senior Ukrainian officials are clear that they expect, and have planned for, a decapitation strategy against them."

Something new to occupy their minds

If Russia is to keep the puppet it presumably aims to install in power, rather than see them driven out as Mr Yanukovych was, it may well need not just to invade Ukraine but to occupy at least some of the country for some time. The very idea sounds outlandish; even Western politicians familiar with the intelligence seem hard put to credit it.

Nevertheless, the Russian forces in a position to invade and the auxiliary forces which may follow behind them, such as units of Mr Zolotov's national guard, "appear more than sufficient to attempt an occupation of Ukraine's eastern regions", argues Michael Kofman, an expert on Russia's armed forces at CNA, a think-tank. Ukraine's eastern areas plus Kyiv amount to only 18m inhabitants, he notes; the coast adds another 3m. That would give Russia a comparable force-density ratio—the number of troops relative to the population—to that which 177,000 troops gave America when it occupied Iraq.

And Russia enjoys advantages that those Americans did not. Its army does not suffer from the same language barriers; it understands the terrain; and it will be "much more ruthless in the application of violence", notes Mr Watling. The 9th Directorate has been working on lists of potential collaborators who might take on government roles—as well as people who might lead the resistance.

As Mr Tertrais notes, Russia's aims are limited in principle, "but wars have a tendency to not follow the path traced by those who launched them". That is not least because others get a vote. "It is in our collective interest that Russia should ultimately fail and be seen to fail", Boris Johnson, Britain's prime minister, declared on February 19th.

Much more severe sanctions on the part of the West and its allies could be a part of that response. In the first tranche, triggered by Mr Putin's speech on the 21st, American imposed "full blocking sanctions" against VEB, an economic-development bank, and Promsvyazbank, which finances Russia's defence sector, freezing their assets in America, prohibiting American individuals and companies from making deals with them, and blocking their access to dollars. Further institutions may now expect the same treatment.

The EU sanctions followed similar lines to America's, showing that their planning had been more closely aligned than many had thought. The most eye-catching demonstration of solidarity was Germany's decision to mothball Nord Stream 2, a pipeline which was to have supplied it with Russian gas by a route that bypassed Ukraine. Because no gas yet flows through the pipeline this will have no prompt economic effect. But it heralds a profound shift in both German energy policy and its attitude towards Russia, where it has long argued that interdependence could be a foundation for peace. "The situation today is fundamentally different," said Olaf Scholz, Germany's chancellor.

Many observers criticised those first sanctions as under-ambitious. The countries involved said they had to keep some in reserve to deter further aggression. Now they will have to show whether what they kept back measures up. Mr Kuleba, Ukraine's foreign minister, has called for "devastating" sanctions on Russia, including its exclusion from the SWIFT system for international financial transactions.

Attacks in cyberspace are also a possibility. "There's a great temptation to reach for cyber operations," says Marcus Willett, a former deputy head of Britain's signal-intelligence agency, GCHQ. "They

On their way

feel more robust than sanctions but not at the level of firing missiles." And then there is support for missiles, and other weapons, fired by a Ukrainian resistance. Ukraine is awash with guns, and American special forces have been training potential partisans in eastern Ukraine. Poland and Romania would probably allow their territory to be used to get arms and communications gear over the border. Other states might provide supplies. Yet no one knows whether an insurgency is viable.

In the 1940s there was significant resistance to Soviet occupation in the territories Stalin had added in the west of the country; but there the terrain is hilly. The parts Russia is interested in today are the plains of the east and the centre, less well suited to a rural insurgency in the style, say, of Afghanistan's mujahideen, or those who slink into villages and towns by night, ambushing enemy convoys. Samuel Charap, a former State Department adviser now at the RAND Corporation, a think-tank, says that he would imagine something along the lines of the provisional IRA, referring to the nationalist paramilitary group which waged a prolonged campaign of largely urban terrorism in Northern Ireland and mainland Britain from the 1970s to the 1990s.

Such an insurgency would invite Russian reprisals against its backers—as would cyber attacks. "If you start going against Russian networks, then the Russians may well be well placed to do similar things on US and allied networks," says Mr Willett. Mark Warner, who chairs the intelligence committee in America's Senate, warns that norms of cyber-deterrence and escalation are poorly understood. He paints a scenario in which a Russian cyber-attack causes deliberate or inadvertent harm to civilians in Europe, prompting NATO to retaliate.

Russia might be expected to be hesitant about the use of such cyber-attacks, and even more so of physical strikes on resistance bases and networks beyond Ukraine's borders, lest it draw the West further into conflict. But mistakes get made. And the forces ringing Ukraine, along with the annexation of Belarus, have already brought Russian and NATO firepower into worrying proximity.

In recent weeks America has rushed to reinforce eastern Europe with thousands of troops and dozens of warplanes. The NATO Response Force, a 40,000-strong unit built around a high-readiness land brigade that can be put into the field in two to three days, may be deployed, for the first time in its history, in the coming days, though that requires the consent of all 30 allies. Jamie Shea, a former NATO official, says he things the military hotline between Tod Wolters, NATO's top general, and Valery Gerasimov, Russia's chief of general staff, may well be needed "to prevent incidents spiralling into open conflict."

→ By invitation

Online we are publishing a range of commentaries on the Ukraine crisis by authors ranging from Jens Stoltenberg to Yuval Harari

"After two years of self isolation there is a tending towards tunnel vision"
Alexander Gabuev

"Leaders are often enslaved by popular mythology that they themselves have promoted"
Andrei Zorin

www.economist.com/by-invitation

It gets worse

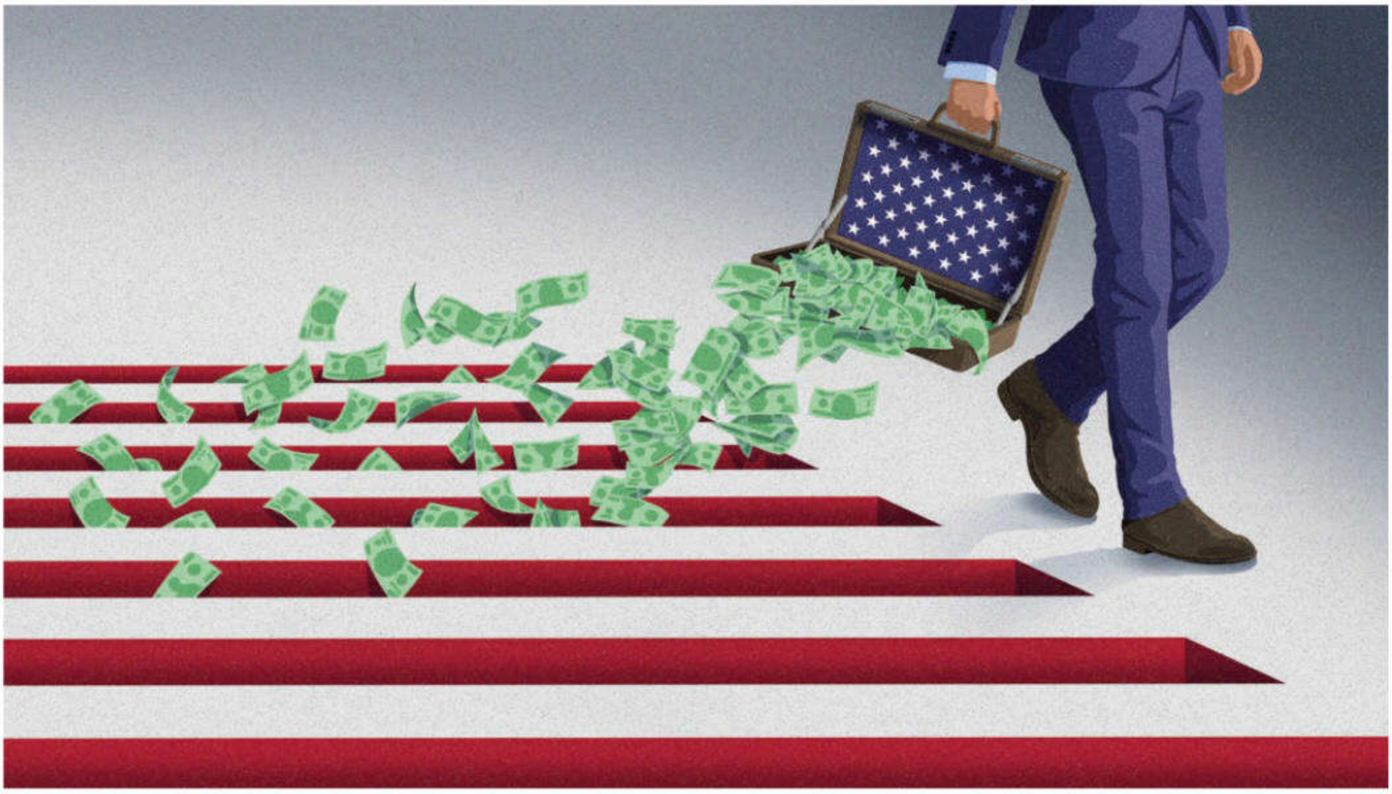
For America and Europe, Mr Putin's war marks the decisive end to an interregnum: the apparently benign period between the end of the cold war and the return of open military competition, and confrontation, between great powers. The process began with a combative speech that Mr Putin gave at the Munich Security Conference in 2007. Now it is complete. That has far-reaching consequences for the West in areas ranging from energy security to nuclear strategy and beyond. It also makes yet harder America's commitment to seeing the Indo-Pacific as the area most important to its future.

If the transformation to confrontation is complete, though, the conflict could still escalate. Though the target of Mr Putin's tirade on February 21st was Ukraine, the former Soviet republics now in NATO, Estonia, Latvia and Lithuania, have cause for alarm over his irredentism

Russia's effective absorption of Belarus—troops that went there for exercises in February have either moved into Ukraine or stayed put—means it has a lot firepower on the edge of the "Suwalki gap", a strip of land which connects Poland to the Baltic states. "If Putin succeeds in Ukraine, he might decide that he needs a land-bridge to link Kaliningrad to Belarus," warns Stephen Hadley, who served as America's national security adviser between 2005 and 2009. As such a land-bridge would have to go through either Lithuania or Poland, "That would mean a war between Russia and NATO."

Western officials play down the idea that Mr Putin would attack NATO—a very different proposition from invading Ukraine, not least because it contains three countries with nuclear weapons. But they have to face the possibility that Russia has gone through a deep change. Mr Rogov argues that the country has always had two ways of seeing itself: as lagging behind the West and needing to catch up; or as subjected to Western attempts to hold it back. In the modernising mode the West attracts. In the paranoid mode it repels. To the Putin regime, now in full-on repulsive mode, isolation and confrontation reinforce each other, says Mr Rogov.

It is far from a stable dynamic. ■



The American Rescue Plan

Take the money and run

WASHINGTON, DC

Governors benefit politically today from spending federal money, but they are creating liabilities for tomorrow

When Kay Ivey, Alabama's governor, announced a plan to build two new 4,000-bed prisons, Democrats and progressive activists were unsurprisingly opposed. One objection was to how the construction would be financed: $400m would come from the state's $2.1bn share of funds from the American Rescue Plan Act (ARPA). This was intended partly to relieve states from the economic and health toll of the covid-19 pandemic.

Critics said the new prisons tackled neither. "This is a gross misuse of funds when Alabama is at the bottom of the country in providing health care," says JaTaune Bosby, executive director of the American Civil Liberties Union of Alabama. Republicans pushed the plan through in a special legislative session focused on prison construction. Building is set to begin later this year.

Signed into law in March 2021, the $1.9trn in stimulus from ARPA (equivalent to 9% of GDP) was predicated in part on the belief that state and local governments were in dire financial straits. In fact, tax receipts were recovering quickly even before the law came into effect. As they now start to prepare budgets for the coming fiscal year, governors and state legislators are finding creative ways to use the money—for better and for worse.

Although some cash is being spent on responsible investments that will yield benefits for years, much is being used for massive new infrastructure projects and social programmes with long-term costs. The indulging Democratic and Republican governors are enjoying rising political fortunes. But the money will run out. For the states, the fiscal high will be short-lived.

After a sharp contraction when the pandemic first hit America, state general funds (mostly revenues from tax receipts) are overflowing: many states are posting their largest surpluses ever. Federal funds from ARPA, in the form of $350bn in direct transfers and more than $300bn in aid to health infrastructure, schools and transit agencies, have given states unprecedented fiscal resources (see chart 1 on next page). They have until 2026 to spend ARPA funds or lose them entirely, by which point many budget analysts expect revenues will have reverted to their pre-pandemic trend. Though the law includes some rules for how the money can be used, states have been adept at deploying it as they see fit.

Start with the more responsible investments. Most states have stuffed away money for a rainy day. The median state rainy-day fund now stands at the highest level as a share of spending in over three decades. Unemployment-insurance trusts, depleted during covid, have been restocked (see chart 2), though states have yet to use more than $80bn in federal funds remaining for that purpose. These sensible outlays will help states weather the next storm. Many have used ARPA to make one-time investments expected to bring long-term benefits. Nearly every state is putting some money towards clearing their collective $873bn backlog in maintenance, cleaning up pollution and replacing ancient computers. ARPA largesse has helped bolster public-health systems and schools amid the upheaval of the pandemic.

Many lawmakers are also giving money back to their constituents rather than letting it go to waste. Almost half of states ▸▸

→ Also in this section

have sent or plan to send bonuses to government employees, such as health-care workers, police officers and teachers. Coupled with pay rises, this is intended not only to retain valuable workers in a tight labour market, but also to curry favour with voters. Inspired by the popularity of the direct payments to households in the CARES Act (a $2.2trn fiscal stimulus passed under Donald Trump), Governor Tim Walz of Minnesota is promoting his proposed "Walz checks", payments of up to $350 that would be sent to every household in the state. California, Indiana and Pennsylvania have similar schemes afoot.

The infrastructure projects that many state governments are embarking on, however, are a mixed bag. On paper, the Treasury Department's rules administering ARPA allow states to spend funds on only three types of physical infrastructure: broadband, sewerage and water. States have eagerly allocated money to broadband, with an estimated $7.6bn already going to it, though Adie Tomer of the Brookings Institution, a think-tank in Washington, DC, cautions that few states have relevant bureaucratic experience. These efforts will get a further boost this year as the $1.2trn Infrastructure Investment and Jobs Act begins disbursing money, much of it earmarked for broadband infrastructure.

ARPA diem

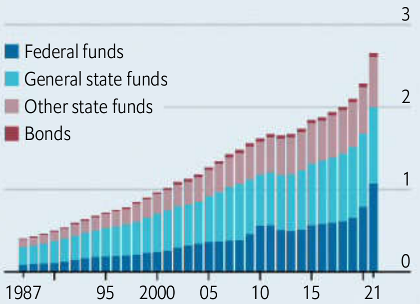
In practice, however, the ability to use funds for "revenue replacement" has allowed many state policymakers to support cherished priorities, no matter how misguided. This is how Alabama justified its prison construction. From rural broadband to environmental clean-up, it is not hard to think of good long-run investments for the state, but prisons are a priority for Alabama's Republicans. Iowa's governor, Kim Reynolds, is handing $11m in ARPA funds to improve the "Field of Dreams", the baseball diamond made famous in a film starring Kevin Costner.

More worrying are the new social programmes and tax cuts that several states

Federal largesse 1

United States, total state spending by source

$trn

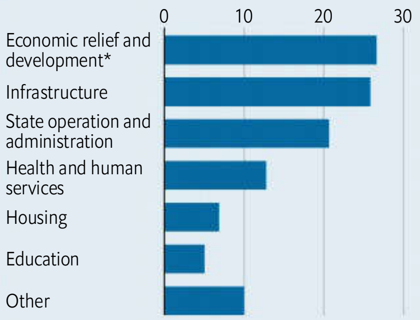


Source: National Association of State Budget Officers

Where the money goes 2

United States, total fiscal-recovery-fund allocations

At February 17th 2022, $bn



*Includes unemployment relief

Source: National Conference of State Legislatures

are embarking on. These may prove unsustainable. Colorado will spend $275m on behavioural-health programmes thanks to ARPA, along with $13m just to build the bureaucracy for a future universal pre-kindergarten programme. New York's governor, Kathy Hochul, has proposed $150m in tuition assistance for part-time students. Jared Walczak of the Tax Foundation, another think-tank, says nearly every state has reduced, or is contemplating trimming, its taxes, after Republicans led the way in 2021. "This is the year of the Democratic tax cut," he says, pointing to the many Democratic governors who are proposed slashing the more regressive sales tax. Some Republicans are going further—Mississippi, the poorest state in America, may repeal its state income tax entirely.

If such profligacy is cause for concern, voters hardly seem to notice. For Republicans, so often the apostles of austerity, the funds have been a boon. Vermont's governor, Phil Scott, who is angling for another term in a state that leans heavily towards the Democrats, is emphasising his large spending commitments. The new governor of Virginia, Glenn Youngkin, is moving to eliminate the state's grocery tax and raise teachers' salaries, key planks of his winning campaign. Nearly all Republican incumbent governors facing re-election look safe. Only embattled Brian Kemp of Georgia appears in any danger of losing—he is desperately pushing pay rises for state employees and income-tax refunds.

Those same state leaders will probably have moved on by the time federal funds run dry. For now, states risk squandering the opportunity to make productive investments, and may be exposing themselves to liabilities that will bite when the next recession comes. With patterns of work disrupted by the pandemic, Laura Kalambokidis, Minnesota's chief economist, warns states to plan their long-term spending with caution: "None of us fully understands yet how the pandemic has permanently changed the economy." ■

Kathy Hochul

The unexpected governor

NEW YORK

New York's governor is proving to be remarkably adept at the power game

"I'M A BUFFALO BILLS fan. I always have an underdog mentality," said Kathy Hochul, New York's governor, earlier this month. Last summer she succeeded Andrew Cuomo, who had resigned amid sexual-harassment and abuse allegations. Few then would have predicted she would be the front-runner in November's governor's race and scoring umpteen political touchdowns. The recent state Democratic convention, where she was introduced by Hillary Clinton, resembled a coronation. Supporters carried tote bags depicting Ms Hochul as Rosie the Riveter. Ms Hochul is an underdog no longer.

She has surprised even longtime observers of Albany, New York's capital. "Politically, she's off to a roaring start," says John Kaehny of Reinvent Albany, a government watchdog. Despite being Mr Cuomo's deputy, she has successfully distanced herself from him and his alleged misdeeds. She is more cordial with lawmakers (Ron Kim, a Democratic assemblyman, has said Mr Cuomo threatened to "destroy" him after he criticised the governor). Instead of vetoing bills, she requests tweaks to get the legislation she wants. "She may not agree with what you want to do, but at least there's a conversation," says Sandy Galef, a Democratic assemblywoman.

Ms Hochul has promised to forge a "new era of transparency" in Albany, where ethics scandals are the norm. She is proving to be far more politically effective than anyone imagined. ▸▸

New wave in New York

The success of Ms Hochul's rebrand should perhaps be no surprise. Ms Hochul was an aide to Daniel Patrick Moynihan, a legendary senator, and won a congressional seat in one of the state's more Republican districts. She is backing several big-ticket infrastructure projects, including a new link (using a freight line) between Queens and Brooklyn that would provide transport to 1m underserved New Yorkers. She has a good relationship with Eric Adams, New York City's new mayor. Mr Cuomo and the previous mayor could not stand each other.

Ms Hochul is also benefiting from the state being in the best fiscal health in 200 years—astonishingly, given that not long ago New York was bracing itself for budget cuts of 20% because of covid-related revenue losses. Instead, the coffers are overflowing, thanks to federal help and an "emergency" income-tax increase on New York's top earners last year. Ms Hochul's budget is full of goodies for important voters, such as tax giveaways to homeowners. She has proposed increasing spending on education and health, which should please the unions. Peter Warren of the Empire Centre, a think-tank, worries that "the state keeps increasing its reliance on the wealthy and at the same time, it's sort of pushing them to leave" for places, like Florida, with no personal income tax.

Mr Kaehny is concerned that billions in discretionary funds (far more than usual) are not subject to review by the state comptroller. New York's governor has a strong role in setting the budget. Mr Cuomo often pushed back against the legislature. Ms Hochul may be a less effective check on largesse, especially in an election year.

Ms Hochul has been under little pressure since Letitia James, the state's attorney-general and erstwhile front-runner for governor, dropped out of the race. But tricky choices loom. Mr Adams has called on the state to tighten the law eliminating cash bail for some criminal defendants. If she takes his side, however, she could upset progressive voters. Yet she cannot ignore swing voters worried about crime.

In November she revamped a plan to redevelop Penn Station and the area around it, including ten new office towers. "We don't need more heavily subsidised office space," says Nicole Gelinas of the Manhattan Institute, a think-tank. Ms Hochul must soon decide whether to lift the mask mandate for schools, one of the more contentious issues on her docket.

Still, with a campaign chest of $20m she looks set to win her primary in June and the general election in November. She would be the first woman to be elected governor of New York and also the first person from Buffalo to be elected to the job since Grover Cleveland in 1882. Cleveland then went on to become president. ■

Park permits

Firefall and footfall

HORSETAIL FALL, YOSEMITE VALLEY

Many parks are overcrowded. Permits are not necessarily helping

YOSEMITE NATIONAL PARK is almost always brimming with visitors. For two weeks each February, however, the crowd intensifies. For just a few minutes each day, the setting sun lines up with Horsetail Fall, lighting the waterfall so that it appears to be lava. "Firefall" has become a tourist spectacle: it drew over 2,000 visitors on a single day. Big crowds have big drawbacks, though, risking environmental degradation, unsafe conditions and wildlife disruption.

The National Park Service (NPS) introduced a permit for the spectacle in 2021 because of covid-19, but lifted restrictions this year. "It's a disaster," says one of a pair of photographers frustrated with the number of visitors and lack of restrictions this year. Surrounding their painstaking set-up was a long queue of cars and large groups shouting to one another while they waited for the sunset. The pair preferred the permit system, which limited the crowds.

But are permits the solution to overcrowding? America's parks have many permitting methods, from digital sign-ups to bingo balls in community centres. The aim is to keep visits sustainable and access fair. The results are mixed.

Some permits are effective. The delicate sandstone feature known as "The Wave" near Kanab, Utah, can cope with only a trickle of visitors without suffering rapid erosion. The odds of getting one of the four group permits issued in person each day are low, but Utah's "only legal lottery" has succeeded in preserving one of the country's most unusual natural structures while creating a gloriously uncrowded hiking experience.

Permits typically carry a fee. Although parks try to avoid discouraging the poor, that can be tricky. The cost of the passes and permits can mount up.

Several areas have permits for reasons of safety. Take Half Dome, a short drive from Horsetail Fall, a challenging hike which attracts tens of thousands of people each year. Cables have been installed on the steepest stretches, to enable those without rock-climbing skills to reach the summit. From 2005 to 2009 there were 85 search-and-rescue incidents and eight deaths. In 2010 the NPS limited access to those with permits. The number of visitors dropped sharply, and fatal accidents fell by half—but serious incidents per person actually rose. The scarcity of permits may have unhelpfully increased the pressure to complete the hike, leading to more accidents.

And some permits are doubly useless: neither preventing crowds nor enhancing safety. The Enchantments, an alpine area in Washington state, requires permits for camping, but not for day use. Many attempt to hike it in a single day, even though it is long and strenuous. On a recent visit, your correspondent only got out a few hours after dark despite starting before sunrise. Many people without proper gear were still hours behind. Several stragglers confessed that they had no idea about the difficulty.

What may sound like a simple solution, in other words, turns out in practice to be anything but. Permit systems require a fine balance—much like the nature they seek to protect.

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Child brides

Miserable marriages

WASHINGTON, DC

The number of marrying minors has fallen sharply—but not far enough

When April Kelley was 15 she was married, against her will, to a family friend seven years her senior. He drove her six hours from her home state of Arkansas into Missouri, which then had looser laws governing the marriage of minors. April remembers a county clerk at the ceremony peering at her tear-stained face and asking if she wanted to go ahead; she was too terrified to reply, she recalls. Her mother and husband-to-be nodded their assent.

Back in Arkansas, she lived with her in-laws. April's husband would take her out of school at lunch break to have sex and often kept her home, sending fake medical notes to her teachers. He would not even let her shower alone. More than a decade later, April cries as she describes the experience, which she endured for a little over a year. After her father-in-law started acting lasciviously towards her, she ran away.

Laws ought to protect children from such horrors, but America's too often do not. Though most states have a minimum marrying age of 18, most also have exceptions—generally, by the consent of a parent or approval of a judge. Missouri is one of 14 states (as well as Washington, DC) that gives county clerks rather than judges the power to issue marriage licences for minors. Nine states have no lower age limit.

A push for legal reform is having some success. In recent years at least 27 states have passed laws to limit child marriages. In the past four years Delaware, Minnesota, New Jersey, New York, Pennsylvania and Rhode Island have all eliminated the exemptions that allow minors to marry.

Yet resistance to such reforms remains, on both the right and the left. In 2017 an attempt to set a minimum marrying age of 18 in California (which has no lower age limit) failed after opposition from advocacy groups including the left-leaning American Civil Liberties Union. The same year Chris Christie, then the Republican governor of New Jersey, vetoed a similar bill, saying it did not "comport with the sensibilities and, in some cases, the religious customs, of the people of this state". More generally, lawmakers have failed to press for reform because the number of marrying minors has fallen dramatically. In 1960, 6.8% of American girls aged 15-17 were married; today less than 1% are.

That is still too many, say campaigners. A study published last year by Unchained At Last, an advocacy group, estimated that

April looks back—and ahead

297,000 minors were married in America between 2000 and 2018, and 60,000 of them were under their state's age of consent (for sex). Patchy state data mean this is almost certainly a big undercount, says Fraidy Reiss, Unchained's executive director. Most minors who marry are girls, she says, and the practice occurs across all ethnic groups and religions. Many of the marriages are prompted by religious beliefs or are immigration-related. Federal immigration law does not specify a minimum age for marriage-related visa petitions.

Escaping from a legal child marriage is difficult. Domestic-violence shelters tend not to accept lone children, who are considered runaways; the police may try to send them back home. Securing a divorce is also tricky. Few lawyers will take on child clients, even if the child has the means to pay them. April says she called dozens of lawyers before she found one who was so appalled by her plight that she drew up a simple divorce contract for no fee.

The State Department's "Global Strategy to Empower Adolescent Girls", launched in 2016, described marriage before the age of 18 as a human-rights abuse. But within America, girls who marry before 19 are 50% more likely to drop out of high school. "I did my best," says April, a college graduate who does gig work, including food delivery and some freelance journalism. But she says she often wonders how much better she would done if she had not missed so much school. Divorcing as a minor required emancipation from her parents by the state, making her a legal adult at 16.

She has only just begun to understand, she says, the toll all this has taken. She panics a lot. At 20 she had a daughter and says that "I worry that I would have been able to do better for her too, though she is doing better than I ever did." Having lived in or near her home town for several years after her divorce, she decided to move far away after her ex-husband saw her with her daughter, with whom she now lives in Texas. "I wanted to make sure he never set eyes on her ever again," she says. ■

Academic freedom

A pushback against cancel culture

Some students and academics are rethinking university education

A blog post by a self-professed liberal, atheist 19-year-old student put culture warriors in a spin in January. She described her transfer from an elite, liberal-arts college to a Christian college in Michigan. Conservatives said it showed young people were sick of leftist indoctrination. Liberals pointed to the fact that the student's mother was an anti-vaxxer, who boasted online that this was the reason for the transfer.

Beyond these skirmishes, the case of the student, Jane Kitchen, raised questions about what good a liberal-arts education is in America today. Ms Kitchen arrived at Bryn Mawr College in Philadelphia in 2019, and loved much about it. But she was surprised at the cultural virtue-signalling and lack of intellectual inquiry. Even before covid, "I didn't sit around with my friends all night arguing about big questions like I thought I would," she wrote. "It was assumed that we all agreed on the answers."

Because she did not want to accept a two-week quarantine and a mask mandate on her return to college, she spent a depressed year at home, and decided to transfer. Many of the colleges operating normally were religious. Still, she took a chance on Hillsdale, where she found an intellectual diversity that she had missed. She told a professor that she had privately objected to a point in class but had not wanted to seem argumentative. "Be argumentative," he responded. Someone on Twitter called her move "an example of following an ideology to my own peril," she wrote. "I think just the opposite happened; I rejected an ideology and it set me free."

Ms Kitchen's tale is unusual, but it highlights the questions that a growing ▸▸

number of young people have about the intellectual orthodoxy of American colleges. Few students are yet openly pushing back as she did, but some educators are.

In recent years administrators at left-leaning colleges such as Haverford, Smith and Yale have yielded tamely to student activism on everything from Halloween costumes to "institutional racism". Bryn Mawr itself was hit by a student strike in November 2020, when activists said the progressive campus was a hotbed of racism.

One mother's anonymous account of the college caving in, published in *Quillette*, an online magazine, concluded that this taught students that "might makes right, that discussion and debate are for racists", and that administrators "will sell them out...all the while publicly thanking the social-justice shakedown artists who engineered their own humiliation, thus incentivising more tantrums in the future". The parent's child also transferred out. Watching the final town-hall meeting in which the college capitulated to all the activists' demands, the mother says, "I felt like I was watching the end of liberal education." The college declined to comment.

The marketplace of ideas

The right has plenty of illiberalism, too, as shown by Republican state legislatures banning topics such as "critical race theory" in schools. But Niall Ferguson, a historian at Stanford University, says it is not just conservative students and faculty who are sick of what he calls "totalitarianism lite" on campus. "Any student of the totalitarian regimes of the mid-20th century recognises all this with astonishment," he writes. "It turns out that it can happen in a free society, too, if institutions and individuals who claim to be liberal choose to behave in an entirely illiberal fashion."

A report in January by the Legatum Institute, a think-tank in London, found that half of academics in elite American universities feel the need to self-censor (compared with 35% in Britain, 39% in Australia and 44% in Canada). A study by the American Council of Trustees and Alumni found that, from 2010 to 2018, spending on student services and administration rose faster than spending on actual instruction.

A report in 2021 by James Paul of the University of Arkansas and Jay Greene of the Heritage Foundation found that based on American universities they sampled, the average one has more than 45 people working in offices devoted to diversity, equity and inclusion (DEI). There were often more people working in DEI than there were history professors.

The pushback is modest but, broadly, there are three models offering an alternative. One is religious colleges such as Hillsdale. Plenty of these—such as staunchly evangelical ones—are unlikely to appeal to disgruntled centrists. But others, including some Catholic colleges, may be attractive, partly because they prize the Western philosophical and literary canon, which is compulsory for two years at places like Hillsdale. "The people who still believe in truth are often people who come out of faith traditions, who believe that there is a truth," says Bruce Gilley of Portland State University. The Association of Catholic Colleges and Universities has not seen an increase in enrolment overall, but some small colleges say they are having a boom. Thomas Aquinas College near Los Angeles recently opened a second campus in liberal Massachusetts. Applications to Hillsdale have nearly doubled since 2015.

A second strand is trying to reform the academy from within. Leading the way is the Heterodox Academy (HXA) in New York. Founded in 2015, it uses workshops and conferences to connect and equip academics to promote "open inquiry, viewpoint diversity and constructive disagreement" on their campuses. Some 5,500 have joined so far globally, with publication of your name a requirement of membership. HXA's new leader, John Tomasi, gave up a chair at Brown University to take the job.

"No organisation in the history of American academic life...is doing more to promote the basic freedoms and viewpoint diversity we urgently need in our colleges and universities today," writes Robert George, a conservative law professor at Princeton University. He serves on the advisory council, alongside progressive academics such as Cornel West. "Great minds don't always think alike," says the website.

The pursuers of the third approach believe the academy cannot be saved, so they must build anew. In November, Mr Ferguson and other academics announced the foundation of a new college, the University of Austin, to be set up in the Texan capital.

Hillsdale keeps faith with the canon

They say UATX, as it will be known, will resist the identity politics that they believe has captured mainstream academia. It will be committed to the pursuit of truth, freedom of inquiry and conscience, they say, and be "fiercely independent".

Advisers include Glenn Loury, Harvard University's first tenured black economics professor, who is now at Brown University, and Jonathan Haidt of New York University. Kathleen Stock, recently hounded out of the University of Sussex in Britain, is to be a visiting fellow. It has raised $90m towards a goal of $250m, says its president, Pano Kanelos. UATX is still little more than an idea and a website, but in its first week it received 7,000 emails from would-be students, and 3,000 from academics asking about jobs, says Mr Ferguson.

It has had 11,000 enquiries for the 80 places on its Forbidden Courses programme this summer. A graduate programme in entrepreneurship will follow in the autumn. Undergraduates are to be accepted in 2024. But it has already run into problems. Several academic advisers, such as Steven Pinker of Harvard and Robert Zimmer of the University of Chicago, have resigned. Other academics are sceptical, too. In the *New Republic*, Aaron Hanlon of Colby College called its backers "a who's who of the Intellectual Dark-cum-Substack Web". "It's a solution to a problem that doesn't exist," says Mr Colby, who suspects it will be filled with conservative students. "It will just be another version of what they say we are not supposed to have."

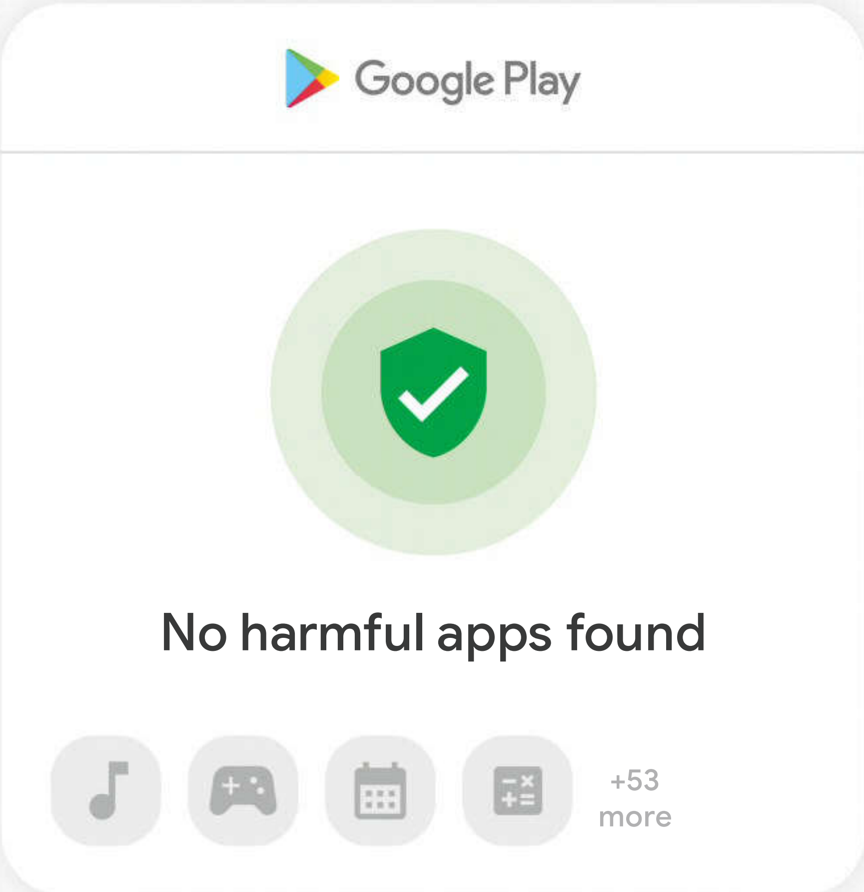
Left, right and centre

Others are trying, too. Ralston College, a startup in Savannah, Georgia, is preparing to accept its first graduate students in the autumn. Its website calls the reform of higher education from within "a losing battle". It has raised more than $30m. Jordan Peterson, a Canadian psychologist, has been mooted as chancellor. Arif Ahmed, a Cambridge philosopher who has campaigned for academic freedom, will teach a class. Ralston already has the authority to award degrees (which UATX does not yet).

All of this remains small beer. And most students are still likely to aspire to established colleges, even if these do lean further left than some would like. But the leaders of the scrappy startups, and the handful of dissident students, are issuing important warnings. "We can't take for granted that our fundamental freedoms, of speech, conscience and association, will still be there 20 years from now," says Ralston's president, Stephen Blackwood. Western liberalism is being deconstructed before our eyes, he says. "The ideological presumptions and weaponised activism that universities now teach are a closing of our horizons. The work of our time is to open those horizons up again." ■

Google

Every day Google scans 100 billion installed apps,



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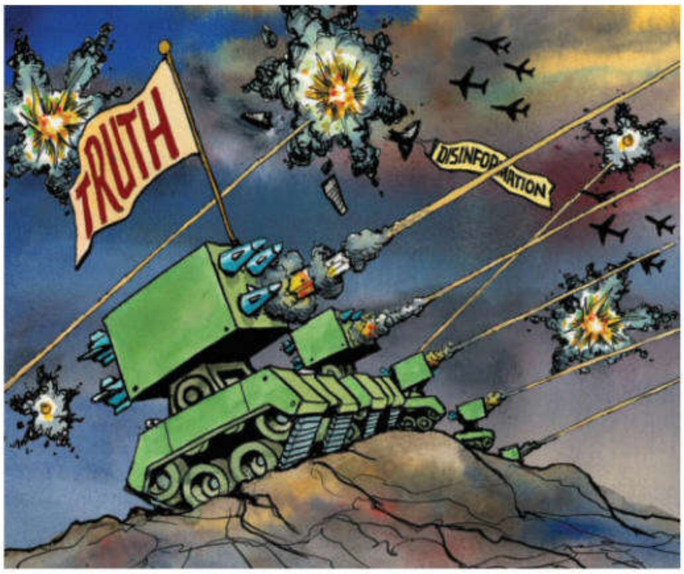
Lexington | Reality against Putin

The administration is countering Russian disinformation on Ukraine



THE INTERNET, microchips and semiconductors are all products of American defence spending during the cold war. Another, less well-known, is a school of social psychology that President Joe Biden has drawn on heavily in recent weeks. It has been evident in his administration's remarkable openness with intelligence in both its diplomacy and public messaging on Ukraine.

This effort started shortly after the administration concluded last October that Vladimir Putin's military build-up was an invasion plan. It began reclassifying the supporting intelligence in order to make it widely available within NATO. From early December, when it published an intelligence assessment that Russia meant to invade Ukraine with 175,000 troops in early 2022, it applied the same tactic to its communications. For example, it released details of a supposed Russian plot to topple Ukraine's government and another to create a pretext for invading eastern Ukraine by means of a "very graphic propaganda video" of fake attacks by Ukrainian troops "which would include corpses and actors who would be depicting mourners". Naturally, Russia denied it. The administration also released alleged intercepts of Russian officers complaining that the Americans were broadcasting their schemes.

A senior administration official explains this "unprecedented" transparency as a lesson learned from previous fights with Russian disinformation (especially the downing of a Malaysia Airlines plane over eastern Ukraine in 2014). It appears to have succeeded. By releasing Mr Putin's designs, corroborated by publicly available satellite imagery, the administration prevented him from dividing NATO and the American public and establishing a pretext for his aggression. It may even have delayed his invasion, which began in an early-morning assault on February 24th.

Security experts are impressed. Stephen Hadley, a former national security adviser to George W. Bush, praises the administration's tactics and believes only the president could have overridden the intelligence agencies' customary attachment to secrecy. After years of gloomy news on disinformation, this looks like a notable blow for reality—especially given the lead role Russia has played in America's own epistemological crisis. Its disinformation helped elect Donald Trump in 2016. And if the extent of that assistance is hard to gauge, the former president does not hide the inspiration he takes from Mr Putin's truth-bending. This week Mr Trump described the Russian president's bogus claim to be advancing into eastern Ukraine to keep the peace—immediately proven false by his subsequent invasion—as "genius".

The administration's tactics originated in a smaller crisis, 70 years ago, over the collaboration of a few American prisoners-of-war in Korea with their Chinese captors. This prompted the agencies to fund research into how such "brainwashing"—a term coined to describe the Korea phenomenon—could be resisted. The psychologist William McGuire duly considered new information to be a form of virus that the mind could be defended against through a mild version of the pathogen, just as bodies are immunised against actual viruses.

This "inoculation theory" rested on two insights that have loomed ever larger in the fake-news age. False narratives, as Mr Trump's stolen-election lie demonstrates, can be extremely contagious. And heading them off, through a pre-emptive dose of the facts, is much easier than deprogramming a mind where the virus has taken hold. Experts such as Andy Norman of Carnegie Mellon University call this approach "prebunking"—and the administration's approach to Ukraine appears to illustrate it.

This success also highlights how much more difficult it is to counter disinformation at home. The power of the administration's approach lies in its combination of promptness and clarity about the alleged distinction between truth and falsehood. Both qualities are much harder to achieve domestically. The federal government cannot spy on American social-media trolls as it can on Russian military intelligence. Nor can Mr Biden's administration pre-empt the biggest troll, Mr Trump, because half the country would condemn that as a political act.

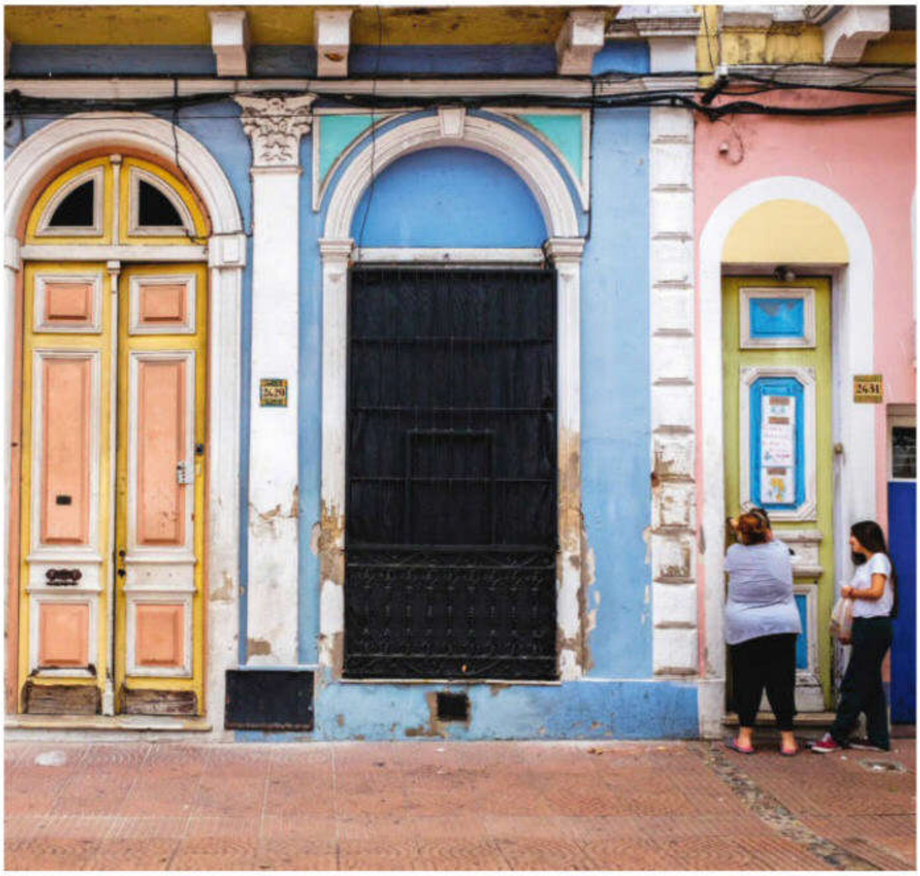
In a democracy that enshrines people's right to spout nonsense, politicians can also be reluctant to draw stark lines between truth and falsehood—even, as with anti-vax conspiracy theories, when the nonsense causes real harm. And when pre-emptive action is essential, there is no time for hesitation. By the time the 2020 election took place, around 70% of Republicans already believed it had been stolen and, as it turned out, were not persuadable by evidence to the contrary. Similarly, by the time Mr Biden sought to introduce a federal covid-19 vaccine mandate, around a fifth of Americans were irredeemably anti-vax. Battling such entrenched belief is a lost cause.

A chronic condition

To preserve pre-emptiveness and moral certainty, the pro-truth lobby must be more creative. The rapidly evolving field of disinformation research (which Mr Trump unwittingly helped inspire) suggests some possible ways. Pro-truth campaigners in America should now anticipate, for example, a welter of disinformation ahead of every election. The conspiracist American right is even more predictable in this regard than Mr Putin.

To counter it, suggests Renée DiResta of the Stanford Internet Observatory, which studies online information flows, governments must seek the help of trusted interlocutors. Doctors and religious leaders stood a far better chance of heading off anti-vax conspiracies than politicians, for example. But the administration did not make a sufficient effort to organise them for the purpose.

Learning from its recent success, it must do better against the next wave of disinformation. And there will be one soon. Disinformation is an evolving virus. Immunisation is possible. But it is not a single treatment so much as a permanent struggle. ■



Political stability

Why Uruguay?

MONTEVIDEO

What Latin America's success story can teach its neighbours

A VISITOR'S LASTING memory of Montevideo, the capital of Uruguay, may be that it's not very memorable at all. Unlike the fashionable beaches of Rio de Janeiro or the splendour of Buenos Aires's poshest districts, few parts of the city stand out. The centre (pictured) is pleasant but many buildings look in need of a lick of paint. The most famous feature is the Rambla, a coastal avenue which is possibly the longest continuous pavement in the world.

Montevideo's dullness, however, is a symptom of Uruguay's quiet success. The country boasts Latin America's largest middle class, comprising almost two-thirds of the population, compared with an average of around a third elsewhere. It has the region's highest income per capita, some of its lowest levels of inequality, and has more or less eliminated extreme poverty. In 2019 just 0.1% of the population earned less than $1.90 a day, according to the World Bank. Its capital may lack glamour, but it is short of corruption, too.

And whereas other Latin American governments floundered during the pandemic, Uruguay's took a sensible middle course. Luis Lacalle Pou, the centre-right president, focused on vaccinations and testing rather than long lockdowns. Fully 70% of the country of 3.5m received two jabs in six months. It was the first country in the region to reopen schools. According to official statistics, Uruguay has suffered just under 7,000 deaths from covid-19. What can such an unassuming place teach its worse-run neighbours?

Uruguay has some structural advantages. Spanish colonialists called it the "land of no profit", as it had neither precious metals nor cheap indigenous labour. These seeming flaws actually turned out to be strengths, however. A lack of easy rents helped ward off oligarchs. A fairly homogenous population prevented the stark racial inequality of places like Brazil.

Uruguay is also strikingly secular. In 2014 fully 37% of its citizens were agnostic or atheist, compared with 20% in the region as a whole, according to the Pew Research Centre. In the same survey it was the only country in Latin America where a majority said religious leaders should have no influence at all in politics. Partly as a result, divorce was legalised in 1907, a full 97 years before Chile made the same move. Same-sex marriage, abortion and the sale of cannabis are all legal.

But Uruguay's good fortune is not simply the result of historical circumstance. The constitution weakens the power of the executive and forces whomever is in power to negotiate with opposition parties. Uruguay has an unusual administrative model in which the boards of public entities, from the water company to the state bank, include members of the opposition as well as the ruling party.

After an economic crisis in Argentina in the early 2000s, Uruguay began to decouple its economy from that of its sclerotic neighbour. Between 2001 and 2021 the share of exports going to Brazil and Argentina fell from 37% to 24%. The economy is still dependent on agricultural exports and tourism, but successive governments have tried to boost tech, too. Uruguay is now one of the biggest exporters of software in the world, relative to its population. In 2006 it pioneered a policy that gave each student a laptop. That made remote learning easier during covid-19.

▸▸

The country is business friendly. It boasts 12 free-trade zones where many taxes are suspended. Partly as a result, the startup scene is booming. Last year dLocal, a digital-payments system and the country's first unicorn (a private firm worth $1bn or more) saw its value rise to nearly $10bn when it listed in New York. Argentine entrepreneurs, fed up with populist politics, have flocked to Uruguay. They include Marcos Galperin, the co-founder of MercadoLibre, an e-commerce firm which briefly became the highest-valued company in Latin America during the pandemic. Mr Lacalle Pou is seeking free-trade agreements with China and Turkey.

What makes all of these successes possible is remarkably stable politics. Populist rule throughout the region often leads to drastic policy swings when governments change hands. In contrast, Mr Lacalle Pou's centre-right coalition, which came to power in 2020, has not rolled back policies which were introduced by the previous centre-left government, such as boosting spending on education and health. It does want to cut public expenditure by $1bn, but plans to do so by reducing inefficiencies and squeezing the government payroll.

Stable politics are accompanied by an enduring faith in democracy. Three-quarters of Uruguayans tell pollsters that their votes are always counted fairly, compared with 18% of respondents in Colombia. Uruguay is the only country in the region where a majority do not believe that rich people buy political influence.

All is not rosy, of course. Powerful trade unions can be a hindrance to reform. Roughly 30% of workers are union members, compared with a regional average of 16% (and just 10% in the United States). Almost all workers, in both the public and private sectors, are covered by collective-bargaining deals. Teachers, in particular, resist change. Most of the increase in the education budget over the past two decades went on wages. Promotions tend to be based on seniority. "Some of my teachers are just there because they're old, and they are the worst teachers ever," groans Camilla, a 13-year-old. According to CAF, a Latin American development bank, in 2018 a higher proportion of pupils dropped out of secondary school than anywhere else in the Americas except Guatemala and Honduras. Around 40% complete high school.

Inefficient state monopolies, meanwhile, raise costs for businesses. The telecoms union is fighting to repeal a law that allows customers to keep their mobile phone number if they switch providers, as that would spur competition. Such restrictions hinder foreign investment, which is lower as a proportion of GDP than in Brazil, Chile or Colombia.

Mr Lacalle Pou's popularity, boosted by his response to the pandemic, could soon be dented. On March 27th the government will hold a referendum on a package of laws it rammed through Congress under an "urgent consideration" law in 2020. The 476 measures cover everything from fighting crime to sanitising slaughterhouses. The government, which was new at the time, had been keen to press ahead with its legislative agenda as quickly as possible, even by unorthodox methods. Unions and the opposition pushed for the referendum. They say the means and haste by which the package was adopted damage democracy, and want to repeal 135 of the laws.

Polls suggest a closely divided electorate. But trust in institutions remains. There is little hint of populism about the opposition's complaints. The fuss has not yet led to any large street protests, common in the rest of Latin America. "It would be hard to have a Donald Trump here," says Adolfo Garcé, a political scientist. ■

Brazil

The price of high prices

SÃO PAULO

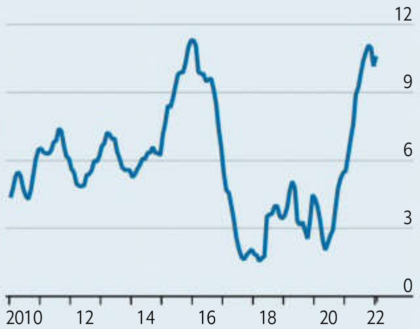
Inflation at 10% is eroding incomes and the president's popularity

BRAZILIANS ARE no strangers to inflation. In the mid-1980s people crowded around supermarket gates and, as soon as they opened, raced in to buy as much as they could carry. With inflation running on average at 300% that decade, it paid to be early. If an unlucky customer missed the morning rush, they would end up paying higher prices in the afternoon.

Today's Brazilians are not yet racing down supermarket aisles, nor even stockpiling as much as their inflation-beset neighbours in Argentina. But poor and, increasingly, middle-class Brazilians are feeling the pinch. At 10.6% the inflation rate is among the highest in big economies, and the median income, adjusted for inflation, is at its lowest in eight years. Prices of petrol and ethanol, commonly used in Brazilian cars, soared by 47% and 62% respectively in 2021. Already inflation is one of the most important issues shaping a presidential election due in October. Fully 73% of people surveyed in one poll in January said Jair Bolsonaro, the president, has done a bad job of controlling it.

The cue for queues

Brazil, consumer prices, % increase on a year earlier



Source: IBGE

To cushion the blow Mr Bolsonaro has promised salary increases and is trying to lower fuel taxes. He has beefed up a welfare payment introduced by Luiz Inácio Lula da Silva, president from 2003 to 2010 and probably Mr Bolsonaro's main opponent in the election. To do so, he persuaded Congress to approve a constitutional amendment busting through a cap on public spending, mandated in law since 2016. That has unnerved investors by suggesting fiscal prodigality. Reckless government spending, after all, has often contributed to bursts of high inflation in the past.

The government is not solely to blame for rising prices, however. Inflation is on the increase around the world, driven in large part by supply shortages and spiralling oil prices. In Brazil it has been exacerbated by the worst drought in 90 years. A consumer boom fuelled by generous fiscal stimulus may have pushed up prices, but this is also true in the United States, where consumer-price inflation is running at 7.5%. What is more, were it not for Mr Bolsonaro's emergency payments during the pandemic, twice as many Brazilians would have found themselves in extreme poverty—defined as living on less than $1.90 a day—in 2020.

The central bank has been raising rates much faster than most of its counterparts elsewhere. Its main interest rate has risen by eight percentage points, from 2.75% in March 2021 to 10.75% in February this year. That is the highest level in nearly five years. The harsh medicine shows no sign of ending. Consumer prices are decelerating at a slower rate than expected (see chart), and the bank has indicated that further increases may be needed.

But deeper problems appear to be undermining the bank's efforts. "I don't think it's a given that inflation will be brought back under control," says Arminio Fraga, one of its former bosses. One reason is expectations. In the last budget Mr Bolsonaro wangled an extra $310m to increase the salaries of government workers whose wages had been frozen during the pandemic. Although a tiny amount, it sets a precedent. On February 21st police in the state of Minas Gerais announced that they would be going on strike to demand higher pay.

Pensions, the minimum wage and other kinds of social spending are indexed to inflation. Such automatic adjustments will keep inflation hovering around 6% in ▸▸

2022, projects Credit Suisse, a bank—above the central bank's target of 3.5%.

Similar structural problems belie the numbers on government spending. On the surface they are pretty good, notes Marco Bonomo of Insper, a business school in São Paulo. Last year the government's debts fell from 89% of GDP to around 80%. This was mostly the result of growth and inflation, though the budget deficit was also smaller than expected.

But by weakening the spending cap Mr Bolsonaro has not only drawn his own credentials as a fiscal hawk into question, but also shown how easy it would be for a spendthrift president to get around rules intended to constrain spending. That debases all future promises of thrift.

The concern about future fiscal incontinence may explain the depreciation of the real. Since Mr Bolsonaro took office in 2019 it has fallen by over 30%, although it has recovered a little recently. This is unusual: when commodity prices are high and Brazil is running a trade surplus, as it is today, the exchange rate tends to appreciate. The falling exchange rate, in turn, fuels inflation, as imported goods become dearer.

In an election year, however, it is the presidential candidates who are the greatest source of uncertainty. The two main contenders are both fiscal chameleons. In 2002 Lula's win spooked the markets, but he was reasonably responsible in his spending in his first term, at least. Mr Bolsonaro, in contrast, has seemed ever less in accord with Paulo Guedes, his orthodox finance minister, as his term has progressed. For now investors seem to expect Lula, who is leading in the polls, to govern moderately. But as with rising prices, they may be in for an unpleasant surprise. ■

Bello The fall of Juan Orlando Hernández

Can Honduras clean up its act?

IT WAS A swift public humiliation. On February 15th, just 19 days after he left office as his country's all-powerful president, Juan Orlando Hernández was arrested at his mansion in Tegucigalpa and taken away in handcuffs. The arrest was in response to an extradition request from prosecutors in New York who have charged him with taking part in a violent conspiracy to export 500 tonnes of cocaine to the United States since 2004. He says he is innocent. His arrest holds out the possibility of a new dawn in a country benighted by corruption, violence, poverty and natural disasters.

Mr Hernández's rise followed the ousting in 2009 of Manuel Zelaya, a Liberal-turned-populist who allied with Venezuela's Hugo Chávez and sought to change the constitution in order to run for a second consecutive term. Mr Hernández, a conservative, at first presented himself as a reformer. He promised to crack down on drug-trafficking and purged the police. He allowed the Organisation of American States (OAS) to set up a unit to investigate corruption.

He then persuaded Honduras's Supreme Court, stuffed with nominees of his National Party, to allow him to run for a second term in 2017. The OAS and others denounced his victory as fraudulent. But the United States blessed it. Mr Hernández played the administration of Donald Trump as sweetly as a marimba. Honduras became only the fourth country to move its embassy in Israel to Jerusalem, as Mr Trump wanted. When scores of migrant caravans began leaving for the border with the United States, Mr Hernández agreed to stop them.

American prosecutors had another view. They secured the arrest and in 2021 the conviction for drug-trafficking of Tony Hernández, the president's brother. Witnesses told of bribes from drug lords, paid to the National Party to persuade the government to look the other way. The president said he wanted to "stuff drugs up the gringos' noses", a witness statement claims. He shut down the OAS unit because it did its job too well. The administration of Joe Biden has published a list of 21 Honduran officials it says are "corrupt and undemocratic", including Mr Hernández's predecessor, Porfirio Lobo (who denies the accusation).

Hondurans have had enough, too. In November they elected as president Xiomara Castro, the wife of Mr Zelaya. At her inauguration she pledged to fight corruption. She brought back a police chief fired by Mr Hernández, who promptly arrested him. She wants the UN to set up an anti-corruption commission.

Mr Hernández says the case against him is based on the testimony of convicted drug-traffickers seeking revenge. The pressure to extradite him is strong. His arrest was celebrated with fireworks in Tegucigalpa. Ms Castro seems to have a different agenda from the one her husband had when he was president. She won in part because she allied with an anti-corruption party of the centre-right whose legislative backing she needs. She seems to have dropped a campaign promise to recognise China's claim on Taiwan. "She clearly has opted to go with the United States," says David Holiday, an analyst of Central America. Her first meeting as president was with Kamala Harris, America's vice-president.

Mr Hernández is not the first Latin American head of state to be accused of drug-trafficking. The case merely highlights the continuing penetration of drug money in the region. Luis García Meza, a Bolivian dictator of the early 1980s, placed his government at the service of the industry. Manuel Noriega, Panama's former strongman, was convicted of trafficking by an American court. Ernesto Samper, a Colombian president in the 1990s, admitted that his campaign took money from the Cali drug gang, though he insists he was unaware of it. Gangs have bribed politicians, police and officials from Argentina to Mexico.

But the rot goes particularly deep in Honduras. Its business and political elites, safe in their gated communities, have allowed the capture of the state by organised crime even as hundreds of thousands of ordinary Hondurans flee. Remittances of nearly $6bn in 2020, equal to almost 70% of exports and a quarter of GDP, keep an unreformed country going.

Ms Castro could change this. Her first test is to try to ensure that a new Supreme Court and attorney-general are politically independent. If they are, that may persuade the UN to get involved. Mr Biden's team will be supportive. But it will take many years of hard work for Honduras to police itself.

South Korea

K-popular

SEOUL

Moon Jae-in leaves office the most popular president of the democratic era

JUDGED AGAINST his own high standards Moon Jae-in, South Korea's outgoing president, is a failure. He took office in May 2017 in a snap election after Park Geun-hye, his predecessor, had been jailed for corruption and abuse of power. There had been months of protests against Ms Park and the discredited political class; Mr Moon campaigned on a platform of social, political and economic renewal. He promised to end the cosy links between politics and big business and create an egalitarian economy. He would move the president's office from the leafy outskirts to central Seoul, be in constant dialogue with citizens and end self-dealing and partisan strife. Moreover, he would bring an era of peace to the Korean peninsula by making overtures to Kim Jong Un, North Korea's dictator.

With just over two months left of Mr Moon's single five-year term, none of this has come to pass. The president remains ensconced in his palace in Seoul's northern hills. He has pardoned Ms Park and paroled Lee Jae-yong, the heir of the Samsung empire, from whom she accepted bribes. Other leaders of conglomerates have been reassured of their firms' central place in the economy. Ordinary citizens are struggling with unaffordable housing and a continuing shortage of jobs for the young. Partisan squabbling and mudslinging endure; indeed, they dominate the campaign to elect Mr Moon's successor. North Korea, meanwhile, has expanded its arsenal of missiles and nuclear warheads and blown up the North-South liaison office in the demilitarised zone between the two Koreas.

Yet when it comes to how Mr Moon is likely to be remembered, all this may matter less than it first appears to. South Korea has weathered the covid-19 pandemic more successfully than any other rich country, at least partly thanks to his government. Mr Moon's tenure also coincided with a huge jump in South Korea's global cultural clout. And he has, in a quiet way, strengthened his country's still-young democracy and begun to make life a little less stressful for its people. All that explains why he is likely to leave office as the most popular president in South Korea's democratic history. Depending on the pollster and the type of survey, between two-fifths and just under half of all voters say they approve of the president, though less than a third say the same of his party.

Mr Moon is likely to be remembered chiefly for the way he shepherded South Korea through the pandemic. Although it is currently suffering a surge in covid-19 infections from the Omicron variant, it still has the second-lowest number (after New Zealand) of confirmed deaths from the disease relative to population of any country in the OECD, a club mostly of rich countries. Two years in, South Koreans are chafing under ongoing curfews and social-distancing rules, but they have not had to endure lockdowns or overwhelmed hospitals. Nor has the country's economy suffered on the same scale as much of the world. GDP returned to pre-pandemic levels early last year, grew by 4% in 2021 and is predicted to grow by 3% in 2022.

That was not Mr Moon's achievement alone. Reforms to public-health systems after a disastrous outbreak of MERS in 2015 help explain the bureaucracy's nimble response to the pandemic. South Korea set up testing, tracing and isolation systems much faster than other rich countries. It ▸▸

→ Also in this section

helped that its highly automated semiconductor factories were less susceptible to disruption by covid-19 outbreaks than other industries were.

But Mr Moon set the train in motion when he called emergency meetings in January 2020 to persuade companies to speed up production of test kits. His decision to remain in the background of public-health management probably helped earn bipartisan support for the measures the authorities imposed. It has been maintained, and is reflected in ubiquitous mask-wearing and a vaccination rate of 86% of the population, one of the world's highest. The legislative supermajority his party won in the elections to the National Assembly in 2020 helped the government swiftly dole out generous pandemic relief, minimising economic disruption.

That victory also allowed Mr Moon to advance another goal: to improve the work-life balance of overworked South Koreans. Before the pandemic, a reduction in working hours for employees at large companies had already led to increased spare time and fewer after-work dinners with the boss. More generous parental leave had encouraged more fathers to spend time with their children. Since then, the curbs on working hours have been extended to smaller companies. Budgets for parental leave and child care have been boosted.

Companies still have some catching up to do to accommodate these new habits. And the president's commitment to improving life has waned at times: he has done little, for instance, to push his party to adopt fast-changing social mores on such matters as gay marriage and discrimination on grounds of sex, sexual orientation or health. Prominent political associates of the president have been embroiled in sexual-abuse scandals. Little by little, however, Mr Moon's policies have been chipping away at a culture that puts work above all else.

The parliamentary supermajority also helped Mr Moon fulfil his promise to strengthen South Korean democracy. He curbed the power of the public prosecutor's office by diverting some of its powers to other agencies. Supporters hope that the reforms will strengthen oversight of powerful government agencies and break the culture of politically motivated prosecutions that has bedevilled the presidency. All Mr Moon's democratically elected predecessors have found themselves subject to corruption investigations after leaving office. Yoon Seok-youl, Mr Moon's former chief prosecutor and now the conservative candidate for president, has threatened to go after his former boss if he wins the election. If he does, the result will be a test not just of Mr Moon's probity, but also of the resilience of his reforms.

The changes wrought by Mr Moon have been mirrored in a development for which he is cannot claim credit, but for which he will probably be remembered as well: South Korea's rise as an exporter of pop culture. BTS and Blackpink are the world's most popular boy band and girl band respectively. Bong Joon-ho, who was one of thousands of artists and intellectuals blacklisted by Ms Park for his left-wing views, won a Best Picture Oscar for "Parasite", a dark satire about inequality. "Squid Game", a gory television show directed by Hwang Dong-hyuk, also offering a crude critique of capitalism, topped the Netflix charts and produced countless memes now lodged in the global imagination. That both directors are now treated as national icons rather than enemies of the state suggests South Korea's democracy has indeed grown stronger under Mr Moon. That both shows depict a world hopelessly stacked against the little guy suggests that Mr Moon's promised egalitarian revolution still has a long way to go. ■

Geography and politics

What's in a name?

Why so many Asian cities adopt an alias

KRUNG THEP MAHA NAKHON may be a mouthful, but it is less likely to provoke sniggering among those with a teenage mindset than its better-known alternative, "Bangkok". That is one interpretation for guidance published on February 16th by the Office of the Royal Society, Thailand's answer to the *Académie Française*. A dense press release noted that this pithy four-word version of the much longer formal Thai name for the country's capital should be the standard for official purposes and should be used when writing in Roman script, too.

Some Thais criticised the government for abruptly changing how their capital is known around the world. But it is hardly the first to consider rebranding a world-famous city. Politicians have long loved to rename places to suit their whims. Rarely do citizens clamour for change.

Often a city's name is changed to shed colonial or other unpleasant memories. Among the best-known is Bombay, named by the dastardly British, which became Mumbai in honour of a local goddess, Mumbadevi. Batavia, the Roman name for part of the Netherlands, became Jakarta when the Dutch left. Frunze, commemorating a prominent Bolshevik, became Bishkek as the Soviet Union crumbled. Equally common are simply tweaks to spelling to reflect local pronunciation: Kanpur not Cawnpore, for instance, or Yangon for Rangoon.

One night in Krung Thep Maha Nakhon

In Australia, various places associated with settlers or featuring offensive language have been given Aboriginal names instead. Tasmania's Suicide Bay, where 30 indigenous men were murdered, is now called Taneneryouer, meaning "trauma". In India, the ruling Bharatiya Janata Party is replacing Muslim-sounding names in pursuit of its Hindu-nationalist agenda. Faizabad district in Uttar Pradesh is now Ayodhya district, and the city of Allahabad has become Prayagraj. In 2019 Kazakhstan's capital, formerly Astana, (ie, "capital"), was renamed Nur-Sultan in honour of Nursultan Nazarbayev, a former president who retired that year.

Inevitably, some changes are contentious. The city government of Ishigaki in southern Japan renamed an area under its jurisdiction to include the word "Senkaku", as a scattering of islands there are known in that country. That annoyed both China and Taiwan, which lay claim to the uninhabited cluster of rocks, and know them as the Diaoyu islands. China, for its part, last year renamed several villages it claims in north-eastern India to reflect its preferred spellings.

Nor do all changes stick. Few people refer to Bangalore as Bengaluru or to Chittagong as Chattogram. Rebranding Bangkok, too, would be unlikely to change how foreigners refer to it. That may be why Thai officials hastily clarified matters the next day: Bangkok is still fine to use, they said—but so is Krung Thep Maha Nakhon.

Blasphemy in Pakistan

No mercy

LAHORE

A cruel law devastates scores of lives each year, most of them Muslim

TANVEER AHMED, afraid to leave the near-darkness of his home, sits on his bed fretting. He is a civil engineer; his wife was the headmistress of a private school. They enjoyed a comfortable life together. An accusation of blasphemy levelled at his wife swept all that away, and he now cowers in a dilapidated couple of rooms in a suburb of Lahore. His wife, Salma Tanveer, is on death row. He has lost his home and job and worries that a mob could kill him at any time. "My wife is a very good woman, she did not deserve this," he says. "We are afraid, we can't go anywhere."

The high-profile case of Asia Bibi, a Christian farmhand sentenced to death in lower courts for blasphemy after being accused by the Muslims she worked with of insulting the Prophet Muhammad, ended in 2018 with acquittal in the Supreme Court. But such accusations still ruin scores of lives in Pakistan each year. Indeed in 2020, the most recent year for which America's State Department has tallied figures, Pakistani courts heard 199 blasphemy cases, a record number.

Ms Tanveer was sentenced to hang in September after a judge ruled she had distributed writings denying Mohammad was the final prophet of Islam. Her husband says she was suffering from long-standing mental illness, and that the case was pursued by a local cleric seeking revenge after a quarrel with the couple. (Ms Asia's case also followed a row, with other farmhands.) Medical testimony on Ms Tanveer's mental-health problems delayed her trial for years. Her death sentence has still to be confirmed. In fact, no death sentence for blasphemy has ever been carried out in Pakistan. But acquittals generate so much public anger that judges prefer to pass cases to appeals courts. Ms Tanveer is likely to spend years more languishing behind bars as her case crawls through the system to the Supreme Court.

According to the State Department's survey, of the people facing blasphemy accusations in 2020, 35 were sentenced to death. Of the accused, 70% were Shia Muslims, 20% from the persecuted Ahmadi sect (who are considered non-Muslims under Pakistani law), 5% Sunnis and the rest Hindus or Christians.

Tehreek-e-Labbaik Pakistan (TLP), an extremist party, has amassed enormous political clout, in part by resisting attempts to reform the blasphemy laws. It has been emboldened by confrontations with the government of Imran Khan, the prime minister, all of which have ended with the government's climbing down.

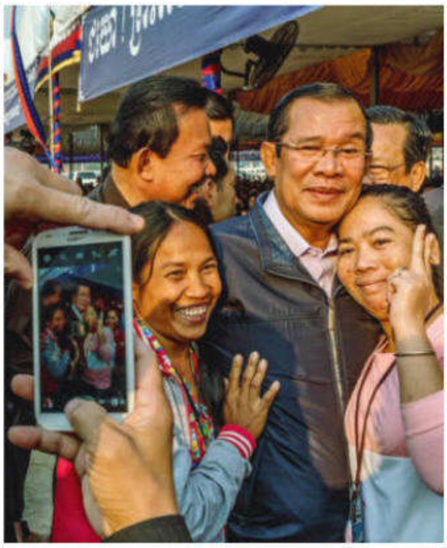
The Centre for Research and Security Studies, a think-tank in Islamabad, has counted nearly 1,300 accusations of blasphemy made between 2011 and 2021. Campaigners trying to help those accused say the success of the TLP has meant that making a blasphemy accusation and whipping up ill-educated followers can be a shrewd career move for an ambitious cleric.

The stream of accusations shows no sign of drying up. On January 19th a 26-year-old woman was sentenced to hang for allegedly sending blasphemous messages over WhatsApp and Facebook. The caricatures Aneeqa Ateeq forwarded were judged to be a deliberate insult to Islam. Ms Ateeq, who is Muslim herself, says she had been lured into conversation with the complainant, who made advances to her and then wanted revenge after she spurned them. In the days after her conviction, competing Twitter hashtags lobbied to save her and to hang her.

Earlier this month a mob in rural Punjab lynched a mentally ill man after accusing him of burning pages of the Koran. A Sri Lankan factory manager in the industrial city of Sialkot was murdered in December after workers accused him of tearing down posters bearing holy verses.

Salma Tanveer is being represented by Saif ul-Malook, the lawyer who also defended Ms Asia. That earlier case brought him international acclaim and even funding. He predicts he will receive no such support for this one. He says: "If the accusation is against a Christian, the whole Christian world is ready to stand, to fund a lawyer, to raise a media campaign and make diplomatic efforts with the government. But when it comes to a Muslim, they are not interested." ■

Blasphemers beware



Diplomacy in South-East Asia

The chastened cowboy

KUALA LUMPUR

Will humiliation in Myanmar help Cambodia distance itself from China?

HUN SEN likes doing things his own way. Cambodia's prime minister has ruled the country for 37 years and counting. Satisfied with his own performance, he banned the main opposition party in 2017. In January he flew to Myanmar, deciding that he was the man to bring peace to that country, racked by war since the army seized power last year.

This did not go down well in the region. ASEAN, the club of South-East Asian countries to which Cambodia belongs, has a hallowed tradition of consensus, and last year decided to shun Myanmar's junta. In 2022 Cambodia holds the bloc's chair, which rotates annually. So the timing of Mr Hun Sen's visit was unfortunate. It might have helped create the impression that the bloc considered the junta legitimate, remarked Malaysia's foreign minister. In exchange, the generals offered no real concessions to Mr Hun Sen.

So the "cowboy" diplomat, as he has been dubbed, has had a rough ride, recalling the last time his country wielded ASEAN's gavel. In 2012 Cambodia scandalised the region by appearing to act as a proxy for China, blocking the release of a joint ASEAN statement on the tussle between China and several South-East Asian countries over competing claims in the South China Sea. Cambodia began to be seen as a Chinese client-state. In 2020 Bilahari Kausikan, once Singapore's most senior diplomat, suggested that ASEAN might one day be forced to expel Cambodia because it had fallen into China's orbit. ▸▸

The episode in 2012 haunts Cambodia's government to this day. It saw this year's chairmanship as a chance to "redeem" itself, says Elina Noor of the Asia Society Policy Institute, an American think-tank. Taking a hard line against the junta would counter the perception that it was an ally of authoritarians and the stooge of China, which has urged ASEAN to befriend the generals. Mr Hun Sen, who is 70, may never chair ASEAN again, and so this is one of his last opportunities to "refashion" his image on the world stage, says Aaron Connelly of the International Institute of Strategic Studies, a think-tank in Singapore.

Yet Mr Hun Sen could not resist making overtures to the junta. That is because he sees himself as a peacemaker who helped bring an end to war in his own country, says Mr Connelly. Myanmar is proving trickier, however. On February 17th, just six weeks into his chairmanship, he announced he would bequeath the crisis to his successor to resolve: "I'm damned if I do, and damned if I don't, so just let it be."

For the rest of his chairmanship, Mr Hun Sen will probably do as his diplomats suggest and try to distance himself from China. Following precedent, Cambodia did not invite junta officials to an ASEAN retreat on February 16th, and hopes to hold meetings with a rival government composed of deposed lawmakers. Western governments will probably shrug. Cambodia is one of China's closest allies in the region. It is Cambodia's biggest source of aid and investment, and is helping pay to upgrade a naval base. Yet Cambodia claims not to want to choose between America and China. Now might be a good time for Western countries to test its readiness to strike a better balance. ■

Banyan Fearful symmetry?

The implications of the war in Ukraine for the Asia-Pacific region

For those concerned about peace in the Asia-Pacific region, Ukraine is, as one Japanese newspaper commentary puts it, "not a fire on the opposite shore". Not least, Asia also has a small democracy bang next to a big bully. China has long claimed Taiwan as its own, uses its armed forces to intimidate it and reserves the right to invade.

Japan's prime minister, Kishida Fumio, recently warned, "If we tolerate the use of force to change the status quo, it will have an impact on Asia as well." He was implying that the aggression of Russia's president, Vladimir Putin, towards Ukraine could embolden his Chinese counterpart, Xi Jinping, regarding Taiwan. China's commentariat does little to dispel the notion. In response to a G7 call to support Ukraine's territorial integrity, the *Global Times*, a state tabloid, tweeted mockingly, "When China takes action to eradicate [the] secessionist regime in Taiwan, you must also give China unwavering support."

In reality, far from affirming the wisdom of Mr Xi's foreign policy, the war in Ukraine exposes its limits (see China section). Meanwhile, the differences between Ukraine and Taiwan illuminate more than do the similarities, starting with levels of American support. Most Americans cannot find Ukraine, their country's 67th-biggest trading partner, on a map.

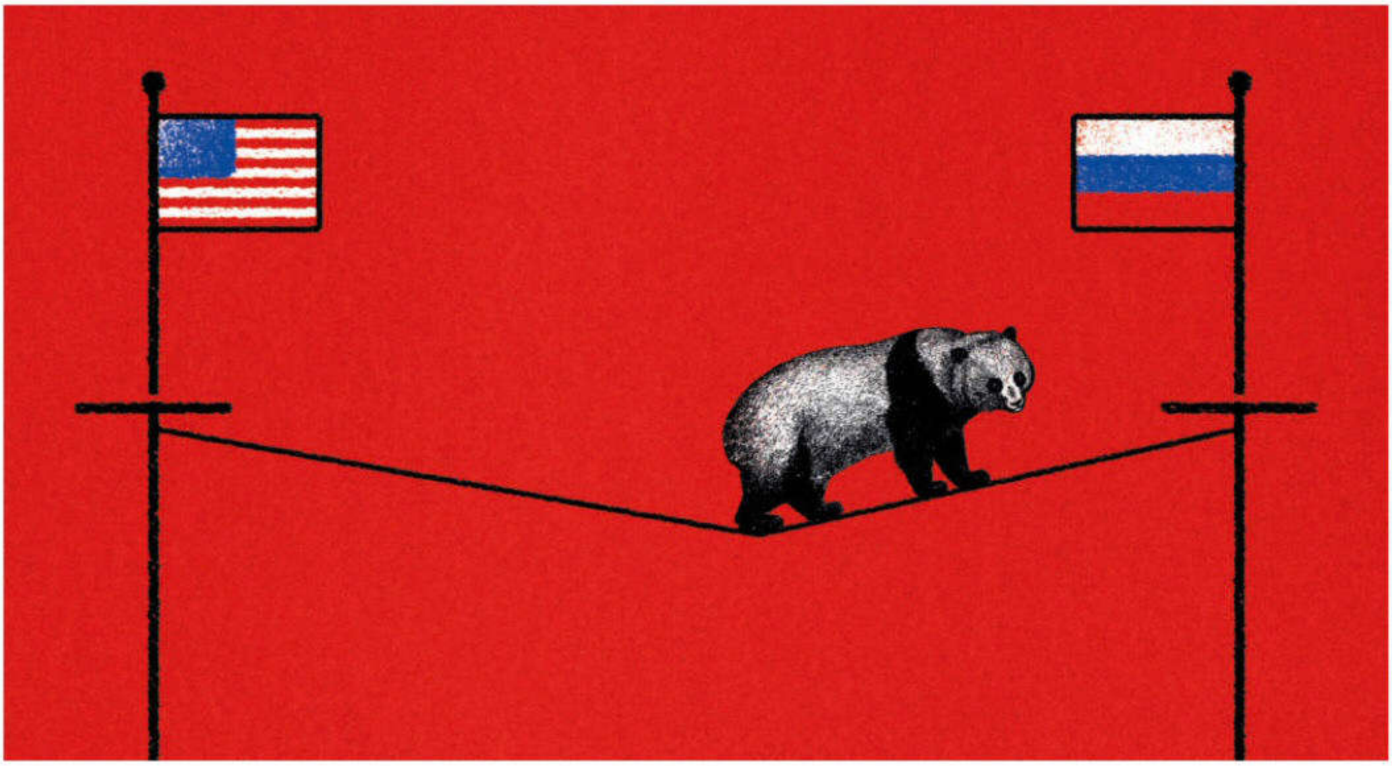
Taiwan, by contrast, is America's ninth-largest trading partner and a semiconductor superpower at the heart of global supply chains. As a Chinese-speaking democracy, points out Bonnie Glaser of the German Marshall Fund of the US, a Washington think-tank, Taiwan has long been valued by the United States as an alternative political model to the Communist-run mainland. The two countries had a mutual-defence treaty until 1979, since when America has supplied weaponry and said it will resist forcible attempts to change the island's status as an independent nation in all but name. Taiwan also sits at the nub of the western Pacific's "first island chain" and, under friendly management, offers a crucial buffer to Japan, America's main ally in the region, from Chinese threats.

So American credibility is much more at stake in Asia over Taiwan than it is in Europe over Ukraine. Losing Taiwan would mean the end of a security order in the region that America has led since the second world war, and ceding to China the role of the region's uncontested power.

It is not surprising, then, that Taiwan's president, Tsai Ing-wen, and her administration make much of their country's differences from Ukraine. Mr Xi, they argue, knows that America would respond robustly to any attack. Of greater immediate concern, says Lo Chih-cheng, head of the ruling party's foreign-affairs division, is that Ukraine will distract American attention, allowing China to make military mischief, such as testing Taiwan's commitment to defending outlying islets. Andrew Yang, a Taiwanese former defence minister, predicts China will step up misinformation drives and cyber-attacks designed to sow doubt about American commitments and reinforce a narrative of the inevitability of Chinese dominance. Here, a linkage with Ukraine does exist, Ms Glaser notes: China is watching closely how Russia applies hybrid warfare there, with lessons for its use against Taiwan.

A final linkage is that Russia itself is an Asian power. Before it began preparing for war against Ukraine, its military activities in the Russian Far East were becoming not only more vigorous but also more hostile to America and its friends. Russia uses the Sea of Okhotsk, north of Japan, as a redoubt for its nuclear-armed submarines (designed to attack the United States as a last resort). It has conducted joint naval drills with China, an increasingly close military partner, in the Sea of Japan.

Meanwhile, Japan is the only G7 member with which Russia has a direct territorial dispute: Stalin seized four northern islands in the last days of the second world war. Japan's hopes of their return have led to years of attempted rapprochement with Russia, in which Japan has been at pains not to be seen to be part of an anti-Russia grouping. But this week Japan has condemned Russia's aggression and has joined Western sanctions on the country—despite unusually large Russian exercises in waters near Japan in recent weeks, intended, military analysts say, to deter Japan from siding with America and Europe. The heightened tension between Russia and Japan looks set to become the norm. Ukraine's fires are already burning on the Asian shore.



The crisis in Ukraine

Choosing sides

China drew closer to Russia on the eve of war. Will Xi Jinping come to regret it?

Some saw it as a pivotal moment in China's relationship with Russia, and indeed in the crisis over Ukraine. On February 19th Wang Yi, China's foreign minister, speaking by video link to a conference in Munich, declared that the "sovereignty" and "territorial integrity" of countries should be protected, adding, lest anyone misunderstand, "Ukraine is no exception". It sounded like an affirmation of international norms, just as Russia's president, Vladimir Putin, was about to shatter them.

But three days later, after Mr Putin recognised two separatist enclaves within Ukraine as independent republics and promised to deploy Russian soldiers to defend them, it became obvious that Mr Wang had been presenting only a veneer of high-minded diplomacy. As America and Europe imposed sanctions on Russia, condemning Mr Putin's assault on Ukraine's sovereignty and territorial integrity, China called on "all sides" to exercise restraint and "avoid continued escalation of the situation". On February 23rd the foreign ministry's chief spokesperson, Hua Chunying, said America was making the situation worse by "sending weapons to Ukraine, heightening tensions, creating panic and even hyping up the possibility of warfare". Ms Hua, an assistant foreign minister, accused America of expanding NATO to Russia's doorstep, asking "Did it ever think about the consequences of pushing a big country to the wall?"

Two weeks earlier China had been even more emphatic in its support for Russia. On February 4th Mr Putin came to Beijing for the opening ceremony of the Winter Olympics. That day he and his Chinese counterpart, Xi Jinping, issued a joint statement that signalled the countries' strongest ties for 70 years. There were "no limits" to the friendship between the two countries, the statement said, and "no 'forbidden' areas of co-operation". It held up the two authoritarian powers as the true guarantors of "genuine democracy", while deriding unnamed countries for seeking to impose their "democratic standards" on others. Crucially China, for the first time, joined Russia in opposing further expansion of NATO, buttressing Mr Putin's demand that Ukraine be kept out of the alliance. As Russian troops were massing on Ukraine's border, Mr Xi was binding himself more closely to Mr Putin. Will he regret that choice now that war has broken out?

Russia and China have been growing closer for more than two decades. Trade surged by 35% last year to a record $147bn. China has become the largest market for Russian exports after the EU, buying $79bn of them in 2021, mainly oil and gas. An earlier round of sanctions against Russia in 2014, after Mr Putin's previous invasion of Ukraine, prompted growth in economic ties with China. An increasing wariness of America and its allies in Europe and Asia has also fostered military ties. Last year the pair held big joint exercises.

Even so, the rebuke of NATO, at such a perilous time for European security, was striking for a country that often prefers to sit on the fence. It risks widening China's rift with the West. Mr Xi seems to be girding for years of tension with America and its allies, and so wants to cement closer ties with Mr Putin, even if Russia's behaviour flies in the face of China's typical rhetoric about non-intervention.

Mr Xi surely would have preferred that Mr Putin had not launched a full-scale war. It will push democracies together and destabilise a global order in which China has thrived. But he has cast his lot with Russia, and probably believes he will not pay too heavy a price. China can be expected to ab- ▸▸

stain from any UN resolutions condemning Russia, as it did in 2014 after the annexation of Crimea. And as they have done in the past, Chinese diplomats will call for an end to the hostilities on all sides, rather than singling out Russian aggression. Indeed on February 24th Ms Hua took issue with a journalist's use of the term "invasion" to describe events in Ukraine.

The Chinese "will double down on stating, 'We support the territorial integrity of Ukraine'," says Alexander Gabuev of the Carnegie Moscow Centre, a think-tank. "But then I don't think they will criticise Russia for what Russia is doing now." China will instead continue to rebuke America. In her comments a day earlier, on the eve of war, Ms Hua called America "the culprit of current tensions surrounding Ukraine" and accused it of pouring oil on the flames in an "immoral" way.

Mr Xi may feel comfortable about showing solidarity with Mr Putin because any Western sanctions imposed on Russia will probably have only limited effects on its economic relationship with China. Mr Gabuev says he would expect China to adhere to the legal requirements of any Western sanctions, such as not banking with blacklisted oligarchs. Nonetheless China will find plenty of ways to keep business flowing. Huawei, a Chinese telecoms giant, should be able to sell 5G technology to Russia, whereas Ericsson and Nokia, two Western competitors, may be locked out. China's development banks can lend to Russian enterprises with less fear of running afoul of financial sanctions targeting commercial lending. And the two countries have steadily reduced their reliance on the dollar to settle trade, part of Russia's efforts to insulate itself from American sanctions.

Western restrictions on the purchase of oil and gas from Russia could be highly disruptive. But it is unclear whether the Biden administration wants to take a step that would increase energy prices and compound inflation ahead of mid-term elections in November. China may also see the suspension on February 22nd of Nord Stream 2, a natural-gas pipeline linking Russia and Germany, as a chance to get a better deal in negotiations over building a pipeline from Russia to China, to carry gas from the same fields that supply Europe.

But there are risks to Mr Xi's cosying up to Mr Putin. Writing in *Foreign Affairs*, Jude Blanchette and Bonny Lin of the Centre for Strategic and International Studies, a think-tank, argue that a "tighter Beijing-Moscow axis would further encourage China's rivals to balance against it". That includes Europe, where attitudes appear to have hardened since February 4th. Jens Stoltenberg, secretary-general of NATO, on February 15th described the "two authoritarian powers" as "operating together".

This perception troubles Chinese analysts. Yang Cheng of Shanghai International Studies University says China worries it could be "treated as Russia's accomplice". But he says that perception is the product of the imagination of America and its allies. China's opposition to NATO expansion, he adds, stems from empathy for Russia, in the pressure they both feel from the West.

Mr Yang says this "in no way" means that China supports the current developments in Ukraine. But the West's tendency to view China and Russia as tied together is "dangerous", he says. "It's a self-fulfilling prophecy that will turn the world into a dangerous situation that could be colder and longer than the cold war." ■

Covid-19

Clinging to zero

HONG KONG

Hong Kong's refusal to live with the virus is causing chaos

HONG KONG in the past week has been under greater stress from covid-19 than ever before. First came the shocking photographs of elderly patients on beds, lined up in the cold in the car parks of overflowing hospitals. Then the reports of foreign domestic helpers—who are forced by law to live in their employers' houses—being abandoned to the streets after testing positive. Next, a raft of announcements: schools are to be closed to become testing venues, while disused tower blocks are to be converted into isolation centres. Having managed to keep the virus at bay for two years, the territory—struggling to replicate the mainland's "zero-covid" approach—has been badly exposed.

Unnecessary fallout

The government reported more than 8,000 new cases on February 23rd—compared with 100 a month ago. The chaos on the wards has, in part, been caused by the insistence that anyone contracting the disease, even with no symptoms, must be placed in hospital or a government isolation centre.

This is unwise, says David Owens, a professor of family medicine at the University of Hong Kong (HKU). "In a covid pandemic the last place we want infectious people is in hospitals, unless they really need treatment." Modelling by HKU suggests there could be 180,000 daily cases within the next couple of weeks.

Hong Kong has been complacent "at all levels", says one public-health expert, who does not want to be named. Officials have been proud of previously effective policies, but they have squandered the success, failing to improve health facilities, stockpile tests or sufficiently increase testing capacity. Many pensioners are unvaccinated.

China's president, Xi Jinping, has ordered that the wave be halted through "all necessary measures". But Carrie Lam, Hong Kong's chief executive, has repeatedly said there will be no full lockdown. China has sent epidemiologists (and, less usefully, 150,000 batches of traditional Chinese medicine). The mainland will also provide kit for a full month of mass testing. During March each of Hong Kong's 7.4m inhabitants will be required to take three tests at a government facility, as well as taking daily tests at home. The infected will be sent to isolation centres. Even young children may be separated from their families. Some 50,000 more places will be made available in new quarantine facilities, but they may prove insufficient.

This is unlikely to halt the Omicron wave. But the variant may naturally burn through the population within a few months, reaching a level at which it becomes plausible to reintroduce a test, trace and quarantine system to quash local outbreaks. This could eventually allow a reopening of the border with the mainland, one of the government's main aims.

That plan will disappoint those who were hoping the city might move towards a policy of living with the virus, as its archrival, Singapore, has done. Instead, the dogged pursuit of zero covid is proving the final straw for many expatriates who have stuck it out so far. "We are fleeing," admits one executive. "The fact that we risk having our ten-year-old daughter being taken away from us, means we are looking at flights now." ■

Chaguan | A horror from another age

The story of a trafficked bride has shaken China in revealing ways

IF ALL GOES to plan for Communist Party leaders, the year 2022 should show the world that China represents the future. State television kicked off the lunar new year with greetings from the crew of the country's first space station, the *Tiangong*, beamed to over a billion viewers. February saw the capital, Beijing, safely host a Winter Olympics during a global pandemic. Athletes were secluded in high-technology quarantine bubbles, before competing on slopes of artificial snow. In a sign of the country's allure as a sporting power, a freestyle-ski champion born and raised in America, 18-year-old Eileen Gu, chose to compete for China, her mother's homeland, earning two gold medals and one silver.

Yet news of confidence and modernity has had competition in these opening weeks of the year. Since late January, millions of Chinese have dodged online censors to follow a different story, involving horrors that seem transported from another age. The news broke when a video blogger filmed a mother-of-eight, who showed signs of mental illness, chained by the neck in a freezing village outhouse in the eastern province of Jiangsu. Nationwide public outrage reached levels not seen since the chaotic first weeks of the covid-19 pandemic in 2020. It peaked as local officials issued a series of defensive, contradictory statements about the woman and how she reached their rural county near the city of Xuzhou. Eventually admitting that she had been sold into marriage, their openness went only so far. Guards sealed the woman's village against outsiders. Two concerned citizens were detained after trying to visit the hospital where she is now confined after a diagnosis of schizophrenia. Censors deleted many reports about the case, taking special pains to suppress news of a collective action: a petition signed by graduates of elite Chinese universities, demanding an investigation into human trafficking nationwide.

Under pressure, Jiangsu's provincial leaders finally launched a formal investigation. A report published on February 23rd declared that the woman, Yang Qingxia, also known as Xiao Huamei, or "Little Plum Blossom", was 44 years old and came from a beautiful but deprived area of Yunnan, a south-western province. She was trafficked at least twice before being sold and married to Dong Zhimin, a farmer who had eight children with her. Mr Dong and at least two traffickers have been arrested, and 17 officials sacked or disciplined, almost all of them of county-level rank or below. Striving to end on a positive note, the report announced a campaign to protect the rights of women, children, the mentally ill and disabled. Public reactions to the report are distinctly mixed, with evidence of critical comments being heavily censored.

The widespread anger inspired by Ms Yang's plight is revealing. That brides and children are trafficked is sadly no surprise. An ancient scourge, it is given new life today by wildly skewed gender ratios, especially in rural areas where a preference for sons has combined with decades of strict family-planning controls and sex-selective abortions to leave tens of millions of women missing from the population. Demographers estimate that around one in five Chinese men has no chance of finding a Chinese bride. In 2015 an ethnographer from Shandong Women's University, Chen Yeqiang, published a study of migrant brides from Ms Yang's home region in Yunnan. Typically aged 15-20, a dismaying number were tricked or abducted before being sold. Many later fled, some leaving children behind so that in-laws would not pursue them.

Those with disabilities are at high-risk of being trafficked. In 2021 Xiong Wanru of Princeton University published a survey of 1,215 bride-trafficking cases that reached Chinese courts between 2010 and 2018. A third of female victims were mentally or physically disabled, fetching prices 30% below the average as a result. Half of all the women were foreign, often from Vietnam. Many buyers were older men who lacked the education or skills to leave their village and work in a city. Sometimes parents bought a bride for disabled or mentally challenged sons, seeking grandsons to carry on the family line. A dismaying number of local officials are sympathetic to such traditionalist arguments. In a recent report the *China Economic Weekly*, a party-run magazine, described how judges in Feng County, Ms Yang's place of captivity, denied divorces to several trafficked women, urging them to think of their children and try harder to reconcile with their husbands.

For party and patriarchy

It is striking how many women have written online about seeing images of Ms Yang and imagining themselves in her place, notes Ma Zhiying of the University of Chicago, who has studied mental illness and illegal marriage in China. To Ms Ma, that reflects wider fears of young, urban women when they hear the government calling for them to marry and have more babies for the nation's sake.

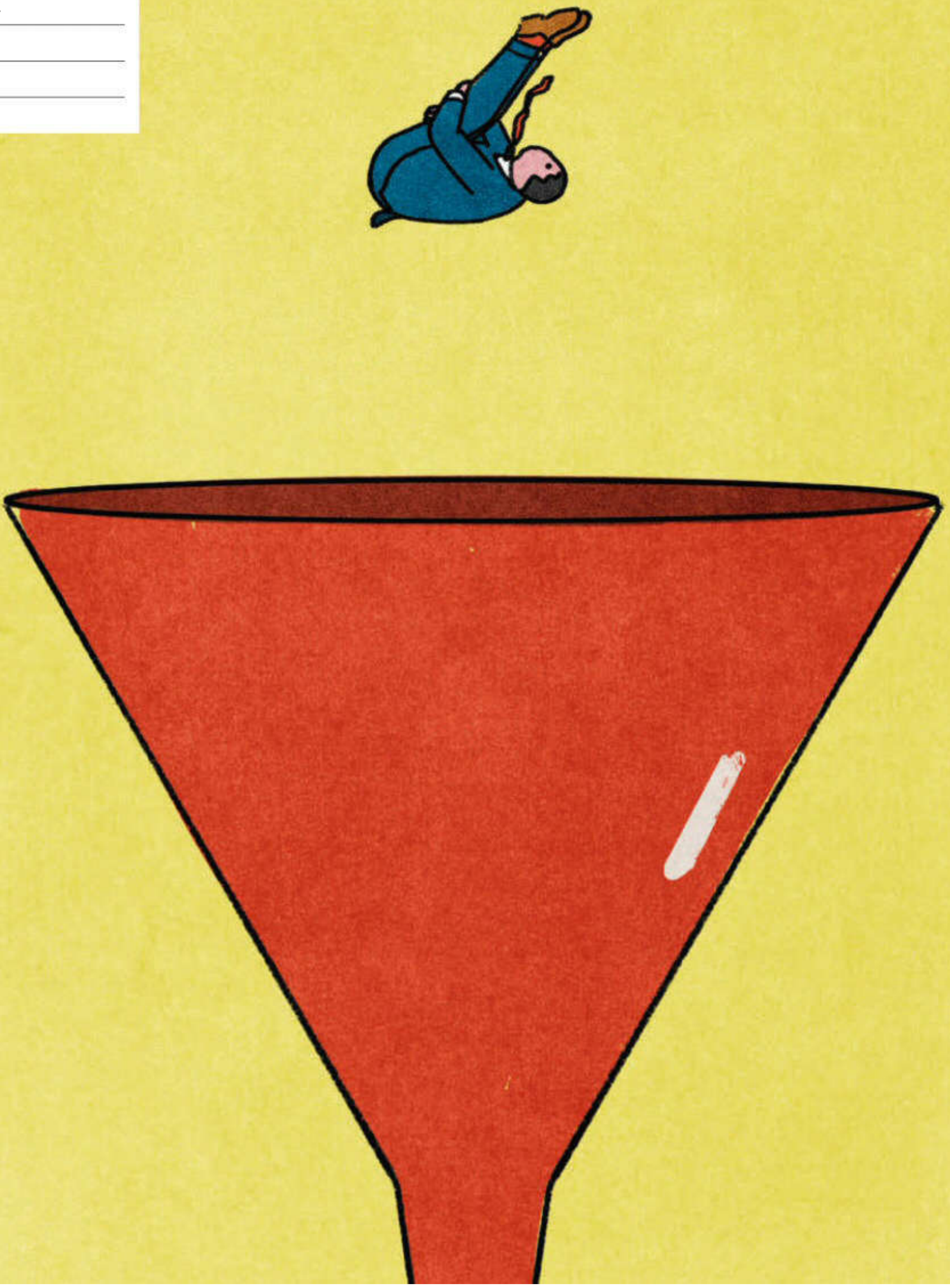
It should worry party leaders that, as netizens tried to comprehend Ms Yang's story, many shared memes from or copies of "Blind Mountain", a film set in 1990s China, depicting a young college graduate tricked into marrying a poor villager. The bleak plot sees the village chief and local elders colluding to thwart the woman's attempts to escape. In contrast, today's leaders claim to have eliminated dark, hidden corners where cries for help go unheard and corruption is unchecked. The party boasts of building good roads to even the remotest villages and of sending upright officials to eliminate graft. With surveillance cameras in every hamlet and identity-card scanners at every railway station, police brag that no criminal can hide for long.

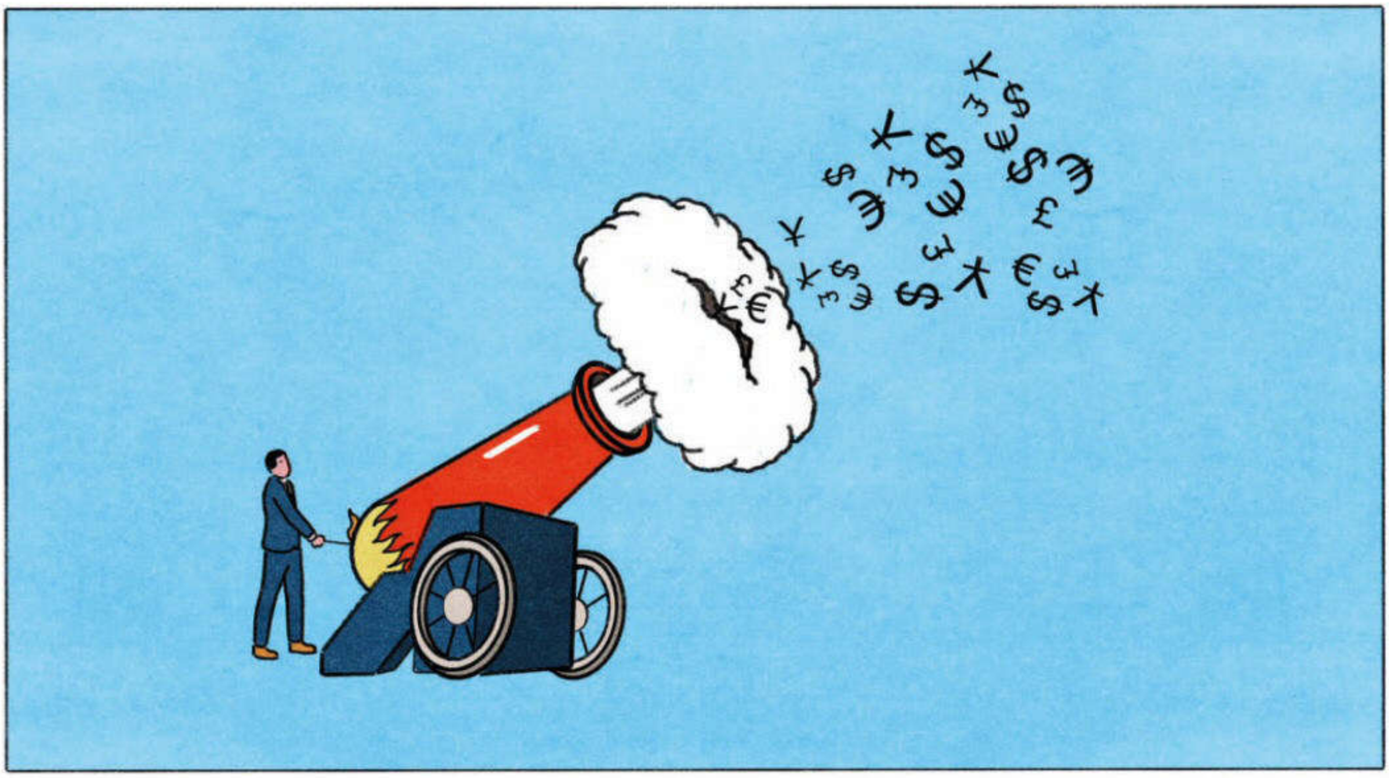
Such boasts explain public shock over Ms Yang's case. A supposedly modern, all-knowing, all-seeing state failed to notice her suffering—or worse, chose to look away in the name of local social stability. Some netizens wonder how much has changed since the time of "Blind Mountain", when it comes to officials' priorities. China's rulers, a socially conservative bunch, talk a lot about the future. But their system protects horrors with roots in the past. ■

The Economist

SPECIAL REPORT:
Private markets

Into the mainstream





Fired up

The past decade was golden for private financial markets. Now they are being dramatically reshaped, says Matthew Valencia

When John Connaughton left consulting for private equity (PE) by joining Bain Capital in 1989, "my mentors counselled against it," he recalls. "They said it wouldn't last." Now he heads Bain's global PE business. He has helped assemble such huge deals as the formation of IQVIA, a life-sciences group valued at $47bn. Bain Capital manages $155bn of assets. The target for its 13th buy-out fund last year was $9bn; it closed just short of $12bn.

PE has been on a tear for three decades. Other firms set their sights even higher than Bain Capital. Blackstone, the biggest, wants to raise a record $30bn for its next fund. CVC, Hellman & Friedman and Apollo Global Management have launched vehicles of $20bn or more. Funds are not just bigger but also being formed more quickly. The cycle between general partners (GPs), who manage PE funds, closing one fund and starting the next has shortened from five years to half that, says David Perdue of PJT Partners, an investment bank. Institutional investors such as university endowments, sovereign-wealth funds and pension plans are increasingly keen on PE and other alternatives to public markets. The attraction is understandable: in the latest fiscal year, many large American endowments enjoyed returns of 30-60% mainly thanks to private markets.

The PE industry has been "supersizing", says Hugh MacArthur of Bain & Company, a consultancy no longer affiliated with Bain Capital. By most measures, from fundraising to "dry powder" (committed capital awaiting deployment), it is three times larger than a decade ago. In just five years, the number of PE funds registered in America has jumped by more than half, to over 18,000.

Dealmaking is at record levels. The global value of disclosed leveraged buy-outs reached $1.2trn in 2021, far above the previous record of $800bn in 2006. PE made up a fifth of all mergers and acquisitions, its highest share for at least a decade. This deal splurge has supercharged activity in high-yield (junk) bond and leveraged-loan markets. Junk-bond issuance surpassed $600bn for the first time last year. So hungry were PE funds in 2021 that the bidding process sped up dramatically. Kem Ihenacho of Latham & Watkins, a law firm, says that, just as buyers gazump when housing markets are red-hot, many bidders are "pre-empting the auction" by offering to sign less than halfway through the process.

Besides buying assets from corporate owners and founders, private funds buy from each other. Some firms have been through three or four PE funds' hands. In America, secondary buy-outs can exceed the volume of initial public offerings (IPOs), the usual route for investors to cash out, says the Bank for International Settlements (BIS), the central bankers' bank.

The PE boom is part of a broader expansion of private markets. Top-tier firms that once focused on leveraged buy-outs, such as Blackstone, KKR and Carlyle, now look just as keenly for opportunities in private debt, real assets such as property and infrastructure, and "growth equity", which sits between venture capital and buy-outs. More than two-thirds of the industry's dry powder is earmarked for investments other than buy-outs. Since 2010 buy-outs have gone from 80% of KKR's business to less than half.

These market leaders are now "one-stop capital providers" for firms less able to tap traditional sources such as banks and public markets, says the BIS. Such diversification (along with stratospheric pay) has cemented their reputation as the new kings of

Wall Street. Today's business-school graduates may now be more likely to seek a career in private markets than in investment banking. Last year Blackstone had 29,000 applicants for just over 100 analyst jobs.

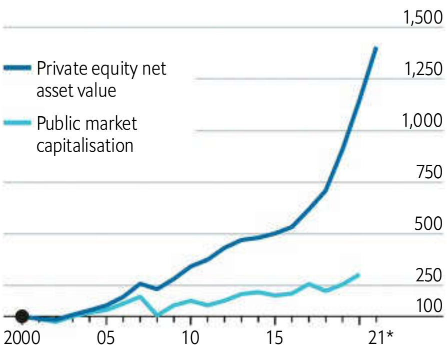
The growth of private markets has accelerated since the financial crisis of 2007-09, outpacing public markets. At its pre-crisis peak, the private-capital industry had some $2.2trn under management. Today it manages four to five times as much, a little over half of it in North America.

The private-markets party has boosted profits and share prices. In 2021 the industry's upper ranks posted record results, and publicly listed PE firms enjoyed benchmark-beating share-price gains. Blackstone's and KKR's share prices doubled. The average profitability of alternative managers is well above that of banks (albeit more volatile). The Boston Consulting Group reckons alternative managers took in more than 40% of global asset-management revenues in 2020.

Since taking off in the 1980s, PE has seen two boom-and-bust cycles. The first boom was driven by swashbuckling dealmakers, epitomised by KKR co-founders Henry Kravis and George Roberts. Its emblematic deal was the highly leveraged $25bn takeover of RJR Nabisco in 1988. The first bust soon followed. The second boom, starting in the late 1990s, saw the industry scale up and expand beyond equity and outside America. Several managers, starting with Blackstone, took advantage of it to list their own shares, monetising fee income and giving GPs more exit options. More have since done so. TPG, a San Francisco leveraged-buy-out firm with some $110bn of assets, listed on the Nasdaq in January.

A private party

Global asset values, 2000=100



Source: McKinsey *H1

Boom back bigger

The financial crisis hit PE, but it bounced back, fuelled by cheap debt as interest rates fell. Even the arrival of covid-19 in 2020 did not knock it for long. Dealmaking froze briefly, but PE firms moved to shore up portfolio firms that needed help or as an opportunity to buy cheap assets. M&A activity took off again later that year.

Private markets have been propelled by push and pull factors, says Mohamed El-Erian, chief economic adviser at Allianz, an insurer, and a former boss of PIMCO, a bond-fund manager. The main push factor was ultra-loose monetary policy, which drove investors towards illiquid markets that offered higher yields. Another was the retreat of banks in response to tougher capital requirements and post-crisis laws (such as Dodd-Frank in America) that discouraged or prohibited them from betting with their own balance-sheets. Private funds gleefully took up the slack. Among pull factors are innovations such as private-debt and property-investment funds that were designed to appeal to wealthy individuals and institutions.

As private markets have grown, more young firms have chosen to delay going public. The average age of companies doing an IPO in America was eight years in the 1980s and 1990s. The average since 2001 has been 11 years. "Private equity has redefined its role as a waystation to the public markets," says Chip Kaye, boss of Warburg Pincus, a PE firm focused on growth investing.

As companies stay private longer, "more investors are looking to get in at that pre-IPO stage, as that's when most of the wealth creation happens," says Ben Meng of Franklin Templeton, a fund manager. Some firms opt not to go public at all, confident of raising enough capital privately, says Byron Trott, head of BDT Capital Partners, a merchant bank for family firms. Of the 40 companies BDT has invested in since 2009, only three have gone public.

Not that the public markets are down and out. Last year was a record one for IPO listings. Firms going public also have other routes, such as direct listings or mergers with special-purpose acquisition companies (SPACs), which landed with a bump after a boom in 2020-21 but are unlikely to disappear. Yet at around 4,000, the number of publicly listed American firms is far below its peak of nearly 6,000 in the mid-1990s. One reason is that investors see disadvantages in public ownership, including onerous disclosure requirements, quarterly earnings pressure and attacks by activist investors.

At PE-owned firms, the activists are on the inside. Owners work closely with managers to shape strategy and capital structure. They reward success handsomely while punishing failure faster than the owners of public firms. Done correctly, this can increase value by narrowing the information gap between shareholders and management, reducing agency costs. The endowments, pension funds and other institutional investors that fuel private markets are believers. They think large allocations to alternative investments offer the best hope of hitting annual-return targets for their portfolios that are typically in the high single digits.

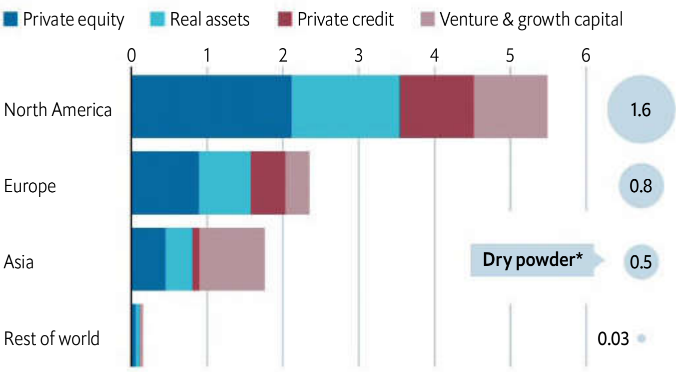
But as the industry enters its third age, it faces challenges. One is the prospect of sustained higher inflation and interest rates. Cheap debt is PE's lifeblood. A rise of a couple of percentage points in the cost of borrowing is unlikely to lead to surging bankruptcies. But more than that might. As more capital has flowed into private markets, prices for assets have risen so far that "there is little room for error," says Bain & Company's Mr MacArthur. For buyouts the average price tag relative to earnings is at an all-time high.

A second worry is greater scrutiny. Private markets are lightly regulated and opaque. Regulators want more transparency, especially on fees and performance measures. Supervisors want to know how private markets might affect financial stability. The industry must also navigate geopolitics, notably the reassessment of the virtues of foreign capital by China, until recently a big part of many managers' plans. The collapse in September of Blackstone's $3bn deal to buy SOHO China, a property developer, augurs ill.

The final test comes from within: generational change. Many who shaped the industry are leaving. Mr Kravis and Mr Roberts handed over to new co-heads last year. Stephen Schwarzman,

America leads the way

Private markets, assets under management, October 2021, $trn



Source: Bank for International Settlements *March 2021

Blackstone's 75-year-old co-founder, remains the boss, but more day-to-day responsibility rests with its 52-year-old president, Jonathan Gray. Apollo's co-founder, Leon Black, quit in March 2021 after an inquiry into his ties to Jeffrey Epstein. At Carlyle, one co-CEO quit in 2020 after losing a power struggle. Can new leaders keep the magic going? The challenge is tougher when, as Stan Miranda of Partners Capital, an investment firm, puts it, "We've been through a golden 40-year period in which conditions grew ever more benign. It's been incredible—and it may well be over."

This special report looks at the risks as the tailwinds of the past decade drop, and at the opportunities as private markets win new investors. It considers a future in which scoring big with buy-outs is no longer enough. It explores what institutional investors want and the burgeoning market for private debt; and it looks at regulatory and reputational landmines. The report focuses on America. Private markets have become more global, but it remains true that today's trend in New York is tomorrow's in London or Shanghai. ■

Strategic priorities

The great convergence

Alternative managers are going mainstream, and vice versa

BLACKSTONE STARTED life in 1985 with $400,000 in seed capital and plans as an advisory boutique. Its founders, Peter Peterson and Stephen Schwarzman, wanted to try leveraged buy-outs too, but struggled to get backing. That was then. In October Mr Schwarzman called his New York-based firm the private markets' "reference institution…reinventing the asset class". It is a justifiable boast. Blackstone towers above rivals, with $880bn of managed assets. "Ten years ago we were essentially a small club with a select group of investors focused on private equity, with a bit of real estate and distressed debt," says Mr Gray at Blackstone. "Now we have a much wider group of investors saying 'If you can get us a competitive return across private equity, lending, real estate, infrastructure or one of a number of other strategies, we're happy to have the capital tied up'."

PE firms are often said to be the "new conglomerates", given increasingly diverse portfolios. Unlike their industrial predecessors, they show capital discipline; owned companies are not cross-subsidised willy-nilly. The dozen or so firms atop the industry are more than corporate conglomerates. The likes of Blackstone and KKR "don't much like the term, but they're starting to look more like financial supermarkets," says Tim Jenkinson of Oxford University's Said Business School. One sign of this is a proliferation of distinct private-market strategies (eg, mid-cap industrials or commercial property).

Listing on public markets was a formative moment for alternative managers. The two main sources of PE income are management and performance fees; the second is known as carried interest (or carry). In the early days, carried interest was PE's main source of profit, with management fees designed only to cover administrative costs. But the latter are more important now, making up 60-70% of GPs' total profits, says one study.

Public markets find management fees easier to value than performance fees, which are more erratic. Floating a firm's shares was an obvious way to monetise the fees' future flows (as well as making it much easier for partners to cash out). The industry's latest IPO, by TPG in January, was structured to give public investors what they most wanted, the management fees, while keeping most of the carried interest for owner-managers.

Once a firm goes public, the incentive is to maximise management fees. The best way to boost a share price is to gather assets furiously, not spend time painstakingly choosing the right buy-out targets. And because alternative managers can charge higher fees than those in the public markets, they enjoy higher valuation multiples. Blackstone has an eleventh of the assets of BlackRock, the world's largest fund manager, but a higher market capitalisation.

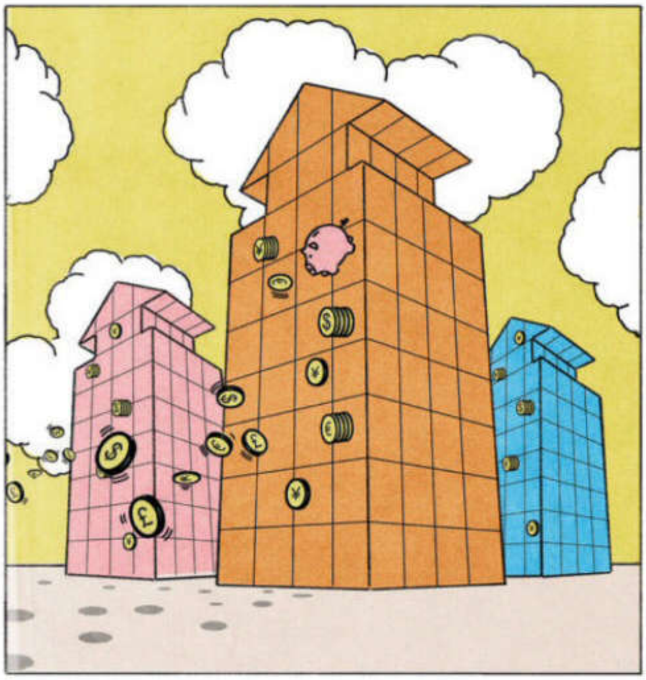
Blackstone aims to reach $1trn of assets within a few years, as does another giant, Apollo. The race to bulk up will accelerate a bifurcation of the industry, says Mr Jenkinson. As giants go for scale and breadth, a long tail of "artisanal" PE firms will tout themselves as specialists who make superior returns by focusing on particular areas or geographies, doing just a few deals a year.

Gone are the days when the big PE firms focused on value, not growth. Today's targets are often not the metal-bashers of old, but zippy new-economy firms. Software, health tech and green tech are hot. Last year one in three PE deals was classed as tech, twice the share before 2007-09. Blackstone hopes to become a king of content as well: its burgeoning media portfolio includes Moonbug and Hello Sunshine, which make TV shows for kids and women.

The search has led the industry into growth equity, a once-tiny sliver between venture capital (VC) for startups and buy-outs for mature firms. Growth equity makes up around 20% of all PE, about the same as VC, with buy-outs accounting for the rest, says Stan Miranda of Partners Capital. Growth equity is useful for firms entering adulthood but unsure about going public.

The focus on fast-growing firms has pushed up valuations. The average price for American leveraged buy-outs has climbed to 11.4 times earnings before interest, tax, depreciation and amortisation (EBITDA); even in heady pre-crisis years it did not exceed nine. Scott Kleinman, co-president of Apollo, one of the few big PE firms not to buy heavily at such multiples, suggested that the industry was gripped by a "collective delusion" on valuations.

Leverage is jangling nerves, too. It has fallen as a percentage of total capital in buy-outs: from 90% in the 1980s to around 70% before the crisis, and less than 50% today. Measured against earn-



ings, however, it is at its highest relative to EBITDA for two decades. Over four-fifths of the American buy-out market is leveraged more than six times earnings, the level at which "Federal regulators start to raise eyebrows," says Bain & Company.

Dealmakers say prices look high only because acquisitions offer fast-growing, not just dependable, earnings. They say they have largely given up financial engineering, when the game was to buy unexciting firms with steady cashflows, leverage up and squeeze out juicy returns before selling them on, and embraced an operational version. The aim is to buy and improve good companies. PE firms have hired specialist fixer-uppers. KKR says it has three "supporting colleagues", steeped in marketing strategy, employee engagement, regulatory risk and much else, for every portfolio manager in North America. "The buy, fire and sell image of the industry is so far from what we do," says Mr Gray.

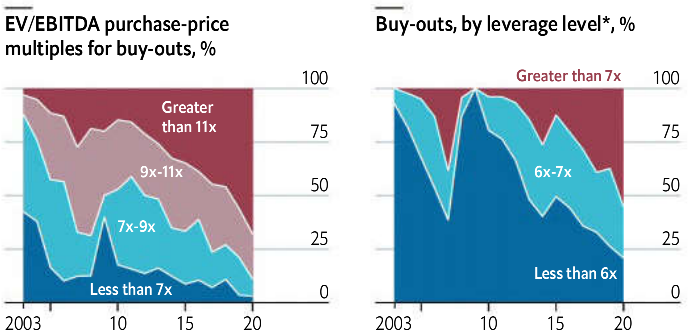
So too, he says, is PE's reputation for indifference to environmental concerns. The big firms talk up "green tech" and the energy transition. Some put money where their mouths are: Toronto-based Brookfield Asset Management has raised a $15bn "Transition Fund". In September a group of investors and PE firms, including Blackstone and Carlyle, launched an initiative to standardise environmental, social and governance (ESG) reporting in buy-outs. Some embrace other forms of stakeholderism: KKR is championing employee ownership. At Ingersoll Rand, a machinery firm, 16,000 workers have been given equity. KKR claims this has helped produce a meaningful improvement in company performance, including an 80% decline in the voluntary quit rate.

Going green, too

Investors, known as limited partners (LPS), want more of this. In a recent survey by Coller Capital, 56% of European LPS said ESG had played a role in rejecting fund commitments over the previous year. (America is behind, at 25%.) Several investors express optimism that PE firms can take a lead on greening business. "If they see it as good for the bottom line long-term, they can move quickly because of the power they have over their portfolio companies," says Tilly Franklin, Cambridge University's chief investment officer. Yet plenty of PE firms remain interested in "brown" assets at the right price. Some are buying oil companies and sniffing around coalmines that publicly listed operators want to divest.

As the industry embraces change, it is also looking for new types of investors. Mr Gray talks of "a revolution not just in what we do but who we do it for". Large institutions will be its biggest clients for many years to come, but private funds are keenly searching out retail investors as well. That would deepen the pool of capital that could be tapped by a cool $50trn, reckons Bain. "Retail has been the holy grail of private markets since Steve Schwarzman got out of the advisory business a generation ago," says one industry veteran.

Bigger, riskier
United States



Source: Bain & Company

*Debt as a multiple of EBITDA

The retail push aims both to increase clients and to grow fee-based revenues

The PE giants are hustling for high-end retail business from clients who count as "accredited" investors whom regulators deem sophisticated enough to buy private assets. The big firms are also strengthening private-wealth teams, in some cases poaching from banks. Alisa Wood of KKR says the firm is looking to raise a third or more of its capital from retail investors. Apollo expects individuals and advisers to invest $50bn over the next five years. To that end, in December Apollo acquired part of Griffin Capital, a Los Angeles-based fund manager. The next target is the "mass affluent", or merely quite well off, who have little invested in private markets and want more. Several firms, including Blackstone and Brookfield, have launched or are working on PE, credit, property or infrastructure funds tailored to smaller investors.

One difficulty over turning this retail trickle into a flood is illiquidity. Retail investors want to trade in and out of investments at a reliable net asset value, if not daily then weekly or monthly. That is not easy to engineer with private assets. Some at the cutting edge are making headway. Swiss-headquartered Partners Group manages over $36bn in open-ended PE funds for investors including wealthy retail clients. Investors receive monthly net asset values and can redeem at 30-90 days' notice (though funds can halt redemptions during market turmoil). Another barrier is regulation. Rule-setters have long been queasy about throwing private markets open to mom-and-pop investors.

There are signs that regulatory resistance is softening. Last year a panel convened by America's Securities and Exchange Commission (SEC) backed giving retail investors greater access to private markets as long as there were investor protections. America's Department of Labour also opened the door for defined-contribution (DC) pension plans to invest (defined-benefit plans have long done so). In November the British government proposed raising the ceiling on the fees that DC plans can pay. If enacted, this would allow them to invest in unlisted assets.

The retail push aims both to increase clients and to grow fee-based revenues. This goes hand in hand with the objective of raising more "perpetual" capital. Not only are profits from traditional PE funds erratic, but also the funds have to be wound up, typically after ten years. Big firms want to move away from this here-today-sold-tomorrow model. They like vehicles that can invest for longer, or are open-ended, avoiding the need to go cap in hand to investors every few years. Mr Gray has said that long-term capital "allows us to broaden who we serve and where we can invest. We've compared this to a ship moving from a narrow channel into open waters, and we believe this process has just begun."

Similar thinking underlies efforts to tap long-term insurance pools of capital, according to Dec Mullarkey of SLC Management. Big firms have stepped up their purchases of books of annuities or life insurance on which insurers are struggling to make a return because of low interest rates. The typical PE investor acquires such books for their fee income, then brings down costs and spruces up their asset mix. Some of this is done using private-credit markets, where spreads are higher than in public markets. "We only need to earn 50 basis points [half a per cent] over what the annuity pays out to do nicely," says one investor.

Apollo has pushed furthest into insurance. It set up Athene Holding in 2009 to buy annuity blocks, later floating its shares. It has since acquired stakes in other insurers. Today, Athene makes up around 40% of Apollo's total assets. KKR is doing something similar. Blackstone is taking minority investments in insurers in exchange for exclusive asset-management arrangements. Last summer it bought 10% of AIG's Life and Retirement business for $2.2bn. In return, Blackstone gets a long-term agreement to manage $50bn of AIG assets.

Public players' private passion

As alternative asset managers grow less alternative, mainstream managers are getting more so. Nudged by clients in search of yield, they are looking to cash in on private-market strategies. They would also welcome the chance to charge higher fees, having seen those from conventional stock funds shrivel with the rise of passive investing.

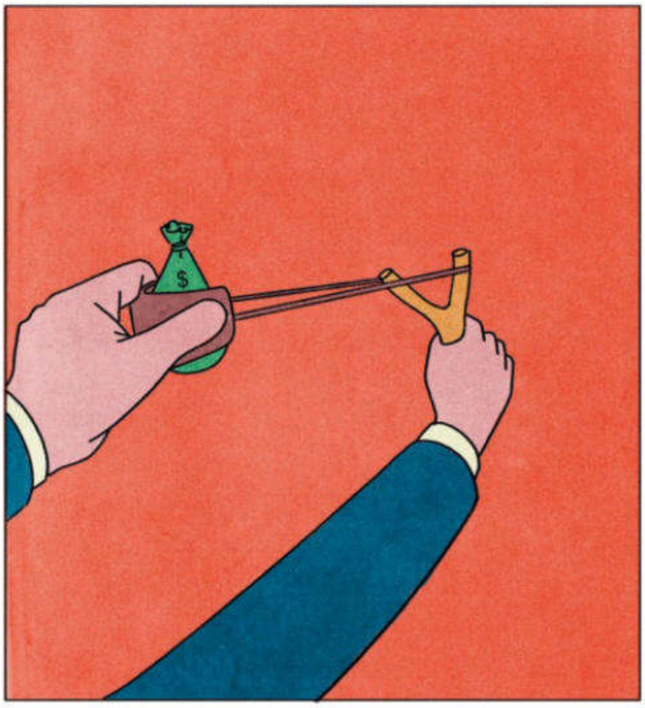
Private markets were the busiest area of dealmaking for big mutual-fund firms in 2021. Franklin Templeton paid $1.8bn for Lexington Partners, which has raised more than $55bn for alternative strategies. It also hired Ben Meng, a former investment officer of a Chinese state agency which manages $3trn, to lead a push into Asia. T. Rowe Price splashed out $4.2bn for Oak Hill Advisors, a private-credit specialist. "They bring products our clients want, and we bring distribution," says Rob Sharps, T. Rowe Price's boss. Vanguard is expanding, through a partnership with HarbourVest Partners, a big PE fund of funds. Critics suggest that venturing into an area known for high fees and opacity would send Jack Bogle, Vanguard's founder, spinning in his grave, but the firm argues that the move helps to give the little guys access to markets previously monopolised by institutions.

BlackRock, the world's largest asset manager, has been quietly building an alternatives business. It has amassed assets of $320bn, more than all but the three largest alternative managers. Half its business is private credit, much of the rest property and infrastructure. The firm also has a growth-equity partnership with Temasek, a Singaporean sovereign-wealth fund. As BlackRock moves onto the same turf as its original parent, Blackstone, there may in 20 years' time be little to differentiate the two except for the second syllable of their names. ■

The investors

LPs turn the tables

The institutional investors whose capital fuels private markets are growing more sophisticated



When David Swensen died last year, the investing world mourned the loss of an icon. As head of Yale University's nest-egg, Swensen pioneered the endowment model: eschewing bonds and lowering holdings of equities in favour of PE and property. His philosophy was that long-term capital could give up some liquidity for higher returns; and, with data scarcer in private markets, that it was easier for those who did their homework to gain an edge. In his 36 years at the helm, the endowment grew from $1.3bn to over $40bn, an average 13.7% compound annual gain.

The revolution Swensen started has spread to other endowments and foundations, and then to sovereign-wealth and pension funds and money managers for the super-rich. Academic institutions remain the trailblazers. In the 2020 fiscal year, leveraged buy-outs, VC and real assets made up an average 39% of the portfolios of American university endowments with more than $1bn. Yale has 45% in buy-outs and VC alone. But institutional investors of all stripes have been gradually raising their allocations to private markets, typically to percentages in the high teens or low 20s. Many plan to go higher: in a survey last year by Preqin, a research firm, around 90% said they expected to commit the same or more to PE funds over the next 12 months.

Last November CalPERS, America's largest public-pension fund with around $500bn under management, signalled plans to increase PE and private debt from 8% to 18% of its portfolio. This is meant to keep CalPERS' expected returns above its long-term target of 6.8%; falling short would matter to a fund whose obligations to pensioners already exceed the current value of its assets by over $160bn. "Most LPs just wish their boards would give them more access to private markets," says a consultant to big investors.

Their investments are mostly made through GP-sponsored funds with a set lifespan. A growing share of funds buy investors' existing commitments in the "secondary" market for PE stakes. This has boomed recently: 2021 saw a record $126bn in transactions, 50% higher than in 2019, the previous peak. Big private-markets firms like Ares and KKR are acquiring secondary specialists or looking for targets. LPs used to sell stakes into the secondary market only in a cash crunch. Now they do so freely, as a tool of active management, eg to increase exposure to a sector or reduce it to a region. GPs have become big secondary players, too. One popular innovation is a "continuation fund", essentially a vehicle for a GP to sell stakes to itself. One aim is to delay selling prized assets that might have to be divested as an old fund winds down.

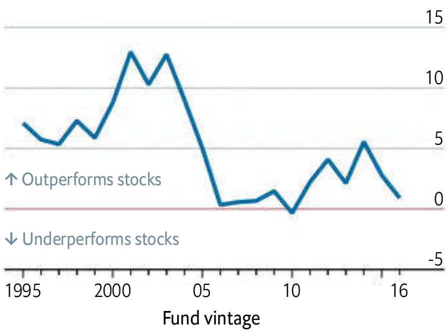
The 50 or so largest LPs have used their clout to invest differently. Some make half their private-markets commitments outside fund structures, either "directly" or as "co-investors", alongside a fund (in which they may also have a stake). The busiest direct and co-investors are Asian sovereign-wealth funds, such as Singapore's GIC and Temasek, and Canada's pension giants, including CPP Investments and the Ontario Teachers' Pension Plan (OTPP).

The OTPP acquired 85% of the private assets in its $220bn portfolio as a direct investor. It ranges from lottery operators to renewable-energy facilities. To beef up its capability it has built an in-house investment team, now 350 strong. "We like influence, and we think in a 30-year horizon. That's too long for most private-equity funds," says Jo Taylor, the OTPP's chief executive. Andrea Auerbach of Cambridge Associates, an investment firm, reckons co-investment alone now accounts for a quarter of big investors' commitments, up from 10% 15 years ago.

As well as giving investors more control, direct and co-investment can boost returns. Over the past 25 years the OTPP's direct investments have delivered a top-quartile return of around 20%, above that of its investments through funds. Between 2009 and 2016, around 80% of all co-investments outperformed funds launched in those years, says Michael Cembalest of JPMorgan Chase.

The gap narrows

Global buy-out funds, direct alpha by vintage, %



Source: Institute for Private Capital, UNC Kenan-Flagler Business School

Higher returns are no mystery. Direct and co-investors avoid fees paid by fund investors: typically a 1.5-2% management fee and 20% performance fee (the manager's "carried interest"). Institutions that do a lot of freelance investing can bring "blended" management fees down to 1-1.5%. The Universities Superannuation Scheme, an £82bn ($110bn) pension scheme in Britain, has saved its members "hundreds of millions" by investing directly, says Geoffrey Geiger, its head of PE funds. The extra staff cost pales beside the fees saved, says Matt Portner of McKinsey.

A good deal?

GPS are ambivalent about this. It means forgone fees, but it can still be useful. Some funds would find it hard to make large investments without co-investors, because of risk limits on single holdings as a share of the total. Blackstone and its partners would have struggled to complete the $34bn purchase last June of Medline, a medical-supply giant, without co-investors, including GIC.

Most investors pay close to the infamous "2 and 20". Gary Gensler, chair of the SEC, said last year that average PE management and performance fees in 2018-19 were 1.76% and 20.3%, respectively, "not that different from when I was on Wall Street" in the 1980s. Other expenses can push overall fees, including carried interest, up to 5% or more per year over the life of a fund. These include charges for "monitoring" portfolio companies, for administrative expenses, or even for use of private jets. StepStone, a private-markets advisory firm, memorably described PE fees as "like snowflakes: abundant, unique and lacking in transparency".

LPS don't kick up much fuss about fees partly because they fear being excluded from GPS' future funds or co-investment opportunities. Some keep quiet because they get rebates under side agreements. Still, many complain that fees are too high and that the fee structure is rigid even though funds' performance varies. Others grumble that fees are charged on all committed capital, not just that actually deployed.

Some GPS seek to assuage such concerns. A few have switched to charging based on funds deployed. One large investor predicts that PE will eventually follow hedge funds: when relative returns sagged after the financial crisis, some hedge funds closed, others turned into family offices, and many of the rest cut fees.

Yet 2 and 20 is likely to stay as PE's reference point. "The way the buy-out and venture-capital markets are rationed is that managers of underperforming funds struggle to raise more money and fade away rather than staying in business by slashing fees," says Steven Kaplan of Chicago University's Booth business school. The head of one American endowment's PE portfolio says that, if anything, there is greater pressure on LPS to pay more than 20% carried interest for good results than to pay less than 20% for below-average results. Some investors will pay 25% or more if the manager delivers something special, such as four times the original investment.

The biggest factor limiting pressure from LPS for lower fees is their faith that unlisted investments will continue to outperform public markets. PE firms tout dizzying returns over the past 20 years. Academics who crunch the data are split, though not down the middle. A small, vocal minority, led by Ludovic Phalippou of Oxford's Said Business School, argues that PE's outperformance is an illusion created by an industry that has mastered ways to massage the numbers. Over the past decade, Mr Phalippou calculates, returns have merely matched those of stockmarkets. For GPS to insist otherwise amounts to "a mis-selling scandal".

Most other boffins disagree. They acknowledge that the "internal rate of return" (IRR) measure favoured by the industry is flawed: it can be gamed by playing around with cashflows or by taking out "subscription lines", loans that managers get from banks to delay calling capital from LPS. However, the academics have developed their own, more solid metrics. The best of these is "direct alpha", a less manipulable, market-adjusted version of IRR.

A paper in January from the Institute for Private Capital at the UNC Kenan-Flagler Business School calculated direct alpha since the mid-1990s for funds in the 1986-2016 vintages. It found that PE, including buy-outs and VC, outperformed shares over all time periods (three, five, ten, 15 and 25 years) by 2-6 percentage points. It beat them regardless of the benchmark used; the authors tested among others the MSCI's global-equities index, the Russell 3000 index of US stocks and a small-cap value index.

The less good news is that the performance gap has narrowed. As private markets get more crowded, competition for stand-out investments intensifies. And as the industry gets bigger, it learns the truth of Warren Buffett's dictum that "no one in the world can earn 20% with big money." The real question, says Gregory Brown, the study's lead author, is whether private assets are worth it once returns are adjusted for risk. PE's "beta" (risk relative to markets) is 20-30% higher than that of equities. Investors also demand a premium for illiquidity (the consensus is around three percentage points a year, says the BIS). Against this, investors must weigh the diversification benefits of holding private assets.

Even if institutional investors conclude that PE pays, average returns are just an average. Pick a below-average fund and you can be soaked in red ink. The gap in performance between top- and bottom-quartile PE funds is wider than in public markets: for some vintages 15 points or more. One-fifth of PE investments return less than was put in, reckons one private-markets adviser.

Picking winners is made harder by a weakening of the link between past and future performance. The odds that a PE manager's next fund will be in the top quartile if its previous one was have fallen over time, to "not much better than 25%", as the industry has grown, says Mr Jenkinson. And information about past performance is often incomplete: investors must decide whether to back a manager's next fund three or four years after the previous one started investing, long before its final returns are clear. Even in the highest reaches of private markets, investing is as much about keeping the faith as studying the form. ■

PE, including buy-outs and VC, outperformed stocks over all time periods

Private credit

Sons of Drexel

Asset managers rush in where banks fear to tread, transforming a formerly niche market

As he ascended the hierarchy of corporate finance in the 1980s to become king of junk bonds, Michael Milken stood out. Not least physically: he paced the trading floor of Drexel Burnham Lambert sporting a lush but ill-fitting wig. More than 30 years on, junk bonds are a recognised part of the market for raising capital. So are other innovations spawned by the buy-out barons, such as collateralised loan obligations (CLOs), securities into which leveraged loans are packaged. Fast gaining ground on these debt markets is one for private credit, which may now be causing more excitement than any other private market.

Before the financial crisis, private credit was a niche pursuit, consisting of distressed debt and "mezzanine" finance (a risky segment between debt and equity). Over the past decade it has spread to activities ranging from aircraft leasing to "direct lending", or loans to small and mid-size companies without using a bank or securities firm. PE firms are cutting out banks and borrowing from direct lenders, including each other's credit arms, to fund buy-outs. Banks huff at this loosening of their grip on financing PE deals that used to be backed by their loans or junk bonds.

The private-credit market has more than doubled in size since 2015 and is now worth at least $1trn worldwide, not far off the $1.3trn institutional loan market, says Moody's. The BIS reckons it may be closer to $1.5trn. Private credit has at times recently exceeded junk-bond issuance, itself at record levels. Transaction sizes have risen commensurately. "Fifteen years ago the biggest deals were a few hundred million dollars. Now they're four or five billion," says Michael Arougheti, boss of Ares Management.

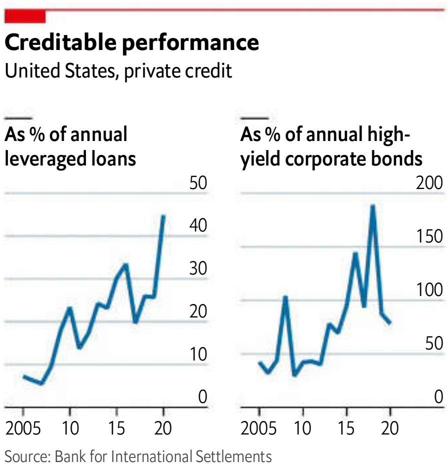
Ares is one of several firms dominating the market. Others include Apollo, Blackstone and Brookfield. Ares sought to raise a $4.5bn credit fund last year. So strong was demand that it closed at $8bn. Debt specialists are among the private markets' hottest assets. Brookfield bagged one of the most sought-after in 2019, paying $4.7bn for a majority stake in Oaktree Capital. Mainstream fund managers are also gaining a foothold: credit accounts for around half of BlackRock's $320bn alternatives business.

The market has been propelled by two big forces. One is the retreat of banks, leaving a void for non-banks. This began in the 2000s as banks looked to trim inventory and go back to being agents, not principals. It accelerated after the financial crisis as banks were forced by tougher capital requirements to offload risky assets. The second is the ubiquitous search for yield. Private credit offers juicier returns than mainstream fixed income. Rock-bottom rates have "pushed ever more investors into a liquidity-for-yield exchange", says Jean-Marc Chapus, the co-founder of Crescent Capital.

In America, banks' share of lending to small and mid-size firms has fallen from around 30% to 20% since 2010, reckons Moody's. Banks have also backed off property lending, particularly for construction and refurbishment, for which regulated lenders have been hit with steep capital charges. Spurred by accounting changes, banks across Europe have marked down dud property loans. Private-debt funds are snapping these up at 50-60 cents on the euro, rewriting loan covenants and, where necessary, offering borrowers fresh liquidity, says Stuart Fiertz of Cheyne Capital, an alternative asset manager.

They have also been busy in markets that emerged from the wreckage of the securitisation meltdown of 2008, conjuring deals for speciality-finance companies in equipment leasing, consumer lending and receivables financing. Apollo has bought two car-leasing firms, a provider of home-improvement loans and a commercial-mortgage lender with a clean-energy focus.

Private credit gives investors more options in the middle ground of risk, between staid bonds or syndicated debt and racy private or growth equity. Expected annual returns range from 4% to the low teens, depending on the product. Both fees and the risk of an investment flopping are lower than with buy-outs. Investors with explicit return targets, such as pension funds, are understandably tempted by coupons of 8-10% or more. Scott Kleinman, co-president of Apollo, says such long-term capital is a good fit for private credit. "I tell them they're the long-term lenders of the future."



For borrowers, the attraction is availability: smaller companies can't easily access public or syndicated debt markets. Others value negotiating contracts more closely tailored to their needs than is possible in other markets, or the fact that direct lenders can move quickly and also be more forgiving of defaults. Some borrowers use the market to avoid disclosure required in public debt markets. For credit funds, an attraction is the promise of excess return for illiquidity or, as Marc Rowan, Apollo's boss, puts it, "complexity and origination". At a big enough scale, making a spread of a single percentage point over ▸▸

public markets is enough for a healthy return. "Five years ago our credit business was mostly high-octane distressed debt and special situations," says Jonathan Gray at Blackstone. Now the firm is doing more, ranging from corporate-loan deals to "steadier yield products" such as property funds that yield less (say, 5-6% a year) but have the potential to be sold "at massive scale".

On the market's lower rungs there is space for specialists to carve out niches. A number of smaller players offer credit facilities with "ratchets". These give borrowers a discount on interest rates (typically up to 0.25 percentage points) if they meet certain targets. Tikehau Capital, a Europe-focused asset manager, has arranged "ESG ratchets" for more than 20 loans, linked to goals ranging from renewable-energy use to reducing work accidents.

Not everyone sees the market's growth as an unalloyed good. In a report last October Moody's called it an opaque, less regulated "grey zone" with low liquidity and hidden leverage. Lenders claim defaults are lower than on institutional loans, but disclosure is thin and definitions of default inconsistent. As with junk bonds, covenants that protect creditors if borrowers get into trouble are being weakened as competition grows. Dan Rasmussen of Verdad Capital says the market has been lending to small tech firms based on flaky projected revenues.

Moody's blues

The BIS recently analysed the growth of private markets, highlighting benefits but dwelling more on risks. Agustín Carstens, the BIS's general manager, called for more comprehensive, systemic regulation of non-bank lending. Regulators are looking at what Christina Padgett of Moody's calls "networks of collaboration" in private credit: the market is dominated by a small number of asset managers with overlapping interests. This raises questions about conflicts of interest and poorly understood risk transmission, yet to be tested by a full default cycle. Links between lenders and borrowers add further complexity. Apollo owns around 100 of the 5,000 firms with which it has a financial relationship.

"I could go back 20 years and show you the same doom-laden reports," says Mr Arougheti. Before covid, he says, private credit was seen as the next shock. But nothing happened amid the tumult of spring 2020. The big private-market players were, if anything, a stabilising influence: many stayed in the game even as liquid markets briefly seized up. Few were forced sellers. "Private-credit funds and private-equity owners did a lot of bespoke rescue financing and other patching up, often in tandem," says Ramya Tiller of Debevoise & Plimpton, a law firm.

After the breakneck growth of the past few years, a pause or correction seems inevitable. For now, though, funds and their advisers are planning on a busy first half of 2022, with numerous credit mega-funds in the works. Some wonder if there will be enough borrowers to absorb the capital flowing in.

The big funds brush off talk of tighter market conditions. "The two things that drive investors to credit are volatility and higher rates," says Holcombe Green, at Lazard. If both materialise, money may flow into private credit from buy-outs and growth equity, he suggests. Most private credit is floating-rate, making it less vulnerable to the interest-rate risk of traditional fixed income.

Ares expects its overall business, two-thirds of which is credit, almost to double by 2025. Apollo thinks its credit business could double over the next five years. "People say that private credit's addressable market is $5trn-10trn," says Jim Zelter, Apollo's co-president. "We think it could be much bigger than that, if it also takes in swathes of the mortgage markets, trade and inventory finance and the like." Add in "fixed-income replacement" products, less-risky credit offering returns in the 3-8% range, and the market could be $40trn, he says. As in all private markets, the bet is that greater scale will more than offset lower returns. ■

Regulation and reputation

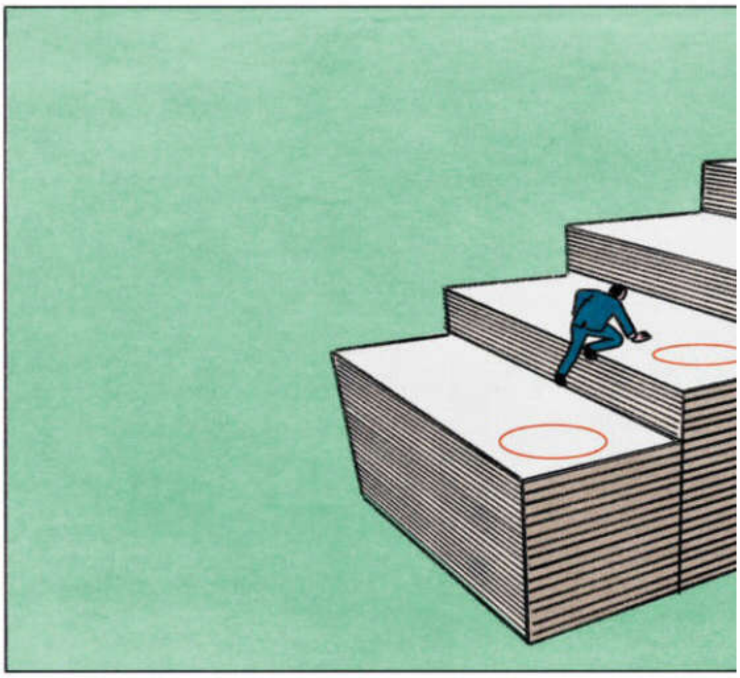
Red teeth, red tape

Criticism of private equity is overdone. That won't stop regulators giving it a harder time

In November Gary Gensler of the SEC addressed the Institutional Limited Partners Association (ILPA). Private equity and hedge funds matter, he said, because they are growing in size, complexity and number, and because of who they serve, such as retirement plans for teachers or firefighters. Caveat emptor? Not on his watch. "It is worth asking ourselves at the SEC whether we're meeting our mission with respect to this important slice of the capital markets," he said. His speech was a clear sign that private markets could expect more red tape.

Regulation increased after the financial crisis. Many private funds had to register with the SEC and start filing information about their holdings. But it remains light compared with the thicket of red tape entwined around public markets. Now regulators, egged on by public and political animus towards PE, are looking to narrow the gap. The political attack is led by Democratic senators such as Elizabeth Warren and Sherrod Brown. They are promoting the Stop Wall Street Looting act, designed to "rip up the predatory playbook" and stop PE "exploiting workers, consumers and communities". The law would, among other things, make funds' GPs share responsibility for the liabilities of firms they own and curb "dividend recapitalisations", the practice of using money borrowed by a firm they own to give themselves a big payout—sometimes enough to cover their entire investment.

Mr Gensler has more time for such pitchfork-waving than his Republican-minded predecessor, Jay Clayton, who now chairs the board of Apollo. Mr Gensler has three main concerns, which will only grow as the industry signs up more retail clients: the opacity and unevenness of fees and other expenses; opaque performance

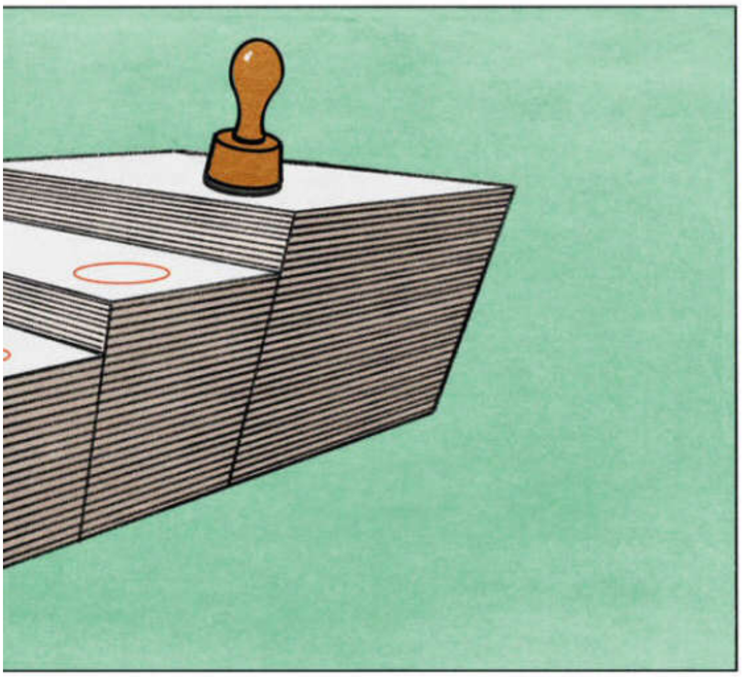


measures; and GPs' discharging of fiduciary duties to clients. He has ordered reviews in all three areas. The SEC has already proposed new rules that would ban certain activities involving conflicts of interest and force more disclosure of fees and performance. It is also working on a plan to force "unicorns" (private startups worth over $1bn) to disclose more about their operations and accounts. And it has increased scrutiny of SPACs, adumbral vehicles used as an alternative way of listing shares.

This push marks a "massive shift" in the SEC's stance towards private markets, says Igor Rozenblit, a former head of the commission's private-funds unit, now with Iron Road Partners, a consultancy. The ILPA hopes to take advantage of it to lobby regulators to force funds to report fees in a clearer, more consistent format. The trade group created just such a template in 2016 and has been trying to persuade PE funds to use it; over 60% of investors have received data in this format from funds launched in America since 2017, says Colmore, a data provider.

The Federal Trade Commission is also eyeing PE more sceptically. Its chair, Lina Khan, an appointee of Joe Biden's, is "a red-blooded anti-private-equity crusader", says one industry bigwig. Ms Khan has made policing buy-outs a priority. "We're now seeing information requests directed not just at the acquiring fund but at its sponsors themselves. Some are even being asked to provide information about their industry track record," says Erica Weisgerber of Debevoise & Plimpton, a law firm. Scrutiny is intensifying even where there is no competitive overlap between seller and buyer. The industry's big fear is that regulators may take a stricter approach to "common ownership", meaning they would consider all firms in a manager's portfolio as part of the same entity.

Private markets face scrutiny from guardians of fiscal stability, too. The BIS has warned that non-banks can "trigger or amplify market stress" and called for a more "macroprudential" approach to mitigate systemic risks. It highlighted hidden leverage, often at multiple levels: not only the firms owned by leveraged-buy-out funds but also the funds themselves (which often borrow to delay making capital calls) and their investors (CalPERS has added leverage for the first time, of 5%). The BIS did, however, acknowledge that private markets involve less "liquidity transformation" (short-term liabilities funding long-term assets) and that long-term investments should make funding more resilient.



The SEC has already proposed new rules that would force more disclosure

The industry is under assault over taxation as well. GPs have faced repeated calls to pay exchequers a bigger slice of their carried interest, the share of profits made on investments. This is taxed as a capital gain at a lower rate than if it counted as income. PE billionaires have more to fear from the end of what many see as an unfair tax break than from heavier regulation.

One result is that the industry employs almost 200 lobbyists in America alone, according to the *New York Times*. It has made congressional-campaign contributions of over $630m in the past decade, calculates Open Secrets, a non-profit. The investment appears to have paid dividends. The Looting act is stuck in Congress and a push to close the carried-interest tax loophole has floundered. Nor has any other country closed it. The British government rejected a proposal to raise the tax. Even if governments did act, the industry might find a way to convert carried interest into a common-stock equivalent that still qualified as capital gain.

Shark practice

Yet the industry has a huge image problem. It faces a negative press despite insisting its reputation for stripping assets and killing jobs is outdated. The British media feature stories of "sharks" as PE has acquired such household names as Morrisons, a supermarket chain. Failures to bag targets, such as Bain Capital's abortive attempt to buy LV, a mutually owned insurer, are met with glee. On both sides of the Atlantic the industry is seen as an emblem of inequality—the more so since it emerged that KKR's co-heads had stock awards potentially worth more than $1bn each.

The financial engineering of PE's early days, when purchases were mostly debt-financed and firms were hollowed out, is less usual now. The new charge is of anti-social behaviour. In 2020 five academics in the private-capital field, including Mr Brown and Steven Kaplan of Chicago University, wrote an article on PE's "Accomplishments and Challenges". Though broadly positive, it took the industry to task for operating in "a profit-maximising way that, although compliant with laws and regulation, is not always what most of us would view as socially optimal". PE-backed for-profit college education is linked to worse outcomes for students.

Another stain is the care-home sector. PE-owned firms have fewer nurses and worse health outcomes, partly because of "arbitraging" of nursing regulations, the authors concluded. In Britain private funds' takeovers of care homes have raised pressure to maximise revenue per bed. Many state-financed places have been reallocated to private payers, leading to bed-blocking in hospitals by those who could be better looked after in homes. Numbers of self-paying residents have risen even as supply has fallen.

Mr Brown and his co-authors say the onus should be on governments to design policy better, with fewer loopholes. Poor outcomes in education, they say, are largely down to the shoddy design of student-loan schemes. But institutional investors think PE must do more than just wait for better policy. In a survey of LPs last year, conducted by Coller Capital, a majority said that just staying within the law was not enough and predicted that "societal pressure will force the industry to begin self-regulating."

It would feel less pressure if it could persuade critics that it is a force for good. The industry has a history of exaggerating its benefits and its returns, says Jeffrey Hooke, author of "The Myth of Private Equity". Academic studies are less damning. Reports in 2014 and 2019 linked buy-outs with productivity gains from exiting less productive businesses and entering friskier ones, and from more effective resource allocation. A study in 2020 looked at what happens to public companies when PE invests in their industry: it forces rivals to respond by becoming more productive.

On jobs, a study in 2019 of PE-backed firms in America found that employment declined in existing plants by 4% relative to others in the same industry. But in new operations, started from scratch or acquired, it increased by 2.3%. Another study in 2021 of 9,800 American buy-outs between 1980 and 2013 concluded that employment shrinks 13% over two years after buy-outs of publicly listed firms, relative to control firms, but grows by 13% after buy-outs of privately held firms. It also found post-buy-out productivity gains at target firms to be "large on average and much larger yet for deals executed amidst tight credit conditions".

Critics talk up PE's costs and ignore its benefits. When citing the study of 9,800 buy-outs, Ms Warren's office focused on the jobs lost at bought-out public firms, not those added at private ones. But PE boosters play down all instances of rapaciousness, employing the "no business is without the odd bad apple" defence. Tougher regulation looms, in any event. ■

The third age

Barbarians at a crossroads

The future may well be bright. It will certainly be less high-octane

SUPERRETURN, A DAVOS for PE, held its annual bash in Berlin last November. One session on "Winners and Losers" went well, recalls Alex Koriath of Cambridge Associates, though "there weren't really any losers to talk about." A self-congratulatory air permeated the event. Nile Rodgers and his band, Chic, entertained buy-out bigwigs with their hit "Good Times".

Top-of-the-market stuff? Few would call the party's end. This year is unlikely to be as sweet as 2021, yet it may still be a record year for private markets. Unlike last year, fund sponsors are likely to look to raise more than investors are comfortable with, says Mr Green at Lazard. Some may end up short of their targets, rather than blowing through them again.

Big risks include inflation and interest rates. Inflation is a curate's egg for PE; firms with pricing power do better than those without. Higher rates can wreak havoc among leveraged buy-outs, but also reflect higher growth. A rise of more than two or three percentage points could trigger defaults and bail-outs. On top of dearer debt, business faces wage pressures, supply-chain problems and more covid-19 uncertainty. And private funds must contend with more competition as public-market funds push into private markets to meet demand for higher yields.

In less benign financial conditions, some pension funds, insurers and family offices that came late to private markets may reassess their tolerance of illiquidity. A tech slump, to which PE is more exposed than it was, would also test investors' loyalty.

Given how heady price tags are in buy-outs, "no one is banking on selling at higher multiples than today," says one dealmaker. "It will be all about growing underlying profits enough to make a nice return on the same or a lower multiple." The giants of PE talk of picking "themes": energy transition, health-care technology, take your pick. Choose the right one, and the right firms, and you can do well regardless of today's valuations, they say. Amazon is not the only success story once viewed from the rubble of the dotcom bust as having been wildly overpriced.

David Swensen might disagree. At his last investment-committee meeting at Yale, he was "very bearish" on PE valuations, says someone who was present. The ex-colleague also recalls Swensen admitting "the possibility that everything he had learned was wrong and we were now in a different world where valuations could stay higher for longer." But it didn't sound like he believed it.

Swensen thought the best private funds could thrive in periods of economic disruption, riding the cycle by acquiring undervalued or distressed assets. But the idea that private markets are greedy when others are fearful, and can profit accordingly, may be wrong. Last year Sirio Aramonte and Fernando Avalos of the BIS studied risk-taking in private markets and concluded that they are as procyclical as public markets. They found capital deployment in both PE and debt to be "positively correlated with stockmarket returns, ie, more transactions are completed in bullish times."

Whatever the short-term outlook for private markets, they have become a large and permanent feature of global finance. They have expanded and matured during the past decade's hunt for yield. Products have become more sophisticated. A secondary market has blossomed. All this has made more investors, including retail investors, comfortable with them.

With private markets representing less than a tenth of global investable assets, there is plenty of room for growth. Some parts of the world, particularly Asia, look underserved. China's crackdown on private enterprise has led some PE firms to cut back there. But the region as a whole, long heavily reliant on bank finance, is a market waiting to be tapped. Private funds are licking their lips at the prospect of more corporate carve-outs from Asian conglomerates, like those seen at Hitachi and Panasonic. Europe, also largely reliant on banks and home to thousands of family-owned firms approaching generational transfer, is fertile ground as well. Barring an interest-rate shock, "we're not even close to starting the shift towards more [private-markets] activity," reckons Bruce Flatt, boss of Brookfield Asset Management.

More competition will narrow outperformance over public markets. For the biggest firms, lower returns come partly by design: they are becoming diversified asset managers, geared to steady management-fee income, with greater scale compensating for lower returns. The industry's metabolism is slowing as it seeks to add longer-term capital that allows assets to be held for longer periods. Such capital already makes up almost a quarter of Blackstone's assets.

Making this pivot work is the biggest challenge for a new generation of buy-out bosses. Success implies asset-gathering on a much larger scale, as Blackstone and other big firms try to get closer in size and substance to BlackRock, the giant of global asset management. That will alarm those who see PE as capitalism red in tooth and claw. But private markets are emerging as a viable alternative—or stepping stone—to public ownership. The more sophisticated they grow, the greater the choice for firms and investors alike. And that has to be good for capitalism. ■

ACKNOWLEDGMENTS A list of acknowledgments and sources is included in the online version of this special report

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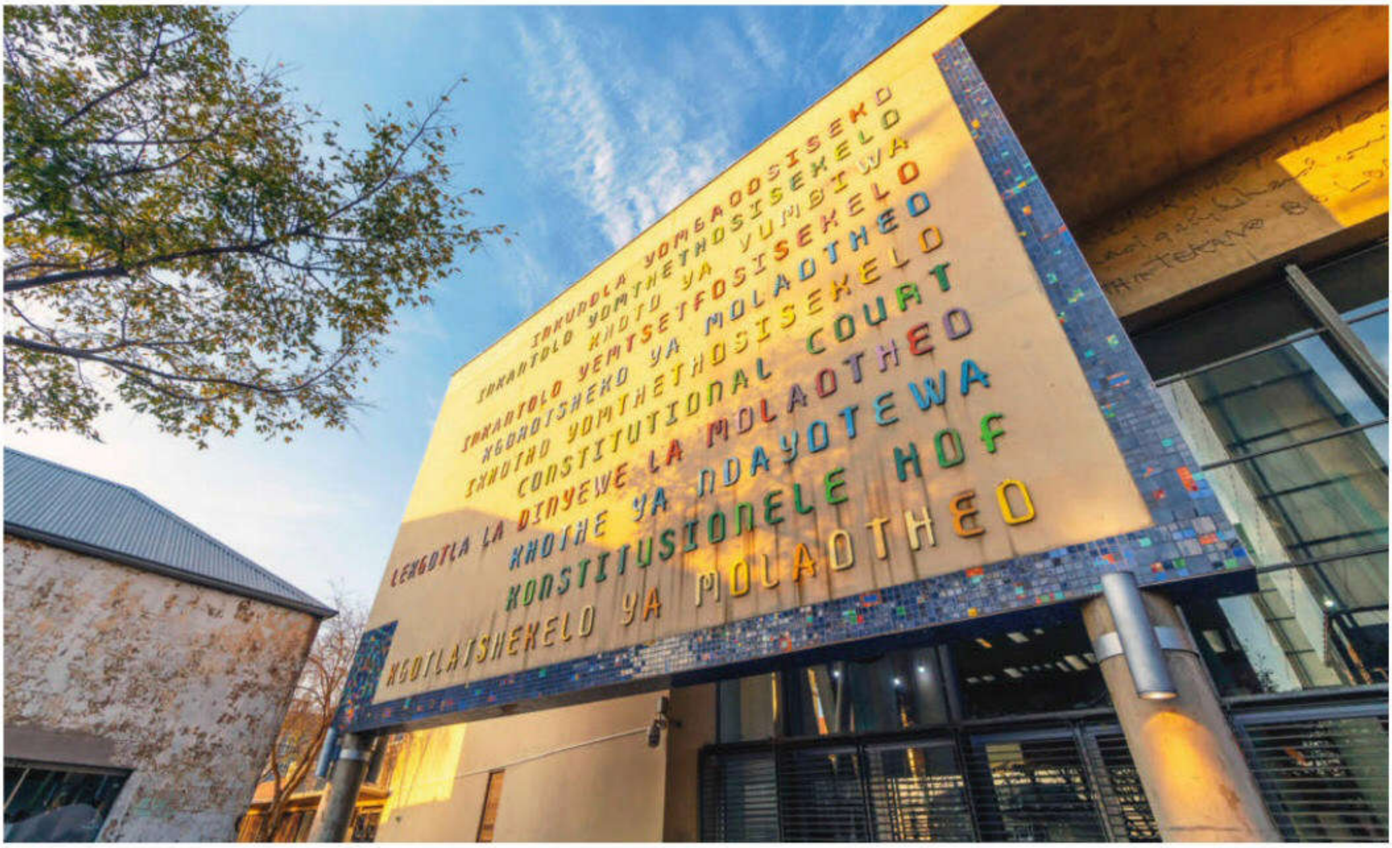


Another institution attacked

Judging judges

JOHANNESBURG

The enemies of South African democracy have the judiciary in their sights

THERE ARE few more poignant locations for a country's supreme judicial body than that of South Africa's Constitutional Court, in central Johannesburg. The building lies within the walls of the Old Fort prison complex where, during the colonial era and under apartheid, black inmates were given less food, fewer blankets and more abuse than white ones. Many who struggled against white rule were held there, including Mahatma Gandhi, Archbishop Desmond Tutu (briefly), Albert Luthuli and Nelson Mandela. The last three all won the Nobel peace prize; not many countries can boast more individual laureates than the Old Fort complex can.

South Africa's courts have generally honoured their legacy. The constitution, a blend of liberal ideas such as the separation of powers, and progressive rights to social services, has shielded the country from the worst excesses of power. Yet as President Cyril Ramaphosa prepares to appoint a new Chief Justice, the judiciary is under unprecedented attack from the enemies of constitutional democracy.

There has long been tension between the courts and the other branches of government. Thabo Mbeki, president from 1999 to 2008, believed a crank theory that the human immunodeficiency virus (HIV) does not cause AIDS. In 2002, much to his chagrin, the Constitutional Court told his government to provide South Africans with anti-HIV drugs.

The relationship deteriorated further under the presidency of Jacob Zuma (2009-18). In 2015 a judge ordered that the government must bar Omar al-Bashir from leaving South Africa after the Sudanese dictator, who was wanted by the International Criminal Court, flew in for a summit. The Zuma administration disobeyed him. The next year the Constitutional Court found that the president and parliament had failed to uphold the constitution by ignoring findings of corruption against Mr Zuma by Thuli Madonsela, then the country's Public Protector, a legal ombudsman.

Such decisions riled Mr Zuma and others in his government. The then president told tribal chiefs that they would be better off resolving disputes "in an African way" (without elaborating on what this might mean), instead of through the courts which "deal with cold facts". Blade Nzimande, a minister, warned of "judicial dictatorship". Gwede Mantashe, another minister, reportedly called judges "counter-revolutionary forces".

Yet 2021 "was arguably the court's most turbulent year", argues Pierre de Vos of the University of Cape Town (UCT). Mr Zuma accused the highest court of being "exactly like the apartheid government" by ordering him to appear before an inquiry into corruption during his reign. He was briefly imprisoned for contempt of court after he ignored the order. Jessie Duarte, an ally of Mr Zuma, said the inquiry was "an onslaught on the people". Lindiwe Sisulu, a cabinet minister, recently called some black judges "mentally colonised Africans" and "house negroes".

→ Also in this section

Tirades from a faction of the African National Congress (ANC) have been echoed by the Economic Freedom Fighters (EFF), an opposition party led by Julius Malema, a race-baiting former head of the ANC's youth wing. His calls to grab land from white farmers influence the left of the ruling party. Mr Malema has described judges as "traumatised old people". An EFF MP called the country's chief prosecutor, Shamila Batohi, a "renowned Indian racist".

Why the increase in vitriol? One reason is what Hugh Corder, also of UCT, calls "the burgeoning scourge of 'Lawfare'". As the presidency and parliament have proven inept, and as politics has become more fractious, courts have been asked to step in. Dikgang Moseneke, who retired from the Constitutional Court in 2016, notes that, towards the end of his tenure, "our democratic system appeared to have lost the capacity to mediate conflict at sites other than the courts of law". When one side loses they attack the referee. Mr Moseneke adds that political elites have every reason to fight their battles in court because taxpayers cover their legal costs.

Yet complaints about overbearing courts are often cloaks for self-interest. Mr Zuma is already on trial for fraud and bribery, on charges dating back to the 2000s. He and his allies may face prosecution for graft during his presidency. Senior figures in and close to the EFF are alleged by South African journalists to have been involved in defrauding a bank (the party denies wrongdoing). Such people are naturally keen to weaken a legal system that may decide their fate.

It would help if those meant to defend the courts did a better job. The recently retired chief justice, Mogoeng Mogoeng, was absent for much of the past year, in part because he was spreading the gospel as a lay preacher. He did a poor job of chairing the Judicial Services Commission (JSC), a body of lawyers and political appointees that advises on judicial appointment. In recent years the highest court has rarely been at its full complement of 11 judges. It currently has three vacancies. None of the white candidates were shortlisted, seemingly because of their race. Interviews of potential successors to Mr Mogoeng became disgraceful political theatre led by Mr Malema and Dali Mpofu, a former chair of the EFF and lawyer for Mr Zuma. One judge was accused without evidence of being a sexual predator; another of being too political.

Mr Ramaphosa, who helped draft the constitution in the 1990s, should be doing more to defend the judiciary. He ought to have fired Ms Sisulu, who took an oath to defend the constitution she now attacks. He has dawdled over picking a new chief justice, whom he can appoint without a recommendation from the JSC (by law he just needs to consult the body).

Nicole Fritz of the Helen Suzman Foundation, an NGO, worries that difficulties faced by whites and those of Indian origin in getting senior judicial jobs, and the personal attacks on judges of all races, mean that good candidates will stop applying. She fears the "long but irreversible decline of the judiciary". Mr de Vos frets that South Africa may become like India, where a judiciary once lauded for progressive judgments has been undermined by politicians with authoritarian tendencies.

For a while the courts were one of the few institutions that retained the confidence of the rainbow nation. No longer. In 2006 no less than 69% of South Africans said they trusted courts "a lot" or "somewhat", according to Afrobarometer, a pollster. Today just 42% say they do. It is a finding that should worry liberals—and cheer Mr Zuma and Mr Malema. ■

Jihadists in west Africa

Lines in the sand

JACQUEVILLE AND ABIDJAN

Coastal states are bracing themselves for a jihadist storm

A DRONE WHIRS overhead as Ivorian special forces creep out of the undergrowth towards a mock village. French trainers watch closely. Nearby, Ghanaian commandos roar down a dusty road before an explosion sends them retreating under the gaze of British soldiers. Operation Flintlock, an annual counter-terrorism training exercise, appears to be going just as it should: regional forces learning from grizzled Western commandos.

Yet Flintlock also encapsulates some of the weaknesses undermining the West's efforts to train local armies to defeat the jihadists who have overrun large parts of Burkina Faso, Mali and Niger and are now attacking places to the south (see map). These include a lack of leadership by countries in the region, a troubling retreat from democracy and failed efforts to win the support of disgruntled populations.

Flintlock is meant to be African-led. It is anything but. It has been largely Western troops, rather than forces from the region, that have shaped strategies to fight the jihadists in the Sahel. Meanwhile troops from the two worst-hit countries—Burkina Faso and Mali—did not attend Flintlock. This is because in both countries colonels (who had attended previous Flintlock exercises) have booted out the elected governments in coups.

What is more, Flintlock is a good example of a broad failure to communicate with local populations, something the commandos running the exercise repeatedly say is the key to defeating insurgencies. Foreign correspondents were free to hang around during the exercises, but local journalists were only allowed to attend the opening ceremony.

Such weaknesses have grave consequences. Take Mali, which is losing its battle against the jihadists. After its elected government failed to stem the violence, army officers cheered on by protesters booted it out. Unable to do a better job, the junta has instead deflected blame for its failure onto France and welcomed Russian mercenaries. On February 17th France and its European allies said they would pull their troops out of Mali, which seems to have been largely lost to the insurgency. Rear Admiral Jamie Sands, the head of American special forces in Africa, concedes that jihadists are already able to move around most of the country unimpeded.

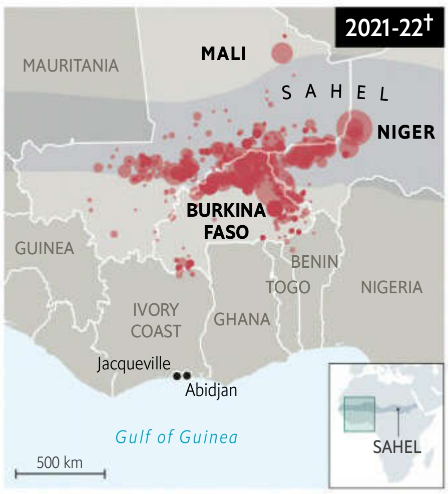
With Mali all but written off, the front lines are shifting. In Burkina Faso, where last year more people were killed than in Mali, many hope the junta will be more effective at fighting jihadists than the elected government it displaced. To the east Mohamed Bazoum, Niger's president, worries that without French troops in Mali, his ▸▸

Deadly events involving jihadist groups

Deaths* • 5 ● 25 ● 50

Sources: ACLED; José Luengo-Cabrera

*Incl. all reported civilian and combatant deaths †To Feb 6th



Ivorians prepare for the onslaught

border with it will be "even more infested and that terrorists groups will strengthen". A special-forces commander from Niger laments that his men are "not winning". Neither, he says, are the terrorists. A rising toll of civilians suggests otherwise.

Mr Bazoum is counting on France moving many of its troops to Niger, but some Nigeriens worry that hosting more foreign troops will fuel anti-French sentiment, of which there are already signs. In November two people were killed in a clash with French forces trying to extricate a convoy that had been blocked by protesters.

Governments across the region are trying to tread a fine line. Their soldiers often want foreign help to fight terrorists, yet many of their fellow citizens do not. As France considers where to deploy soldiers in the region "we must be sure that the presence of foreign units will be welcomed by the local population," says Colonel Pascal Ianni, the French army spokesman. Where that might be "is not so obvious".

A widening of the war will force hard choices. Jihadists are "moving south at a rate that is alarming", says Brigadier General Felicia Twum-Barima, the Ghanaian defence attaché in Ivory Coast. "They are looking to get to the coast." Since 2020 jihadists have attacked Ivory Coast about 16 times, killing at least 22 members of the security forces. In Benin attacks are accelerating. Ghana has thus far avoided violence but jihadist groups have reportedly established cells there and Ghanaian militants have claimed attacks in Mali.

Ghana has moved troops to its north and created its first special-forces unit. In 2020 Ivory Coast doubled to about 3,000 the number of soldiers deployed in its northern frontier regions. Yet poor soldiering was evident among even elite troops at Flintlock. Many did not know how to check a pulse or apply a tourniquet, says an American medic. Civilian engagement and building trust with locals "is quite new for them", admits one Dutch trainer. Units earmarked for winning over locals often exist "only on paper", says another.

Troops are only part of the solution. "We have learnt lessons from Mali and Burkina," says Mamadou Touré, the Ivorian minister of youth. "They did not have a social response, the state was absent." In January Patrick Achi, the prime minister, announced about $55m of spending to help young people in the north, insisting that they would be "neither neglected nor forgotten". This is part of a plan to spend $5.5bn on social programmes around the country over the next three years, in part to build resilience against jihadism. The region's Western allies should also pitch in, says a senior Ivorian defence official, adding that poverty, not ideology, drives the extremists' recruitment.

Worryingly, coastal countries may be repeating mistakes made in the Sahel where members of the Fulani ethnic group (many of whom are herders) are frequently blamed for jihadist attacks. This has fuelled violent ethnic clashes and deepened cleavages that the jihadists can exploit. In Ivory Coast the defence minister recently blamed attacks on the "Fulani of Burkina". In Ghana the authorities regularly kill animals belonging to herders. Sometimes herders themselves are killed. That is exactly the sort of approach that propagates, rather than quells, jihadist attacks. ■

Names in southern Africa

Here comes Trouble

JOHANNESBURG AND LILONGWE

The creative and revealing process of deciding what to call a baby

IF HE IS in a tight spot, says Trouble Kalua, people mention his name, asking, "What do you expect?" Shortly before his birth in Malawi, his father had lost his job as a bus conductor, impoverishing the family. Then the baby nearly died. "This boy is trouble," his father said. "His name is Trouble."

Across Africa names can have a story behind them. Yewande, for instance, is a Yoruba name meaning "mother has paid me a visit", given when an older female relative dies just before a girl is born. Kiptanui may hint at a difficult birth for mothers who speak one of the Kalenjin group of languages in Kenya.

But southern Africa stands out for nominative creativity, at least when it comes to English names. Ask Zimbabweans about their school friends and you will hear an eclectic register: Lovemore, Hopewell, Innocence, Tedious, Patience, Knowledge, Fortune, Brilliant, God Knows. A Malawian (himself Golden) lists friends named Goodfriday, Wisdom, Iron and BoyBoy.

Names illuminate power and oppression. Under apartheid in South Africa many black people took on English names, some under pressure from bosses too lazy to pronounce their real ones; others to avoid standing out in a system designed to strip black people of their history, dignity and identity. In his memoir, "Born A Crime", Trevor Noah, a comedian, says that since African names were used at home, English ones often received little thought. He recalls the example of his friend Hitler, who was named because the original Hitler "was so powerful that...black people had to go and help white people fight against him".

In Zimbabwe children were long given African names with meaning. This practice switched after British colonisation, when having an English name was seen as a way of getting ahead. Names may refer to circumstances around the birth, a quality parents see in the child, an aspiration for them—or even for the country. Under white rule some children were called Democracy, Freedom or, allegedly, Polling Station. Other names suggested progress. One venture capitalist recalls school friends named Computer and, unless he was winding your correspondent up, Crankshaft.

Do names shape character? Zimbabweans wryly noted that one Reward Marufu, a late brother-in-law of Robert Mugabe, did well out of his relative's corrupt regime. But Mr Kalua says he is Trouble by name, not by nature. "Great sense of humour, friendly, patient, kind, loving. Nothing like trouble at all!"

Names, and the language they are in, reflect changing times, too. In Zimbabwe, whose economy is collapsing, one comes across people named No Money. In many places African names are supplanting English ones. In recent years in South Africa, Enzokuhle ("to do good" in Xhosa), has become one of the most popular names, perhaps inspired by a popular song, "Enzo".

It may be that names such as Salad Nthenda will become relics. The Malawian, whose mother ate lots of vegetables when pregnant, says his "name felt good from day one". He loves the "uniqueness". Although he is teased at times, he does not give a toss.

Money-laundering

Cleaning up the laundromat

ABU DHABI

The United Arab Emirates tries to crack down on tainted money

DIRTY MONEY has long been an open secret in the United Arab Emirates (UAE). Oligarchs and foreign officials would fly in with stacks of cash, buy houses under their own names and showcase their lives of luxury on social media. Guests at a hotel in downtown Dubai last year might have shared a lift with a Turkish mob boss who had moved in for a while. With its beachfront villas, luxury hotels and fine dining, the UAE's glitzy business hub is a magnet for money, licit and otherwise.

Two years ago the Financial Action Task Force (FATF), the world's main anti-money-laundering body, urged the UAE to make "fundamental and major reforms" to crack down on financial crime. In the coming days it will decide whether the country has made enough progress. If not, it may be added to a "grey list" of problematic ones. A decision is expected by March 4th.

The list currently includes 23 countries. Being on it carries no penalties, but would probably mean extra paperwork and costs for banks. It would also dent the UAE's reputation as a well-run financial hub.

Emirati officials acknowledge the problem. They scored well on what the FATF calls "technical compliance": the country has plenty of relevant laws and regulators. But these are rarely used. From 2013 to 2018 there were just 50 prosecutions and 33 convictions for money-laundering.

Part of the problem is the UAE's tangled web of jurisdictions. A federation of seven emirates, it also has dozens of free zones that allow foreigners to hold full ownership of companies (until last year locals had to own a majority of firms incorporated elsewhere in the UAE). The FATF counted 39 different corporate registries in 2020. Some did only cursory checks on firms under their jurisdiction. At the federal level, agencies did not work closely with each other or their foreign counterparts. "We needed a platform to integrate everything in the country," says Khaled Balama, the governor of the central bank.

The government has made progress towards building one. A federal corporate registry now collects data across emirates and free zones. Ahmed al-Sayegh, a minister of state at the foreign ministry, says 92% of firms have declared information about beneficial ownership.

Enforcement is up: from 2019 to 2021 the UAE prosecuted 254 money-laundering cases, with 220 convictions (another 15 are still pending). The government confiscated assets worth $625m last year. Staffing at the central bank's financial-crimes division has more than doubled. Officials point to some recent high-profile arrests, such as that of an Emirati man detained in London in December on charges of moving £100m ($136m) between Britain and Dubai.

The deeper problem, though, is the country's business model. With little oil, Dubai (one of the seven emirates) was forced to diversify its economy decades before its neighbours did. It happened to focus on industries that attract dirty money, such as construction and property, which account for 15-20% of GDP. Core, a research firm, estimates that Dubai alone added 251,000 homes from 2011 to 2021, including 37,000 last year. The pace of new construction far exceeds population growth.

For criminals, this is a convenient way to launder money. High-end brokers all have stories of clients like the Afghan officials who bought $2m villas on Palm Jumeirah, an artificial island in Dubai. Leaked property records released in 2018 by C4ADS, a British NGO, featured a host of unsavoury characters, including a former Nigerian oil minister convicted of corruption in France and several war profiteers close to Bashar al-Assad, Syria's dictator. At least seven people under sanctions by Western countries for drug-trafficking, financing terrorism and the like owned homes in the emirate.

Another risky industry is gold. In 2019 the glittery stuff was the UAE's largest import and its largest export bar oil. Much of it is hand-carried on commercial flights and sold in Dubai's gold souk. So-called "artisanal" gold is often smuggled out of foreign countries, depriving governments of royalties; sometimes it is linked to conflict or child labour. Once sold in Dubai, it can be re-exported as Emirati gold.

Again, the government has adopted some meaningful reforms. Until recently, only financial institutions had to report suspicious transactions. Around 12,500 non-financial firms have now been added to the central bank's reporting system. "The entire country, not just financial institutions but also real estate, the gold sector, it's now part of the anti-money-laundering system," says Mr Sayegh. Traders in precious metals and jewels must report cash transactions above 55,000 dirhams ($14,974); the authorities are discussing a similar requirement for property-brokers.

If other countries have similar problems, the UAE has some unique ones as well. The line between the public and private sectors is blurry. The same royal families that run politics and pick regulators also control vast business holdings. State-run banks and exchange houses have been linked to big money-laundering schemes. Iranian money-laundering and sanctions-busting in Dubai is not just lucrative for the emirate. It also serves as what one diplomat calls "an insurance policy", helping to shield Dubai from tensions in the Gulf.

If the FATF shrugs off the reforms the UAE has undertaken and puts the country on its naughty list, as many expect, the impact will probably be limited. The central bank says confidence in the financial industry "remains high". Bankers agree, calling a designation more a nuisance than a knockout blow. Dubai will remain a magnet for money. The question is whether much of it will continue to be dirty. ■

Public transport

A ban on the van

CAIRO

Rethinking transport in Egypt's congested capital

WEAVING IN AND out of traffic, the minibuses on Cairo's ring road seem to be racing. In a sense, they are. The white minivans compete to pick up passengers and faster trips mean more fares. Since a ride costs as little as five Egyptian pounds ($0.32), quantity is key. So drivers speed along the motorway, exploiting every little gap in the traffic. Some are intoxicated by tramadol, an opioid that has a reputation for improving alertness (and male sexual stamina), two claims your correspondent preferred not to test.

The privately run minibuses are a fixture in the capital. But locals do not exactly like them. Start with the erratic drivers, who contribute to the city's dreadful record on road safety. Traffic in Cairo, already a nightmare, is made worse when they stop to pick up and offload passengers. The vans, which run on cheap diesel, belch noxious fumes into the air. For the government they are an embarrassment, a loud reminder of its failure to provide adequate public transport in greater Cairo, home to about 20m people.

That helps explain why officials said that minibuses would be banned from the ring road by the end of last year. Taking their place would be a new bus rapid transit (BRT) system operating in dedicated lanes. Green types are pleased (Egypt will host the COP27 climate conference this year). But don't be fooled: the minibuses will still be around for a while.

Fifty years ago Cairo had an enviable network of trams and buses, which was used by most residents. A metro system, opened in 1987, was the first of its kind in Africa. But the trams are all gone and even officials are unsure how many buses remain in operation or where exactly they go. The metro has a different problem. Though it covers a limited area, it is often packed, reportedly carrying the highest number of passengers per kilometre of any metro in the world. Rather than braving the crush, Egyptians who can afford them buy cars instead. Fuel is subsidised, which aggravates both pollution and congestion.

Most other folk rely on the minibuses. Poor planning and even poorer policies are partly to blame. The government has built satellite cities around the capital in an attempt to alleviate overcrowding. Most of these are connected to Cairo via the ring road. But until recently there was little public transport between them because the government wanted Cairenes to move to the new cities, not commute to or from them. The minibuses, which connect the various settlements, filled the void. (Similarly belching tuk-tuks, which the government sporadically threatens to curb, squeeze down narrow alleys and through gaps in the traffic.)

Analysts think the BRT will eventually offer relief but that the ban on minibuses is premature. The first phase of the BRT would cover much less ground than the minibuses, which ply the ring road on many of their routes. Analysts propose waiting until more of the new public-transport system is in place. That could take a while. The first phase of the BRT was supposed to open at the end of last year. Delays in construction have pushed it back. So the minibuses are still flying down the ring road. ■

Falconry

Beak demand

The market for falcons is soaring as wild populations decline

THOUGH ITS eyes are covered, the falcon looks frightened in the video. It sits frozen on its perch as a dozen excited men bid for the creature. The scene plays out in the Libyan city of Tobruk. But the bidders, phones in hand, are relaying prices to traders in the Gulf. When the offers top 1m dinars ($220,000) those in the room yell *Allahu akbar* (God is great). Finally the bird is sold to a man in a camouflage jacket for 2.25m dinars, making it one of the most expensive falcons in the world.

Falcons have long inspired passion among Arabs. The Bedouin used them to hunt and still recite poems extolling them. Medieval caliphs led parties into the bush to watch their falcons swoop down on game. Today Gulf royals spare no expense on such outings. With prey at home dwindling, they have began hunting abroad, in such countries as Mongolia, Morocco and Pakistan. Some call it "falcon diplomacy".

Lately a craze for falcon-racing and beauty contests has increased demand for the birds. Falcon clubs have opened across the Arabian peninsula, some offering courses to children as young as five. Airlines in the Middle East sell seats for the birds. (A Saudi prince once filled most of a commercial jet with his flock.) Falcon ownership has tripled in the Gulf over the past decade, says Karim Rousselon of the International Association for Falconry. The finest birds cost more per gram than gold.

But even at such heady prices, there are not enough wild falcons to satisfy the demand. The saker falcon, as a favoured local species in the Gulf is known, is already endangered. In the Arabian peninsula wild ones are all but extinct. Many countries have banned trade in them. But buyers and sellers have found ways around the rules.

In lawless Libya traders sometimes stitch closed the eyelids of captured specimens to keep them from flying away. Poachers in Pakistan pin prey to sticks in order to capture migrating falcons. Places like Britain also contribute to the problem, says Guy Shorrock of the Royal Society for the Protection of Birds. Recent changes to the law have made it harder to trace falcons and their eggs leaving the country. "We're part of the global business to supply the Arab demand for hunting and falcon racing," says Mr Shorrock.

It is not just falcons that this situation harms. The houbara bustard is big and fast, but also rather dumb. Falcons love to hunt it, leading to a mostly illegal trade in the bustard that has put it on the road to extinction. To help it recover without curbing hunting, the United Arab Emirates (UAE) has opened bustard-breeding farms at home and abroad. One in Morocco, where the UAE's crown prince, Muhammad bin Zayed, likes to hunt, has bred almost 300,000 bustards since opening in 1995.

The UAE has also promoted the use of farmed falcons, not least by banning imports of all wild-caught birds. "A decade ago 90% of the UAE's falcons were wild," claims Mr Rousselon. "Now 90% are captive-bred." But other Gulf countries lag behind the UAE in terms of regulation. And many falconers prefer wild birds to those bred on a farm. In the UAE the ban has caused prices to spike—but failed to stop the trade in falcons. Senior officials set a bad example by obtaining waivers. Their appetite for wild falcons risks killing the sport they love. ■

A fair-feathered friend

Turkey and Russia

Frenemies

ISTANBUL

Turkey's rapprochement with Russia may not survive the war in Ukraine

TRAFFIC ON THE Bosporus, the waterway that splits Istanbul and connects the Marmara and Black seas, has been busier than usual of late, and more dangerous. Making their way past supertankers, passenger ferries and the occasional pod of dolphins are Russian warships heading north towards Ukraine. Since the start of February, at least six Russian amphibious assault ships, as well as a Kilo-class submarine, have passed through. Russia now has four such submarines in the Black sea, each armed with missiles capable of striking targets anywhere in Ukraine.

Few countries are watching the war for which these weapons were deployed as anxiously as Turkey. Its government, headed by President Recep Tayyip Erdogan, is eager to preserve a recent rapprochement with Russia. "We cannot give up" on either Russia or Ukraine, Mr Erdogan said on February 23rd. But Russia's actions may end up forcing his hand. The following day, as Russian bombs began falling on Ukraine, Turkey's foreign ministry called the invasion "unacceptable" and "a grave violation of international law". It had already denounced Russia's recognition of separatist enclaves in Ukraine. The war will test the relationship, possibly to destruction.

Turkey's most immediate concern is its economy. Mr Erdogan, who has helped drive inflation to over 48% and maimed his currency with ill-judged interest-rate cuts, is eager for lots of foreign cash from a busy tourism season, lower energy prices and some measure of regional stability. Russia's actions in Ukraine seem to have torpedoed such prospects. Russians and Ukrainians accounted for over a quarter of foreign visitors to Turkey last year. This summer, presumably, far fewer will show up. Western sanctions against Russia, one of Turkey's main trading partners and its main supplier of natural gas, will deal the economy a separate blow. The war has already sent shudders through Turkish markets. On February 24th the lira was headed for its worst day this year.

Turkey does not want to antagonise Russia. The last time it did so, by shooting down a Russian warplane near the border with Syria in 2015, the Russian response, a mix of sanctions and threats, was robust enough to force a rare apology and a range of concessions from Mr Erdogan. What followed was a thaw in relations, marked by new energy deals, co-operation in Syria, and Turkey's purchase of an S-400 air defence system from Russia. Russia has since tried to peel away Turkey from NATO, while Turkey, estranged from its Western partners, has looked to Russia to advance its regional interests.

Remarkably, the rapprochement has survived the assassination of Russia's ambassador to Turkey, as well as wars in Libya, Syria and Azerbaijan in which Turkey's proxies have squared off against Russia's. The two powers co-operate whenever possible and confront each other where necessary, though almost never directly. "It's like *capoeira*," says a European diplomat, referring to a stylised Brazilian martial art. ▸▸

"Each side is doing its dance, sizing up the other, but there's always the danger they will come to blows." When they do, one of them (usually Turkey) finds a way to scale back. When a Russian airstrike killed dozens of Turkish troops stationed in Syria in 2020, Mr Erdogan ordered a bombing campaign against Syrian regime forces, but not Russian positions. Turkey has also been silent about Russia's antics in Belarus.

But Turkey considers Ukraine a strategic partner. It opposed Russia's annexation of Crimea, backed Ukraine's plans to join NATO, and shared its concerns about Russia's naval build-up in the Black sea. Turkey also sold Ukraine dozens of armed drones, vexing Mr Putin. Earlier this year, Mr Erdogan and Volodymyr Zelensky, Ukraine's president, signed a new defence co-operation agreement. The war will make it difficult for Turkey to balance its commitments as a member of NATO and its warm relations with Russia, says Alper Coskun of the Carnegie Endowment for International Peace, a think-tank in America.

Turkey's backing for Ukraine has already helped the country buff its tarnished NATO credentials. American diplomats, used to taking Turkey to task for its human-rights record, are praising its stance on Ukraine. It helps that Turkey has begun to mend fences with the UAE, Egypt and Israel, all of them American allies.

Russia has ways of tempering Turkey's support for Ukraine, however. Nowhere is this as clear as in Idlib, a province in north-east Syria packed with over 3m civilians and controlled by Islamic extremists. Two years ago, Turkey, which backs the insurgents, and Russia, which backs the Syrian regime, agreed to a ceasefire. That stopped a regime offensive that would have pushed the insurgents and millions of refugees towards Turkey's border. Since the start of the crisis in Ukraine, ceasefire violations have picked up, officials in Ankara say. This is not a coincidence. They believe Russia is weaponising the refugees against Turkey. "The Russians see Idlib as a soft spot for Turkey," says one official. "They're sending a message, that if we do something they don't like [in Ukraine], they can make our lives difficult."

Mr Erdogan said earlier this year that Turkey would do whatever is necessary as a NATO member in the event of a Russian invasion. But in practice there is only so much Turkey is prepared to do for Ukraine. Recently one of the prime minister's top advisers suggested that Turkey would not align with foreign sanctions against Russia, calling them "useless". Instead Turkey had tried to position itself as a possible mediator between Russian and Ukraine—a notion that now seems naive. Mr Erdogan would have loved to preserve cosy ties with Russia, but the war in Ukraine is likely to prove the end of the affair. ■

The French election

Bills to pay

PARIS

A healthy economy, ailing public finances

FOR THE past few months, rivals in April's French presidential election have dwelt to excess on questions of national identity and immigration. This should soon shift. Emmanuel Macron, a former economy minister and one-time investment banker, is expected shortly to confirm officially that he is running for re-election. This is likely to turn the focus to the economy. Voters will be judging not only Mr Macron's economic management since he took office in 2017, but how he and his rivals plan to improve competitiveness, job creation and incomes.

As the French economy rebounds, growth has exceeded expectations. After a contraction of 8% in 2020, GDP recovered to pre-pandemic levels last autumn. Growth in 2021 reached 7%, its fastest rate for over half a century, and brisker than in Germany, Italy and Spain. This was partly thanks to generous government support to keep businesses going, people in jobs and incomes protected. The injection of €100bn ($113bn), or 4% of GDP, partly from the EU's recovery plan, has also helped.

On Mr Macron's watch, France has also become a lot more business-friendly. He has cut taxes on businesses, replaced the wealth tax with a narrower property tax, introduced a flat tax on financial income and courted foreign investors. For the past five years he has stuck to the same fiscal policy and the same finance minister: Bruno Le Maire has been in the job longer than anyone since Valéry Giscard d'Estaing in 1969-74. In 2019 Mr Macron promised that by 2025 there would be 25 French "unicorns", or tech firms valued at over $1bn. That figure was reached three years early, in January this year.

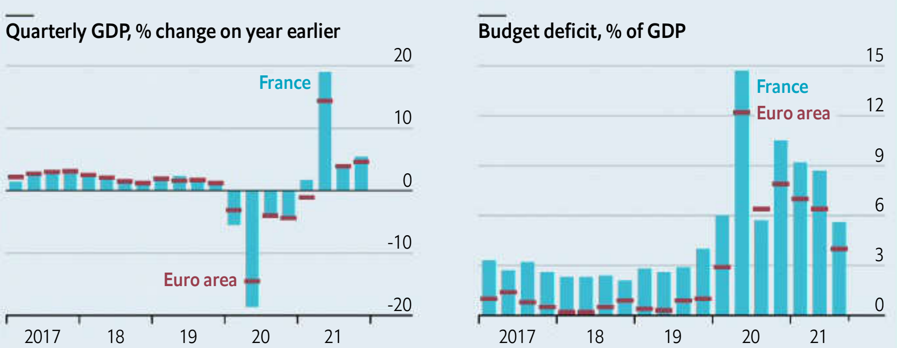
Perhaps most surprising, the French job market is doing relatively well too. Unemployment in the fourth quarter of 2021 fell to 7.2%, down from 9.2% when Mr Macron took office. This is not principally owing to government support: the number of people on furlough schemes has fallen from 8.4m in April 2020 to 420,000 in December last year. It largely reflects the strength of private-sector job creation. One reason, says Philippe Martin, of the Council of Economic Analysis, an independent advisory body, is past labour-market reforms, particularly those in 2017. Among other things these capped the cost to employers of redundancy payments. Instead of prompting more lay-offs, as some economists had feared, this has made firms more willing to hire staff on permanent contracts.

The government has also invested heavily in training. The number of apprenticeships has risen from 290,000 in 2017 to a record 720,000 in 2021. The employment rate of 15-64-year-olds actually increased during the pandemic. Even older workers now stay at their desks for longer. For the 50-64-year-olds, the employment rate is at its highest level since the national statistics body started measuring it in 1975.

Yet there are two weak points to Mr Macron's economic record. The first is the state of public finances. When the pandemic took hold, he vowed to do "whatever it costs", and he did. The government's budget deficit was still 7% in 2021, and the level of public debt reached 115% of GDP, according to official estimates. France now belongs to the group of the most indebted countries in the euro zone, alongside Belgium, Greece, Italy, Portugal and Spain.

France has no difficulty servicing its debt. But Mr Macron has yet to show that he has a plan to reduce it. Valérie Pécresse, the centre-right Republicans' candidate and his most credible critic on the economy, has accused him of "burning through cash". She promises to restore fiscal discipline and cut a net 150,000 jobs from the 5.6m-strong civil service.

Bouncing back, at a price



Source: Eurostat

The other weakness is pension reform. The average effective age of retirement for men in France is 60 years, well below the 63 years in Germany and 64 years in Britain. Yet at the start of the pandemic Mr Macron shelved his ambitious plan to merge the country's sprawling 42 pension schemes, and to raise the retirement age. The next president will have little choice but to take on this reform.

Mrs Pécresse vows to raise the pension age from 62 to 65, and the far-right Eric Zemmour wants to increase it to 64. But this is not a message many French voters want to hear. Pension reform is the one policy almost guaranteed to prompt strikes and protests. Indeed most candidates on the left, including the radical Jean-Luc Mélenchon, as well as the nationalist-populist Marine Le Pen, promise instead to bring the pension age down.

In the short time left to him to campaign, Mr Macron will be able to defend a reasonably good economic record. But elections are seldom won on past achievements. Voters remain sceptical about the effect on their own purses, even though average incomes grew on his watch, and they are worried about the rising cost of living and energy bills. If Mr Macron is serious about reviving the reformist spirit of his campaign in 2017, he will need to present both credible pension reform and a decent plan to fix public finances. This means telling French voters some uncomfortable truths, whatever it costs. ■

The Vatican

Holy See-saw

ROME

Did the pope restrict defendants' rights?

IT HAD BEEN billed as the trial of the century. It would spotlight Pope Francis's determination to stamp out financial jiggery-pokery by establishing whether and how the Vatican was tricked and extorted out of tens of millions of euros in a botched property deal. Among the defendants was a "prince of the church": Cardinal Angelo Becciu (pictured), former deputy head of the Vatican's most exalted department, the Secretariat of State. Yet seven months after Cardinal Becciu and nine other defendants were arraigned in court in the Vatican, not a word of evidence has been heard. The main outcome from seven preliminary hearings has been awkward questions about the genial pontiff's respect for the rule of law.

The case centres on the Secretariat of State's purchase and subsequent sale of a commercial property in London—transactions in which more than €100m ($113m) in donations collected from the faithful were lost. Like previous Vatican financial scandals, this one is richly spiced with improbable detail. The latest twist to emerge is that in 2019, shortly before the scandal broke, Pope Francis signed an edict authorising the Vatican's prosecutors to use wiretaps that were placed on Italian subjects in Italy.

The edict was among four, known in Latin as *rescripta*, signed by the pontiff between July 2019 and February 2020 at the request of the prosecutors overseeing the investigation into the property deal. The *rescripta* exempted them from several limitations placed on them by the Vatican's legal code. Unlike all previous papal *rescripta*, they were kept secret.

The cardinal waits

The edicts are now at the heart of the courtroom wrangles that have so far delayed the case. Defence counsel have argued for the charges against their clients to be dismissed on two grounds. Firstly, that the *rescripta* in effect suspended the rule of law in the Vatican, vitiating any investigations conducted while they were effect. The second is that, armed with pontifical waivers, the prosecution acted with a contempt for the rules that violated the defendants' rights to a fair trial. The prosecutors are still refusing to comply fully with an order by the presiding judge to hand over to the defence all the evidence collected. They argue that the omissions are to shield the reputations of the accused. And, of course, they have the backing, if not of God, then of the man Catholics believe is His earthly representative.

Spain

Thunder on the right

MADRID

The opposition is ditching an ineffectual leader

BELEAGUERED AND almost alone in his party's headquarters, abandoned by its powerbrokers and most of its MPs, a bemused Pablo Casado this week suffered the implosion of his leadership of the People's Party (PP), Spain's mainstream conservative opposition. At a meeting that lasted into the early hours of February 24th, the party's regional barons allowed him to save face by staying on as a figurehead until an emergency party congress on April 2nd. In return he agreed to back as his successor Alberto Núñez Feijóo, the experienced president of the region of Galicia who is the consensus choice. A smooth transition matters not just to the PP but to Spain. Vox, a newish hard-right outfit, is snapping at the PP's heels in polls, largely because of Mr Casado's ineffectual leadership.

Two things precipitated Mr Casado's fall. The first was his decision to force an early regional election in Castilla and León. Far from a hoped-for absolute majority, the PP achieved only a pyrrhic victory; the big winner was Vox. Then Mr Casado rounded on Isabel Díaz Ayuso, the president of Madrid's regional government and a former protégé-turned-rival. He and his abrasive deputy, Teodoro García Egea, accused Ms Ayuso of corruption over a €1.5m ($1.7m) contract for face masks early in the pandemic from which her brother earned €56,000. She said she was not involved in the contract and her brother had long worked in health procurement. A prosecutor has opened an investigation.

Although Ms Ayuso was damaged by the revelation, Mr Casado had declared a war he could not win. The leader of the party's libertarian wing, she is the party's popular darling, having handsomely won a snap regional election last year. Several thousand of her fans demonstrated outside PP headquarters. After angry meetings Mr Casado sacrificed Mr Egea, an apparatchik widely hated in the party. But it was not enough for his critics. "I don't know why I have to go," Mr Casado reportedly told a colleague. "I have done nothing." That only went to show his lack of political awareness.

Mr Casado became leader at the age of just 37 when he won a party primary in 2018. An eloquent orator and an amiable man with no experience in government, he has never seemed up to the job. Instead of setting out an alternative to Pedro Sánchez's left-wing coalition, he merely sniped at it while steering an erratic course of his own. That left Vox to benefit from widespread discontent with Mr Sánchez's handling of the pandemic and the slowness of the economic recovery. Vox's support has climbed to 21% in the latest polls, which give the PP 22%.

Mr Feijóo is a conciliatory centrist. He has won four consecutive absolute majorities in Galicia, keeping Vox out of the regional parliament there. Many expected him to stand for the leadership in 2018, but he apparently considered the party too divided. Spanish political leaders tend to cling on despite defeat. The Socialists went through a similar bloodletting in 2016, with Mr Sánchez being ousted and then winning back his job. But there will almost certainly be no way back for Mr Casado. His parting gift to the PP has been to unite it, against himself. ■

HFC Smuggling

Free as air

Controlling the flow of gases, even in canisters, turns out to be tricky

For a while it looked as if all was going to plan. In a move cheered by climate activists, the European Union began in 2015 to restrict the production and import of gases known as hydrofluorocarbons (HFCs). HFCs are widely used in refrigeration, air-conditioning and manufacturing, but they are also potent greenhouse gases. The first big shortages hit in early 2018. Prices across Europe multiplied sixfold or even more. The EU wanted to push HFC users to adopt pricey, climate-friendlier alternatives. It thought that the engineered shortage would do the trick.

But officials were soon scratching their heads. The high prices unexpectedly plummeted. And even though the EU tightened caps on HFCs again a year ago, prices are still not much higher than before the crunch. The reason: HFCs were being smuggled into the EU. The trafficking is still going on. The Environmental Investigation Agency, a watchdog based in London that has dispatched researchers to pose as buyers in Romania, estimates that a quarter of all HFCs in the EU are contraband. A body formed by chemical companies, the European FluoroCarbons Technical Committee (EFCTC), says the proportion may be as high as a third.

Such estimates are rough. But they have not been plucked from thin air. Much can be inferred, for example, by examining officially registered trade flows. Data from Turkish sources show that in 2020 more than four times as much HFC tonnage left Turkey bound for the EU than the latter reported as imported. This suggests that plenty of tanks and canisters holding HFCs enter on the sly.

The smuggling has hit some firms particularly hard. To supply greener alternatives to HFCs, Chemours, an American firm, spent around $500m on R&D and production facilities. But with illegal imports continuing to hold down HFC prices, demand for alternatives has been "stagnating" and even declining, laments Murli Sukhwani of Chemour's European HQ in Geneva. Mr Sukhwani, who also leads the EFCTC's investigation into the black market, says climate-friendly alternative gases cost at least twice as much as the compounds they are supposed to replace.

This has miffed America. In a report last year on barriers to trade, Katherine Tai, the American trade representative, wrote that the EU's "insufficient oversight and enforcement" of its HFC caps is hurting American chemical firms, not to mention the climate. European officials, for their part, point to the difficulty of preventing profitable contraband from crossing the bloc's long borders.

Consider the potential earnings, says Marco Buoni, president of an association of European refrigeration and air-conditioning contractors called AREA. When prices first soared, a car boot could be filled in Ukraine with canisters of an HFC blend called R404A that would sell, hours later, for ten times as much in Poland. Margins have since shrunk as legions have got in on the action. But contraband HFCs are still so valuable that canisters are sometimes given space on boats trafficking migrants from north Africa to Europe.

Some trafficking is carried out by moonlighters who make border runs in their cars or hide canisters in luggage stowed on passenger coaches. But the black market is now dominated by crime syndicates that move large volumes, says the European Anti-Fraud Office (OLAF). Most of the contraband seems to come from China, Russia, Turkey and Ukraine.

One trick is to mislabel with stickers that are later peeled off. To detect the practice, which became widespread in 2019, expensive gas-analysis equipment is needed, says an OLAF investigator. Another approach is to falsely declare that a shipment of HFCs will be subsequently exported out of the EU. These "transiting" goods are not subject to EU limits on imports, but the stuff often disappears, the investigator says, into "a very, very difficult to track" succession of warehouses across Europe. Trafficking has been exacerbated by generally light penalties. Fines of a few thousand euros have been common.

The EFCTC is trying to improve enforcement. It has hired Kroll, an American firm, to gather intelligence on potential smuggling and pass it along to authorities. The team, which is based in London, uses network-analysis software to unearth hidden relationships between entities in myriad sources of data. In one success, the software drew attention to a lorry driver hauling gas from Turkey into the EU. In a video posted online, he unwisely mentioned his "friends at the border". He was later nabbed. Recent months have seen "a lot of arrests and a lot of action", especially involving Romania and Turkey, says Benedict Hamilton, leader of the Kroll team.

But the outlook nonetheless remains grim, according to Marius Appenzeller, refrigerants manager at Westfalen Group, a gases distributor based in Münster, Germany. The firm expects trafficking to increase as the EU continues, every three years until 2030, to shrink HFC quotas. A report in December from the European Environment Agency acknowledged that HFC use had begun to grow, even without taking into account "alleged" smuggling. ■

Who knows where it came from?

Charlemagne | The free-rider continent

Europe thrives by letting others do the legwork—but should wonder if that can last

Clever road cyclists who run out of puff keep up the pace by discreetly tucking themselves behind faster riders. Carried by this slipstream, it is easy to get comfortable, if not outright lazy. Why expend the effort needed to forge ahead if you can get away with this *dolce vita*? Occasionally laggards have to soothe the tired (and increasingly irate) front-runner with a vague pledge to "pull their weight". That seems like a small price to pay. Only much later, perhaps ensconced in the comfort of a peloton, does the realisation dawn that staying too long in the rear means blindly following someone else down a road not necessarily of your choosing.

Europe is the free-rider continent. For decades its defence has been underpinned by America—leaving it in a supporting role even as war breaks out on its own borders. Economically it has piggybacked on innovation from elsewhere, keeping up with rivals, not forging ahead. Even the feel-good environmental ambitions crafted in Brussels are made possible in part by importing from afar the products once made in carbon-spewing factories Europe shut down long ago. How clever it seems to some. All this money saved and effort outsourced has made it possible to live a fine life while working 35-hour weeks and retiring in one's prime.

Defence is where criticism of Europe's ways has been loudest—and where it is currently being most acutely felt. The combined military spending in the 34 European countries that are part of either NATO or the EU is less than half that of America's, despite a bigger economic output and nearly twice the population. Europeans in NATO spend only 1.7% of GDP on their armed forces, well short of the 2% NATO target and the 3.5% America splurges. Big countries like Germany (1.5%), Italy (1.4%) and Spain (just 1%) slink away when the subject comes up. That is despite a swell of new military spending following America indicating it was pivoting to Asia a decade ago, not to mention the terrifying prospect of having Donald Trump be the guarantor of anything important.

Worse, when it comes to gauging the ability of an army to do anything beyond its borders, a lot of Europe's spending is wasted on dozens of redundant national schemes. Too much goes on pensions rather than on advanced kit. The run-up to the war in Ukraine demonstrated these shortcomings. It was overwhelmingly America that undertook basic military tasks such as surveillance flights. Europe was left to whinge about whether it got sufficient access to the intelligence it did little to produce.

All the money not spent on guns makes for more butter. Europe could have invested the savings in pioneering innovation. But there also it has preferred to stay tucked in behind others. EU countries spend a third less on research and development than America or Japan, as a share of GDP, and are out-invested even by China nowadays. Economic theory dictates that poorer countries converge with richer ones as they learn to mimic their ways. One bit of the world persistently defies the possibilities of this "catch-up" growth: western Europeans were a quarter poorer than Americans in 1990, and remain a quarter poorer today. They work less, and enjoy the slipstream of those who toil harder.

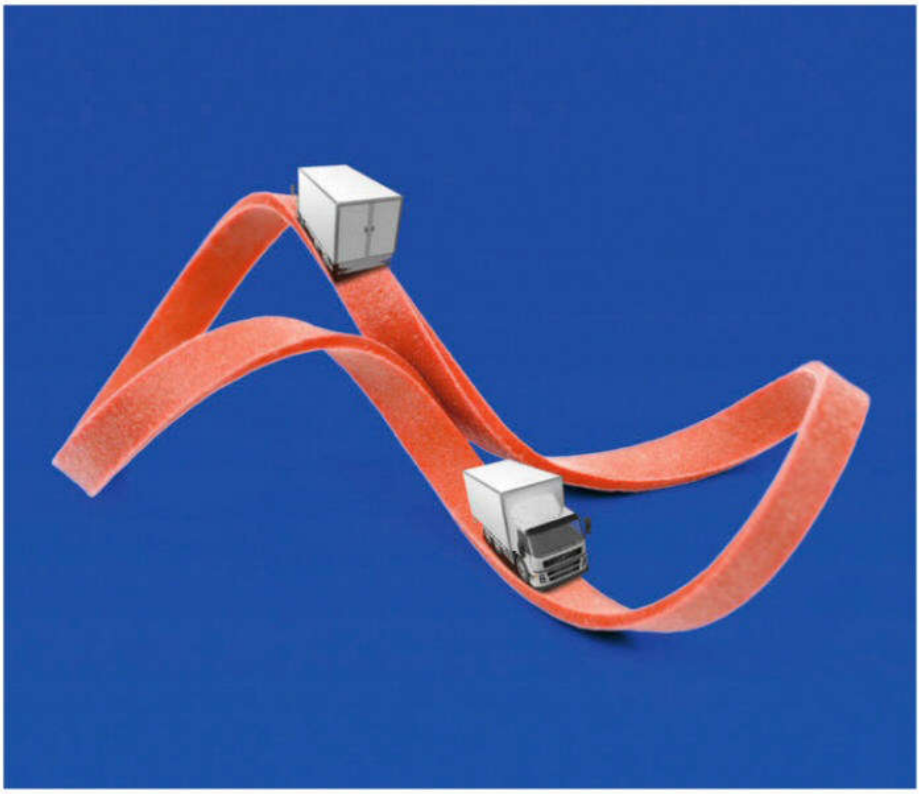
Et alors?, Europeans might ask. Plenty of them scoff at America's cut-throat capitalist model, not to mention the Chinese one. But economists, including Daron Acemoglu, point out that such winner-takes-all systems create the conditions for innovation that Europe then adopts on the cheap. And indeed the cuddly form of capitalism embraced in Europe has markedly failed to create world-beating companies. Big tech firms are all American or, increasingly, Asian. Pharmaceutical breakthroughs are financed by the high prices paid by American patients (and backed by abundant venture capital); government-run health systems in Europe then bulk-buy the same drugs for much less. Europe has had some successes—German companies were among those pioneering mRNA vaccines—but most of the cutting-edge research in science and technology is done at universities and companies elsewhere.

Even the EU's efforts to cut its carbon footprint depend on the work done by others. The pledge by the bloc to reach "net zero" by 2050 is a fine ambition. But part of the progress already made is an illusion. Per capita emissions in Denmark, say, have fallen by about half since 2000. But the pollution it imports—in goods that used to be made there, but whose manufacturing is now outsourced to China and other places—has surged in the same period. Take the extra carbon its imports have generated in other countries into account and Danish emissions are down by just one-third, according to data from the Global Carbon Project, a research outfit. A scheme has been mooted to tax carbon emissions embedded in products brought into the bloc, but is yet to be agreed.

Stuck in the wheel with you

It is the foot-dragging on defence that is garnering the most attention now. The evacuation debacle in Afghanistan in August was a reminder of Europe's inability to do much without America. But the outbreak of war in Ukraine brings the point home, literally. It was America that took the lead in sounding the alarm, not the EU. It was also America that shuffled troops around the continent in a vain attempt to deter Russia. Emmanuel Macron of France provocatively alluded to the impending "brain death" of NATO in 2019 to spur Europeans into taking responsibility for their own defence. The French president should be thankful that the alliance seems to have snapped back to life. For all his pining for "strategic autonomy"—the idea that Europe should be able to forge its own way in the world—America is firmly in the lead, and the Europeans are united in following.

Europe realises that being in the peloton has its limitations. But to be a leader requires resources and purpose. Mr Putin's decision to go to war has stirred a sense of unity among a bundle of rival polities more often squabbling within an imperfect union. Being a follower might not seem so bad after all. ■



International trade

A more flexible approach

Britain's post-Brexit trade policy is slowly maturing

THE DEPARTMENT FOR INTERNATIONAL TRADE (DIT) is certainly busy. On January 13th Anne-Marie Trevelyan, the international-trade minister, launched new talks with India. Just over a month later, on February 18th, she announced progress towards her goal of joining the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP), a trade deal with 11 countries around the Pacific Rim. A digital deal with Singapore is imminent. A cruel observer might dismiss all this as a shallow demonstration of the country's post-Brexit freedoms. A kinder one might note that, although it is not yet perfectly formed, Britain's trade policy is at last maturing into a more workable form.

Part of the evolution happened inevitably as Britain moved through the process of Brexit. The first task that DIT faced when Theresa May set it up after the June 2016 referendum was to roll over the free-trade agreements that Britain had signed up to by virtue of being a member of the European Union. Out of 39, it has now managed an impressive 33. But some of these were done only by agreeing to temporary provisions and delaying a full renegotiation. Now, negotiators are working out where they need to tidy up, which in general means reviewing the biggest and oldest FTAs. The agreement with Mexico, for example, is ripe for an update, as its provisions on services do not match up to the most modern standards.

Broader progress has happened simply through practice. The government was forced to start rebuilding its trade capacity pretty much from scratch. As of September 2021 there were 521 full-time equivalent DIT staff directly responsible for negotiating and implementing trade agreements. One person who follows discussions at the World Trade Organisation closely says that, although British representatives in Geneva were active right from the beginning, it was mainly to show that they were no longer just part of the EU delegation. Now, it seems, their interventions are more substantive.

Canny negotiators tend to gather and deploy information to their advantage—as do their business stakeholders as they seek to influence the direction of trade talks. But much to the frustration of the second group, a terror of leaks has stifled DIT's information sharing. In July 2020 the department set up Trade Advisory Groups, as a more formal way of liaising with the outside world. Lobbyists still complain that officials often use meetings only to give updates on what they have already agreed, rather than to find out what they should be asking for. Still, it seems that engagement has improved.

Politicians have also learned that achieving the vision of post-Brexit Britain as a buccaneering free-trader is not quite as easy to realise as it sounds. The Trade Remedies Authority (TRA) was designed to make independent recommendations on defensive tariffs for the minister to accept or reject. But just weeks into the new system, the government passed emergency legislation allowing it to apply stronger protection for steel than the TRA had recommended. Now the entire framework is under review.

Pacific dreaming

At least the approach to trade deals displays elements of consistency. Although it took a while to become visible, political leaders have long coveted membership of the CPTPP. Deals done with the likes of Australia and New Zealand mean that some of the heavy lifting has already been done. Yet it will not make much of a splash. Excluding partners with which Britain already has trade deals, joining the CPTPP would cover trade worth only 0.4% of Britain's exports ▸▸

between 2017 and 2020. Even so negotiators hope to conclude the deal by the end of the year, and after that to help build on its rules from within the club.

Attitudes to other partners have seen more change. Sam Lowe of Flint Global, a consultancy, remembers a sense of denial from some close to the talks that incompatibility between EU and American food-safety standards would get in the way of a transatlantic deal. That has since faded into recognition that it would, and that Britain is unlikely to relax its regime. The Biden administration's lack of interest in a trade deal has also diverted energy into a less glamorous effort of working with individual states (potentially useful in services, though not possible in goods). If successful, this could make it easier for professionals to get qualifications mutually recognised or create more opportunities to win public-procurement contracts.

With hopes of a deal with America in the deep freeze, one with India is the next big shiny prize. India is a notoriously awkward negotiating partner, so officials are not naive about how difficult that will be. But if they were to manage it, it could be a shrewd economic move. Sophie Hale of the Resolution Foundation, a think-tank, points out that India's demand for imported business services, an area that exploits British comparative advantage, is expected to triple by 2030. Business is more excited about a possible deal with India than about one with America, partly because there is much more regulatory uncertainty to tidy up. The CBI business lobby wants provisions to encourage free flows of data, as well as easier visas for business visitors.

As for China, the policy seems to be not to mention it at all, or else merely to point to the CPTPP as an arena in which Britain could help to set standards that one day China might move towards. But some change is happening behind the scenes. Having been scared by supply-chain vulnerabilities during the pandemic, DIT has built a team dedicated to examining supply-chain resilience in certain high-priority sectors. There are also plans to launch a forum with the United States Trade Representative to discuss topics including unfair trading practices. (That means China.)

A report by the National Audit Office, a public watchdog, notes the concerns of business associations, civil society and consumer groups over a lack of clarity in the alignment of trade policy with the government's other objectives. Michael Gasiorek of the UK Trade Policy Observatory, a think-tank at Sussex University, hopes that in future there will be more emphasis on meaningful services-trade liberalisation. Trade policy has moved beyond a simple rejection of the EU, which remains by far Britain's biggest trade partner. Yet there is still some way to go. ■

Climate policy

A new routine

SOUTHEND-ON-SEA

After Brexit, Nigel Farage wants a referendum on net zero

THE NAVAL AND MILITARY CLUB, a haunt for ex-servicemen high above the Thames estuary, is the sort of venue Nigel Farage has worked for 30 years. In the early 1990s, as an unknown in a fringe movement, he would hone his oratory night after night in pubs, church halls and lounges across southern England, denouncing Brussels with a peroration his regulars learned to mouth in unison.

His gig on February 17th was the same as ever: a grey-haired audience, pints of ale, that raspy laugh. What has changed is the television cameras. Mr Farage has a show, part political manifesto, part light entertainment, four nights a week on GB News, a right-leaning channel. The other change is Mr Farage's cause. He is agitating for a referendum on net zero, the government's carbon-reduction policy. It spells higher energy bills and unaffordable electric cars, he tells the audience, to applause.

Mr Farage sees parallels with the EU cause. Like European integration, climate policy inches forward by treaty, drafted by officials at international conferences. Just as with Europe before 2016, there is a broad consensus among the major parties on meeting net zero. "The only debate is, 'Can we go towards this lunacy more quickly'", he says. UKIP's roots were Thatcherite, and lamenting emissions rules is a natural extension from denouncing European red tape. For Mr Farage, climate policy is a case of Brexit failing to usher in radical deregulation: Boris Johnson's exit deal binds Britain to the Paris climate agreement.


Back to the front again

UKIP and its successor, the Brexit Party, didn't need to win elections. The threat of splitting Tory voters and the parliamentary party was enough to force a referendum on Brexit, and then a hard form of it. On climate policy, the Tories are ripe for splitting again. A new backbench caucus, the Net Zero Scrutiny Group, is led by Craig Mackinlay, a former UKIP official. A Tory leadership election would offer new leverage for Mr Farage, as a public battle for the future of conservatism. Indeed, he thinks the mere discussion of a referendum will be enough to change policy. He imagines "a people's army, mobilised to bombard their local MPs, so the political class say 'Oh my God, it's happening again.' "

A net-zero referendum would have clear echoes. As in 2016, a consensus of experts would fight on an equal footing with folksy wisdom and fringe voices. Just as Brexit was never defined in practice, there would be no clarity on what voting against net-zero would mean, whether merely a modest tweak or an emissions free-for-all. (Mr Farage supports coal and shale-gas extraction). The crucial difference, claims Mr Farage, is that industry cold on Brexit would this time support him.

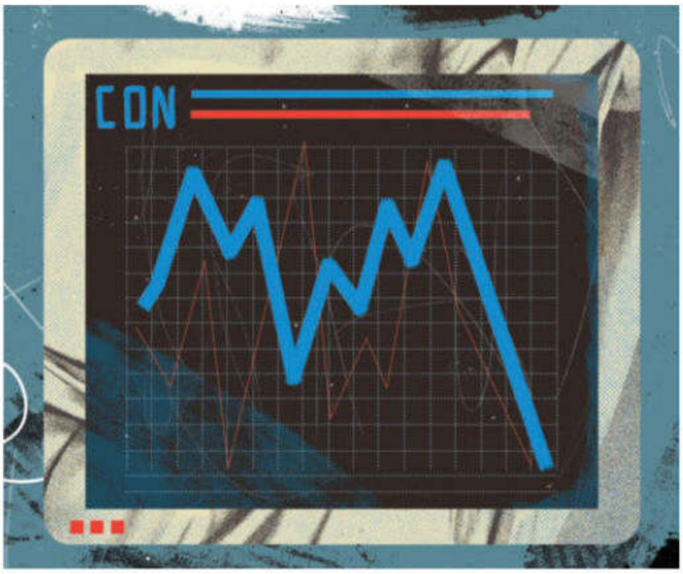
Conservatives hoped that delivering Brexit would kill Mr Farage's movement. In December 2019 four in five Brexit Party voters switched to the Tories. But there are signs Mr Johnson's vote is becoming spongy: Leave voters support a no-confidence vote by 45% to to 37%, according to Ipsos, a pollster. Asked by Mr Farage whether they thought Mr Johnson would lead the Tories into the next election, only half the room in Southend raised their hands. "They like Boris's optimism, but they're beginning to wonder what they voted for," he declares.

As for net zero, Britons as a whole support taking action. But four in ten Tory voters think the threat of climate change is exaggerated, and a similar number oppose climate-mitigation measures if they harm the economy. It is a niche too small for Mr Johnson to win election on, but large enough for Mr Farage to make trouble with. And although climate is less potent an issue than immigration, Mr Farage's stature among Brexit voters means he may be able to electrify it, says Rob Ford of the University of Manchester. "He's a hero to them. If he's worked up about it, they'll assume they should be too."

Radical ideas can rush to centre stage at remarkable speed. In 2006 David Cameron dismissed Mr Farage's outfit as "fruitcakes and loonies"; a decade later, Britain was out of the EU. In the Southend chill, four protesters gathered, waving EU flags and playing the Ode to Joy from a car stereo. Once, Mr Farage quips, it was his gang who used to protest outside other meetings. "We are now the consensus." ■

Bagehot | A tale of two crises

A slow-burn crisis in the NHS could hole the Tories, rather as the financial crisis did Labour



Clichés are common in British politics. It is a land where a week is a long time, dear boys are told to worry about events and, more recently, everything is just like "The Thick Of It". Some clichés count more than others. Wes Streeting, Labour's shadow health secretary, returns to one when attacking the Conservatives on the NHS. "It's not just that the Tories didn't fix the roof while the sun was shining," Mr Streeting likes to say. "They dismantled the roof and removed the floorboards." This echoes George Osborne, the former Conservative chancellor, who hammered Labour for "fail[ing] to fix the roof when the sun was shining" during the global financial crisis.

If the soundbites are alike, that is because the predicament of the Conservatives in 2022 is similar to the one Labour found itself in after 2008. In both cases, a government faces a crisis in an area where voters never fully trusted it. For Labour under Gordon Brown, it was the economy in the wake of the financial crisis. For the Conservatives, it is the health service in the aftermath of the pandemic, with the prospect of 14m-long waiting lists. In neither case is the government directly culpable. In both cases, it banks on voter forgiveness. It was not forthcoming for Labour; it would be heroic to assume it will be for the Tories.

Enormous waiting lists undo almost two decades of detoxification when it comes to the Conservatives and health. If the NHS was "the closest thing the English have to a religion", as the former Conservative chancellor Nigel Lawson put it, creating yet another political cliché, then the Conservatives were once happy heretics. Only after David Cameron took over in 2005 did the party start attending church. "Tony Blair once told us that his priorities could be summed up in three words: education, education, education," he explained in one conference speech. "I can do mine in three letters: NHS." Since returning to the top of politics, Boris Johnson has joined the cause. As a columnist, Mr Johnson aimed kicks at the health service, with its "starch-bosomed nurses" and its sometimes lousy care. As prime minister he is soppy. After a brush with covid-19, Mr Johnson declared that the NHS is "powered by love".

Just now the NHS is hardly powered at all. About 6m people—roughly one in ten—are already waiting for a procedure. By 2024, when the next election is due, up to 14m people could be, or one in five. The Conservatives have at least been honest. Ministers admit chewing through waiting lists will be miserable. Sajid Javid, the health secretary, pledged to cut waiting times to under a year only by 2025. The wait for diagnostic treatment will return to pre-pandemic levels only then. An unpopular tax rise of 2.5 percentage points on national insurance will help clear the backlog, before being put towards social care from 2023. The most uncomfortable part of the levy is that it will only stop things becoming worse.

It is a familiar tale. For Labour, the financial crisis undid 15 years of detoxification. In the 1990s John Smith, Labour's leader between 1992 and 1994, launched a "prawn-cocktail offensive", trying to charm bankers over dinner to no avail. ("Never have so many crustaceans died in vain," mocked Michael Heseltine, a former Tory cabinet minister.) It was only under Tony Blair and Mr Brown that the rebrand was successful. Prudence became the watchword. But by the time Labour left office, a crisis-induced deficit of 10% of GDP had appeared. It was gleefully blamed by Mr Osborne on Labour profligacy.

Neither party is to blame for the crisis, whether financial or viral. But voters are rarely forgiving. Mr Brown handled the financial crisis well, but it did him no favours in the 2010 election. So far, voters have given the Conservatives the benefit of the doubt during the pandemic. But by 2024, the exceptional chaos of spring 2020 will be forgotten. Labour has already attacked the government for wasting £8.7bn (0.4% of GDP) on personal protective equipment (PPE) at the height of the pandemic. The fact that, at the time, governments were stealing PPE from each other and NHS staff were reduced to fashioning gear out of bin bags is forgotten. Any residual glow from a successful vaccine roll-out will have faded. A bunged-up NHS, with someone in every family on a waiting list, will be a day-to-day reality.

Both catastrophes exposed the failings of the government in power. Under Labour, there were no complaints as the City boomed unsustainably amid light-touch regulation, flooding government coffers with tax revenues. Criticism arrived only once it went bang. Likewise, the pandemic revealed how austerity eventually bled into areas supposedly protected from budget cuts, such as the NHS. A lack of capacity in the care system left the elderly stranded in hospitals. False economies jammed up the entire system, until the NHS had to deal with it.

Boris Brown, Gordon Johnson

Voter cynicism may yet be a Tory saviour. Labour have for years tried and failed to make political hay from the NHS. Ed Miliband accused the Conservatives of destroying it, when it was just about hanging together. Jeremy Corbyn said the Conservatives had plans to privatise the service, which was untrue. Mr Johnson was able to shrug off the assault. But when it comes to waiting lists, the attacks will be accurate. Conservatives may dismiss Labour wailing as Cassandraesque. Cassandra was, however, right in the end.

Once formed, such reputations ("Labour cannot be trusted with taxpayer money"; "the Conservatives break the NHS") are hard to lose. The Tories hammered Labour so hard that ministers still appear on television to blame Labour's mismanagement of the economy more than a decade later. "The 2015 election was won in the first six months after 2010," says one former Conservative adviser. Sir Keir Starmer, the Labour leader, is still scrubbing at the stain of fiscal ineptitude, wiping away ink thrown by the Conservatives in that era. When it comes to waiting lists, the roles are reversed. Labour will happily repay the favour. ■

China Inc and self-reliance

The techno-independence movement

HONG KONG

The Communist Party wants to sever China's dependence on the West in strategic industries. We assess its progress in six of them

A STRIKINGLY HARSH appraisal of China's ongoing technological battle with America appeared on the website of a prestigious Beijing-based think-tank on January 30th. The paper, published by the Institute of International and Strategic Studies (IISS) at Peking University, found that China is likely to be the bigger loser from the technological and economic decoupling under way between the two world powers. China lacks control over core computing systems, the paper stated, and is far behind America in a number of important areas such as semiconductors, operating systems and aerospace. Within a week of its posting, the document vanished.

The circumstances around its removal are unclear. Communist Party bosses may have decided it signals weakness at a time when Xi Jinping wants to project strength—his country's, the Communist Party's and, as he prepares to be anointed president for life later this year, his own. The report's conclusions are indeed inconvenient for Mr Xi. He has been talking up "self-strengthening" against what his government calls "chokeholds" that the West exerts over access to critical technologies, from seeds to semiconductors. The power of the West to hobble its adversaries with sanctions is about to be tested in Russia, which on February 24th attacked Ukraine (see Briefing). China's rulers will be watching that military and economic confrontation closely because it may illuminate their own vulnerabilities. China's 14th five-year plan, a strategic blueprint published in 2021 that covers the years until 2025, makes self-reliance in science and technology a cornerstone of economic policy.

The plan's deadlines for China to break free from existing techno-dependence are fast approaching. The government is pouring billions into the effort, and cajoling Chinese companies to do the same. Combined public and private research-and-development spending soared to a record 2.8trn yuan ($440bn) in 2021 in a bid to catch up with foreign rivals. That is equivalent to 2.5% of GDP, still far from America's 3% or so but up from just over 2% five years ago (see chart 1 on next page). On February 11th SMIC, China's biggest chipmaker, said that it would invest some $5bn in 2022 in new semiconductor factories. Three days later the Hong Kong unit of Standard Chartered, a British bank, became the first foreign lender outside mainland China to be directly linked to CIPS, the Chinese answer to the Belgium-based SWIFT interbank payments system.

To see how much all this adds up to, *The Economist* has surveyed six areas in which China's reliance on the West has been of particular concern to the party and Mr Xi. We looked at MRNA vaccines, agrochemicals, civilian aerospace, semiconductors, computer operating systems and payments networks. Our conclusions mirror those of the IISS paper: although there has been a degree of self-strengthening, self-reliance is some way off.

Chinese progress has been most pronounced in fields that, though themselves technologically sophisticated, require less extended and complex supply chains. Start with the vaccines. Much of China's progress in MRNA technology used in Western jabs such as Pfizer-BioNTech or Moderna ▸▸

→ Also in this section

has been linked to one man, Ying Bo. For several years Mr Ying worked on MRNA at Moderna, before returning to China from Boston at the start of the pandemic. His homecoming was hailed by state media as a patriot answering the call of the motherland. His company, Abogen Biosciences, has worked with the People's Liberation Army to develop the country's most advanced MRNA shot, and was part of a programme that has invested at least $2.3bn in developing local vaccines.

Results from phase-one clinical trials of Abogen's jab, known as ARCoVax, were recently released, according to state media. In some ways, that looks impressive, coming just a year and a half after the Western versions. However, the company has not made any statements about wide deployment. Annual production capacity of 200m doses looks modest next to the 4bn doses expected this year for the Pfizer-BioNTech vaccine. BioNTech offered to provide its shot to China in a partnership with Fosun, a local conglomerate, a year ago. By championing ARCoVax while denying approval to Western MRNA jabs (though not Western covid pills, one of which was approved this month), Mr Xi appears to have placed a higher value on self-reliance than on public well-being, says Huang Yanzhong of the of the Council on Foreign Relations (CFR), a think-tank.

Similar considerations appear to have slowed progress in agrochemical technology. Foreign genetic-modification and seed-editing methods have been banned from domestic use out of a long-held fear that this would hand foreign firms control of China's grain supply. Chinese companies have been developing home-grown alternatives; Dabeinong Biotechnology, a big feed producer, is investing heavily in research. They have also been procuring them through acquisitions. The most notable of these was the $44bn purchase in 2016 by ChemChina, a state-controlled chemicals conglomerate, of Syngenta, a Swiss seed-and-agrochemicals giant with a granary's worth of intellectual property.

Brain-power struggle

China, research-and-development spending*

Source: National Bureau of Statistics *Public and private

Planes, grains and mobiles

China, selected technology sectors

Sector	Investment $bn	Period	Selected items in sector	Import cost $bn	Period
Civilian-aircraft programme	72	2008-20	Aircraft and parts	19	2021
Agrochemicals	47	2008-present	Soyabeans, corn and cotton	62	2021
Semiconductors	33	2020	Semiconductor-related	55	2021
Operating systems	3.9	Jan 2019-Sep 2021	Licensing fees	2.6	2018
Vaccines*	2.3	Mar 2020-present	No foreign vaccines	nil	n/a

Sources: Press reports; *The Economist* *mRNA and other platforms

But a continued lack of domestic production capacity means that China is still dependent on the import of crops. In 2021 China spent at least 400bn yuan on imports of soya, corn and cotton—much of it genetically modified (see chart 2).

Imported aeroplanes and parts cost China considerably less than that—$19bn last year. But here, too, the party wants the industry to fly free of foreign dependencies. If state media are to be believed, it already is. This year COMAC, a state-owned aerospace group, plans to start delivering its narrow-body C919, a rival to the Boeing 737 and Airbus A320 in development since 2008. Chinese airlines have ordered hundreds of them.

On closer inspection, though, the C919 does not look all that Chinese. The programme has eaten up $72bn or more, according to an analysis by the Centre for Strategic and International Studies, another think-tank. Yet the aircraft remains a jumble of foreign parts. Because the turbofan engines being developed for it have been mired in technical troubles, for example, the aeroplanes will for now be fitted with engines from a joint venture between France's Safran and America's GE Aviation. With hundreds of other components also produced abroad, the final product is a facsimile of a Western plane—and not exactly state-of-the-art. One Western airline-industry bigwig points out that the C919 is a generation behind Airbus's fuel-efficient A320neo, and therefore much less competitive in the global market.

China faces the same problem in trying to extricate itself from the global semiconductor supply chain, which like that for aircraft is complex and dominated by America and its allies. China's vulnerability to tech sanctions became clear in 2018, when Donald Trump's administration halted the sales of sensitive hardware that used American technology to two Chinese telecoms-equipment makers, ZTE and Huawei.

To avert anything like this happening again, the latest five-year plan stipulates that China should produce 70% of the chips it consumes by 2025, up from less than 20% last year. As in the other areas, the country is making some progress towards that goal. SMIC is planning to complete the construction of three new factories this year. The state has poured hundreds of billions of yuan into the sector. The money has helped Chinese chipmakers go on a recruiting binge. A lab in Shanghai run by Micron, an American chipmaker, has become a poaching ground for local firms. On January 26th Micron said it would close the lab altogether. The result has been to enable some big Chinese chipmakers to operate production lines cleansed of American technology, notes Adam Segal of the CFR.

A chip on their shoulder

But as with airliners, the Chinese chips lag well behind the cutting edge. SMIC and others are trying to fully domesticate the supply chain for chips with structures measured in tens of nanometres (billionths of a metre), an order of magnitude bigger the most advanced current chips. That puts them a few generations behind TSMC of Taiwan and Samsung of South Korea, the two industry leaders. China is probably years away from replicating the lithography machines built by ASML, a Dutch firm which has cornered the market for equipment to etch the tiniest integrated circuits onto silicon wafers. Shanghai Micro Electronics Equipment Group, the state company tasked with catching up with ASML, is running behind on delivering the devices, according to Tilly Zhang of GaveKal Dragonomics, a research firm. Some large investments in Chinese semiconductor capacity have gone to firms that folded or turned out to be frauds.

In the last two critical technologies China's problem has less to do with mastering a technology or recreating supply chains and more with overcoming users' lack of trust in its alternatives. The operating systems that power personal computers and smartphones are a prime example. When the Trump administration banned American firms from working with Huawei in 2019, a generation of the Chinese firm's phones were deprived not just of chips but also of Google's Android operating system. Together, these restrictions contributed to the decline of about 30% in Huawei's revenues last year.

Chinese companies are estimated to have invested $4bn or so between 2019 and September of 2021 in the development of operating systems. Some analysts expect Huawei's Android alternative, called HarmonyOS and partially based on Google's open-source system, to gain market share. But virtually all Chinese smartphones continue to run on Android and Apple's iOS, and nearly all Chinese desktops are powered by Apple's macOS or Microsoft Windows. Alternative Chinese operating systems struggle to attract developers because they are not widely used—and they are not widely used because they do not have many apps or programs to download.

A similar chicken-and-egg problem afflicts China's effort to create a worldwide payments network. The bulk of global money transfers are processed through SWIFT, a Belgium-based interbank messaging system, and CHIPS, America's domestic clearing system. These, plus the widespread use of the dollar in international finance and trade, give America power over the global financial system. To insulate itself against the threat of eviction from the world's financial plumbing, which America has contemplated over Mr Xi's crackdown on freedom in Hong Kong and its human-rights abuses in Xinjiang, China has since 2015 been expanding a parallel system for yuan payments known as CIPS. In September the service was processing 317bn yuan in transactions each day in more than 100 jurisdictions.

The costs of CIPS's expansion are unknown but probably large. Yet gauged against the size of the Chinese economy, the system's footprint is puny. CIPS's 80 or so connected institutions are dwarfed by SWIFT's 11,000-plus. Much of the growth in the yuan's cross-border use—to 2.7% in December from 1.9% two years earlier—was the result not of foreign demand for the Chinese currency but of Chinese state firms' overseas expansion. A recent report from the Carnegie Endowment for International Peace, one more think-tank, notes that distrust of China has increased since the start of the pandemic. This does not bode well for the yuan in the short term.

Such stumbles may only strengthen the Communist Party's resolve to wean itself off the West in areas it sees as of strategic importance. Like all autarky, the technological sort will come at a cost: in billions spent, often wastefully, as well as in apps undeveloped, fields unplanted, arms unjabbed. In Mr Xi's eyes, that appears to be a price worth paying. ■

Sea Group

Perfect storm

HONG KONG

South-East Asia's super-app faces choppy waters

THROUGHOUT MOST of the pandemic Sea Group, a Singaporean super-app, had wind in its sails. Both its e-commerce business, Shopee, and its gaming unit, Garena, were thriving thanks to growing appetite for all things digital. In October Sea's stockmarket value surpassed $200bn, making it the first South-East Asian stock in history to break into the exclusive ranks of the world's mega-cap companies.

Since then the weather has turned, wiping more than $130bn from Sea's market capitalisation. The global tech sell-off is only part of the story. Investors also harbour fears that are specific to the company. In January Tencent, a Chinese internet giant, trimmed its stake in Sea from 21.3% to 18.7%. Tencent had earlier reduced its holding from nearly 40% at the time of Sea's listing in 2017 and gave no explanation for the latest divestment. Whatever the reason, the market didn't like it, perhaps fearing that Tencent's retreat implies doubts over Sea's prospects.

This month those prospects took another knock. On February 14th Sea's stock price tumbled again, after Garena's flagship mobile game, "Free Fire", was abruptly made unavailable on app stores in India. Indian media reported that the government had banned "Free Fire", along with 53 Chinese apps. Sea's association with Tencent may again have played a role.

Sea is Singaporean, and India has no obvious beef with the city state. But it does have one with China. Tensions between the two nuclear-armed giants have been rising. In the past year the two countries' soldiers have clashed, sometimes violently, at their Himalayan border. This has led India's government to impose restrictions against hundreds of Chinese apps—or, it now appears, ones with perceived links to China. Sea says it complies with Indian laws and does not transfer any Indian user data to China or store them there.

Many existing users in India appear able to keep playing the game. But the loss of new Indian players is a huge blow to Sea. Indians are avid mobile gamers, and there are lots of them. India downloads more gaming apps than any other country, according to App Annie, an analytics firm. In the latest earnings call, Sea's founder and chief executive, Forrest Li, trumpeted the fact that "Free Fire" was the highest-grossing mobile game in India (as well as in South-East Asia and Latin America, where his firm has been expanding its operations). Sea does not publish a breakdown of Garena's earnings by country, but some analysts believe that Indian sales may account for around a tenth of the Sea's digital-entertainment revenue.

Lost in the Indian ocean

It would thus be bad enough for Sea if its Indian troubles remained confined to the "Free Fire" saga. Worse, Shopee could be in trouble, too. The e-commerce platform's rapid ascent up the rankings of Indian apps since a quiet launch last year has apparently irritated the Confederation of All India Traders (CAIT), a lobby group representing small businesses. CAIT has called for Shopee to be banned along with "Free Fire", claiming in a letter sent on February 15th to India's minister of commerce and industry that Sea is controlled by Tencent. The fact that CAIT's claim is patently false may not matter to the Indian government, if the prohibition on "Free Fire" is a guide. ▸▸

Rough Sea

Sea's troubles in India could spell similar problems for South-East Asia's other super-apps as they try to expand beyond their region. Grab (which in November merged with a special-purpose acquisition company in a $40bn deal that was the largest ever of its kind) and GoTo (the result of a merger between two Indonesian online groups that is likewise eyeing a listing) have also received Chinese investments. Both are focusing primarily on business closer to home for the time being. But as those markets become saturated, India's 1.4bn consumers would be the obvious next target—not least with China sequestered behind the Great Firewall and the West largely spoken for by America's technology giants.

Despite the recent battering, Sea's share price is still around three times what it was before the pandemic, outperforming many other technology bets. The Singaporean star remains South-East Asia's most valuable listed company. Unlike many youngish tech darlings, parts of Sea make money. In the third quarter of 2021 its digital-entertainment arm raked in around $715m in adjusted gross operating profits.

That cash, combined with ready access to capital afforded by its size and prominence, allows Sea to cross-subsidise loss-making divisions such as Shopee (which lost $684m in that period on the same measure) or SeaMoney, a fast-growing financial-services unit consolidated in 2019. As the stock suffered in the wake of the Indian "Free Fire" ban, ARK Next Generation Internet exchange-traded fund, a vehicle run by Cathie Wood, a high-profile tech stock-picker, loaded up on Sea shares. Still, investors will need Ms Wood's famously strong stomach to weather the increasingly choppy waters Sea finds itself in. ■

Bartleby Dirty work

Work confers dignity. But some jobs are also a source of stigma

THE TERM "dirty work" was coined by Everett Hughes, an American sociologist, to capture the attitudes of ordinary Germans to the atrocities of the Nazi regime. Hughes used it to convey the idea of something immoral but conveniently distant, activities that were tacitly endorsed by the public but that could also be disavowed by them. The term has since come to embrace a wide array of jobs, in particular those that are essential but stigmatised, both crucial to society and kept at arm's length from it.

In an insightful new book of the same name, Eyal Press, a journalist, reports unflinchingly on occupations in America that carry the taint of stigma. Among others, he interviews prison guards in Florida and slaughterhouse workers in Texas. The pandemic has changed people's awareness of some essential work: meat-processing plants were designated as critical infrastructure by the Trump administration in 2020, for example. But these jobs remain largely hidden from view; many are in physically isolated locations. People do not know what these workplaces are like and do not care to.

Dirty jobs often pay better than other openings. But they impose unseen costs. They usually involve inflicting harm on others (or on the environment), and they ask emotionally and morally compromising questions of the people who perform them. What is it like to work day in and day out as a "knocker" or a "live hanger" on a slaughterhouse kill floor? Should a prison guard risk her livelihood to speak up about the violence routinely meted out to inmates by her colleagues? Mr Press does not exculpate individuals who behave badly in these jobs. But by forcing readers to confront the context in which they operate, he makes it harder to condemn them as bad apples.

The boundaries of dirty work can be drawn too loosely. Some sociologists include firefighting, on the ground that it exposes people to danger on behalf of others, yet it is difficult to think of jobs that are less morally compromised. Indeed, exposure to danger can be the thing that cleanses work. Mr Press also meets operators of military drones at an air-force base in Nevada. Although drone warfare is a more precise form of combat than many others, operators often struggle with the idea of taking life without taking risk. The personal danger that soldiers on the ground face is what separates an unfair video-game from an exercise in valour.

The definition of dirty work can also be too rigid. Although the dirtiest work often lies at a remove and is concentrated among the low-paid, white-collar organisations have their own types of grubby jobs. Think of the difference between engineers who build social-media platforms in the name of connectedness and the content moderators who monitor the effluvia that result. The very language of decarbonisation points to emerging fractures within energy-firm workforces, between employees developing the clean energies of the future and those pumping the dirty fossil fuels of the past.

Individual roles can also break into dirtier and cleaner tasks. A piece of research in 2012 found that animal-shelter workers who were involved in putting animals to sleep were less likely to talk to outsiders about their work. "All The News That's Fit To Click", a new book by Caitlin Petre, a professor of journalism at Rutgers University, examines the effect that performance metrics are having on newsrooms. As she interviewed people for the book, Ms Petre noticed the frequency with which journalists used metaphors of pollution and contamination to describe the risk that chasing eyeballs might compromise the integrity of their editorial judgments.

Journalists tend to be good at telling stories, however. Ms Petre describes how many of them have drawn symbolic mental boundaries as a way of mitigating this risk. Analysing audience data to work out how to present their work is a "clean" use of metrics; using data to make decisions on content is impure and to be avoided. Criminal lawyers use a different but deep-rooted narrative to make sense of their own unpleasant tasks. They often defend people who have committed appalling crimes, for example, but because they do so in service of a noble ideal—everyone's right to a fair trial—they are far less likely to feel morally compromised.

The idea of dirty work should not obscure the fact that having a job is a source of dignity. But some roles exact a hidden toll. To draw the sting of stigma, employers have to persuade their workers and the public that such jobs are not just essential, but also worthy of respect.

Private equity and the press

Culture vultures

Buy-out firms are snapping up America's newspapers

AMERICA'S LOCAL newspapers have been struggling to stay afloat for years. Since 2005 roughly 2,200 of them have folded. Private-equity firms, which often swoop on businesses in distress, have descended on the industry. The share of American newspapers owned by private-equity groups increased from 5% to 23% between 2001 and 2019 (see chart). The covid-19 pandemic has presented new opportunities for buy-outs of troubled media companies. That has led many of those who read the papers, or write for them, to fear that buy-out barons' readiness to slash costs and seek out new sources of revenue will be bad for newsrooms. New evidence suggests that things are not quite that simple.

In a new working paper, researchers at the California Institute of Technology and New York University compare how newspapers that were purchased by private-equity firms have fared relative to those that were not. Some of the findings seem to confirm the fear of those newspaper readers and writers who see private-equity types as heartless vulture capitalists unconcerned about democracy.

After private-equity buy-outs, for example, newspapers laid off more reporters and editors. Across a sample of 766 American publications (accounting for around 45% of total circulation), payrolls were about 7% lower after a couple of years at those with new private-equity capital relative to those without such capital. The researchers also identified a 16.7% relative decline in the number of articles written within five years of the buy-outs.

And the focus of coverage shifted from local to national news: the share of articles on local politics dropped by about a tenth. That looks worrying in the context of a study published last year, by researchers at Colorado State University, Louisiana State University and Texas A&M University, which concluded that when readers consume national news their views become more polarised. Poor local coverage is also associated with less competitive mayoral elections, and newsroom staff shortages are linked to lower voter turnout.

Local news may, though, be a losing battle from the business perspective. Local reporting is expensive, because it requires journalists on the ground and cannot be syndicated. Moreover, readers appear increasingly apathetic towards local news—a survey in 2018 by the Pew Research Centre, a think-tank, found that only 14% of respondents paid for local papers that year—and instead seek out national online media.

As for the size of newsrooms, things could have been much worse were it not for private equity. For the study also found that newspapers which had been bought out were 75% less likely to shut down than if they hadn't been. Dailies were also 60% less likely to become weeklies—a common downgrade for many a suffering rag.

The study's authors caution that they cannot estimate the general causal effect of private-equity buy-outs on the press, but only the observed effect on the newspapers in their sample. Private-equity firms do not purchase newspapers randomly. They target failing newsrooms with potential for turnaround; papers with low circulation but high advertising rates (the price charged to advertisers per square inch) were likelier to be bought. But for the newspapers studied, the buy-outs may have been what allowed them to survive. The accompanying weakening of newsrooms and nationalisation of news may be the lesser of two evils. ■

Buying up a storm

United States, private-equity buy-outs

Source: "Local Journalism under Private Equity Ownership", by Michael Ewens, Arpit Gupta and Sabrina T. Howell, 2022, working paper

*From a sample of 745 newspapers †Change relative to non-buy-outs ‡From a sample of 766 newspapers

Investor activism

Burger flip-out

What is Carl Icahn's beef with McDonald's?

FOR MOST of his life Carl Icahn was vilified for his abrasive personality and his activism as an investor. His mother said he had the spirit of Genghis Khan. Oliver Stone based Gordon Gekko, a fictional predator-in-chief of the junk-bond boom, in part on Mr Icahn. Bill Ackman, no softie, called him a bully who is not used to someone standing up to him, when the two pugilistic financiers fought over Herbalife, a nutritional-supplements business. He is most chief executives' worst nightmare.

Late in life the 86-year-old Mr Icahn seems to be showing his milder side. This month HBO, a TV network, launched "The Restless Billionaire", a largely sympathetic documentary that tracks his rise from modest beginnings in Queens to one of Wall Street's titans. And on February 20th Mr Icahn launched a proxy fight for two board seats of McDonald's to press the fast-food behemoth to require its suppliers to improve their treatment of pregnant pigs. "Animals are one of the things I feel really emotional about," he told the *Wall Street Journal*. He reserves especial affection for pigs, which are unusually clever.

Mr Icahn's activist strategy typically involves buying sizeable stakes in undervalued companies and seeking to shift the management's focus to cost-cutting. If managers refuse his demands, he stirs up a shareholder revolt, launches aggressive campaigns on social media to win over public opinion and pushes his own line-up of board members. Such methods have boosted the target's share price often enough to earn a moniker, the "Icahn lift", and let Mr Icahn sell out at a juicy profit.

All this makes his McDonald's manoeuvre look out of character. He owns only 200 of the $186bn company's shares, worth some $50,000. And McDonald's has heeded his demands for better treatment of pigs, which he first made ten years ago. In 2012 it pledged to stop buying pork for its McRib and breakfast sandwiches by 2022 from producers who use cramped crates to constrain sows for all 16 weeks of pregnancy. McDonald's concedes that it has not quite fulfilled its pledge, which it blames on delays caused by the covid-19 pandemic and outbreaks of swine disease. Yet by the end of 2022 it expects to source 85-90% of its American pork from sows not housed in gestation crates during pregnancy. By the end of 2024 all of its American pork will come from pigs housed in larger group en- ▸▸

closures when they are with piglet.

Mr Icahn's campaign is also unusual in that McDonald's is in rude health. Most shareholders are happy with the chief executive, Chris Kempczinski. The company is reporting "some of the highest margins ever", notes Sara Senatore of Bank of America. Mr Kempczinski, who took over as CEO months before covid-19 spread around the world, has enjoyed tailwinds from the pandemic, which increased McDonald's online orders and business at its drive-throughs. He has also jazzed up the brand, by teaming up with celebrities such as BTS, a South Korean boy band, Travis Scott, an American rapper and J. Balvin, a Colombian singer. For a limited time, star-struck clients could order a BTS meal (Chicken McNuggets, a medium packet of chips and a medium Coke) or a Travis Scott one (a medium Sprite, a quarter-pounder with bacon and chips with barbecue sauce).

Seemingly underpowered activists have notched up several surprise victories against managements of late. Most notably, a year ago Engine No.1, an activist hedge fund with a stake of just 0.02% in ExxonMobil, secured three seats on the oil giant's board for climate-friendly shareholder representatives. That made large companies think again about dismissing small activist investors as unserious, especially on environmental or social issues that other shareholders may also see as worthy causes. But the ExxonMobil coup took place when the company was underperforming its rivals like Chevron. McDonald's, by contrast, is running onion rings around its competitors (see chart).

Mr Icahn's nominees are Leslie Samuelrich, an asset manager focused on sustainability, and Maisie Ganzler, an executive at Bon Appétit, a restaurant company. Shareholders will vote on the board's composition at their annual meeting this spring. The wily Mr Icahn may not get his way, for once. Even if he does, any Icahn lift he cashes in on would scarcely pay for one dinner at the higher-end restaurants he normally frequents. ■

Volkswagen and Porsche

Reverse gear

Two German carmakers are set to uncouple

PURCHASING A NEW Porsche often involves a long wait. If limited production and aloof dealers weren't enough of a bottleneck, some buyers face further delays after a fire that broke out last week mid-Atlantic on a ship carrying 4,000 vehicles, including Porsches, from the stable of brands owned by Volkswagen (VW).

As with Porsches, so, too, with Porsche the company. Talk of letting investors buy a slice of the illustrious sports-car maker has been in the air almost ever since it combined with VW after Porsche's audacious attempt to take over the much larger German company in 2008. That misadventure brought Porsche close to bankruptcy, averted thanks to a rescue by VW. One upshot of the affair was for the Porsche brand to become VW's wholly owned subsidiary in 2012. Another was that the holding company controlled by the secretive Porsche and Piëch families, descendants of the sports-car maker's founders, became VW's largest shareholder.

A parting of the ways now looks closer than ever. On February 22nd VW and the families' holding company said they were in "advanced discussions" over an initial public offering (IPO) of Porsche.

For VW's boss, Herbert Diess, the spin-off could not come soon enough. He has been trying to streamline VW's unwieldy collection of ten distinct marques. Dealing with flashy Porsche, which has always regarded itself as a cut above the rest of the group, is a headache he can do without. Porsche insisted, for example, on developing its own platform to underpin electric models rather than cutting costs by sharing one with the group's other brands.

An IPO would also raise cash for Mr Diess to plough into his reinvention of VW as a maker of software-intensive electric vehicles. Manufacturers of upmarket cars have looked enviously at Ferrari since its flotation in 2015. The Italian firm's stock-market value has doubled in three years, to €35bn ($40bn). It is valued more richly, relative to earnings, than the luxury-goods firms it sought to match—let alone than lowly carmakers. (The family holding company of Ferrari's chairman owns part of *The Economist*'s parent company.)

Porsche is no Ferrari. Its operating margin of over 15% is well below the Italian company's 25% or so. But it handily outperforms the rest of VW. Despite making only 277,000 of the 11m vehicles that the group turned out in 2019, before the pandemic and the ensuing chip crunch, it accounted for a tenth of the group's revenues and a quarter of its operating profit. The Taycan, a battery-powered model, shows it has a clear and profitable strategy for electrification that most other sports-car firms lack. Philippe Houchois of Jefferies, a bank, reckons that Porsche is worth €60bn-90bn. That is more than half of VW's current market capitalisation of €109bn.

And the Porsche and Piëch families? By some estimates their members would now be twice as rich had they not attempted the abortive takeover in 2008. And their holding company will need to raise money to buy Porsche stock, perhaps by selling some of their VW shares. But, as Mr Houchois points out, they would at least reclaim a more direct stake in the firm that bears the family name. Perhaps that is what they have been waiting for. ■

End in sight

Schumpeter | Putin's python

How Gazprom helps the Kremlin put the squeeze on Europe

THE BUSINESS pages of newspapers tend to deal with the cut and thrust of competition, rather than the cacophony of war. But when it comes to Vladimir Putin's assault on the sovereignty of Ukraine, there is a company—the world's largest gas producer—that is right in the thick of it. Gazprom, majority-owned by the Russian state, has mastered the art of furthering the Kremlin's interests as well as its own commercial ones. That extends to squeezing European gas supplies until the pips squeak. On February 22nd it received a dose of its own medicine when Germany said it would mothball the Nord Stream 2 (NS2) pipeline owned by Gazprom in retaliation for Russia's warmongering in Ukraine. Two days later Russia attacked Ukraine. Even those two events may not stop the firm from making mischief—and money.

To understand Gazprom, it helps to remember it is a child of the cold war, born from the Soviet Union's Ministry of the Gas Industry in 1989. Its boss, Alexey Miller, has run it since 2001, the year after Mr Putin took power. The two men are cut from the same cloth. When America imposed sanctions on Mr Miller in 2018, he remarked: "Finally I've been included. It means we are doing everything right." Investors in the West, who buy Gazprom stock for a spectacular dividend yield, lament that it splurges on projects that benefit the state, not shareholders; a plan to build the world's second-tallest skyscraper in St Petersburg is a case in point. As for mixing politics with commerce, its business model relies on a monopoly on the high-margin export of piped natural gas in order to cross-subsidise cheap gas to Russians. In a land of frozen winters, that is a precious *quid pro quo* for Mr Putin.

The run-up to war in Ukraine offered a textbook lesson in how Gazprom served the government's interests while feathering its own nest. For years its efforts to circumvent Ukraine, an important transit route for its gas, led it to construct alternative pipelines into northern and southern Europe that were intended to strengthen its bargaining power when its contract with Ukraine ended in 2024. These efforts also set European countries that stood to win and lose from the new configurations against each other. Gazprom's decision to dribble only a bit of surplus gas to Europe as demand there soared in recent months had a commercial logic—the resulting spike in spot prices translated into record profits. However, it also sent a message: Europe should not take Gazprom for granted. "It suits their purposes to keep Europeans on their toes," says Jack Sharples of the Oxford Institute for Energy Studies, a think-tank.

Since the cold war, western European countries have tended to shrug off this nasty side of Gazprom. Instead they have become overdependent on its gas. Germany, which gets about half of the fuel from Russia, is in a particularly invidious position. Some Gazprom hangers-on, like Gerhard Schröder, an ex-chancellor who chairs Nord Stream, deserve special ignominy. Former Eastern bloc countries, such as Poland, have no such illusions. They know that as well as extending the hand of friendship, Gazprom can wield the knuckle duster. They are also the most exposed, observes Anna Mikulska, an expert on Russian energy at Rice University's Baker Institute. The most extreme case is Ukraine, where Gazprom provided cheap gas and other benefits, then turned them on and off as punishment for the country's westward drift. Recently Moldova has suffered similar treatment.

Russia's war against Ukraine paints Gazprom's geopolitical thuggery in stark relief. It sent prices of Brent crude soaring above $100 a barrel, their highest level since 2014. It caused a surge in prices of natural gas, of which Russia is the world's second-biggest producer. The so-called Brotherhood Network running through Ukraine used to be the main transit route for Gazprom's gas into Europe, though supplies have dwindled recently. Nonetheless, fears that vital pipelines will be destroyed are likely to keep gas prices elevated. So will concerns that Mr Putin could turn off the taps as part of his war effort, though he may prefer European cash pouring into his coffers. While Gazprom continues to supply Europe, high prices are good for it.

Germany's decision to halt the approval process for NS2, a €9.5bn ($10.7bn) underwater pipeline running from Russia to Germany, does not change much. It had already been suspended for legal reasons in Germany. The bigger question is whether sanctions will be imposed on Gazprom. Before the attack, the betting was that given how dependent on Gazprom Europe remained, the firm would not suffer much. Russia's potential eviction from the SWIFT interbank payments system—which some Western politicians are calling for—would probably not entirely sever Gazprom's links with its European customers, who still need a way to pay for its energy. An idea suggested by Ms Mikulska, among others, to sideline Gazprom with a "Gaslift" of liquefied natural gas (LNG), a maritime version of the airlift that overcame Russia's blockade of Berlin in 1948-49, looks like a long shot.

Put that in your pipeline

At a time of war, Gazprom's fealty to the Kremlin is unlikely to be shaken. Being a loyal servant has won it the support it needs from the regime as other presidential pets, such as Rosneft, an oil giant, try to wrestle away its monopoly on piped-gas exports.

The conflict will do grave damage to Gazprom's reputation nonetheless. It is a wake-up call to European countries that they should invest in more terminals to import LNG, and further build up their renewables capacity to reduce dependence on Russia. It will be studiously watched in China, where Gazprom has pivoted in recent years in order to diversify its gas customers away from Europe. China is likely to be less bothered by Mr Putin's belligerence. But even the Communist Party in Beijing has good reason to care about Gazprom's trustworthiness as it watches the squeeze on Europe. The python may yet end up tying itself in knots. ■

→ Also in this section

Russia invades Ukraine

The economic fallout

Expect inflation, lower growth and disruption to financial markets

OVER THE past decade intensifying geopolitical risk has been a constant feature of world politics, yet the world economy and financial markets have shrugged it off. From the contest between China and America to the rise of populist rulers in Latin America and tensions in the Middle East, firms and investors have carried on regardless, judging that the economic consequences will be contained.

Russia's invasion of Ukraine is likely to break this pattern, because it will result in the isolation of the world's 11th-largest economy and one of its largest commodity producers. The immediate global implications will be higher inflation, lower growth and some disruption to financial markets as deeper sanctions take hold. The longer-term fallout will be a further debilitation of the system of globalised supply chains and integrated financial markets that has dominated the world economy since the Soviet Union collapsed in 1991.

Start with the commodity shock. As well as being the dominant supplier of gas to Europe, Russia is one of the world's largest oil producers and a key supplier of industrial metals such as nickel, aluminium and palladium. Both Russia and Ukraine are major wheat exporters, while Russia and Belarus (a Russian proxy) are big in potash, an input into fertilisers. The prices of these commodities have been rising this year and are now likely to rise further. Amid reports of explosions across Ukraine, the price of Brent oil breached $100 per barrel on the morning of February 24th and European gas prices rose by 30%.

The supply of commodities could be damaged in one of two ways. Their delivery might be disrupted if physical infrastructure such as pipelines or Black Sea ports are destroyed. Alternatively, deeper sanctions on Russia's commodity complex could prevent Western customers from buying from it. Up until now both sides have been wary about weaponising the trade in energy and commodities, which continued throughout the cold war. Sanctions after the invasion of Crimea did not prevent BP, ExxonMobil or Shell from investing in Russia, while American penalties on Rusal, a Russian metals firm, in 2018 were short-lived. Germany's decision to mothball the Nord Stream 2 gas pipeline on February 22nd was largely symbolic since it does not yet carry gas from Russia to the West.

Nonetheless the prospect now is of more Western restrictions on Russia's natural-resources industry that curtail global supply. Russia may retaliate by deliberately creating bottlenecks that raise prices. America may lean on Saudi Arabia to increase oil production and prod its domestic shale firms to ramp up output.

The second shock relates to tech and the global financial system. While the trade in natural resources is an area of mutual dependency between the West and Russia, in finance and tech the balance of economic power is more one-sided. America is thus likely to put much tougher Huawei-style sanctions on Russian tech firms, limiting their access to cutting-edge semiconductors and software, and also blacklist Russia's largest two banks, Sberbank and VTB, or seek to cut Russia off from the SWIFT messaging system that is used for cross-border bank transfers.

The tech measures will act as a drag on Russia's growth over time and annoy its consumers. The banking restrictions will ▸▸

bite immediately, causing a funding crunch and impeding financial flows in and out of the country. Russia has sought to insulate its economy from precisely this: the share of its invoices denominated in dollars has slumped since its invasion of Crimea in 2014, and it has built up foreign-exchange reserves. Still, it will hurt. Russia will turn to China for its financial needs. Already trade between the two countries has been insulated from Western sanctions, with only 33% of payments from China to Russia now taking place in dollars, down from 97% in 2014.

Western banks appear to have fairly low exposure to Russia. Nonetheless, since the modern era of globalisation began in the 1990s no major economy has been cut off from the global financial system, and the risk of broader contagion across markets, while apparently low, cannot be ruled out.

What does all this mean for the global economy? Russia faces a serious but not fatal economic shock as its financial system is isolated. For the global economy the prospect is of higher inflation as natural-resource prices rise, intensifying the dilemma that central banks face, and a possible muting of corporate investment as jittery markets dampen confidence.

The longer-term impact will be to accelerate the division of the world into economic blocs. Russia will be forced to tilt east, relying more on trade and financial links with China. In the West more politicians and firms will ask if a key tenet of globalisation—that you should trade with everyone, not just your geopolitical allies—is still valid, not just for Russia but other autocracies. China will look at Western sanctions on Russia and conclude that it needs to intensify its campaign of self-sufficiency. The invasion of Ukraine might not cause a global economic crisis today but it will change how the world economy operates for decades to come. ■

Chinese-American trade

Artful dodging

WASHINGTON, DC

America's tariff wall on Chinese imports looks increasingly like Swiss cheese

"AN EASY WAY to avoid Tariffs? Make or produce your goods and products in the good old USA. It's very simple!" In the days when Twitter was the main medium for presidential proclamations, that was what Donald Trump recommended to companies using China as a manufacturing base. He was half right: avoiding tariffs has proved to be quite simple. What he failed to see, though, was that avoidance is an eminently viable strategy for companies staying put in China.

The scale of avoidance is, to use a non-technical term, huge. A giant discrepancy that has opened up between Chinese and American trade data provides a window onto the tariff-dodging that has occurred over the past three years since America slapped duties on Chinese products. Much of it involves importers taking advantage of legal loopholes; some of it appears to be outright evasion, with companies lying to customs inspectors.

The numbers add up quickly: the total value of made-in-China goods entering America and dodging tariffs may have surpassed $100bn in 2021, according to calculations by *The Economist*. Taken alone, these goods would be equivalent to America's fourth-largest source of imports, even outstripping its purchases from Japan and Germany. Moreover, if all these goods were counted properly, America's bilateral goods-trade deficit with China would have smashed its annual record in 2021—a damning indictment of the use of tariffs as a way to narrow the trade gap with China.

To understand the discrepancy, start with the official American trade data. According to figures released on February 8th, America bought $506bn of goods from China last year. That was up by 16% from 2020 (a reflection of America's booming consumption) but still below its import peak reached in 2018. The Chinese trade data are starkly different. They show that America bought $576bn of goods from China last year, up by nearly 30% from 2020, far and away the most on record.

This gap is particularly striking because the historical pattern is for China to systematically underestimate its exports to America by roughly 18%. (One reason for the historical underestimate is that China classifies many products shipped via Hong Kong as exports to Hong Kong, whereas America counts them as imports from China.) If the 18% underestimate rule of thumb still applies, China's exports to America may have reached as much as $680bn last year, $174bn more than reported by America.

The obvious question to ask is why anyone should privilege China's data, with its reputation for manipulation, over American data. In other words, perhaps America has counted its purchases from China correctly, while China has overstated its sales to America. Last year two economists then with the Federal Reserve, Hunter Clark and Anna Wong, explored this possibility, trying to account for the data discrepancy.

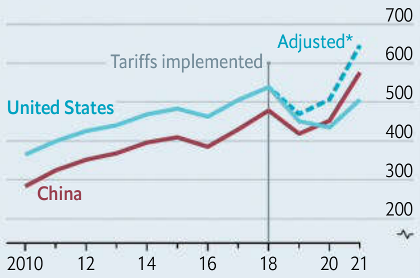
Part of the problem, they found, did indeed stem from the Chinese side. To blunt the impact of the trade war with America, China dramatically increased tax rebates for its exports, which in turn encouraged exporters to declare more overseas shipments. But in working through the trade data for 2020, their conclusion was that the tax changes explained just about 14% of the discrepancy, while tariff avoidance explained 62% (it was hard to pin down a specific reason for the remainder). If the same proportions applied to the trade data for 2021, tariff avoidance would have reached $108bn, nearly double the amount in 2020. And there is reason to think it may be even higher: in 2021 China actually decreased some of its tax rebates for exporters, ▸▸

Boxes of tricks

Hole in the wall

China, exports to the United States, $bn

By source of data



*US imports assuming constant historical relationship with Chinese data

Sources: GACC; US Census Bureau; *The Economist*

whereas those trying to get around America's tariffs will only have become more adept at doing so.

What are the tricks of the trade? One approach is to exploit what is known as the "de minimis" rule. According to this, countries neither charge duties on nor collect full data on imports below a certain value. Most developed countries set the threshold at around $200. In 2016, eager to focus scarce customs resources on high-value shipments, America lifted its bar to $800, providing importers with ample scope to avoid tariffs. Over the 12 months to September 2021, American customs officials counted that 771.5m *de minimis* packages entered the country—a fifth more than during the previous period—with no estimate of their actual value. Some logistics companies now offer services to American importers, letting them make bulk shipments to Mexico or Canada and then break them into smaller packages for tariff-free entry into America.

Some firms may also be evading tariffs by presenting false information to customs inspectors. In their paper, Mr Clark and Ms Wong noted that American importers could use "low-ball invoices supplied by their Chinese suppliers". There also appears to have been an increase in goods produced in China but falsely labelled as originating from other countries. Since 2016 the Customs and Border Protection, a federal agency, has published a record of its investigations into potential evasions of anti-dumping duties. Over the past two years it has launched 37 such investigations, up from 24 over the previous three years. Virtually all have targeted products from China. In January, for example, customs investigators determined that Simpli Home, a furniture company, had imported quartz products from China but incorrectly claimed they were from Vietnam. In December they found that A&A Pharmachem, a supplier of drug ingredients, had transshipped China-produced xanthan gum through India to avoid tariffs.

With tighter rules and closer checks at the border, America could stop some of this tariff avoidance. Earl Blumenauer, a Democratic congressman from Oregon, introduced a bill last month—aimed squarely at China—that would prevent companies from non-market economies from using the *de minimis* loophole. If customs agents were to open more shipping containers and sift through them carefully, they might identify more understated invoices and more mislabelled countries of origin. But doing so would require expertise and time—all the more difficult when ports are suffering from backlogs. Officials want to speed shipments up, not slow them down with yet more inspections.

Indeed, America can be at least somewhat grateful for all of the tariff avoidance. Duties at the border ultimately act as a tax on American consumers, pushing up prices for imported products. At a time when inflation is running high, tariff-dodging helps to keep costs down. ■

The IMF's woes

Lost and fund

WASHINGTON, DC

Despite bulging debt across the planet, the IMF is struggling to be helpful

IN THE ONCE-BUSTLING streets around the IMF's headquarters in Washington, DC, you can hardly spot a soul these days. Soul-searching is also keeping officials busy inside the building. With government debt ballooning everywhere, many continue to criss-cross the globe, talking with countries that can still borrow and coaxing creditors into granting relief to those who cannot. But the world's lender of last resort is hampered by conflict between its members—just as rising interest rates threaten to cause a big bang of defaults.

Two years of pandemic-fighting and on-off lockdowns have turbocharged global debt, both public and private. In 2020 alone it soared by 28 percentage points, to 256% of GDP—the largest one-year rise in borrowing since the second world war. In recent months, as central banks have raised interest rates to combat inflation, the cost of servicing it has increased, raising demand for the fund's assistance. In most large emerging markets the pain is manageable, for now. Soaring inflation and sinking currencies have not yet pushed the likes of Brazil or India towards crisis.

Instead a quieter crisis is breaking out in smaller countries devoid of hard currency. Sri Lanka, Tunisia, Lebanon and Ghana are all candidates for loan programmes from the IMF. On February 23rd the fund said it would start talks with Ukraine over a possible $700m debt tranche. Among the world's 60-odd poorest countries, more than half carry debt loads which may need to be restructured. That may be an underestimate: a recent World Bank report found that 40% of low-income countries have not published any data about their sovereign debt since 2020.

The IMF has enough firepower to help solvent countries. Its resources were increased after the global financial crisis, boosting its lending capacity to $1trn today, up from $400bn in 2010. It has also responded creatively to members' difficulties since the start of the pandemic. When markets melted down in early 2020, it launched a short-term liquidity facility through which countries facing cash squeezes could borrow cheaply. It also lent $170bn through rapid credit facilities similar to its standard loan programmes, but with fewer strings attached.

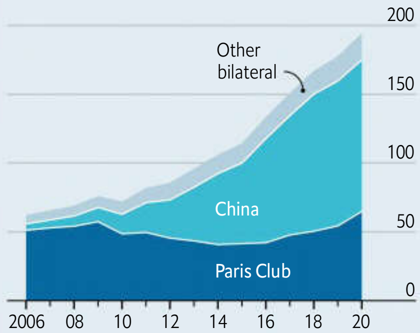
Last August it also doled out $650bn-worth of new special drawing rights (SDRs), a quasi-currency used to augment countries' foreign-exchange reserves, to all its members. Because SDRs are allocated based on what each member contributes to the fund, most of the issuance went to well-off countries. Just $21bn was allotted to those that really needed it. But the fund is working to create a trust through which some of the SDRs allocated to richer members might be available for long-term lending to poorer ones. Though the G20 promised last year to pony up $100bn for the trust, only $60bn has been pledged so far.

Such programmes have helped to tide over many solvent countries when markets have dried up. But lending, no matter how easy or cheap, is of little help to countries that are nearly bankrupt. At least a dozen countries today owe more than they can hope to repay. Given the fragile outlook for growth—clouded by tighter monetary policy, a weak Chinese economy and geopolitical tensions—more may join their ranks. Without debt relief, many will only use IMF loans to repay other creditors, ▸▸

Gaining leverage

Public external debt of low-income countries, $bn

By creditor origin



Source: World Bank

leaving the fund with an ever-growing share of the tab.

In the past the IMF used its convening power to cajole richer members into forgoing some of the money they were owed. In 2020 its efforts yielded the Debt Service Suspension Initiative, through which 73 low-income countries became eligible for a temporary moratorium on debt payments. By the end of the programme in December last year nearly 50 countries had opted to make use of it, freeing some $10bn they could use to meet urgent needs. Separately, the IMF also suspended some debt payment on loans it had made itself to 29 very poor countries.

But such suspensions do not make underlying debt loads more sustainable, because the delayed principal and interest payments remain due. Thus a new G20 initiative, referred to as the "common framework", was rolled out in November 2020. Its utter failure to gain traction—so far only three countries have sought relief under its auspices, and none has completed the process—illustrate the new political pickle the IMF finds itself in.

The framework was intended to provide a broad set of principles which could be applied to individual countries in need of debt relief. Crucially, it was meant to extend beyond lenders from the "Paris Club"—rich-world governments which have long co-operated in cases of sovereign insolvency—to include private creditors and countries like China, India and Saudi Arabia. These, however, have largely refused to play ball. That is a big problem. Whereas a decade ago Paris Club members still provided the bulk of credit to poor-country governments, China is increasingly bankrolling them: its disclosed lending (which probably understates the true total) amounts to roughly half the money they owe to other governments.

Restructuring such debt is extremely hard. Views differ within China as to whether and how much debt relief to provide to overextended borrowers. Many different Chinese institutions are involved in foreign lending, not all of which are keen to help. And many poor countries are reluctant to seek relief from China, lest they cut themselves off from future access to Chinese financing or otherwise antagonise the Chinese government.

Yet without participation from other lenders, the IMF is in a bind: under pressure from rich-world politicians to do more to help struggling economies, yet often unable to provide programmes that put countries on a path towards stable finances. Some critics suspect that the fund, squeezed in this way, has occasionally indulged in excessive optimism about countries' prospects in order to justify its lending. In January Kenneth Rogoff, a former chief economist of the IMF, wrote that the fund's permissiveness risked transforming the institution into an aid agency. A recent, tentative agreement between the IMF and Argentina, to refinance $45bn owed to the fund, drew widespread criticism for the vagueness of the path it sketched for eventual repayment of the loan.

The fund lacks good alternatives. Failure to reach a deal with Argentina might well have meant financial disaster for that country and lost the IMF billions. Its leaders could perhaps be more vocal in calling for China to be more lenient. But the West's reluctance to increase the country's 6% voting share at the IMF, to a figure matching its new economic might, has made China less willing to listen. And the window for getting China deeper into the tent has probably closed, because its relations with the West have deteriorated so much.

In the 1990s the IMF and the World Bank, capitalising on a moment of international bonhomie, marshalled the Heavily Indebted Poor Countries Initiative, through which lumps of debt owed by 37 economies were forgiven—with most of the funding coming from creditor countries. The sums needed today are not huge, but getting the world's big countries to agree on anything seems ever harder. On February 18th a G20 meeting ended with no firm commitment to expand debt relief. That bodes ill for the IMF. Without global co-operation, it is fast becoming a shadow of its former self—just like the eerily quiet district where its offices stand. ■

Gold demand in India

Karat and stick

NEW DELHI

India's booming demand for bullion is worrying the government

COVID-19 HIT India hard, leaving millions jobless and struggling to get by. Yet Sachin Rana, who runs a jewellery stall in New Delhi's Malviya Nagar market, says sales have been booming since lockdowns ended. After months in isolation, consumers were keen for a blowout during Diwali, a festival in November. A bumper wedding season has followed, creating plenty of occasions to wear jewellery or give it as a gift.

The pandemic has proven that "Indians will never stop buying gold", says Mr Rana. Pent-up demand for pendants and parties pushed bullion sales to the highest on record in the last quarter of 2021, reckons the World Gold Council, an industry body that has tracked consumption since 2005. Indians picked up around 340 tonnes of gold over the period, equivalent to the weight of five healthy Indian elephants every week.

Booming business, rain or shine

India's special relationship with gold predates covid-19, of course. It is the world's second-largest market for the yellow metal, behind China, though it produces almost none at home. This is partly driven by tradition. Brides are given jewellery as part of their dowry and it is deemed auspicious to buy bullion around certain religious festivals. It is a handy store of undeclared wealth, too, often stashed in wardrobes or under the mattress.

But the pandemic has also affirmed an investment advice passed on over generations: park savings in gold as a rainy-day fund. In the past two years many families have made ends meet by selling jewellery, ornaments, bars and coins at pawn shops and informal markets. Others have borrowed against the stuff. The three largest non-bank financial companies offering gold loans saw their assets jump by 32%, 25% and 61% year on year, respectively, in 2020. Gold's appeal as a safe haven is only rising: as tensions escalate in Ukraine, its price is approaching records.

This insatiable appetite is a worry for policymakers. Vast gold imports can destabilise the economy. During the 2013 "taper tantrum", when India's foreign-exchange reserves were lower than they are now, a rush of gold imports helped push the current-account deficit to 4.8% of GDP and fuelled worries of a currency crisis.

Savings stashed away as idle gold could be put to more productive use elsewhere. Indian households hold 22,500 tonnes of the physical metal—five times the stock in America's bullion depository at Fort Knox and worth $1.4trn at current prices. The average family has 11% of its wealth in gold (against 5% in financial assets).

The government has tried using sticks to push people away from bullion. Import duties hover around 10%, even after cuts in last year's budget aimed at keeping smuggling in check.

It is also experimenting with carrots that lure savers away from physical gold. The central bank has ramped up issuance of sovereign gold bonds, which are denominated in grams of gold. Of the 86 tonnes' worth issued since 2015, about 60% were sold after the pandemic began. And the gold monetisation scheme, which allows households to hand gold over to a bank and earn interest, was revamped last year to reduce limits on the size of deposits.

Lockdowns inadvertently helped the state's agenda. Researchers at the Indian Institute of Management in Ahmedabad found that when shops shut and sales of physical gold ground to a halt, some Indians turned to online alternatives. Mobile payments platforms like PhonePe and Google Pay reported rising appetite for digital gold, which is sold online and stored by the seller. Money also rushed into gold exchange-traded funds (ETFs). Their assets hit 184bn rupees ($2.5bn) in December, a 30% rise in a year.

Still, only a sliver of the population, mostly well-off urban types and millennials, invest in complex financial products. A large part of India's demand for physical gold comes from rural areas, where it seems in no danger of losing its lustre. Those in far-flung villages don't always have a bank account or a smartphone, making it hard to buy gold online. Nor could they easily show off digital metal to the neighbours or lend their daughter an ETF to wear on her big day. ■

Italian billionaires battle

Ciao, salotto buono

The retro campaign of two grandees of Italian business

TWENTY YEARS ago Mediobanca was the epicentre of the *salotto buono* (the "fine drawing room"), a group of old-fashioned firms whose web of cross-connections dominated Italian business. Times have changed. Today the Milanese bank is in the modernising camp in a fight with two super-seniors over the future of 190-year-old Generali, Italy's biggest insurer. Its outcome could decide whether Italy's corporate governance is at last thrust into the 21st century.

The power struggle pits Alberto Nagel, boss of Mediobanca, against Leonardo Del Vecchio, the 86-year-old founder of Luxottica, an eyewear giant, and Francesco Gaetano Caltagirone, a 78-year-old construction tycoon. Both sides own big stakes in Generali: Mediobanca controls 17%, while the pair together own 14%. At stake is the future direction and governance of one of Italy's biggest firms. Mr Nagel thinks Generali is on the right path under the stewardship of Philippe Donnet, the group's French CEO whose mandate is up for renewal at the annual general meeting (AGM) in April. Messrs Del Vecchio and Caltagirone are agitating for regime change at the venerable Trieste-based insurer.

Exactly why is not clear. They have not come up with a business plan or an alternative candidate for CEO. They seem unhappy with Generali's mergers-and-acquisitions strategy, which they consider too timid. The firm's recent takeover of Cattolica, a parochial rival, was not the kind of deal they want to see, which is big and international. They complain that Generali should do more to digitise its operations.

In fact Mr Donnet seems to have done a good job at Generali. He has strengthened its capital position through the sale of peripheral businesses and improvements in profitability. He has lowered its debt burden and changed its business mix away from products that eat up too much capital, such as guaranteed life-insurance contracts, to fee-paying ones, such as property and casualty policies. In recent months he has led acquisitions that increased Generali's share in core European markets. And Generali has pioneered software that writes insurance contracts on its own.

What's more, Generali has become a cash machine that makes institutional investors happy, says Andrew Ritchie of Autonomous Research. When Mr Donnet presented his three-year plan in December he promised cumulative dividends of almost €6bn ($6.8bn), forecast an annual rise in earnings per share of 6% to 8% and announced a €500m buyback.

So what motivates the dissident duo? A loss of influence, perhaps. In the old days of the *salotto* the CEO of Generali would dine with important shareholders before announcing strategic decisions or new board members. Those days are gone as the insurer continues to bring its governance in line with European norms. Under rules Mr Donnet introduced in 2020, the outgoing board last month recommended new directors for the ten-strong body—as is the case at some continental blue-chips. The duo dislike the new rules.

On the face of it they scored a victory on February 18th, when Gabriele Galateri di Genola, Generali's chairman, said he would step down at the end of his third term in April. But Mr Galateri did not leave because the duo pushed him out. He left because he supports Mr Donnet's drive to modernise Generali: under the new governance rules, three terms is the maximum.

It is likely, in fact, that Mr Donnet will still be in his job after the AGM on April 29th. Analysts assume that Mr Nagel and investors who represent 35% of shares will prevail. This may upset the silver-haired rebels—but there is a silver lining, too. As top shareholders, they stand to pocket giant dividends in the coming years. ■

Inflation in Turkey

Getting sticky

ISTANBUL

With its president's policies, Turkey cannot hope to bring down inflation

AT LEAST BY comparison with last year's disaster, when it crashed by 44% against the dollar, Turkey's lira has had a good run of late. Since January the currency has lost only 4% of its dollar value. Part of the reason is a scheme to protect lira deposits against swings in the exchange rate, which the government introduced in December, and which has suppressed demand for hard currency. Another factor is a series of interventions in currency markets by Turkey's central bank. The latest of these came on February 22nd, when the bank reportedly sold about $1bn in foreign reserves, helping the currency absorb some of the shock waves from the run-up to Russia's invasion of Ukraine.

The lira may have recovered its footing. But the spike in inflation set off by the currency's collapse last year is here to stay. The officially reported inflation rate rocketed to a ghastly 48.7% year-on-year in January. Forecasts see the rate peaking in the spring, and finishing the year well above 30%, thanks largely to base effects. Surging energy prices, as well as widespread fears that the government has been massaging the inflation data, have sparked protests in parts of the country. The leader of Turkey's main opposition party has announced he will not pay his electricity bills unless President Recep Tayyip Erdogan's government reverses recent price rises.

Unfortunately for Turks, who are quickly becoming used to stockpiling non-perishables and basic necessities, stabilising the exchange rate will not be enough to bring inflation under control. Inflation is bound to remain high because of rising wages (Turkey recently increased the mini-

The sum of all fears

mum wage by 50%), strong retail demand and continuing increases in energy and commodity prices.

Most problematic is Turkey's insistence on keeping interest rates low. After a series of cuts last year, the central bank's benchmark rate is 14%, a whopping 35 percentage points below the rate of inflation. Down the line, Turks may question the wisdom of keeping their money in the banks when the interest on their deposits, even those protected from currency shocks, is so much lower than inflation, says Selva Demiralp, an economics professor at Istanbul's Koc University. They may instead decide to spend on consumer durables or property, further fuelling price growth.

Reining in inflation is hard enough with orthodox monetary-policy settings. (Ask Brazil, where inflation is into the double digits despite a number of interest-rate rises.) With Turkey's, it is impossible. This will not change soon. Obsessed with growth and convinced, wrongly, that the way to tackle inflation is by cutting rates, Mr Erdogan has sworn to keep borrowing cheap. "We cannot sacrifice the growth rate," acknowledges Cevdet Yilmaz, a ruling-party lawmaker.

This does not mean that hyperinflation is on the cards. Price increases of the kind Turkey expects to see over the coming months tend to push down demand, says Gizem Oztok Altinsac, chief economist at Tusiad, the country's biggest business association. This creates a buffer preventing inflation from reaching triple digits, she says. But with persistent structural problems, and the central bank's credibility shattered, bringing it back down to the single digits, or even below 20%, will probably take years. ■

Buttonwood The sun also rises

The yen has retained its purchasing power. That is an overlooked virtue

The last shall be first, and the first, last. An emerging theme in capital markets is that securities that generated bumper returns in the era of low inflation, sluggish demand and zero interest rates—think American tech stocks—are under pressure, while assets that fared horribly in the 2010s (oil, mining and bank stocks) are holding up well. If it is cheap, inflation-proof and formerly unloved, capital is now increasingly drawn to it.

This brings us to the yen, the forgotten currency of the least inflation-prone big economy, Japan.

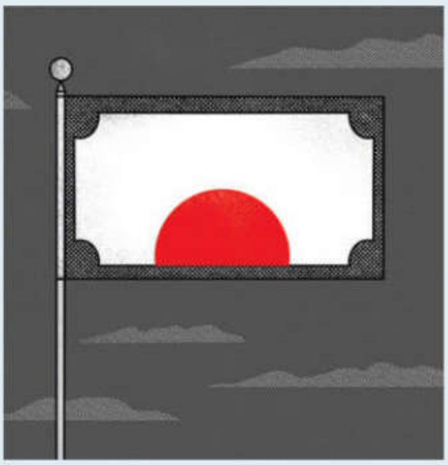
It once had a solid reputation as a haven, like the Swiss franc or the American dollar. Whenever a storm blew up, the yen rallied. But not recently. In the volatile weeks since the start of 2022, the yen has mostly moved sideways against the dollar. Even Russia's invasion of Ukraine did not immediately change its course. The yen is a cheap currency that keeps on getting cheaper. Its cheapness now looks like an obvious virtue.

Japan remains the world's largest creditor. Its net foreign assets—what its residents own abroad minus what they owe to foreigners—amount to around $3.5trn, almost 70% of Japan's annual GDP. Some of those assets are fixed investments, such as factories and office buildings. But a chunk is held in bank deposits, and in shares and bonds, which can be liquidated quickly.

In past periods of high stress, such as during the global financial crisis of 2007-09, capital was pulled back into Japan by nervous investors. The upshot was an appreciating yen. In some instances, the effect was dramatic. In October 1998, as the crisis surrounding LTCM, a busted hedge fund, came to a head, the yen appreciated from 136 to 112 against the dollar in a matter of days. It is rallies such as this that gave the yen its safe-haven reputation. When trouble struck, you followed the Japanese money.

This has not worked so reliably lately. An important change came with the re-election of Abe Shinzo as prime minister, in December 2012, and the subsequent appointment of Kuroda Haruhiko as governor of Japan's central bank. A key goal of "Abenomics" was to banish Japan's chronic deflation through the use of radical monetary policy, including huge central-bank purchases of bonds and equities. A result of all the sustained money-printing was a much weaker yen, but not much stronger inflation. The yen's safe-haven status wore off, says Peter Tasker, a seasoned observer of Japan's economy and markets.

Might it be restored? In a world in which inflation is a serious concern, there is a lot to be said for a currency which holds its purchasing power. The yen is now very cheap in real terms against a broad basket of other currencies. On a measure calculated by the Bank for International Settlements, the yen is now more competitive than at any time since the series began in 1994. *The Economist*'s Big Mac Index, a light-hearted gauge of purchasing power, tells a similar story. The exchange rate required to equalise the price of a Big Mac in Tokyo and New York is 67; but the yen currently trades at 115 to the dollar. On this basis, the yen is undervalued by 42%. Even if the yen continues to trade sideways, it is likely to become cheaper in real terms. Japan's inflation rate is currently just 0.5%. America's is 7.5%.



In the near term, risk aversion and rising interest rates in America will support the dollar. But the more the Federal Reserve has to do to contain inflation, the greater the risk of a hard landing for America's economy. The dollar might eventually find itself at the centre of a storm. In such a scenario, the yen would rally strongly. Kit Juckes of Société Générale, a French bank, sees a risk that dollar-yen falls below 100 in the next year or two. Traders might wait for signs of trouble in America's economy before buying. For those who want exposure now, Japan's stockmarket has appeal. It, too, is cheap: it trades on 13.6 times expected earnings. And for cautious souls looking for a cheap segment of a cheap market in a cheap currency, Japan's banks offer a dividend yield of 4% and trade on a single-digit multiple of expected earnings.

The tides are shifting. Not so long ago many investors were fearful of "Japanification", in which economies got stuck in too low a gear to stop prices and bond yields from falling. But now inflation is roaring back and interest rates are on the rise. In a world turning upside-down, the yen's old-fashioned virtues ought to jog the memory.

Free exchange | Second-time lucky

Studying how the first era of globalisation ended could help preserve the second

IN 1920 JOHN MAYNARD KEYNES reflected on the Britain he knew before the outbreak of the first world war. "The inhabitant of London", he wrote, "could order by telephone, sipping his morning tea in bed, the various products of the whole earth." Keynes's Londoner "regarded this state of affairs as normal, certain and permanent", and not long ago the globalisation of the present age seemed a similarly inexorable force. A new world war remains unlikely, but the uncomfortable echoes of the past in recent history suggest that a closer look at the rise and retreat of 19th-century globalisation might yield valuable lessons.

A work of economic history published in 1999 provides a great starting point. "Globalisation and History", by Kevin O'Rourke and Jeffrey Williamson, hit shelves at a time of growing unease about the effects of deepening economic integration. Then, anti-trade activists swarmed meetings of the World Trade Organisation, while a few economists began to draw attention to the occasionally troubling distributional effects of globalisation. It roared on nonetheless over the first decade after the book's publication. But in the years since, economic nationalism has become a potent political force, and the book has come to seem eerily prescient.

Nineteenth-century integration began in earnest around mid-century, after decades of instability and insularity. Liberalised trade rules helped; Britain repealed its Corn Laws—tariffs on imported grain—in 1846. But the integration of markets was supercharged by improvements in communication and transport technologies which allowed for faster, cheaper and more reliable movement of people, goods and information. The telegraph, steamships and railways brought the economies of Europe and the Americas into close contact, with profound consequences. In the new world, land was abundant and cheap, and wages were high. The reverse was true in Europe, where workers were plentiful and landowners collected fat rents. As these markets integrated, prices converged. In 1870 British wheat prices were 60% above those in America; by 1890 the gap had mostly closed. When telegraph cables connected distant financial markets, differences in the pricing of various securities vanished almost immediately.

Simple trade theory predicts that as differences in the prices of traded goods shrink, the cost of factors of production like land and labour should likewise converge. Experience in the 19th century bore this out. As waves of American grain spilled into European ports, land prices in Europe tumbled toward those across the pond. In America, the real price of land tripled between 1870 and 1913, while in Britain, it dropped by nearly 60%. Real wages converged as well, although the authors note this owed more to migration than trade. Nineteenth-century migrant flows were unlike anything in recent memory. Between 1870 and 1910 they reduced Sweden's labour force by 20% relative to what it otherwise would have been, and increased America's by 24%. These flows transformed labour markets. Real wages earned by unskilled labourers in Ireland rose from roughly 60% of the British level in the 1840s to 90% in 1914, thanks entirely to Irish emigration.

How much can really be learned from such a different world? Today, migration matters much less than it did in the 19th century. Skilled workers account for a far larger share of rich-world workforces, and are protected by modern regulations and social safety-nets. Trade consists not only of bulk commodity shipments, but of components imported and exported multiple times along complex supply chains. Forget telegraphs; in meetings today people chat face-to-face with colleagues on other continents.

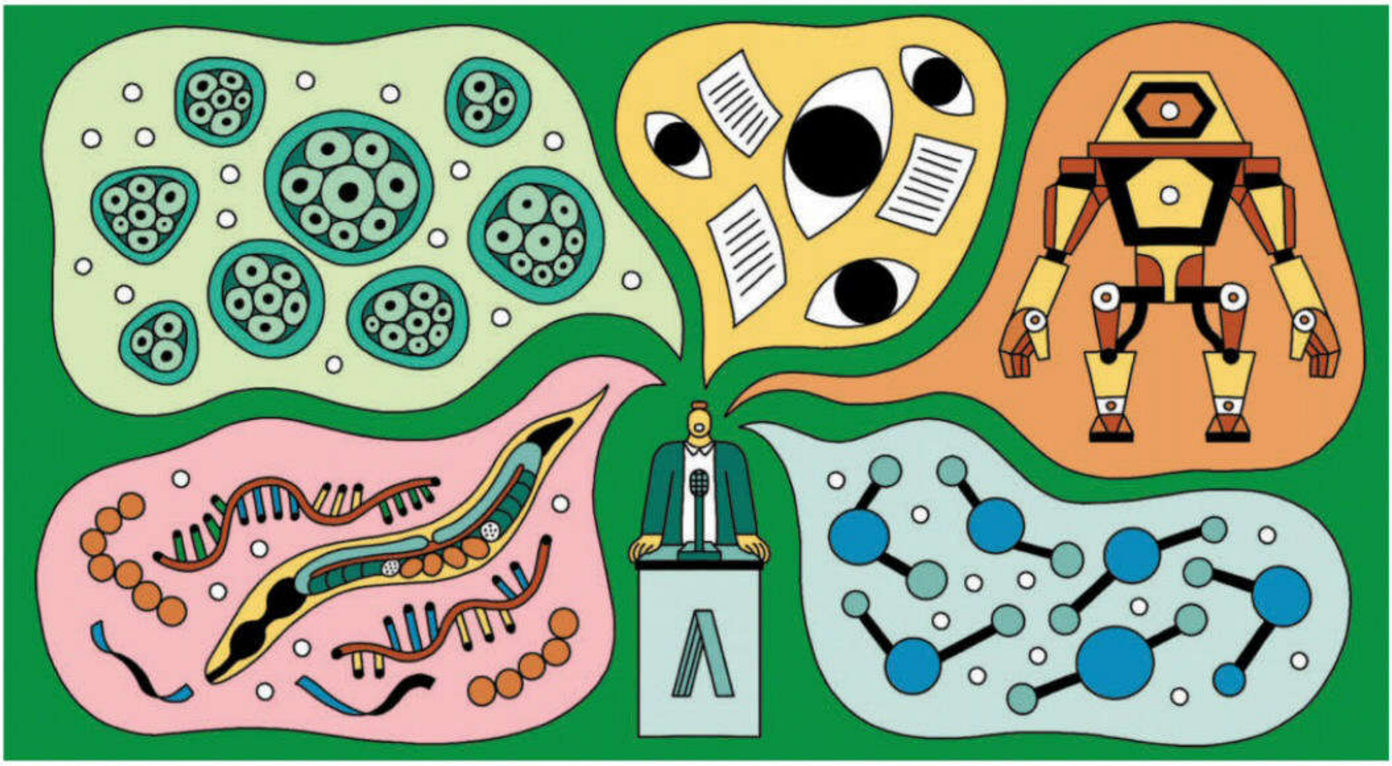
Yet a number of lessons appear relevant. Start with the issue of convergence in incomes across countries. Much of modern theorising about convergence focuses on the role of capital accumulation and technological progress. Poor countries grow rich, in these models, because they invest more and adopt more sophisticated technologies. But in the 19th century the integration of markets drove convergence: a force which has also been at work in recent decades. The narrowing gap between American and Chinese wages is in part a story of Chinese technological progress. Yet it is also one in which hundreds of millions of Chinese workers began participating in a global economy, making low-skilled labour more abundant globally and contributing to weaker blue-collar wage growth and higher inequality in rich countries.

Second, people in the 19th century generally understood the effects that trade and migration had on their economies, and those on the losing end sought political solutions to their troubles. Then, as now, training and education were touted as answers to the problems of unhappy workers. But moves to improve schooling were accompanied by a broad shift towards protectionism. From the 1870s European economies, with the notable exception of Britain, began raising tariff rates. Over the same period, migration policy in the Americas became ever more restrictive.

Don't spoil the ending

So it has gone this time, too. Work by David Autor of the Massachusetts Institute of Technology and three co-authors found that American counties which were more exposed to imports from China became more likely to vote Republican in presidential elections, for example: a shift which in 2016 helped to elect a trade-warring president.

And yet third and most important, it was not higher tariff barriers or restrictions on migration which plunged the world into the deep and destructive insularity that took hold after 1914; it was war. But for war, the retreat of globalisation a century ago may have remained modest and short-lived. The same may be true today. If inattention to the distributional effects of trade can prompt a backlash, then a greater commitment to sharing the bounty generated by openness might permit a renewal of economic integration—if the world remains willing to learn from the past. ■



The American Association for the Advancement of Science

An endless frontier

CYBERSPACE

This year's meeting of the AAAS heard of the future of robots, brain organoids, epigenetic inheritance, better ways to extract lithium and witness reliability

ROBOTS HAVE been around for six decades or so. Originally, they were simple devices which did as they were told, working on assembly lines in, well, a robotic manner. They were often kept in cages, like zoo animals, to stop people getting too close. And for similar reasons. They were dangerous. If a mere human being got in the way of a swinging robotic arm, so much the worse for the human.

Since then, they have got vastly more dexterous, mobile and autonomous. They are also more collaborative. There are now over 3m robots working in factories across the planet, according to the International Federation of Robotics, a worldwide industry association. Millions more move goods around warehouses, clean homes, mow lawns and help surgeons conduct operations. Some have also begun delivering goods, both on land and by air.

The pace of automation is likely to accelerate, for two reasons, a panel of robotics experts told the 2022 meeting of the American Association for the Advancement of Science (AAAS), held for the second year running in cyberspace, rather than in Philadelphia, as originally planned. The first reason is that covid-19 has created social changes which look likely to endure. The "Great Resignation", in which millions around the world have quit their jobs, may in part be a consequence of lockdowns creating new opportunities for home working. These so-called lifestyle choices about which jobs to do, together with creaking supply chains and a boom in e-commerce, have left warehouses and many other businesses struggling to recruit workers.

Universal robots

The second reason is that the bots are getting better. Instead of just moving goods in warehouses to human "pickers", who then put items into bags for home delivery, they are learning to do the picking and packing for themselves. In factories, they are stepping out of their cages and, equipped with advanced sensors and machine learning, a form of artificial intelligence (AI), are going to work alongside people. Such robots will increasingly help out in other places too, including hospitals, and in roles, such as caring for an ageing society—which, post-covid, has got used to a more techno future for health care, with "telemedicine" via remote doctors and health-monitoring mobile-phone apps.

There is, though, a long way to go. In the field of manufacturing, car plants lead automation. But, as Henrik Christensen, director of the Contextual Robotics Institute at the University of California, San Diego, told the meeting, even the most advanced of them, those in South Korea, average only around one robot per ten workers. So-called "lights-out" car manufacturing, with no human beings on the factory floor, remains a distant dream.

Even so, the rise of robots makes some people fear for their jobs and ask how they will earn a living. "It's a good question. I get it every week," says Dr Christensen. He replies that jobs which robots undertake are usually dull, repetitive and strenuous—and, post-covid, such jobs are getting harder to fill. In many industries it is less a desire to reduce labour costs that is driving automation than the sheer difficulty of recruiting flesh-and-blood workers. Indeed, instead of destroying jobs, robots can create them by making businesses more efficient, allowing firms to expand. As Dr Christensen points out, for the past decade manufacturing employment in America has grown, even as the number of factory robots increased (see chart).

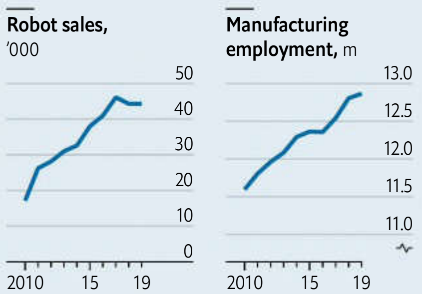
There is a similar fear in health care that robots will destroy jobs. But this is a myth, Michelle Johnson told the meeting. Dr Johnson is the director of the Rehabilitation Robotics Lab at the University of Pennsylvania, and currently works in Botswana on ways to use robots to help people recover from illness and injury. Even in America, let alone Africa, "there are just not enough clinicians to do the job," she adds.

Dr Johnson has a particular interest in helping people recover from strokes. This sometimes requires intensive therapy for long periods. But public health-care systems are often too stretched to offer anything but limited treatment. Robots can help here, and in some circumstances may be better, even, than human physiotherapists, since they are both tireless and reliable. They can exercise a person's limbs with consistent movements and take objective measurements of recovery. This, says Dr Johnson, allows a single occupational therapist, assisted by a technician, to look after, at the same time, half-a-dozen or so patients who would otherwise need one-to-one attention.

Robots that work with people in such ways do, though, require special training. And there is a long way to go to improve that says Julie Shah, who leads the Interactive Robotics Group at the Massachusetts Institute of Technology. Most robots perform narrowly defined tasks, with mobile ones using their sensors to avoid bumping into people. "Robots need to see us as more than just an obstacle to manoeuvre around," adds Dr Shah. "They need to work with us and anticipate what we need."

Studying what happens in factories shows that the most successful applications employ robots programmed by an engineer who is working side-by-side with someone (a so-called "domain expert") fully versed in the tasks at hand. To make that easier, she and her colleagues are developing AI systems which can school a robot using natural-language commands.

Bots at work
United States



Sources: University of California, San Diego; International Federation of Robotics; Bureau of Labour Statistics

Although all three experts believe robots will enhance human capability, one problem is that regulation lags technology. With covid-19, says Dr Johnson, some clinicians worried that even the spread of telemedicine might affect their indemnity insurance, let alone robots. And although a long road remains ahead for the development of autonomous delivery vans and lorries, Dr Christensen finds it "ludicrous" that a test vehicle driving across a state border in America may thereafter have to comply with a completely different set of regulations from those which pertained in the place whence it came. It seems an awful lot of meetings lie ahead for roboticists and regulators to determine how machines and people will work together. ■

Neuroscience

From here to humanity

Organoids and neuron transplants give new ways to study the brain

STUDYING THE human brain is hard. Other animals' brains provide clues. But they cannot reveal the special essence that makes human brains different. Nor, often, do they make good models for neurological conditions that affect human beings.

Recently, however, two halfway-house approaches have been developed. One is to grow so-called brain organoids from human tissue. The other is to create animals with human-derived neurons in their bodies. As the AAAS heard, both approaches are yielding results. But they also raise ethical questions of their own.

Organoids are usually grown from induced pluripotent stem cells—artificial equivalents of embryonic cells. The process is now sufficiently well understood for them to be mass produced and Paola Arlotta of Harvard University described ways they are being put to use. These include studying brain development, examining the pathology and genetics of disease, and screening potential drugs. A particularly exciting idea is to grow organoids using cells from people with known, genetically related problems. That will allow specific instances of disease to be investigated.

Dr Arlotta herself employs organoids to study autistic-spectrum disorders (ASDs), using versions which incorporate mutations of three genes seemingly linked to those conditions. Though these genes work in different ways, she found that mutating any one of them induces the same effects. These include accelerated development of cells called GABAergic neurons and a consequent slowing of the rate, and diminution of the amplitude, of electrical spiking. This is of interest because other studies suggest that disrupted GABAergic signalling is indeed associated with ASDs.

Dr Arlotta also described how it is now possible to make organoids that resemble, in their mix of cells, different parts of the central nervous system (for example, the cerebral cortex and the spinal cord) and to link these together, and also to muscle organoids, to create what are known as assembloids. That permits preliminary investigation of how different regions of the brain connect up, and how the brain connects with the rest of the body.

A thoughtful individual might, at this point, be tempted to stop and ask whether brain organoids themselves can do anything remotely like thinking. At the moment, the answer to that is a pretty definitive "no". Those currently emerging from the culture tanks are under 5mm across, so have less than a ten-thousandth of the volume of an adult human brain. More importantly, microscopic examination shows that they have little of the complex organisation found in real brains. And they have no sensory connections through which to learn about the world. But technology moves on. As Bernard Lo, a medical ethicist at the University of California, San Francisco, told the meeting, "this science is developing rapidly, and we don't know what will be possible in a decade."

The second approach, putting human neurons into living animals, was outlined by Joshua Sanes, who also works at Harvard. Dr Sanes came to public attention a few years ago as co-inventor of "Brainbow mice"—creatures that have had individual neurons in their brains "painted" using proteins that fluoresce in different colours. Recently, though, he has found himself struggling against the limits of what can be learned from laboratory animals, and has become interested in the idea of partly "humanising" them.

Transplanting neurons is an old technique, and is even being tested therapeutically for the treatment of Parkinson's disease. But they can also be transplanted between species, and human neurons have, indeed, been transplanted into mice. Some, though, talk of going further, and transplanting human neural stem cells into embryonic mouse brains. The intention would be to create a "chimera" in which brain cells from both sources were intermixed and interfunctional.

At the moment, formidable technical obstacles stand in the way of doing this. But Dr Lo's observation about scientific progress is equally applicable here. And chimeric animals of this sort, which might even exhibit humanlike behaviours, are an idea at least as disturbing as brain organoids' becoming conscious. In 2020, therefore, America's scientific establishment, in the form of its National Academies of Sciences, Engineering and Medicine, set up a committee, co-chaired by Dr Lo and Dr Sanes, to investigate both matters, in order to head off future trouble.

This committee published its report last year, and Dr Lo discussed it with a fellow committee member, Alta Charo, of the University of Wisconsin-Madison. The general tenor was keep calm and carry on. But cautiously. The potential benefits of both types of research are huge. As Dr Sanes had earlier pointed out, ailments of the brain are, collectively, the biggest cause of morbidity around the world, as well as a huge cause of mortality. But experiments must be ethical. Any sign of heightened suffering in animals caused by their having human neurons in their brains needs to be scrutinised carefully.

As to brain-organoid consciousness, though organoids' simplicity and lack of connection to the world makes this unlikely, assembloids might change that. As Dr Lo observed, this sort of work taps into fears raised over many years by science fiction. But science fiction does sometimes go on to become scientific fact. ■

Intergenerational memory

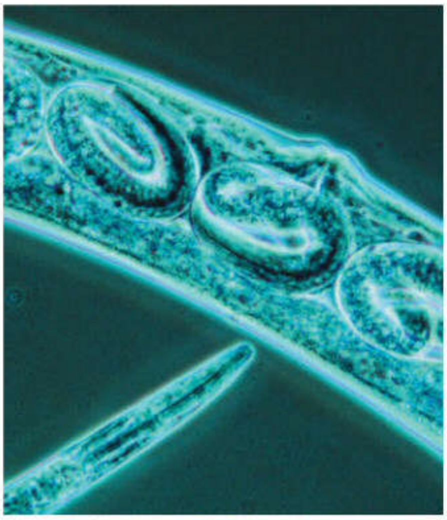
The worm's turn

Nematode progeny "remember" hostile bacteria encountered by a parent

Charles Darwin did not invent the idea of evolution. But he did come up with the currently accepted explanation, natural selection, in which heritable characteristics arise by chance and are retained if competition shows them to be useful. Natural selection's success overthrew an earlier idea proposed by Jean-Baptiste Lamarck, a French natural historian. Lamarck had suggested that characteristics acquired by experience during an organism's lifetime might somehow become heritable.

Modern genetics has no place for Lamarckism as a long-term mechanism, because it would involve writing the recipe for such environmentally induced changes accurately into an organism's DNA. But occasional examples of short-term effects that resemble it do turn up from time to time. They usually involve minor and reversible chemical tweaks to the DNA in sperm and eggs, or to the proteins in which that DNA is packaged into chromosomes. These tweaks, known as epigenetic effects, tend to cause general, and not always helpful, responses to events like famine, and persist for only a generation or two. The AAAS meeting heard, however, of an example that has a much more intriguing mechanism. It encodes a specific, life-saving behaviour in a relative of DNA called RNA. And it is passed down even unto the third and fourth generations.

Coleen Murphy of Princeton University studies *C. elegans*, a nematode worm beloved of geneticists that is, as a consequence, one of the planet's best understood animals. *C. elegans* lives in rotting fruit, and eats bacteria. Among its favourite prey are bugs of the genus *Pseudomonas*. But munching these does not always go well. One species, *P. aeruginosa*, is a dangerous pathogen, at least when the temperature is above 25°C. Not surprisingly, worms which survive their first encounter with *P. aeruginosa* in such circumstances are put off by the experience. Thenceforth they are repelled by, rather than attracted to, its chemical traces.



The kids are alright

That makes perfect sense. But Dr Murphy, who is interested in the phenomenon of epigenetic transmission, wondered if this aversive behaviour might also be displayed by the offspring of those worms.

It was. And by the offspring of those offspring. And by the offspring of the offspring of those offspring. In fact, it did not disappear until the fifth generation of worms descended from the one that had had the bad experience. By this time the ambient temperature might have fallen below 25°C, making *P. aeruginosa* once again an attractive food source.

A lot of molecular-biological manipulation by members of Dr Murphy's team showed that the switch from attraction to repulsion is caused by an increase in the amount of a protein called daf-7 in a pair of nerve cells called ASI neurons found near the worm's mouth. Not only were elevated levels of this protein confined to those worms which were repelled by *P. aeruginosa*, but they also remained elevated for four further generations, returning to normal, along with the behaviour, in the fifth.

The biochemical underpinning of this, it turned out after further rounds of experiments, is an RNA molecule, P11, which is produced by *P. aeruginosa* and taken up by the worms. Experiments showed that after exposure to P11, daf-7 levels in worms' ASI neurons went up, and the worms then avoided *P. aeruginosa*. Because RNA and DNA are chemically similar, strands of RNA can bind to strands of DNA if the compositions of the two are complementary. And that is what is happening here. Part of P11 matches part of a gene called *maco-1*, that is active in ASI neurons. Binding between them turns down the volume on *maco-1*, which has the effect of turning up the volume on the gene which encodes daf-7 and switching on the evasive response.

Somehow, therefore, P11 is being passed from one worm generation to another. And this seems to involve an object called a retrotransposon. Retrotransposons are virus-like structures that can copy RNA into DNA. Dr Murphy's latest experiments show that worms have one called *Cer 1* which does this with P11.

Cer 1 thus acts as a sort of vehicle, outside the cell nucleus, which carries P11. It is able, in experiments, to pass the RNA on to other worms, which then also become *P. aeruginosa*-averse for four generations. And it does something similar to the germ cells inside its original host. Why the effect persists for four generations and no longer remains unknown. But what this elegant piece of science shows is that a specific, useful acquired characteristic can, indeed, be inherited. ■

Lithium production

Filter feeders

Two new ways of extracting lithium from brine

Around 60% of the world's lithium, a metal in high demand for making batteries, comes from evaporation ponds, like that pictured overleaf, located in deserts in Argentina, Bolivia and Chile. These ponds, which can have individual areas of 60km², or more, are filled with lithium-rich brine pumped from underground. That brine, as the ponds' name suggests, is then concentrated in them by evaporation, after which it is treated to purge it of other metals, such as sodium and magnesium, and the lithium is precipitated as lithium carbonate.

This all takes time—often as much as two years. And the process of purification is complex and inefficient. As a consequence, only about 30% of the lithium in the original brine reaches the marketplace. ▸▸

An American firm called EnergyX, plans, however, to change that. Using a polymer membrane developed by Benny Freeman of the University of Texas at Austin the company intends, beginning later this year, to filter lithium directly from brine. Dr Freeman says the company's pilot plant, which will be able to fit into a standard shipping container, should be able to handle millions of litres of brine a day. Once the process is perfected, he reckons it will be able to extract at least 90% of the lithium within a brine.

Speaking at the AAAS meeting, Dr Freeman explained that his inspiration was the protein channels which control the flow of metal ions in and out of biological cells. A potassium channel, for example, is 10,000 times more permeable to potassium ions than to those of sodium. Modern imaging tools and supercomputers have revealed the structure of these channels, permitting them to be mimicked.

The upshot is a membrane pierced by nanometre-sized pores made from rings of carbon and oxygen atoms precisely arranged to let lithium ions through while slowing the passage of others, such as sodium. To start with, these membranes will enrich a brine's lithium levels before it enters the ponds. Eventually, they could replace the ponds by generating a pure and concentrated solution of lithium hydroxide suitable for immediate industrial use.

Another way to improve the efficiency of ponds was also proposed at the meeting, by Seth Darling of Argonne National Laboratory, in Illinois. The actual evaporating is done mainly by heat delivered as sunlight. But much of this is wasted. Either it warms water below a pond's surface—which, not being in contact with the air, is thus unavailable for evaporation—or it is re-radiated before it has had a chance to liberate any water molecules.

Dr Darling worked out that covering a pond with a material that converts light to heat quickly would stop these unfortunate losses by concentrating the warming effect at the pond's surface, thus promoting evaporation. As long as that material was also porous, it would then let the resulting water vapour through and out into the air, to be blown away. His first try was Chinese calligraphy ink which, being viscous and a light-absorbing black, worked well—except that eventually (as ink does) it dissolved in the water. Now, though, he prefers charcoal, which also has the green bonus of being made from farm waste.

Dr Darling says the result is a process that can convert incident sunlight into heat at the water's surface with near 100% efficiency. Besides improving lithium extraction, that could also help industries, such as fracking and mining, that tend to accumulate large ponds of waste water as a by-product of their activities. It could be

Tomorrow's batteries today

used as well as a low-cost way to turn seawater into fresh, by capturing the water vapour as it evaporated.

Moreover, if Dr Freeman's and Dr Darling's ideas can get rid of the need to use vast evaporation ponds, that would open up new sources of lithium. The Salton Sea, a lake in southern California, contains huge quantities of the stuff, and in Texas a lot of groundwater released as a side-effect of oil production is rich in it. Unfortunately, neither of these places has the vast acreages of otherwise valueless land required for the sorts of inefficient evaporation ponds used in South America. Shrinking the sizes of those ponds, or even getting rid of them altogether, would change that. ■

The psychology of justice

First impressions

Eyewitness evidence can be more reliable than thought

THE "SATANIC PANIC" that swept through America in the 1980s and 1990s held that thousands of ordinary people up and down the country were secretly members of devil-worshipping cults which were abusing, raping and murdering children on an industrial scale. Alleged victims made detailed allegations, often after therapy designed to "recover" memories that had supposedly been buried in the aftermath of trauma. Many people went to prison. None of it was true.

One after-effect of the panic was to cement in the minds of both the public and the justice system the idea that eyewitness testimony is unreliable. That fitted with experiments by psychologists such as Elizabeth Loftus, which demonstrated just how malleable memories can be. The Innocence Project, an American charity, examined 375 cases of wrongful conviction for all sorts of crimes, and found misidentification of suspects by witnesses was a factor in around 70% of them.

But at the annual meeting of the American Association for the Advancement of Science, John Wixted, a psychologist at the University of California, San Diego, argued that this institutional distrust has gone too far. Eyewitness memories, he said, can in fact be very reliable—if they are tested in the right circumstances.

The key to reliability, said Dr Wixted, is the confidence of witnesses in their assessments. Experiments suggest that when witnesses to a simulated crime are confident of having identified the suspect in a later photo line-up, they are almost always correct. Similarly, if they are sure the suspect is not present, that is likely to be right too. Only when a witness is unsure does a risk of misidentification arise. A field study conducted in 2016 by Houston's police came to similar conclusions.

The problem is that this confidence is trustworthy only the first time the question is asked. One of the unavoidable frustrations of quantum mechanics is that measuring a particle's position or energy irretrievably alters it. Something similar, said Dr Wixted, happens with memories. The very act of testing them contaminates every other test that comes after. Assessing people's faces for a possible match, for example, lodges them in a witness's memory. Once that has happened, anything from police encouragement to the high-pressure environment of a courtroom can twist subsequent attempts at recollection.

Dr Wixted drew a comparison with evidence such as DNA samples. Improper handling can contaminate these. That does not mean DNA tests are inherently unreliable, but it does mean the technology must be used carefully. The same, he says, is true of witnesses. The answer, as he and Dr Loftus argue in a recently published paper, is to test a witness's memory as fairly as possible, and—crucially—to do so only once.

Decades after the Satanic panic, the matter remains important. Dr Wixted cited the case of Charles Don Flores, a prisoner awaiting execution for a murder committed in 1998. Initially, when shown a line-up that included Mr Flores, a crucial witness said none of the people matched her recollection. (She had recalled a white man with long hair. Mr Flores is of Latin American extraction, and had short hair then.) By the time the case came to trial a year later, she had changed her mind, and Mr Flores was convicted. His appeal on the basis of the witness's change of mind has been denied. Dr Wixted, however, suggests she was likely to have been right the first time and wrong the second. ■

Art and regeneration

The drawing on the wall

IZTAPALAPA

Mexico revives a tradition of painting murals with a purpose

IZTAPALAPA, A TEEMING neighbourhood on the outskirts of Mexico City, is largely a sprawl of grey concrete. But look down from the cable car that soars above it—a city initiative that helps densely packed residents get around—and the aerial view is punctuated by brightly painted rooftops. Down here, a likeness of Mercedes Hernández, an actor. Over there, a boy and a girl at play, beneath the slogan: "We are equal". On the ground, pedestrians navigate streets lined with portraits of locals, past and present, or pictures of crops formerly grown in this once-rural area.

Muralism has a long history in Mexico—from wall paintings by the Olmecs, the first major civilisation in the region, to colonial frescoes painted by the Spanish to dramatise Bible stories. Another mural movement took off in the 1920s. After the Mexican revolution, the government sought to foster a sense of identity in a country of numerous languages and ethnicities, whose citizens had fought to end the old dictatorship for varying reasons. The population was still mainly illiterate, so the new rulers recruited artists, including Diego Rivera, to paint murals showing scenes and events from Mexican life. The artists drew on the country's heritage by, for example, incorporating Mayan motifs.

→ Also in this section

Today tourists flock to the works of the "big three" muralists of that era—Rivera, David Alfaro Siqueiros and José Clemente Orozco. "Dream of a Sunday Afternoon in Alameda Park", a lively depiction of some of Mexico's best-known historical figures, was painted by Rivera for a hotel restaurant in 1946-47; now in a museum devoted to the artist, it is a regular pit stop in Mexico City. In Guadalajara, on the ceiling of a former hospice (also now a museum), Orozco painted "The Man of Fire", which shows a twisted body emerging from flames, a startling image of rebirth.

From the 1960s, murals became a private enthusiasm rather than a public project. They can be seen from the walls of schools in rural Oaxaca in the country's south, to Monterrey, the business capital, in the north. Now, after a period of decline, the art is being revived with gusto, and as it was practised after the revolution—with a social purpose and paid for by the authorities. Iztapalapa, where some 7,500 new works have been commissioned since 2018, is the heart of the trend.

There is plenty of beauty in the bright colours and bold images on display in the neighbourhood. But the aim is not purely aesthetic. Officials in Iztapalapa want to make it a safer place to live. Mexico's second-most-populous municipality with 2m people, it is known as one of the most dangerous, in which residents feel most unsafe. Iztapalapa has long been the "backyard" of the capital, says Clara Brugada, its mayor. "Prisons, that was the investment we received," she says.

Eyes of the tiger

Some of the murals carry slogans exhorting better behaviour, such as "No to violence!" Others portray the faces of women, many of them local, such as Lupita Bautista, a world-champion boxer, and Eva Bracamontes, herself a street artist. Indeed, the whole project grew out of a push to improve the lot of women in this patriarchal bit of a male-dominated country, where the killing of women remains tragically common. Initially the murals were part of a programme designed to create streets where women felt safe walking alone; but they took on a life of their own. At first, says Ms Brugada, people were sceptical about having paintings on their houses and shops. Now they request them.

To critics of the scheme, the fact that Iztapalapa's authorities pay for the artworks undercuts their authenticity. Enthusiasts point out that Mexico's education ministry paid Rivera and his contemporaries in muralism's heyday. Then, as now, individual artists had distinct styles, as well as leeway to decide the content of their murals.

Rivera, for instance, romanticised the time before the Spanish conquest and represented the conquistadors as greedy and barbaric; Orozco was softer on them and the Catholic church. "I connect with the place and people," says a contemporary muralist who paints as Andre amx. "I don't just put out my message." She often explores feminist themes and subjects, such as prehispanic goddesses. Her murals in Iztapalapa include a huge tiger whose striking eyes stare out from a green wall.

Historians think the post-revolutionary murals did help to forge a cohesive, modern country. They shaped both how Mexicans saw themselves and how foreigners saw them, reckons Barbara Haskell of the Whitney Museum of American Art in New York. (The big three went on to paint influential murals in the United States.) An example of their impact lies in the way Mexico celebrates *mestizaje*, the mixing of Spanish and indigenous peoples. One of the country's best-loved murals, by Orozco, is in the Colegio de San Ildefonso, a former school in Mexico City. It depicts Hernán Cortés, the conquistador, and Malinche, his indigenous interpreter and later lover, who gave birth to a child considered one of the first *mestizos*.

Can murals in places like Iztapalapa have a comparable impact now? Since 2018 some crimes, such as those involving firearms, have declined there. Rapes of women have fallen, too. Other aspects of the regeneration drive, such as improved lighting and better maintained streets, have contributed. But officials are convinced that the art has helped.

Whatever their effect on crime, the murals are popular. "They are motivating people, especially girls, who think, 'I could appear there'," says Ms Bautista, the boxer. Her face is plastered on a bright red background accompanied by the words "Proudly from Iztapalapa". Residents who used to conceal where they come from no longer do. Slowly, outsiders may come to see Iztapalapa in the same way. ■

Nobel-prizewinning fiction

The spirit and the flesh

The Books of Jacob. By Olga Tokarczuk. Translated by Jennifer Croft. *Riverhead Books; 992 pages; $35. Fitzcarraldo Editions; £20*

THE NOVEL that earned Olga Tokarczuk the Nobel prize in literature for 2018, now published in English, is a wild, unruly beast—not just because it is more than 900 pages long. Divided into seven books, it begins one foggy morning in October 1752.

Horsemen, merchants, peasants and priests jostle along a muddy road in central Poland on their way to market. The air is scented with the sweet smell of malt from nearby breweries. Vodka and mead are also on offer, Ms Tokarczuk writes, as well as wine from Hungary and the Rhineland. The fog is so dense, though, that the crowd can only navigate by the burble of a river, a metaphor for readers who will also find themselves, as the Polish author says, on a "fantastic journey across seven borders, five languages and three major religions, not counting the minor sects".

Man and myths

At the centre of "The Books of Jacob" is a large group of Jews from Podolia, in what is now south-western Ukraine, adherents of a real-life Kabbalist rabbi and self-proclaimed Messiah called Sabbatai Tzvi. In the mid-18th century they become followers of his heir, Jacob Frank, also based on a real figure (pictured), a tall, charismatic merchant who always dresses in a long coat and a high Turkish hat. As the author herself has commented, Frank is an ambivalent figure, "ruthless yet sensitive, unpredictable but attentive", practical if somewhat eccentric. "He's a trickster—a charmer and a fraud."

A one-time convert to Islam, Frank persuades the group to be baptised as Catholics—and to experiment with incest and other forms of sexual licence—all in a bid for intellectual and emotional freedom. He is accused of heresy and imprisoned for 13 years in a Polish fortress that also serves as a shrine to the Virgin Mary. Liberated by Russian troops, he makes his way to Brno in Moravia, where he is befriended by Emperor Joseph II and his mother, Maria Theresa. Later his group move to Offenbach am Main in Germany, where they create a huge court and religious centre. Eventually they return to Poland, where Frank dies and his followers join the growing bourgeoisie.

"The Books of Jacob" conjures up a society flooded with the new thinking that emerged from the Enlightenment and the French revolution. Its central question—the answer to which remains tantalisingly out of reach—is why people believe in the likes of Frank. In the living, breathing, mysterious world he and his followers inhabit, Ms Tokarczuk shows how ideas, along with fables, myths and delusions, made the society in which he flourished, which in turn led to the world of today.

Jennifer Croft's translation brilliantly captures the onward rush of Ms Tokarczuk's writing. Of the novel's many other stories, two stand out. The first concerns a challenge that Father Benedykt Chmielowski, a diligent priest, sets himself: to write down all the knowledge humanity has accumulated. The other revolves around a magnificent character called Yente, introduced as a sickly old lady at a wedding in the mid-18th century and still around in 1944, so ancient she is almost translucent.

Five families descended from Frank's followers have taken refuge in a cave; Yente is among them. Someone throws in a bottle in which is "a piece of paper that says, in a clumsy hand, 'Germans gone'." Over the decades, Yente waits and watches, proffering advice, asides and rich observations—much like Ms Tokarczuk herself. ■

The birth of the undead

Out for the count

As "Nosferatu" shows, killing monsters has always been a job for women

ONE HUNDRED years ago, in March 1922, the first major film adaptation of Bram Stoker's "Dracula" had its premiere in Berlin. Not that it was called "Dracula". The film-makers hadn't asked for permission to adapt the famous vampire novel of 1897, so they changed the characters' names. Jonathan Harker, the estate agent who ventures to Transylvania, was renamed Thomas Hutter (and played by Gustav von Wangenheim). Harker's fiancée, Mina, became Hutter's wife Ellen (Greta Schröder). Count Dracula is Count Orlok (Max Schreck). And the film, directed by F.W. Murnau, luxuriated in the shiver-inducing title "Nosferatu: A Symphony of Horror".

No one was fooled. Stoker's dogged widow, Florence, sued the producers for copyright infringement, and the courts ordered all copies of the film and negatives to be destroyed. If it weren't for a stray print that turned up in Paris, one of the masterpieces of Weimar cinema would have been lost for ever. (Today viewers can stream it on Shudder, a service dedicated to horror and thriller titles.)

A century on, "Nosferatu" is still revered for its experimental techniques—shooting on rugged locations as well as in a studio; using stop-motion animation and fast-motion footage—and for the glut of horror-movie conventions it established. The film includes villagers in a tavern who warn the hero not to proceed, and the conceit that vampires are burnt to ash by sunlight. It is the archetypal "Dracula" film. And yet its most strikingly modern aspects are those that leave Stoker's novel behind.

One departure from the source material is that when Orlok travels from Transylvania to Germany, he brings along a swarm of plague-carrying rats. Crosses are chalked on doors in the fictional town of Wisborg; a line of coffins is carried down the main street. After the influenza epidemic that began in 1918, these images would have chilled audiences as much as did the grisly count. They remain chilling today.

Another change is the omission of Stoker's macho band of vampire-slayers. While the men in "Nosferatu" bustle around, achieving nothing, it is Ellen who consults a book of undead lore, against her husband's instructions, and she who sacrifices herself to defeat Orlok and save the town. Ellen even shoos the useless Hutter out of the house so he won't get wind of her plan.

The producer, Albin Grau, wrote an article in 1921 describing the first world war as a "cosmic vampire", and some critics see "Nosferatu" as a response to the wartime slaughter that helped push women into the workplace. Whatever the reason for Ellen's courage, this feminist twist on Stoker's story established another horror-movie staple—the woman who deals with a heinous villain single-handedly.

Think of Ridley Scott's interstellar vampire film "Alien" (1979). After the male crew members unwittingly invite a toothy predator into their spaceship, ignoring the objections of Ripley (Sigourney Weaver), it is up to her to destroy the thing herself. It may be a coincidence that Ripley's first name is Ellen, too. But these two heroines, decades apart, are united by a core belief: monster-hunting is women's work. ■

The Nixon presidency

Watchdog barking

The President's Man. By Dwight Chapin. *William Morrow; 480 pages; $29.99 and £20*

FIFTY YEARS ago this month, Richard Nixon embarked on his historic trip to China. Nixon loved planning it, recalls Dwight Chapin, an aide who helped prepare the visit. Mr Chapin's ghostwritten memoir captures the excitement of the mission, as well as his awe at the president's strategic vision. "We are going to China", Nixon said at the time, "because in 50 years we will be adversaries and we must be able to talk to one another."

Those were heady days for Mr Chapin, brought up on a farm in Kansas and now witnessing great-power politics, being served duck brain at a banquet with Zhou Enlai and, at just 30, impressing the Chinese premier with his youth. Thanks to his loyalty and organisational flair, he had progressed from working as an advance man on Nixon's failed bid for California's governorship in 1962 to occupying an office next to the president's. His secret-service codename was "Watchdog". As Nixon's appointments secretary, he kept his daily schedule, "working with five of the most impressive words in the English language: 'The White House is calling'."

After China came Russia. Mr Chapin helped organise the first trip by an American president to Moscow, where Nixon signed the Strategic Arms Limitation Treaty and his aide found himself admiring the beauty of the American ambassador's residence. Mr Chapin began to harbour plausible thoughts of himself one day becoming an ambassador in a place like this.

Then it all came crashing down. In December 1972 Mr Chapin was abruptly fired from the White House in an effort to kill a growing scandal. He would become the first official to be indicted—on four counts of perjury—in the Watergate affair. As he is at pains to point out, he had nothing to do with the burglary at the Watergate building and played no part in its cover-up. But he had hired a former college roommate to carry out dirty tricks on Democrats (he calls them "political pranks"), at the suggestion of Nixon and Mr Chapin's mentor, the chief of staff, Bob Haldeman. A court decided he had lied about the shenanigans to a grand jury. He spent nine months in Lompoc penitentiary in California.

Looking back, Mr Chapin has no regrets. He considers himself to have been a political prisoner, the victim of a campaign ▸▸

by the liberal media and by Democrats, who had double standards over dirty tricks. He disparages the incriminating leaks from the FBI's Mark Felt (better known as "Deep Throat"), and, he suspects, from Al Haig, a future secretary of state. But the real villain, in this telling, was John Dean, the White House counsel who co-operated with the prosecution and, maintains Mr Chapin, was the true "cancer" on the presidency. "The conventional assumption that Richard Nixon represented evil and John Dean honour or integrity is unquestionably a myth."

As for Nixon, his resignation was an "extraordinary unfairness". Mr Chapin describes a leader who was not only notoriously complex and brooding but also decent, sensitive and caring. As president, Mr Chapin argues, he accomplished far more than history gives him credit for, at home as well as abroad. What of the nastiness exposed in the White House tapes? Those remarks were taken out of context and gave a false impression of the man Mr Chapin knew so well.

Mr Chapin went on to have a career in public relations and consulting. But at heart, it seems, he has never stopped being Nixon's advance man. He is still preparing the ground, attending to every detail, trying to make his boss look as good as possible—this time not for a campaign stop or foreign foray, but for posterity. ■

Refugees and reportage

His brother's record-keeper

A journalist accompanies his Afghan friend on an odyssey to Europe

The Naked Don't Fear the Water. By Matthieu Aikins. *Harper; 336 pages; $27.99. Fitzcarraldo Editions; £12.99*

IN THE AUTUMN of 2016 two young men were deposited in Moria refugee camp (pictured), a notorious detention centre on the Greek island of Lesbos. They had just braved a dangerous crossing in a dinghy from Turkey, on their way from Afghanistan to Europe. But the pair were not quite what they seemed. One was Afghan; the other was an undercover Canadian journalist, who was accompanying his friend on his perilous journey to a new life.

Both were shocked by the squalor they encountered, the result of a fire that had gutted the camp the previous week. As well as the grim conditions, the men had to contend with souring attitudes towards newcomers across Europe. More than a million migrants and refugees reached the continent by sea in 2015, but, a year on, countries were increasingly putting up fences and closing their borders. With public hostility outstripping sympathy, the road to asylum became more difficult, as the swelling number of detainees at the camp on Lesbos demonstrated.

The long road to a better life

Matthieu Aikins, a journalist partly of Japanese descent, had been working in Afghanistan for seven years when he agreed to make the trip with Omar, his pseudonymous companion. They had developed a close friendship during assignments on which Omar served as Mr Aikins's fixer-cum-driver. But they came from drastically different worlds. As a child, Mr Aikins played ice hockey in a Canadian suburb; Omar grew up in exile in Iran and Pakistan. From a young age he had shined shoes, picked pistachios and taken construction jobs in the Iranian city of Shiraz to support his parents. His family moved back to Afghanistan soon after the American invasion of 2001.

By the time Omar left Kabul with Mr Aikins in 2016, his mother and father had already fled their war-torn country for a second time. Some of his siblings were already living in Europe; the rest of his close relatives were in Turkey, hoping to go west. His own trip had been delayed after he fell in love. He eventually sold his prized car, a gold Corolla, and steeled himself for the trials ahead.

"The Naked Don't Fear the Water"—the title is a Dari proverb—is a chronicle of the two men's odysseys. Omar entrusts himself to smugglers and risks his life to cross mountains and seas; Mr Aikins, who assumes the name Habib as part of his disguise, is his companion for some, but not all, of the voyage. Unlike his friend, he does not enter Turkey from Iran. Instead, he attempts to fly in from Italy, but is denied entry at a time of heightened tension after an attempted coup. So Mr Aikins travels by bus to Bulgaria before illegally slipping across the Turkish border.

The hazards they share mask the gulf in their circumstances—up to a point. Mr Aikins, who passes as Afghan because of his "black hair" and "wiry beard", knows that, when push comes to shove, his friend must rely only on his luck, while he can always fall back on his Western citizenship. The question of who has the right to travel across borders looms large in his courageous reporting. So do the dangers some people are obliged and willing to take along the smuggler's route into Europe. Boys stow away in lorries, families board unseaworthy inflatable boats, men and women cross deserts. As they near their destination, a border guard's snap decision can determine their future "in a heartbeat".

Mr Aikins's wanderings were undertaken as a journalist's project. Omar's were not. The author confesses that he initially treated the trip "like another assignment where I was in charge"; but his sense of authority quickly fades. His role turns passive, as he awaits his friend's decisions and documents their stories and those of the folk they meet. The result is a devastatingly intimate insight into the refugee crisis. ■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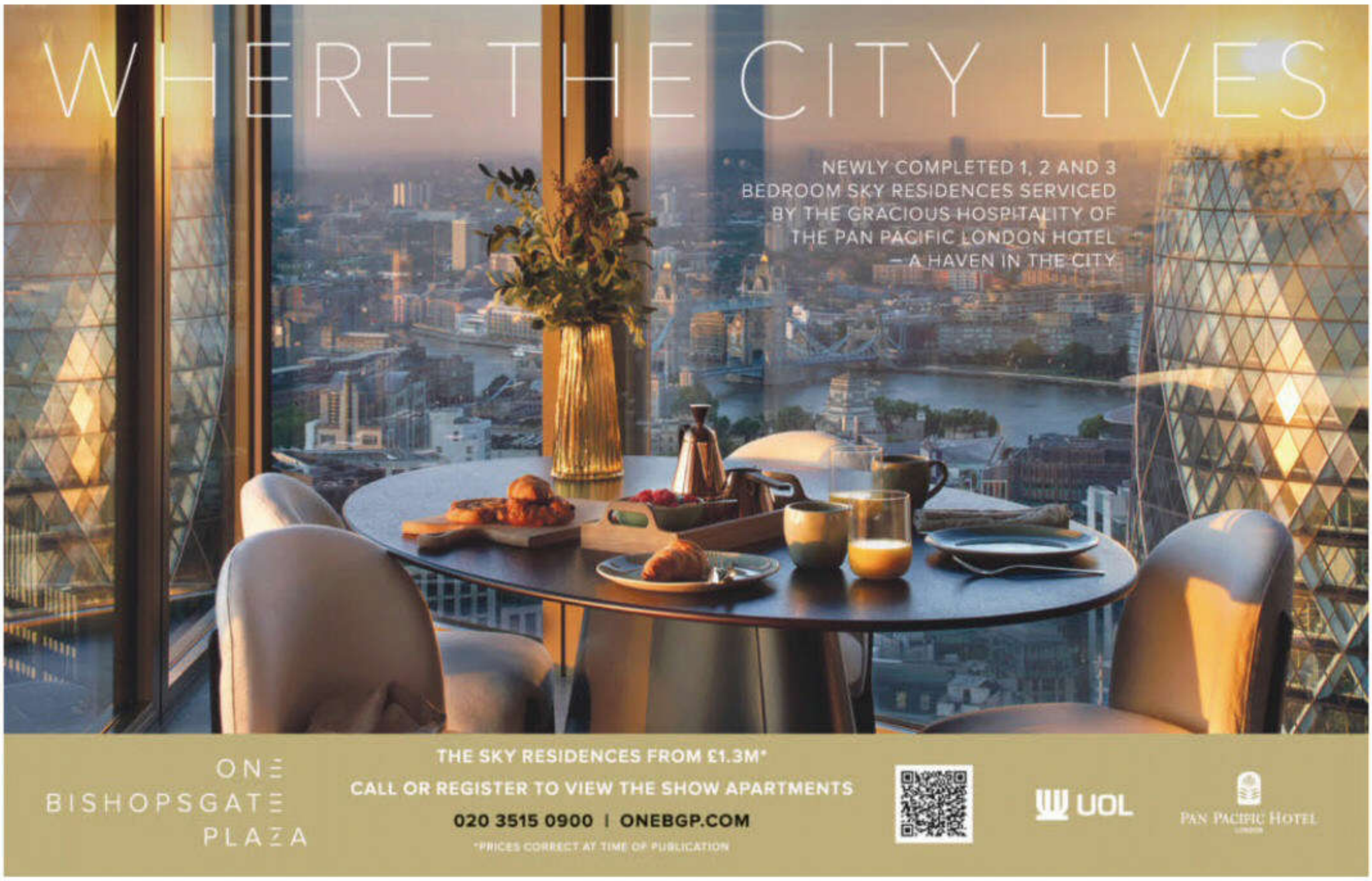

Tenders

SOCIAL SECURITY AND NATIONAL INSURANCE TRUST (SSNIT)

SOURCING FOR STRATEGIC PARTNER(S)
INTERNATIONAL COMPETITIVE TENDERING (ICT)
Project No. GR/SSNIT/CS/0001/2022

REQUEST FOR EXPRESSION OF INTEREST FOR INVESTMENT IN SSNIT-OWNED HOTELS IN GHANA

This announcement is neither a prospectus nor an offer or an invitation for sale of shares to the public.

1. BACKGROUND

The Social Security and National Insurance Trust (SSNIT) is a statutory public Trust charged under the National Pensions Act, 2008 Act 766 with the administration of Ghana's Basic National Social Security Scheme. SSNIT is the largest non-bank financial institution in Ghana and holds a diversified portfolio of investments. This includes ownership of six hotels located along the coast of Ghana.

2. INVESTMENT PROPOSAL

SSNIT's objective is to develop its owned hotels into world class standard in their respective categories and is therefore seeking capital injection from competent strategic investors with expertise in owning and managing hotels and/or development of real estate to finance these developments. SSNIT will not be involved in injecting additional capital.

The hotels are as follows:

NO	PROPERTY NAME	LOCATION	DESCRIPTION	ROOMS
1	Labadi Beach Hotel	La Road, Accra, Ghana	A 5-star leisure hotel situated along the Beach Road (Accra-Teshie-La-Nungua Road, Accra)	164
2	La Palm Royal Beach Resort	La Road, Accra, Ghana	A 4-star hotel with 8 restaurants and bars, located at Labadi Road in Accra	152
3	Elmina Beach Resort	Elmina, Ghana	A 3-star hotel, situated at Elmina off the Cape Coast - Takoradi Highway	100
4	Ridge Royal Hotel	Residential Rd, No.1 Second Ridge, Cape Coast, Ghana	A 3-star hotel, located in the historic City of Cape Coast, Ghana	79
5	Busua Beach Resort	Busua, Ghana	A 3-star hotel, situated in Busua in the Ahanta West Municipality	62
6	Trust Lodge Hotel	Takoradi, Ghana	A purpose-built hospitality block structure located at Takoradi Beach Road	10

Key transaction features:

- Opportunity to acquire control and set strategic direction
- Opportunity to partner with the largest non-bank financial institution in Ghana

3. PRE-QUALIFICATION CRITERIA

Interested firms should include the following information in their expression of interest:

- Legal status of firm (evidence of registration/incorporation);
- Profile of firm, including key financials for the last three years, history and ownership structure;
- Relevant credentials in hotel industry;
- CV of key personnel;
- Valid SSNIT and GRA clearance certificates for firms registered in Ghana;
- The preferred hotel or hotels in which the firm wants to participate;
- Sources and proof of funding.

Interested parties will be evaluated according to the following criteria:

- Experience in owning hotels;
- Experience in managing hotels;
- Experience in development of real estate; and
- Financial strength.

Preference will be given to those bidding for multiple hotels.

Only shortlisted firms will be provided a request for proposal and related documents.

4. FURTHER INFORMATION

Signed Expression of Interest (EOI) and supplementary documents, all in English, should be sealed in an envelope bearing the inscription ***"Expression of Interest for Investment in SSNIT-Owned Hotels"*** and addressed to:

THE CHAIRPERSON
TENDER COMMITTEE
SSNIT, PENSION HOUSE, 5TH FLOOR
P. O. BOX MB149
MINISTRIES – ACCRA, GHANA

Documents must be deposited in the Tender Box located at the Office of the Director-General, 5th Floor, SSNIT Pension House, Accra, Ghana **or** sent to the email address eoihotels@ssnit.org.gh on or before **Wednesday, 23rd March, 2022 at 10:00 a.m.** Documents will be opened thereafter on the same day at the Mini Board Room, 1st Floor, Tower Block, Accra, Ghana in the presence of interested parties' representatives who wish to attend.

EOIs received after the deadline will be rejected.

For further information, please call **00-233-0302 661 912.**

SSNIT reserves the right to accept or reject any or all expressions of interest, and to cancel this process at any time prior to selection without incurring any liability towards any applicant, or without any obligation to inform any applicant of the reasons thereof.

SOCIAL SECURITY AND NATIONAL INSURANCE TRUST

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Economic & financial indicators

Economic data

	Gross domestic product % change on year ago latest		quarter*	2022†	Consumer prices % change on year ago latest		2022†	Unemployment rate %		Current-account balance % of GDP, 2022†	Budget balance % of GDP, 2022†	Interest rates 10-yr gov't bonds latest,%	change on year ago, bp	Currency units per $ Feb 23rd	% change on year ago
United States	5.5	Q4	6.9	3.4	7.5	Jan	5.2	4.0	Jan	-3.3	-7.4	2.0	62.0	-	
China	4.0	Q4	6.6	5.2	0.9	Jan	2.6	5.1	Dec‡§	2.0	-5.0	2.6 §§	-49.0	6.32	2.2
Japan	0.7	Q4	5.4	3.0	0.5	Jan	1.2	2.7	Dec	1.9	-7.0	nil	-8.0	115	-8.6
Britain	6.5	Q4	3.9	4.3	5.5	Jan	4.1	4.1	Nov††	-3.1	-5.4	1.6	88.0	0.74	-4.0
Canada	4.0	Q3	5.4	3.8	5.1	Jan	3.8	6.5	Jan	nil	-7.5	2.0	72.0	1.27	-0.8
Euro area	4.6	Q4	1.2	3.9	5.1	Jan	3.1	7.0	Dec	3.2	-4.0	0.2	53.0	0.88	-6.8
Austria	5.7	Q3	14.6	3.9	5.0	Jan	2.8	4.9	Dec	1.4	-2.9	0.6	68.0	0.88	-6.8
Belgium	5.6	Q4	2.0	3.1	7.6	Jan	4.4	5.7	Dec	1.3	-3.8	0.7	76.0	0.88	-6.8
France	5.4	Q4	2.9	3.9	2.9	Jan	2.2	7.4	Dec	-1.3	-4.9	0.7	79.0	0.88	-6.8
Germany	1.4	Q4	-2.9	3.3	4.9	Jan	3.9	3.2	Dec	6.6	-2.7	0.2	53.0	0.88	-6.8
Greece	13.7	Q3	11.3	4.2	6.3	Jan	4.3	12.7	Dec	-3.9	-4.3	2.6	169	0.88	-6.8
Italy	6.4	Q4	2.5	4.4	4.8	Jan	3.5	9.0	Dec	3.5	-5.5	1.9	129	0.88	-6.8
Netherlands	6.2	Q4	3.8	3.7	6.4	Jan	5.7	3.6	Jan	8.8	-4.3	-0.2	36.0	0.88	-6.8
Spain	5.2	Q4	8.3	6.0	6.1	Jan	3.7	13.0	Dec	1.3	-5.4	1.2	89.0	0.88	-6.8
Czech Republic	3.0	Q3	3.6	4.1	9.9	Jan	8.1	2.2	Dec‡	-0.9	-4.3	3.0	135	21.7	-2.1
Denmark	3.7	Q3	4.5	2.7	4.3	Jan	2.0	2.5	Dec	8.6	nil	0.5	70.0	6.57	-6.8
Norway	5.4	Q4	0.3	3.3	3.2	Jan	3.6	3.5	Nov‡‡	9.2	2.6	1.4	76.0	8.87	-4.4
Poland	5.5	Q3	7.0	4.9	9.2	Jan	6.2	5.5	Jan§	0.5	-3.1	4.0	262	4.04	-8.4
Russia	4.3	Q3	na	2.5	8.7	Jan	5.6	4.3	Dec§	7.4	0.9	10.8	382	80.9	-8.7
Sweden	5.7	Q4	5.7	3.3	3.7	Jan	2.8	7.3	Dec§	3.4	0.1	0.7	37.0	9.36	-11.4
Switzerland	4.1	Q3	6.8	3.0	1.6	Jan	1.1	2.3	Jan	5.1	0.5	0.3	54.0	0.92	-2.2
Turkey	7.4	Q3	11.3	3.4	48.7	Jan	35.3	11.3	Dec§	-3.3	-3.9	21.4	874	13.8	-48.8
Australia	3.9	Q3	-7.5	3.3	3.5	Q4	3.0	4.2	Jan	1.2	-4.6	2.3	74.0	1.38	-8.7
Hong Kong	4.8	Q4	0.8	2.9	1.2	Jan	2.2	3.9	Jan‡‡	1.3	-1.5	1.8	53.0	7.80	-0.6
India	8.4	Q3	54.1	7.0	6.0	Jan	4.6	6.6	Jan	-1.6	-6.4	6.7	57.0	74.6	-2.8
Indonesia	5.0	Q4	na	5.1	2.2	Jan	3.6	6.5	Q3§	-0.6	-4.9	6.5	-3.0	14,338	-1.7
Malaysia	3.6	Q4	na	4.5	3.2	Dec	2.8	4.2	Dec§	3.2	-6.1	3.7	69.0	4.19	-3.6
Pakistan	6.0	2021**	na	3.4	13.0	Jan	8.0	6.9	2019	-5.6	-6.4	10.9 †††	79.0	176	-9.8
Philippines	7.7	Q4	13.0	6.0	3.0	Jan	4.1	7.4	Q4§	-1.7	-7.4	5.3	171	51.1	-4.8
Singapore	6.1	Q4	9.5	3.8	4.0	Jan	2.8	2.4	Q4	17.3	-1.8	2.0	67.0	1.35	-2.2
South Korea	4.0	Q4	4.5	2.9	3.6	Jan	2.3	4.1	Jan§	4.1	-2.9	2.7	81.0	1,194	-7.0
Taiwan	4.9	Q4	11.1	3.2	2.8	Jan	2.4	3.7	Dec	14.6	-0.7	0.8	33.0	27.9	nil
Thailand	1.9	Q4	7.5	2.9	3.2	Jan	1.9	1.5	Dec§	1.8	-4.7	2.1	44.0	32.3	-6.9
Argentina	11.9	Q3	17.3	3.0	50.7	Jan	51.8	8.2	Q3§	0.5	-4.4	na	na	107	-16.6
Brazil	4.0	Q3	-0.4	0.3	10.4	Jan	7.6	11.6	Nov§‡‡	-2.0	-7.7	11.5	328	5.03	7.8
Chile	17.2	Q3	21.0	3.0	7.7	Jan	6.9	7.2	Dec§‡‡	-2.4	-3.5	5.9	298	790	-10.6
Colombia	10.7	Q4	18.2	4.2	6.9	Jan	4.7	11.0	Dec§	-4.9	-6.8	9.3	409	3,917	-8.3
Mexico	1.0	Q4	-0.4	1.9	7.1	Jan	5.1	4.0	Dec	-0.9	-3.3	7.9	218	20.2	1.6
Peru	3.2	Q4	-12.9	2.3	5.7	Jan	5.5	11.0	Jan§	-2.4	-3.0	6.0	179	3.73	-2.1
Egypt	9.8	Q3	na	5.4	7.2	Jan	6.3	7.4	Q4§	-3.9	-6.9	na	na	15.7	-0.3
Israel	10.7	Q4	16.6	4.4	3.1	Jan	2.7	3.9	Jan	5.1	-2.7	1.9	78.0	3.23	1.2
Saudi Arabia	3.3	2021	na	5.0	1.2	Jan	1.8	6.6	Q3	6.3	2.0	na	na	3.75	nil
South Africa	2.9	Q3	-5.8	2.1	5.7	Jan	4.8	34.9	Q3§	-0.6	-6.0	9.3	40.0	15.1	-3.5

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 Feb 23rd	% change on: one week	Dec 31st 2021
United States S&P 500	4,225.5	-5.6	-11.3
United States NAScomp	13,037.5	-7.7	-16.7
China Shanghai Comp	3,489.2	0.7	-4.1
China Shenzhen Comp	2,337.6	1.8	-7.6
Japan Nikkei 225	26,449.6	-3.7	-8.1
Japan Topix	1,881.1	-3.4	-5.6
Britain FTSE 100	7,498.2	-1.4	1.5
Canada S&P TSX	20,744.2	-3.0	-2.3
Euro area EURO STOXX 50	3,973.4	-4.0	-7.6
France CAC 40	6,780.7	-2.6	-5.2
Germany DAX*	14,631.4	-4.8	-7.9
Italy FTSE/MIB	25,955.1	-3.8	-5.1
Netherlands AEX	727.9	-4.1	-8.8
Spain IBEX 35	8,440.1	-3.4	-3.1
Poland WIG	62,826.1	-7.1	-9.3
Russia RTS, $ terms	1,204.1	-21.0	-24.5
Switzerland SMI	11,941.9	-2.0	-7.3
Turkey BIST	2,016.0	-1.2	8.5
Australia All Ord.	7,473.9	-1.3	-3.9
Hong Kong Hang Seng	23,660.3	-4.3	1.1
India BSE	57,232.1	-1.3	-1.8
Indonesia IDX	6,920.1	1.0	5.1
Malaysia KLSE	1,586.1	-1.1	1.2

	index Feb 23rd	% change on: one week	Dec 31st 2021
Pakistan KSE	45,132.9	-1.2	1.2
Singapore STI	3,393.0	-1.3	8.6
South Korea KOSPI	2,719.5	-0.4	-8.7
Taiwan TWI	18,055.7	-1.0	-0.9
Thailand SET	1,696.5	-0.3	2.3
Argentina MERV	91,359.5	0.9	9.4
Brazil BVSP	112,007.6	-2.8	6.9
Mexico IPC	51,363.0	-4.3	-3.6
Egypt EGX 30	11,301.1	-2.3	-5.1
Israel TA-125	2,072.7	-0.7	nil
Saudi Arabia Tadawul	12,527.6	0.3	10.6
South Africa JSE AS	74,987.1	-2.0	1.7
World, dev'd MSCI	2,909.3	-4.9	-10.0
Emerging markets MSCI	1,206.9	-3.0	-2.0

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2021
Investment grade	146	120
High-yield	388	332

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

Commodities

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

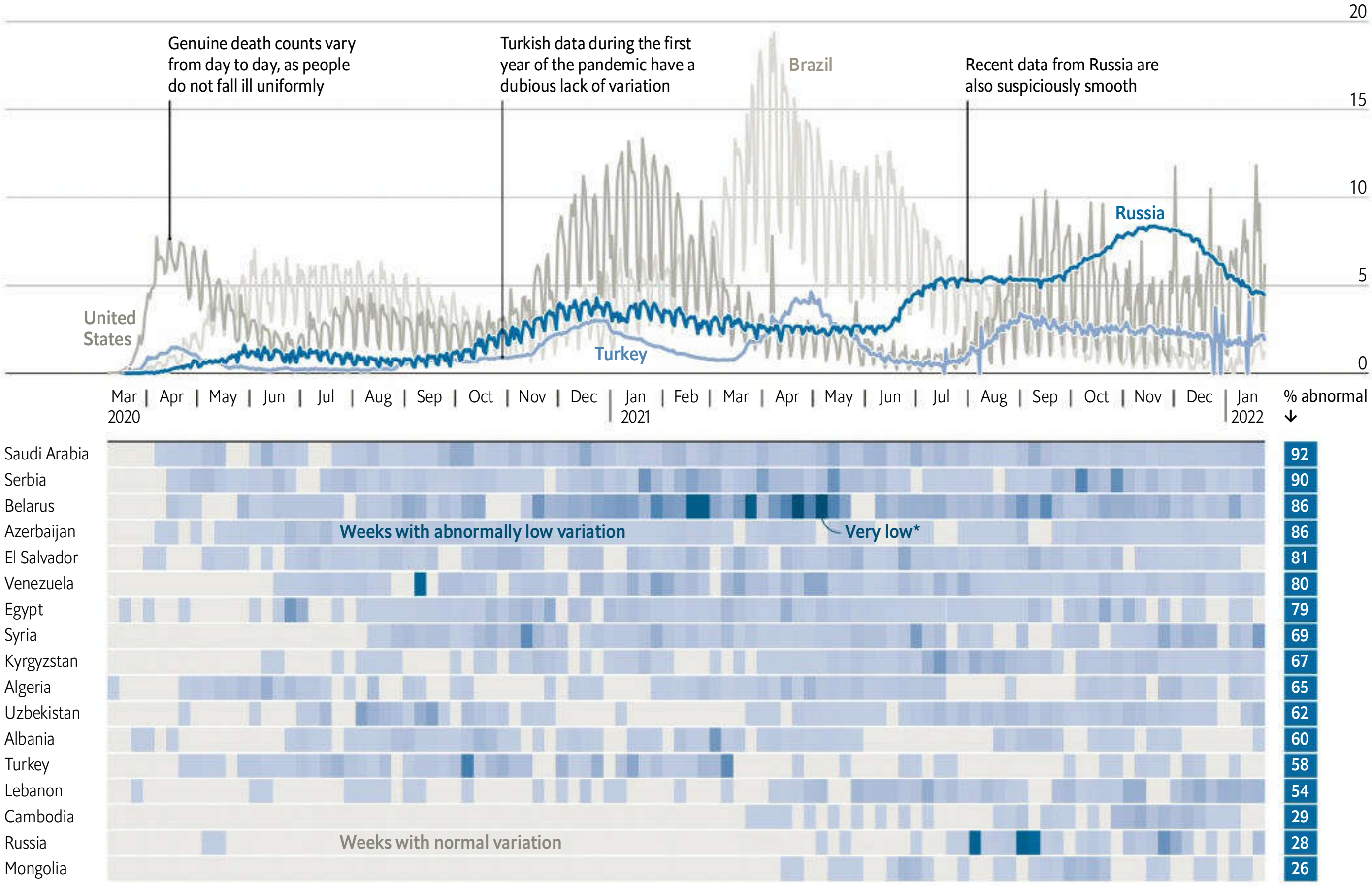
2015=100	Feb 15th	Feb 22nd*	% change on month	year
Dollar Index				
All Items	176.9	181.2	5.7	8.0
Food	150.0	155.6	9.2	21.3
Industrials				
All	201.9	205.1	3.4	0.3
Non-food agriculturals	180.5	181.1	9.2	23.0
Metals	208.3	212.2	2.0	-4.2
Sterling Index				
All items	199.6	203.4	4.9	12.1
Euro Index				
All items	172.7	177.3	5.2	15.9
Gold				
$ per oz	1,849.2	1,899.1	2.8	5.2
Brent				
$ per barrel	93.4	96.9	9.8	48.0

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

For more countries and additional data, visit
Economist.com/indicators

→ Reported covid-19 death tallies have an expected amount of variance. But in some countries, variance is abnormally low

New confirmed covid-19 deaths per million people



*Less than 1% of expected variation Sources: "Underdispersion in the reported covid-19 case and death numbers may suggest data manipulations", by D. Kobak, working paper, 2022; Our World in Data; JHU CSSE

More equal than others

Abnormal tallies suggest some countries reported false covid-19 data

SOMETIMES THE numbers are simply too tidy to be believed. Irregular statistical variation has proven a powerful forensic tool for detecting possible fraud in academic research, accounting statements and election tallies. Now similar techniques are helping to find a new subgenre of faked numbers: covid-19 death tolls.

That is the conclusion of a new study to be published in *Significance*, a statistics magazine, by the researcher Dmitry Kobak. Mr Kobak has a penchant for such studies—he previously demonstrated fraud in Russian elections based on anomalous tallies from polling stations. His latest study examines how reported death tolls vary over time. He finds that this variance is suspiciously low in a clutch of countries—almost exclusively those without a functioning democracy or a free press.

Mr Kobak uses a test based on the "Poisson distribution". This is named after a French statistician who first noticed that when modelling certain kinds of counts, such as the number of people who enter a railway station in an hour, the distribution takes on a specific shape with one mathematically pleasing property: the mean of the distribution is equal to its variance.

This idea can be useful in modelling the number of covid deaths, but requires one extension. Unlike a typical Poisson process, the number of people who die of covid can be correlated from one day to the next—superspreader events, for example, lead to spikes in deaths. As a result, the distribution of deaths should be what statisticians call "overdispersed"—the variance should be greater than the mean. Jonas Schöley, a demographer not involved with Mr Kobak's research, says he has never in his career encountered death tallies that would fail this test.

That should make it easy to pass. And the vast majority of countries reporting data to the World Health Organisation do. This does not mean that their death tallies were necessarily accurate—undercounting still plagues many countries with insufficient testing (which is why *The Economist* estimates the pandemic's death toll using excess deaths). But it does suggest that the numbers reported are not being deliberately tampered with.

Yet data from 17 countries had the opposite pattern. In many weeks, the variance of each distribution was less than the mean. This is a statistical smoking gun. "It seems reasonable to conclude that there's no way these are independent observations," says David Steinsaltz, a professor of statistics at the University of Oxford.

Imputing motives is harder. A benign explanation would be bureaucratic bottlenecks in processing death certificates. Yet there are other irregularities: the usual drop-off in weekend reporting is often absent. According to Mr Kobak, the likelier explanation is cackhanded tampering.

The Russian numbers offer an example of abnormal neatness. In August 2021 daily death tallies went no lower than 746 and no higher than 799. Russia's invariant numbers continued into the first week of September, ranging from 792 to 799. A back-of-the-envelope calculation shows that such a low-variation week would occur by chance once every 2,747 years. ■

Lone Humourist Scourge

P.J. O'Rourke, unsparing right-wing satirist and commentator, died on February 15th, aged 74

THOUGH HE never showed an interest in doing it, running for political office often occupied P.J. O'Rourke's mind. Nothing bothered him so much as the sorry state of the American system, when compared with the fine way it had started out. The nadir came in 2016, when he watched the Trump/Clinton circus with ever-increasing horror. ("How the Hell Did That Happen?" was the book that followed.) Mr Trump was clearly unstable; Mrs Clinton was wrong about absolutely everything, but wrong within normal parameters. For the first time in his life, holding his handsomely large nose, he voted Democratic that November.

Would he, the Lone Humourist, make a better candidate? Very possibly. Great name recognition: some 20 books, editor-in-chief of *National Lampoon*, foreign-affairs chief at *Rolling Stone*, regular columnist for the *Weekly Standard* and go-to conservative on any talk show. He looked presentable, too, in chinos, blue blazer and a Brooks Brothers tie. It was a look modelled on Tom Wolfe, his favourite member of a band of glass-sharp satirists whose numbers had been dwindling ever since Swift and Voltaire. The weirder you were going to behave, the more normal you should look. He had even written books, his first two, advising on mannerly and sober living. ("Never do anything to your partner with your teeth that you wouldn't do to an expensive waterproof wristwatch." "Never serve oysters during a month that has no pay-cheque in it.")

He was no elitist, however, but an average guy: a Buick man, whose job as a teenager was to wash 'n' wax the cars his father sold. His home town was Toledo, Ohio, one of America's many run-down-but-still-proud junkyards of capitalism. He had a master's in English, but earned it at a time of low quality-control. All those counted as pluses; for better or worse, voters liked candidates who were like themselves. If they voted for a bunch of malevolent trolls, like the members of the House, it was because they reckoned there was something in it for them. That was the essence of the American system. When he called his most famous book "Parliament of Whores", it was not just Congress he meant. Some members even surprised him with their sincerity. The real whores were the citizenry whose demands made Congress the piss-poor machine it was, and then blamed everybody else.

He wrote that book, and most of his others, to explain to readers things he didn't understand himself. To explode the zero-sum economics that so entranced the left, when wealth was infinite, he read 900 pages of Adam Smith. To fathom why some countries failed and others thrived (the ones that endorsed free markets, of course), he visited 70 or so countries, carefully conducting most of his research in bars. ("Only one way to cover a story like this, and make that a double, bartender, please.") He did not venture often into the deep end of thought, since it was not a very worthwhile pastime and gave the brain, a mushy organ, unfair domination over sturdier body parts. But every time he yanked another page from his IBM Selectric iii (no computer geek he), he had more grist for a terrific manifesto.

Its message could be summed up in one word, Freedom! and one motto: Mind Your Own Business and Leave Me Alone. The less government, the better. For example, marijuana had done a fraction of the harm that prohibition had. Marijuana did not kick down your door in the middle of the night or peer through your bedroom windows, as government did. Intervention was needed only when people faced being destroyed, not when they imagined they lacked some "right" or other. Rather than moping about what they thought they were owed, citizens should consider what their duties were. He felt ashamed later that, being chicken, his own notion of duty hadn't included going to Vietnam.

It went without saying that he was a Republican, born, bred and proud. A Republican Reptile, he confessed, hard-drinking and hard-driving. He had never been a Democrat, only a youthful Maoist with a bad haircut, until Maoists proved both bullying and boring. Yet his politics were not as simplistic as they seemed. Naturally God was a Republican, holding the mortgage to everything in the world, and Santa Claus was a Democrat, promising everyone everything they wanted down to getting the crab grass off their lawns. But in government both parties made a thorough mess of things. He was often more Libertarian, convinced that the only curb on freedom to do as you damn well pleased was the other guy's freedom to do the same. And even more constantly he was just a hater of do-gooding liberals, with their fuzzy-edged ideas, their sanctimonious talk and their love of food fit only for rabbits. In his America the Safety Nazis had no place, and what was fun could not be wrong. The citizens chowed down on red meat, carried guns, called foreigners monkeys and kept big, beautiful gas-guzzlers in the carport, just as America was supposed to be.

His principles were so secure that they seemed to add up to an ideal presidential character, as he described it on "60 Minutes" once. If elected, he would do what he knew was right and take the consequences. On the other hand the president was a national toddler, so reliant on public opinion that he could do only what the voters wanted. When asked how America might really be improved, the Lone Humourist sounded less sure. "Use your common sense," he suggested. "Be nice." His Alternative Inaugural Speech read: "Ask not what your country can do for you. Ask me how I can get the hell out of here."

When he found out how, it would not be in the presidential limousine but in a blood-red Ferrari 308 GTS, the glorious car which in 1980 he had driven at eye-blurring speed from New Jersey to Los Angeles, revelling in his wonderful country. This time he would head for New Hampshire, that fabulously low-tax, liberal-free state, and the lovely colonial mansion where he could hide away from everything that infuriated him. Or almost everything except the porcupine, so full of barbs that he could approach it only with oven mitts and a broom handle, which had made its natural home in his barn. ■

The Economist

Subscriber-only digital event

Editor’s conversations: Malala Yousafzai

Monday March 7th
5pm GMT / 12pm EST / 9am PST

Join Malala Yousafzai, education campaigner, Nobel laureate and co-founder of Malala Fund, for a wide-ranging discussion to mark International Women’s Day. Speaking with *The Economist*’s editor-in-chief, Zanny Minton Beddoes, Malala will discuss girls’ education around the world, the unfolding crisis in Afghanistan and how to improve the lives of women and girls everywhere.

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