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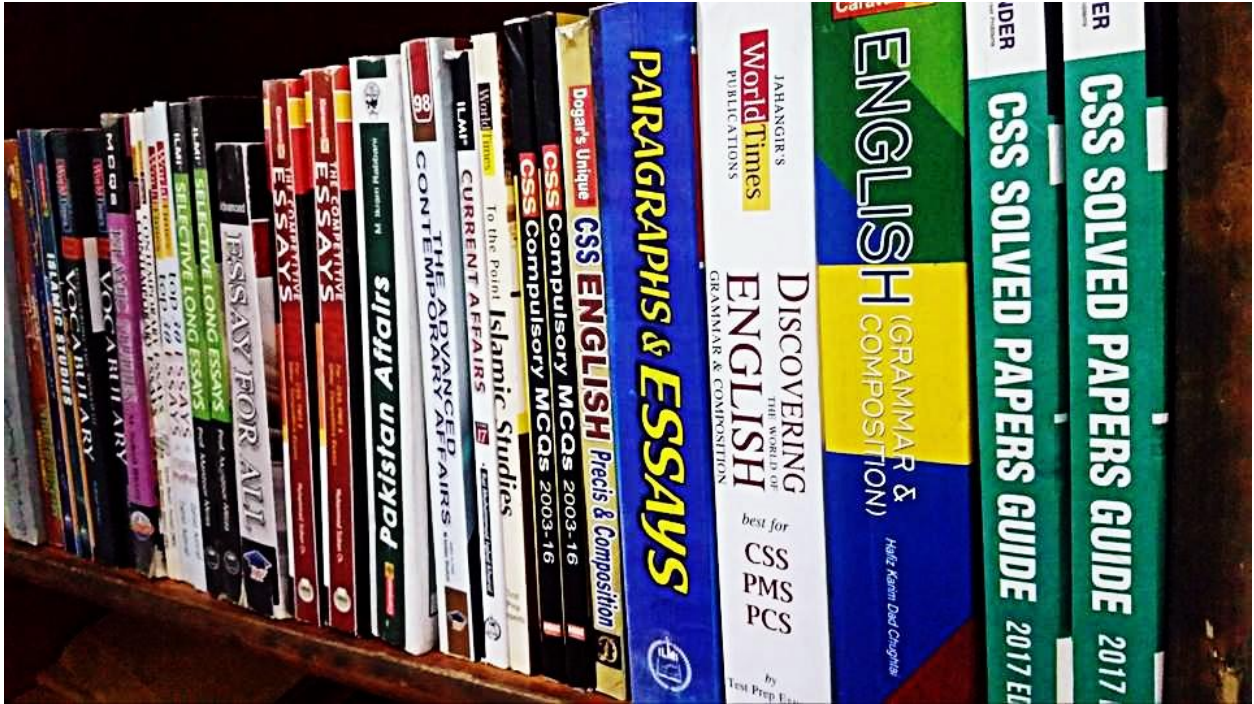
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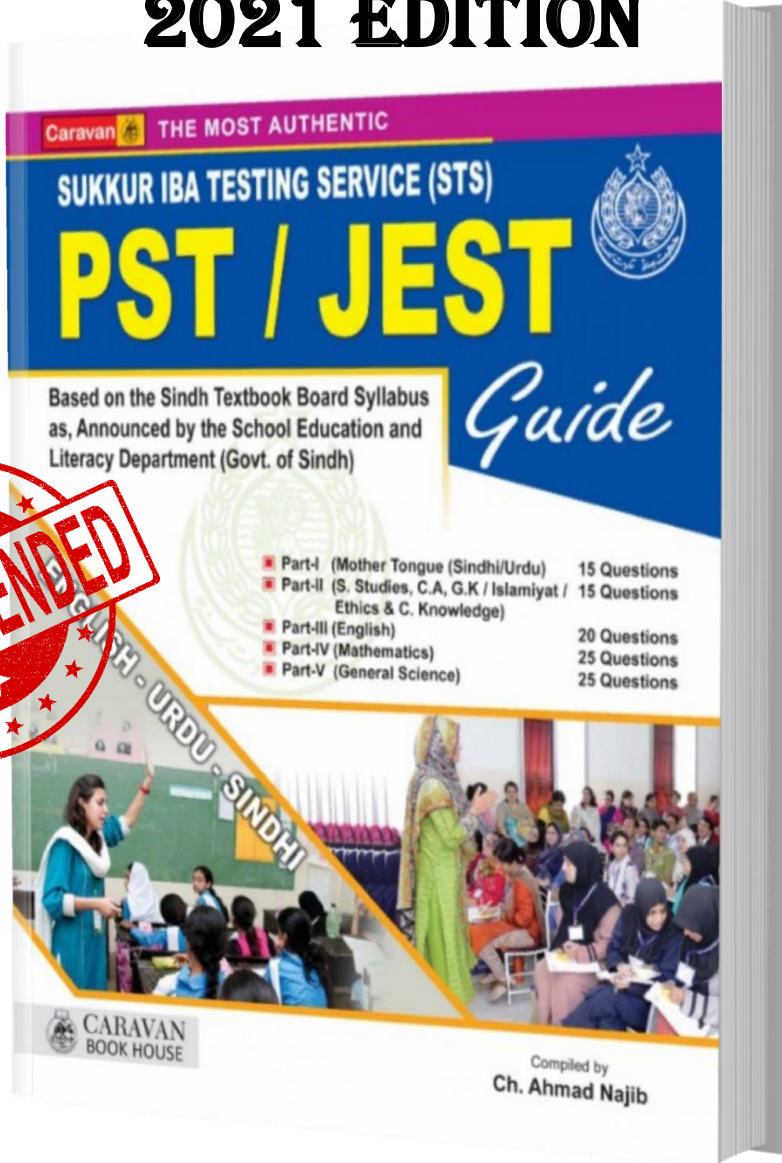
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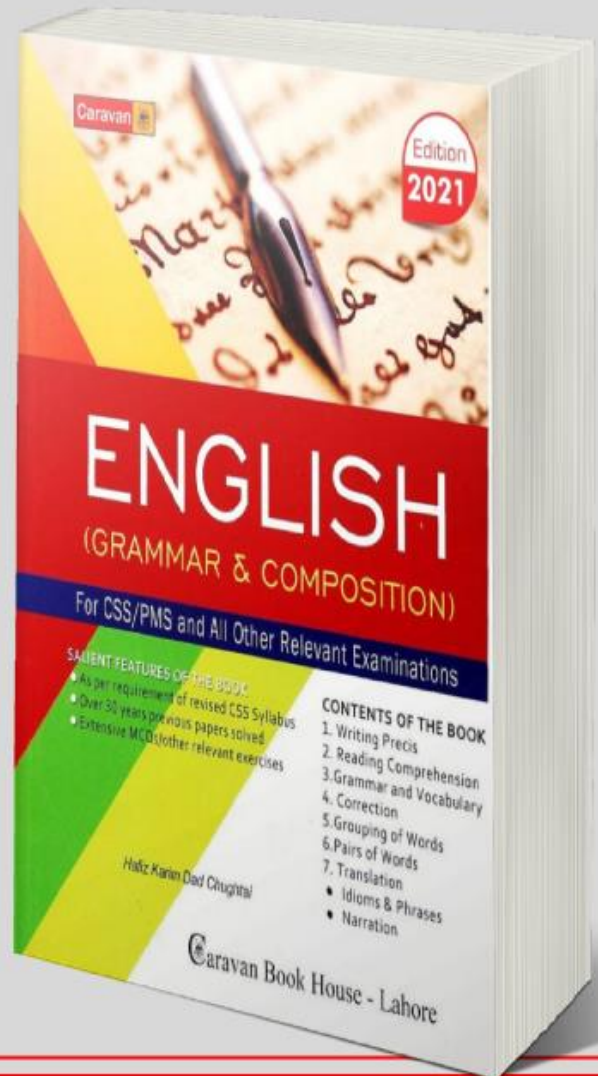
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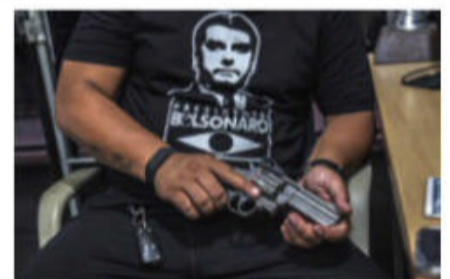
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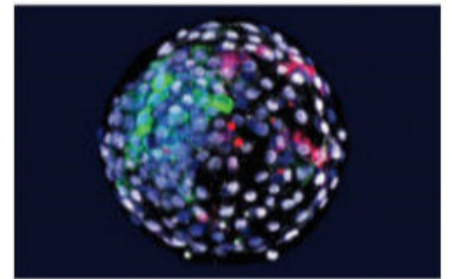
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Is there the possibility of a better tomorrow? Will the investments I've made see me through? In a world always shifting, can I be sure that my decisions will be the correct ones? Or will these times remain this unpredictable?



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President Joe Biden set September 11th as the day by which American troops will pull out of **Afghanistan** after 20 years. Without their support, other NATO forces are also expected to withdraw. It is not clear how much help the US will now give the elected Afghan government to hold off the Taliban, a jihadist group that seized power in the 1990s and hopes to do so again.

Russia massed more troops along its border with Ukraine. A similar build-up in 2014 preceded the annexation of Crimea and the invasion of the south-eastern part of the country. Mr Biden called for a summit with Vladimir Putin, his Russian counterpart, to discuss the situation.

Germany's ruling Christian Democrats were locked in a bitter row over whether Armin Laschet, the leader of the Christian Democratic Union, or Markus Söder, leader of the Bavaria-based Christian Social Union, should be their joint candidate in the general election due in September.

Boris Johnson, **Britain's** prime minister, ordered an investigation into lobbying by David Cameron, one of his predecessors, on behalf of Greensill Capital, a collapsed financier. Mr Cameron denied breaking any rules, but admitted he should have used formal channels to contact ministers.

Protesters in **Minneapolis** clashed with police over several nights after a black man was killed by a white police officer. The chief of police said he believed that Kim Potter mistakenly drew her gun instead of her Taser before shooting

Daunte Wright. Ms Potter was charged with second-degree manslaughter.

Hundreds of celebrities, bosses and companies signed a statement condemning voting restrictions. They were responding to the American state of **Georgia's** new voting law, which critics say would make it harder for black people to vote. Mr Biden has called the rules "Jim Crow in the 21st century"; his predecessor Donald Trump wants a boycott of "woke" firms that speak out against them.

Guillermo Lasso, a conservative ex-banker, unexpectedly won **Ecuador's** presidential election. Mr Lasso, who barely scraped into the initial run-off, has promised to reduce the pay disparity between men and women, to feed chronically undernourished children and to fix Ecuador's incompetent public-health system.

Pedro Castillo, a leftist teacher, came out on top in the first round of **Peru's** presidential election, but did not win a majority of votes. He will face Keiko Fujimori, the daughter of Alberto Fujimori, a jailed former president, in a run-off in June.

Brazil's Senate took the first step towards a congressional inquiry into President Jair Bolsonaro's handling of the covid-19 pandemic, which has killed more than 350,000 Brazilians. A committee will submit a final report to the federal prosecutor's office, which will consider any possible criminal acts.

Blaise Compaoré, who ruled **Burkina Faso** for 27 years, is to be tried for the murder of his predecessor, Thomas Sankara, who was killed in a coup in 1987. The trial will proceed without Mr Compaoré, who has been in exile in Ivory Coast since he was swept from power by protests in 2014.

Mohamed Abdullahi Mohamed, the president of **Somalia**, signed a law extend-

ing his term in office by two years after failing to hold elections before the expiry of his mandate in February. Donors, who pay for much of the government's budget, oppose the move.

Patrice Talon, the president of **Benin**, won a second term in office after an election marred by violence and in which popular opposition figures were barred from running.

Iran accused **Israel** of sabotaging one of its most important nuclear installations. Explosives destroyed thousands of centrifuges, which are used to enrich uranium, a nuclear fuel. Iran said it would replace the machines and start enriching uranium to 60% purity, closer to levels suitable for a bomb. The moves complicate talks in Vienna to revive the multinational deal that limited Iran's nuclear programme.

Egypt impounded the container ship that blocked the Suez Canal last month and reportedly demanded that its Japanese owner pay \$900m (£652m) in compensation. The *Ever Given* became stuck in the waterway after running aground amid high winds and a sandstorm.

An election in **Samoa** delivered a surprise result. The ruling Human Rights Protection Party, which has run the country with little opposition since 1982, tied at 25 seats with the new Fa'atuatua i le Atua Samoa ua Tasi party.

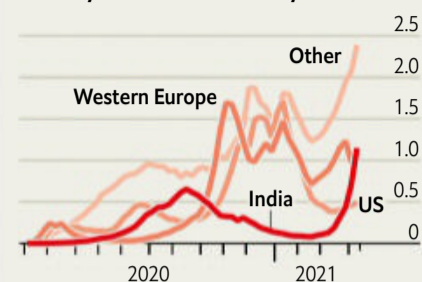
Voters backed a referendum granting Sadyr Japarov, **Kyrgyzstan's** president, greater powers. Turnout was low. Among other changes, the cabinet will now answer to the president's chief of staff.

Gao Fu, a senior **Chinese** health official, appeared to admit that Chinese covid-19 vaccines were not terribly effective, and suggested that they might be made more so by combining them with other jabs. He later said his words had been misinterpreted.

Coronavirus briefs

To 6am GMT April 15th 2021

Weekly confirmed cases by area, m



Vaccination doses

	Total '000	% of adults with	
		1st dose	2nd
Israel	10,290	96	89
Bhutan	477	94	0
UAE	9,157	70	44
Maldives	284	66	4
Britain	40,108	62	15
Chile	12,260	52	34
United States	192,283	49	28
Malta	249	49	21
Bahrain	989	44	32
Hungary	4,328	39	17

Sources: Johns Hopkins University CSSE; Our World in Data; United Nations

Official daily infections hit a record 185,000 in India. Meanwhile, millions of people gathered for a Hindu festival, thousands of whom have tested positive for the virus.

America, South Africa and Europe suspended the roll-out of the one-shot **Johnson & Johnson** jab after six vaccinated women developed blood clots.

The Centres for Disease Control urged **Michigan's** governor to impose a lockdown to curb the spread of the disease in the state instead of relying on vaccines.

Shops, hairdressers and gyms re-opened in **England** following a lockdown. Beer-lovers braved a cold spell to enjoy a pint at pubs with outdoor seating. The government has hit its target of offering a vaccine to high-risk groups and everyone over 50. Daily deaths from the disease have plummeted from more than 1,000 to a few dozen.

→ For our latest coverage of the virus please visit [economist.com/coronavirus](https://www.economist.com/coronavirus) or download the *Economist* app.



American banks had a bumper first quarter, with profits and revenues beating analysts' expectations. They were helped by frenzied market activity, such as the surge in special purpose acquisition companies (SPACs) and retail investing. And, thanks to America's recovering economy, some banks were able to release funds that had been set aside to cover bad loans. JPMorgan Chase and Goldman Sachs both reported record revenues. Returns on tangible common equity, a measure which compares profits to capital, jumped to 29% at JPMorgan and to 33% at Goldman. Wells Fargo posted strong results too.

Consumer prices in America rose by 2.6% in the 12 months ending in March, compared with 1.7% in February. The jump was in part caused by the fact that inflation figures compare prices today with what they were a year ago. That was when the first covid-19 wave spread through the country, pushing down prices.

America's **budget deficit** grew to a record \$1.7trn in the six months since October. Federal spending soared last month, following the third round of stimulus payments aimed at boosting the economy.

Britain's economy improved slightly in February as GDP grew by 0.4% compared with the previous month. The uptick was caused by a recovery in post-Brexit trade with the European Union and by businesses adapting to lockdown conditions.

The International Energy Agency revised up this year's

forecast for the growth in **oil demand** by 230,000 barrels a day to 5.7m. The revision is the result of faster economic recoveries than previously expected, particularly in America and China.

Bernie Madoff, the former financial adviser, died aged 82. He was the mastermind behind the world's biggest Ponzi scheme, which defrauded investors out of \$19bn. He died in a federal prison in North Carolina while serving a 150-year sentence.

Wed at last

After a long and bitter battle, **Suez** and **Veolia**, two French water companies, agreed to merge. For months Suez's board resisted the tie-up. But a higher bid that values Suez at €13bn (\$15bn) helped secure the deal. The transaction will create a giant in the water industry with revenues of €37bn. Both companies' share prices rose by nearly 10%.

Microsoft said it will buy **Nuance**, a voice-recognition technology company, in a deal worth \$20bn. It is the second-largest acquisition in Microsoft's history. It bought LinkedIn, a professional social network, in 2016.

Chinese regulators ordered **Ant Group**, a fintech giant, to restructure and to cut the "improper" links between its financial products and its payment platform. Investors welcomed the end of the uncertainty. In November regulators abruptly halted the group's listing in Shanghai, just days before it was set to raise almost \$40bn.

Kurumatani Nobuaki resigned as the boss of **Toshiba**, a Japanese conglomerate which has been beset with accounting scandals and a disastrous acquisition. The company said the decision was made for personal reasons and was not linked to a recent takeover bid launched by CVC, a European private-equity firm. The bid reportedly caused a split among senior management. KKR, another private-equity group, and Brookfield, an asset manager, are also said to be preparing bids.

General Motors said it would temporarily shut down more factories in America, as a global shortage of semiconductors continues to bite. The move follows similar announcements by other major carmakers. Bosses say the shortfall could last several more months.

Coinbase, an exchange for digital currencies, listed on the Nasdaq stock exchange. It is the first cryptocurrency firm to go public. It closed its first day of trading down 14% with a market capitalisation of \$65bn. The offering coincides with a cryptocurrency surge. The price of Bitcoin rose to a record high of over \$64,000, doubling since the start of the year. The price of Ethereum, a smaller cryptocurrency, has also reached a record high.

Grab, a Singapore-based digital firm, said that it will also list on the Nasdaq but that it will do so through a SPAC. The deal values the company at almost \$40bn, making it the biggest SPAC listing to date. Grab started life as a taxi-hailing app but has added many services, such as food deliveries. Investors view it as a thriving "super-app".

Domino's, a fast-food company, has teamed up with Nuro, a robotics firm, to trial **autonomous pizza delivery**. In a neighbourhood in Houston some customers can opt for their food to be delivered by a small self-driving car, called R2. Once it arrives, customers enter a code into a touchscreen, the car door swings open and dinner is served.





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Asia's next failed state

Myanmar will become a Burmese blaze unless its neighbours adopt a more constructive stance

WHEN THE generals who run Myanmar drew up a constitution to pave the way for an elected government, albeit one that would have no authority over the army, they termed the arrangement “discipline-flourishing democracy”. Untrammelled political competition, they suggested, would lead to disorder and impede development; only the army could ensure order and prosperity. So it is ironic that, since the army took complete control of the country again in a coup on February 1st, the only thing that has flourished is chaos.

Daily protests are a rejection of the putsch, although these have shrunk since the army began shooting unarmed demonstrators (see Asia section). Soldiers are rampaging through rebellious districts, beating and killing at random, and reportedly charging grieving relatives 120,000 kyat (\$85) to release the bodies. Citizens have burned down shops tied to the army. A general strike has paralysed businesses. Public services have largely ceased. In the borderlands some of the 20 or so armed groups that have battled the government on-and-off for decades are taking advantage of the crisis to seize military outposts or caches of weapons. The army has bombed them, sending refugees into neighbouring countries.

In short, Myanmar is becoming a failed state. A vacuum is being created in a territory bigger than France that abuts Asia's biggest powers, China and India. It will be filled by violence and suffering. Although Myanmar is not yet as lawless as Afghanistan, it is rapidly heading in that direction—a sobering warning of how hard it is to put a country back together (see Leader). The ruin of Myanmar is not only a calamity for the 54m Burmese; it also creates risks that could ripple through the region.

Myanmar's guerrilla-controlled enclaves produce heroin and are the world's biggest suppliers of methamphetamine. The country also exports misery. Nine refugee camps over the border in Thailand are filled with victims of the fighting between the army and ethnically based insurgents such as the Karen National Liberation Army (KNLA). Over 700,000 Rohingya, a Muslim minority, fled to Bangladesh from a pogrom led by the army in 2017. A newer export is disease. China last month sealed off Riuli, a border town, after three Burmese visitors tested positive for covid-19.

These problems will get worse before they get better. The army looks as if it means to hack and blast the protesters into submission. It has warned them that they risk being shot in the head and the back—as many have been. The known death toll exceeds 700. On April 9th the army gunned down more than 80 people in the provincial city of Bago. The protesters are using makeshift weapons to fight back. Some are seeking military training from the rebel militias on the borders. In a country awash with arms, that is a recipe for shedding a lot more blood.

A group of elected lawmakers who have managed to escape arrest are talking about forming a “federal army”, presumably encompassing some of the many ethnic militias. The biggest of these can muster 20,000 soldiers equipped with anti-aircraft missiles, artillery and armoured personnel-carriers. The rebels,

even were they to act in concert, do not have the firepower to overthrow the army and reverse the coup. But neither has the army been able to defeat them, despite decades of trying. The KNLA has been battling the army since 1949, making its campaign the world's longest-running civil war.

The army may eventually manage to assert its authority over the centre of the country, inhabited by the Bamar, the majority ethnic group. But the apparatus of the state will be broken. Tax collectors, teachers and doctors have walked off the job in droves. When banks reopen, they are bound to suffer runs. Foreign donors have frozen aid and foreign firms have suspended investments. Before the coup the World Bank had predicted that the economy would grow by almost 6% this year; now it expects it to shrink by 10%. Others warn of a contraction of 20%.

Neighbouring countries are alarmed. China wants to keep out covid-19 and protect strategic investments such as the pipelines that carry oil and gas from the Bay of Bengal to its interior. India has been bristling at the flow of refugees from the fighting, trying to turn them away and then reluctantly agreeing to admit them. Some members of the normally hands-off ASEAN, a club of South-East Asian countries that includes Myanmar, want to convene a summit to discuss the turmoil. Then there is meddling from afar. Russia, doubtless sensing an opportunity to needle the West, has backed the generals, sending its deputy defence minister to gladhand them.

America and Britain have imposed targeted sanctions on senior generals and the firms they control. Such measures, though welcome, will not be decisive. During earlier periods of military rule, Western pressure had little effect on previous juntas. The only outsiders able to influence the generals are Myanmar's close

neighbours: China, India and the other ASEAN countries, to whom they will turn if shunned by the West. The problem is that all these countries have stood back. Beyond airing concerns about refugees or the coronavirus, they tend to play down the havoc as an internal political affair.

Everyone's business

That is short-sighted. Letting Myanmar slide into mayhem will cause misery to ordinary Burmese and threaten neighbours with drugs, refugees and instability. To avoid that, those neighbours should adopt a braver, more constructive approach. No country should recognise the coup; more should impose sanctions on the top brass and their rent-seeking businesses. ASEAN should suspend Myanmar's membership. An arms embargo should be imposed (China, India and Russia are currently the biggest suppliers). Outsiders should press the army to release political prisoners, including Aung San Suu Kyi, the leader they overthrew, and start talking to her shadow government operating near the Thai border; the Thai government should turn a blind eye to the informal channels by which it gets money and supplies.

Only concerted pressure can get the generals to talk to the civilians and thereby put Myanmar onto a less ruinous path. The alternative is a failed state at the heart of Asia. ■



Corporations and democracy

The political CEO

Business and politics are growing closer in America, with worrying consequences

WHEN AMERICANS notice business and politics mingling in other countries they often see it as a sign of institutional decay, crony capitalism or authoritarianism. Today the mixing of government and corporations is happening in America. Sometimes that is in pursuit of honourable causes, as in the protest of CEOs over new laws restricting voting in Georgia and other states. Sometimes it is visible in the statesman-CEO: the latest manifesto from Jamie Dimon, boss of JPMorgan Chase, pronounces on military procurement and criminal justice among many other weighty concerns. Most broadly of all, it is reflected in how the Business Roundtable, a lobbying group, has extended the corporate remit to include serving all stakeholders, for the success of their firms, communities and country.

This newspaper strongly supports the protection of voting rights. We believe that companies operating in competitive markets advance social progress. Nonetheless, as classical liberals, we also believe that concentrations of power are dangerous. Businesspeople will always lobby for their own advantage, but the closer they get to the government, the more harm they threaten to both the economy and politics.

America pioneered the separation of business from politicians in the 19th century by ending the requirement for limited-liability firms to be chartered by the state. This innovation cut against patronage and helped make America rich. Relations between the state and firms have still been turbulent, from the ambition and graft of the Gilded Age, to corporatism after 1945 (see Business section). In recent decades the dominant thinking has looked to Milton Friedman, a 20th-century economist who argued that bosses' authority derives from firms' owners, and that they should prioritise owners' interests, which are usually to maximise long-term profits.

Few firms ever lived up to that ideal, but today they are openly rejecting it because of several forces. As more citizens want firms to support causes they hold dear, CEOs who remain silent risk being accused of complicity. Fund managers seek to evaluate firms' "social and governance" scores, in response to demand from their clients—and to charge juicier fees. Tech firms exercise influence over political speech (see United States section). Many Americans think the government in Washington is broken and may hope businesses can fill the vacuum. Donald Trump bullied and enticed business. President Joe Biden has a big-government agenda that is founded on an alliance with business to bring about national renewal, to fight climate change and to gird America against the rise of China.

Even if those goals are individually laudable, all this amounts to a shift in the role of business that brings underappreciated risks. One is of a display of hypocrisy that discredits everyone. Many socially conscious investment funds are stuffed with the shares of tech giants accused of antitrust violations. Members of the Business Roundtable who took the pledge to look after all their stakeholders went on to cut hundreds of thousands of jobs last year, and are busy campaigning against tax rises to pay for the social cost of the pandemic. To want to defend voting rights,

which are central to democracy, is only natural. But that leads inevitably to the next test—over support for, say, new federal voting laws, reform of the Supreme Court and boycotts of China over human-rights abuses in Xinjiang. If CEOs claim that their companies are moral actors, will they be consistent?

The vigour of the economy is at stake too. Calls for companies to serve all stakeholders risk being vacuous because they provide little guidance on how to prioritise their competing claims or measure the performance of CEOs. A healthy corporate scene is heterogeneous, not uniform: even in an economy that is creating jobs some companies need to fire people, and a country that is slashing emissions still needs some firms to sell oil. Some of today's companies are already protected thanks to their ties to the government, at the expense of the innovative outsiders who are not. Consider Delta Air Lines, which lobbied in private to amend the voting legislation in Georgia. It is part of an oligopoly that hurts consumers, has just received \$8.5bn of government cash, cut its workforce by 19% during the pandemic and is an important polluter.

The risk to politicians is more subtle. Their inconsistency is blatant: progressives who once abhorred corporate involvement in politics now urge it, while Republican leaders who cosied up to big business now want it silenced. But politicians routinely deflect accusations of hypocrisy. The real danger is that when business is asked to help solve political problems, like voting reform, executives exploit their seat at the table to promote their own narrow interests. There is a profound dissonance in the idea that popular discontent with politics can be resolved by giving more power to an elite of unelected CEOs.

The competition Friedman endorsed is a better way of thinking about companies and politics. Competition makes it legitimate and lucrative to embrace social change. In a market firms must anticipate and adapt to society's preferences. Consumers want more humane and less wasteful products, so firms are innovating to provide them, from Beyond Meat to Tesla, in turn forcing McDonald's and General Motors to adapt. In order to recruit the best staff, firms increasingly need open and diverse cultures. And to thrive in the long-term, companies must anticipate how laws on externalities will change as public opinion shifts. Few capitalists today would make lasting investments based on an assumption of zero taxes on carbon emissions or supplies from labour camps in Xinjiang.

Perhaps the new corporate agenda is just another front in this competition—marketing to win over talent and customers. If so, better and more effective tactics are available, such as Home Depot's programme to raise voting turnout among its staff. Because make no mistake, companies are not a substitute for effective government. It is the state that ensures markets are competitive and not skewed by monopolies or corruption. Only governments can tax externalities such as pollution and build a social safety-net. And the only legitimate way to mediate America's bitter divisions and protect its fundamental rights is through the political process and the courts—not the executive suite. ■



Monetary policy in America

Be prepared

Inflation is rising. The Federal Reserve should be clearer about what comes next

THE INEVITABLE has begun. America's consumer-price index (CPI) in March was 2.6% higher than a year earlier, when prices collapsed as the pandemic struck. The increase in inflation from 1.7% in February was the biggest rise since 2009, the last time the economy was recovering from a deep shock. Several more months of high numbers—by rich-world standards—are coming. The CPI could reach over 3.5% by May. On the separate price index used by the Federal Reserve, inflation will soon rise above the central bank's 2% target.

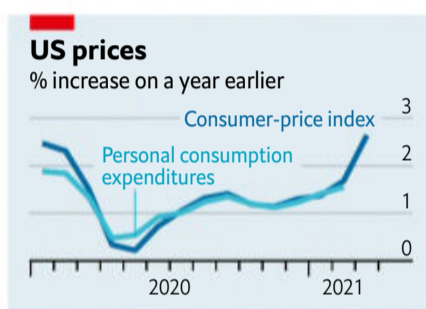
The Fed is rightly unworried by cosmetically higher inflation that reflects what happened a year ago. Yet the central bank does have an inflation problem that will trouble it when the economic recovery produces sustained price pressures. A new monetary-policy framework it adopted in August dictates that it should push inflation temporarily higher than its target after recessions, to make up lost ground. The problem is that nobody knows by how much or for how long it wants inflation to overshoot after the pandemic. With the risks of an inflationary episode greater than they have been in years, the ambiguity is an unfortunate additional source of uncertainty.

The idea behind "average inflation targeting" is to make sure that inflation averages 2% over the full economic cycle, rather than falling short over time owing to recessions. It is a welcome corrective to the old regime, which took too long to restore the economy to health after the global financial crisis due in part to a misplaced fear of inflation.

Yet the new framework remains vague. Richard Clarida, the Fed's vice-chairman, has suggested that it means waiting to hit inflation and employment goals before raising interest rates, and then operating as normal—a bit like a driver waiting to hit the brakes until the car has arrived, regardless of its stopping

distance. Other Fed officials have hinted that they want to make up more precisely the ground lost to downturns.

But it is unclear whether to measure from March 2020, when the present crisis struck, or from August, when the new regime came into effect. Include the spring and there is a shortfall; start in August and there is none, because prices have risen at an annual pace of more than 2% since the autumn (see Finance section). Then again the Fed could argue that, as long as long-term inflation expectations stay around its target, it is already set for 2% on average and need not overshoot by much. Policymakers also disagree about how far above the target it is reasonable to go, temporarily, in the name of catching up.



Central bankers often differ over the state of the economy or the probable impact of their monetary-policy decisions. Failing to articulate what they are aiming for is more unusual. The ambiguity is contributing to uncertainty over inflation and interest rates, which has also been heightened by the novel circumstances of the pandemic and President Joe Biden's enormous fiscal stimulus. A gap has opened between financial markets, which expect the Fed to raise interest rates in 2022, and the median monetary-policymaker, who does not expect rates to rise until 2024 at the earliest. Investors are also pricing in a growing risk that inflation will run well above the Fed's target for quite some time.

Jerome Powell, the Fed chairman, has said that it is deliberately avoiding committing itself to a numerical rule. Sometimes central bankers must avoid excessive specificity, and forging consensus on a committee can be hard. But sooner or later the Fed must decide what it wants as inflation rises. It should do so soon. The monetary-policy meeting that starts on April 27th would be a good time to clear up some of the ambiguity. ■

Afghanistan

The final countdown

Joe Biden is wrong to pull troops out of Afghanistan

A DOZEN YEARS ago Afghanistan was sliding into carnage. The Taliban, who had scattered back into their villages after the American invasion in 2001, had regrouped and were launching attacks daily on American forces. America was split. President Barack Obama argued that Afghanistan's elected rulers, though deeply flawed, were much better than the jihadists they had replaced, and should be protected. His vice-president, Joe Biden, wanted to draw down troops, leaving only a small counter-terrorist force. Mr Biden lost the argument; an extra 17,000 American troops flew into Kabul to prop up the government.

Today Mr Biden is president, and faces a similar dilemma. The Taliban are as strong as they have been since 2001. The Afghan state, backed by America and its NATO allies, is tottering.

This time, however, Mr Biden is in a position to get his way. By September 11th, two decades exactly since al-Qaeda terrorists felled the twin towers, prompting America to overthrow the Taliban regime that harboured them, almost all the remaining 2,500 American troops in Afghanistan will have left. A handful will stay to guard the embassy. The decision was made against the advice of America's generals, who had warned Mr Biden (and Donald Trump before him) not to pull out (see Asia section).

Mr Biden thinks the costs of staying outweigh those of leaving. He campaigned promising to end America's "forever wars". Few Americans see the case for remaining part of a seemingly unwinnable conflict 7,000 miles away. Yet the decision was wrong. American troop levels were already much reduced. No ▶▶

▶ American soldier has died in combat in over a year. It costs little to keep a small force in place, guaranteeing the security of a larger number of NATO troops who have been training Afghan forces. With America gone, they will surely leave, too.

America has defended other allies, such as South Korea, for far longer than it has protected the Afghan government. Abandoning Kabul to its fate will undermine other allies' confidence in America. And it will lead to more bloodshed, not less. Civilian casualties are already mounting; the number killed increased by 29% in the first three months of this year, compared with last, says the UN. The government still controls most cities, but several, including Kabul, are under siege and racked by suicide-bombings. The Taliban hope to oust the government, just as they ousted and slaughtered Afghanistan's rulers in the 1990s after their Soviet sponsor collapsed. A Taliban victory could mean the reimposition of a pious, premodern tyranny. Urban Afghans could lose the freedom to listen to pop music. Girls may be stopped from going to school, or killed if they try.

If Mr Biden insists on pulling out American troops, he should at least take steps to reduce the likelihood of total disaster. The

Soviet-backed state did not collapse immediately when Russian soldiers withdrew; it fell when the money ran out. So America should promise to subsidise Kabul for longer. The Taliban's leaders now have plush offices in Qatar and travel freely internationally. They are, at least nominally, negotiating with Kabul. They must be made to realise that if they take over by force, they will be international pariahs once again, and the money will stop. Even in Taliban-held districts teachers and doctors are paid by foreign donors. Ashraf Ghani, Afghanistan's president, must also now realise that more American troops are not coming to his rescue, and try seriously to negotiate—or cede his position to someone who will.

The omens are not good. The Taliban believe they have defeated America; they do not seem inclined towards concessions. Even if they negotiate rather than shoot their way back into government, the Afghan constitution of 2004, with its legal protections for women and other freedoms, is unlikely to last. The Taliban show little sign of giving up their links with al-Qaeda. Mr Biden may be pulling troops out of the country now. A future president may have to send them back in. ■

Biology and ethics

Softly, softly

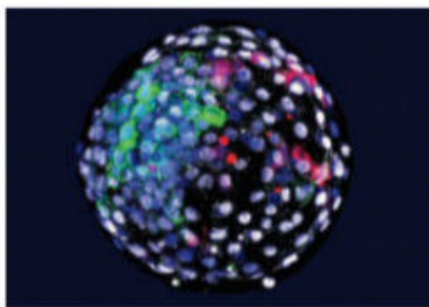
The creation of part-human, part-monkey embryos will discomfit many, but research should be encouraged

PHYSICS IS FAMOUS for mind-bending ideas. Subatomic particles can be in many places at once. The flow of time depends on how fast you are moving. But because such ideas are confined to the realm of the invisibly tiny or the inhumanly vast, most people regard them as little more than diverting curiosities.

Biology has mind-bending ideas, too. Since they may concern the everyday world of living bodies, their impact is often felt much more viscerally. One example is “chimeras”, organisms which, a bit like the mythological beast, are formed from cells of two distinct species. Scientists have already produced goat-sheep and mouse-rats. Now a group of American, Chinese and Spanish researchers has reported significant progress in the quest to create chimeras using human cells—in this case, combining them with cells from monkeys to form functioning embryos (see Science & technology section).

It is another example of humanity's growing power to tinker with the basics of life, a power which makes many people uncomfortable. The work leaves the very idea of a species looking at least a little blurry at the edges. Experiments involving human cells can break deep-seated taboos about human dignity, human exceptionalism and—among the religious—stir up worries about interfering with God's creation.

There are also more practical concerns. The human-monkey embryos were not intended to grow to maturity. But it is right to wonder what might have happened if they had—and what should be done if, or when, someone decides to try. What is the moral and legal status of an organism with one human genome and one non-human one? What effect, if any, might the human cells have on the animal's brain? Mindful of such worries, many places, including America and Britain, tightly regulate what is allowed. Much of the latest work was done in China.



Despite those concerns, the potential benefits outweigh the risks. Such research should always be done cautiously, and be properly monitored. But it should also be encouraged, because the rewards it brings could turn out to be significant. Chimeric embryos may offer a way around ethical problems that make experiments on human embryos difficult. That could lead to new treatments for congenital diseases. This particular bit of research was inspired by a desire to grow human organs in the bodies of animals, from where they could eventually be used for transplants. Easing the long-standing worldwide shortage of transplantable organs could save many lives. In America alone, more than 100,000 people are on transplant waiting-lists.

The best way to ensure that such research can proceed is to talk about it with the public, not just among scientists and expert regulators. Ethical debates around chimeras have been going on for years, but mostly in scientific journals and academic conferences—places where outsiders rarely venture. If dramatic demonstrations of this kind of scientific advance take people by surprise they are likely to create a backlash. Scientists should also work to ensure that international rules are harmonised, to the extent that is possible.

History offers grounds for optimism. Many biological technologies that were at first decried as reckless meddling with the natural order of things ended up proving much less frightening in practice than they once seemed in theory. In vitro fertilisation was once seen as unnatural; these days it is routine, at least in the rich world. Genetically modified crops provoked street protests and dire warnings about “Frankenfoods”. Billions of meals later, the technology has proved both safe and effective. Ultimately, however, scientists need to convince not just each other but the public, too. ■

Future of the union

The Untied Kingdom

The bonds that hold the United Kingdom together are fraying. The government needs to try to mend them

THE UNITED KINGDOM was not born in glory. The English conquest of Ireland in the 17th century was brutal, motivated by fear of invasion and facilitated by the superiority of Cromwell's army. The English takeover of Scotland in the 18th century was more pragmatic, born out of Scottish bankruptcy after an ill-fated American investment and English worries about France. But the resulting union was more than the sum of its parts: it gave birth to an intellectual and scientific revolution, centred on Edinburgh as well as London; an industrial revolution which grew out of that, enriching Glasgow as well as Manchester and Liverpool; an empire built as much by Scots as Englishmen; and a military power which helped save the world from fascism.

That union is now weaker than at any point in living memory. The causes are many, but Brexit is the most important. Political leaders in London, Edinburgh and Belfast have put their country at risk by the way they have managed Britain's departure from the European Union.

Boris Johnson, the prime minister, has done it carelessly, by putting party above country and espousing a hard Brexit. The Scots never wanted to leave the EU and are inclined to seek a future outside the UK (see Briefing). In the past year opinion polls have shifted from a small majority backing the union—broadly the pattern since a referendum rejecting independence in 2014—to a small majority backing departure.

Nicola Sturgeon, Scotland's first minister and leader of the Scottish National Party, has done it determinedly, by exploiting Scots' dislike of the Brexit settlement. The ills of fishermen unable to sell their catches are blamed on Westminster. Polls suggest that, in the Scottish elections in May, the SNP will gain an overall majority in a system designed to avoid it.

Arlene Foster, first minister of Northern Ireland and head of the Democratic Unionist Party (DUP), has done it stupidly, by rejecting the softer Brexit proposed by Theresa May, Mr Johnson's predecessor. That would have avoided the vexed issue of how and where to create a border with the EU. Neither Brussels, nor Dublin nor London was prepared to create a hard border on the island of Ireland, so Mr Johnson created one instead in the Irish Sea, between Great Britain and Northern Ireland, weakening the union which the DUP exists to defend. That helps explain a week of rioting earlier this month (see Britain section). Resentments fester and, as the 100th anniversary of Irish independence nears, reunification has never looked closer.

If the Scots, Northern Irish or even the Welsh choose to go their own way, they should be allowed to do so—but only once it is clearly their settled will. That is by no means the case yet, and this newspaper hopes it never will be.

Breaking up a country should never be done lightly, because it is a painful process—politically, economically and emotionally. Ask the Indians, Pakistanis and Bangladeshis or the Serbs, Croats and other former citizens of Yugoslavia. Few splits happen as peaceably and easily as that of the Czechs and Slovaks. Though it seems inconceivable that the citizens of today's UK would start murdering each other, that is exactly what they did

during the Northern Irish Troubles that ended less than a quarter of a century ago.

When not bickering about the constitutional question, the UK's constituent parts work together fine. England, Scotland, Wales and Northern Ireland ran separate covid-19 lockdowns, adjusted to local rates and sensitivities. Vaccines, where scale counts, were run nationally.

The UK's survival matters more broadly, too. Although its historical record is hardly unimpeachable, it is on the side of democracy, human rights and transparency in a nasty world. No doubt its constituent parts would embrace similar values, but when independent England or Scotland piped up in defence of Hong Kong, they would be easily ignored—especially if they lost their permanent seat on the UN Security Council.

The fact that the survival of the union is now in Mr Johnson's unreliable hands will bring no comfort to anybody who hopes it has a future. Yet he is concerned enough to have created a "union unit" within Downing Street, and put it under Michael Gove, one of his cleverest colleagues and the government's only high-profile non-English minister.

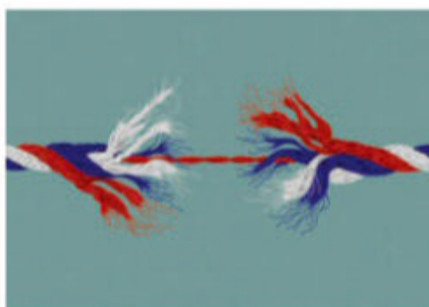
Some of what Mr Johnson is doing is sensible. He is right to insist that now is not the time for another Scottish referendum. The last one, only seven years ago, was advertised as a once-in-a-

generation opportunity. It is true that Britain's circumstances have since changed, but Brexit is very recent, and opinion about it has not had a chance to settle. There should not be another referendum until polls show a clear and sustained majority for independence. Holding frequent referendums is a recipe for instability and an eventual end to the union: at some point the trigger and the bullet will coincide.

But the government is getting much else wrong. It should stop plastering the Union Jack everywhere. To those whose identity is primarily regional, it looks like a campaign that is designed to stamp Westminster's ownership on all corners of the nation. It should use non-English figures more, including Ruth Davidson, the popular former leader of the Scottish Conservative Party. Mr Johnson also needs to stop lying. His dishonesty over the Irish Sea border, which he said would be created "over [his] dead body", exacerbated his betrayal of the province. And he needs to improve Britain's relations with Europe, including by aligning Britain's food-and-agriculture standards with those of the EU—the main source of the trade friction that has infuriated Northern Ireland's unionists. That would make a trade deal with America harder, but no such deal is on offer now, and none ever will be if the peace in Northern Ireland is put in jeopardy.

You only had two jobs

Mr Johnson was elected prime minister to "get Brexit done". In carrying that out, he has endangered his country's integrity. His single most important task for the rest of his term in office is to hold the union together. If he fails, he will go down in history not as the man who freed the United Kingdom, but as the man who destroyed it. ■





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Director

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EDHEC seeks a Director for its new Climate Finance Institute

EDHEC, one of the leading European business schools, recognised for the quality of its research in finance, is recruiting a Director for its new climate finance research institute, the EDHEC Risk Climate Impact Institute (ERCII).

EDHEC's ambition is to make the EDHEC Risk Climate Impact Institute an international centre of reference in the area of fundamental and applied research on measuring the impact of climate change on asset prices and on the financial industry's participation in mitigating climate change.

Drawing on the reputation that EDHEC Risk Institute has built up over the past 20 years, the EDHEC Risk Climate Impact Institute intends to develop its activities in close cooperation with the investment industry.

Responsibilities and missions

In close cooperation with ERCII's Scientific Director, the institute's Director will manage the institute, which has been provided with a budget of 25 million euros for the first five years. The Director will participate in building a team of researchers and development support staff of around 15 people.

The director will have direct responsibility for the implementation of the institute's outreach, whether it involves organising presentation events and promoting the research to the industry or scientific cooperation with the industry.

A climate-investing specialist, the institute's director will have direct responsibility for the research & development focus on the financial industry's participation in mitigating the risk of climate change.

With very good knowledge of the industry, the director will develop and coordinate industry relationships, whether to fund research initiatives or implement joint research ventures.

A good communicator, the ERCII Director will be the institute's spokesperson and its institutional representative.

Profile

This position is reserved for a high-level professional who has exercised research responsibilities in the area of climate finance for at least five years and has more than ten years of professional experience in the finance sector.

Ideally a PhD holder, the Director will have dual expertise on both technological and financial matters relating to climate change.

Apart from their scientific qualities, the Director will need to have genuine project leader and communication qualities to fully cover the representation and development of the institute.

The institute's working language is English, so the Director will need to be bilingual if their first language is not English.

Location

The institute will have staff on EDHEC's campuses in London, Paris and Nice, so it is entirely possible for the director to exercise their responsibilities from one of these locations.

The director is expected to be highly geographically mobile in carrying out their missions.

Remuneration

The remuneration will be in line with the institute's ambitions and EDHEC implements an active talent recognition and management policy by associating its talent with the success of the initiatives that they develop.



Pulse oximeters and race

Regarding your article on race and sex bias in medical devices (“Fatal truths”, April 10th), I founded Masimo and co-invented the modern pulse oximeter, which measures blood-oxygen levels. Black patients have indeed been a challenge for conventional pulse oximetry, resulting in overestimates of arterial blood oxygen saturation, but that is not the whole picture. Many studies have reported a bias between different brands of pulse oximeters on patients, with larger biases found in those with darker skin.

An internal study at Masimo, which covered 2,000 subjects, including 1,000 with dark skin, found a 0.3% difference between the groups across an oxygen saturation range of 70-100%, and 0.25% in the more limited pulse oximetry range of 92-96%. When we compared black and white subjects who had reported their ethnicity (200 black and 194 white) we found a bias of 0.4%, between the two groups. Applying the statistical test used in the University of Michigan study you referred to, we found a difference between dark- and light-skinned subjects of 1%, whereas that same Michigan test found a 325% difference.

Given that our bias was so much less, we questioned what could be the cause of the disparity between the results presented by Michigan and all the data we had seen in the past two decades. We are aware of several potential factors that, if present in the patients in the study, affect the accuracy of pulse oximetry readings. These include sickle-cell disease, tissue damage and poor circulation, which afflict black patients more than any other racial group, and elevated methaemoglobin. Hydroxychloroquine, which has been used on covid-19 patients, has been shown to elevate methaemoglobin in black patients.

Perhaps the most critical oversight in the design of the Michigan study was an unacceptably long delay of up to ten

minutes between pulse oximetry readings and invasive blood sampling. From our studies we know that these two measurements must be taken simultaneously, because the oxygen saturation of sick patients can change dramatically in ten seconds, let alone ten minutes.

Moreover, pulse oximeters do not all have the same accuracy and reliability. It is important that researchers report the brand and version they used. In the pursuit of science and patient safety, Masimo is conducting further tests for bias in pulse oximetry measurements on black patients and we will report our findings in the near future.

The Michigan study is important as it highlights the need to include subjects that represent all the different kinds of patients that will depend on a medical intervention. It is equally important that studies actively control for confounding variables that could produce biased conclusions and lead us all astray.

JOE KIANI
Chairman and CEO
Masimo
Irvine, California

In support of the IMF’s SDR

Your criticism of the IMF’s allocation of \$650bn in new “Special Drawing Rights” lacked an understanding of the instrument (“Special drawing wrongs”, April 3rd). This is not primarily about granting unconditional aid to low-income countries under external financial pressure, though that is a significant by-product that can be shared by many other countries. More important, the allocation will help support the recovery of the world economy, and thereby all IMF members. In 1969, when the SDR mechanism was established, the purpose was to facilitate the smoother working of the international adjustment process by relaxing the external constraint on countries’ macroeconomic policies. That rationale underlay the three previous general SDR allocations.

The global economy should have received a SDR-shot-in-the-arm a year ago. The delayed global responses have steepened the task ahead. It is naive to suggest that the appropriate way to respond would have been, or should be, prolonged negotiation about special funds, IMF facilities, and more bilateral aid. Many countries’ pandemic-related medical needs are substantial.

Additionally, countries have been hit with an exogenous economic shock through no fault of their own. The IMF was created with pre-positioned financial resources to respond quickly to such shocks, and the SDR is a useful tool in its response kit. The money is there. It can and should be delivered quickly; better late than never.

EDWIN TRUMAN
Senior fellow
Mossavar-Rahmani Centre for Business and Government
Harvard University
Cambridge, Massachusetts

Your leader makes the case that a general allocation of SDRs will be a sign of failure for the IMF. This is the first proposal during this pandemic that meets the scale of the economic challenge facing low and middle-income countries. The IMF should be congratulated for taking action when few others have. The proposal should be swiftly accompanied by a recycling mechanism to transfer SDRs to where they are needed most: to the countries that desperately need liquidity and reserves to respond to the pandemic and avoid default.

JAMIE DRUMMOND
Global strategist
Global Goal
Washington, DC
DR DAVID MCNAIR
Executive director
Global Policy
The ONE Campaign
Brussels

A full list of signatories to this letter is available online

The pen club

A small nit. Bagehot stated that only three British prime ministers—Disraeli, Churchill and

Boris Johnson—made a living by writing (March 27th).

However, before the death of his elder brother, Lord Salisbury (as he was known) made his living by writing for the *Saturday Review*, the *Quarterly Review* and similar publications. His articles were necessary to support a growing family. Once assuming the family lands, he concentrated on politics, becoming an important Victorian prime minister.

RALPH WALTER
Centre in Victorian Political Culture
Keble College, Oxford

Sport boycotts

Any cold shouldering of the Beijing Winter Olympics could backfire (“Winter of discontent”, March 27th). The boycott of the Moscow Olympics in 1980 merely mobilised Russian public support for the Soviet invasion of Afghanistan. It poisoned the well even deeper between America and the Soviet Union. A NATO exercise in 1983, Able-Archer, was mistaken by Moscow as preparation for an American first-strike because all trust between the nuclear rivals had been lost.

The world may soon need China to prevent a nuclear conflict in the Taiwan Strait, South Asia or the Korean peninsula. An Olympic boycott could burn the bridges to Beijing.

FRANK RICHTER
Clawson, Michigan

Veritas

Bartleby (March 20th) asks how to tell if people went to Harvard. An older version of the joke goes, “You can always tell a Harvard man, but you can’t tell him much.”

RICHARD WAUGAMAN
Potomac, Maryland

Letters are welcome and should be addressed to the Editor at The Economist, The Adelphi Building, 1-11 John Adam Street, London WC2N 6HT
Email: letters@economist.com
More letters are available at: [Economist.com/letters](https://www.economist.com/letters)



The long road back to Europe

Many Scots see independence as the antidote to Brexit. It may be its mirror, too

THE END OF Britain's 47-year experiment in Europe had a Scottish air to it. On January 29th last year the European Parliament ratified the Brexit divorce, after three years of negotiations which had exhausted Britons. On the square outside in Brussels a bagpiper played "Flower of Scotland", a folk tune, and "Ode to Joy", the European anthem. Aileen McLeod, a member of the parliament for the Scottish National Party (SNP), told other members that her country would soon be back: "In the meantime, I hope very much that you will leave a light on for Scotland." After the vote was cast, many of the MEPs joined hands and sang "Auld Lang Syne", a song of friendship by Robert Burns, Scotland's national poet.

As prime minister, David Cameron oversaw two constitutional referendums with the potential to change the United Kingdom irrevocably. He expected to win both handily. In 2014 he had permitted Scots to vote on independence from the rest of Britain. They rejected it by 55% to 45%, and the following morning Mr Cameron declared the issue settled for a generation. In 2016, he was not so fortunate. In

the referendum on membership of the European Union, Britons voted by 52% to 48% to leave.

Those two decisions are now inextricably entwined. Scots, more Europhile than the English, voted by 62% to 38% to remain in Europe. So Brexit has reopened the question of Scotland's place in the United Kingdom, provoked demands for a new referendum, and reshaped the independence movement as an avowedly Europhile cause. For a growing number of Scots, independence has become the escape route from Brexit. Their movement—full of young, educated idealists, who are green, pro-migration and increasingly stirred by the politics of gender and race—looks like the opposite of the alliance of English traditionalists who supported Brexit.

The movement hopes soon to have its moment. Scotland will hold elections on May 6th for its devolved parliament in Edinburgh, which since 1999 has run education, health care and transport (foreign relations, defence and the economy are still run by Westminster). Nicola Sturgeon, the SNP leader, will seek another term as first

minister. An SNP government, she says, will have a mandate to hold a second vote on independence. If it won, that would lead to separation talks with London, and open the door to Scotland's accession to the EU. Around 65% of Scots still want to rejoin the bloc. Polls show a small lead for separation (see chart 1 on next page).

But victory in a second referendum would bring Ms Sturgeon a similar challenge to the one which Britain faced in 2016, of extracting a nation from a political and economic union without unleashing chaos. The SNP's top brass believe they can avoid such trauma and learn from British errors. The Brexiteers had wildly different ideas about what Brexit meant, made no preparations for negotiations, and refused to anticipate problems such as the border with Ireland. Nationalists, by contrast, are clear about Scotland's destination as a new EU state, and the Scottish government is studying the EU accession process. In private, senior nationalists are a little more candid these days about the obstacles: the need for a trade border with England, a new currency and a legally complex transition period for the chilly years between leaving one union and joining the other.

Yet many of the technical and legal challenges would look similar to those brought about by Brexit: settling bills, splitting assets, fixing the right to work and study, and access to fishing waters. The union has stood since 1707, so Scotland is far more deeply stitched into the United Kingdom than Britain was into Europe. ▶▶

► The hidden systems of daily life—tax collection, immigration controls, electricity distribution—must be unwoven. Unlike Brexit, Scottish negotiations would need to grapple with the fate of nuclear weapons, sovereign debts, and oil and gas reserves. Only once Scotland was a state could accession talks with Europe begin. Unionists warn that, rather than an escape from the turmoil of Brexit, Scotland would be choosing its own “Brexit on steroids”.

But we can still rise now

Unlike British rule in Ireland, for most of its life the union has rested on Scots’ consent, which they have been, for the most part, happy to grant. Scotland had a stake in Britain’s government, producing prime ministers and cabinet members. Empire and free trade with England made it wealthy and the union did not interfere with Scotland’s church, legal system and universities. Demands for a parliament grew in the 20th century, but calls for independence only came from a noisy fringe.

The pillars of consent were weakened under Margaret Thatcher. She was more willing to impose London rule on Scots in areas such as higher education and local government. The collapse of coal, steel and manufacturing that followed privatisation hit Scotland hard, drove up unemployment, and gave the SNP its “anti-Scottish” villain. In the 1980s, the idea that Westminster lacked consent and legitimacy in Scotland gained ground in the Labour Party. Tony Blair hoped the devolved parliament would forestall independence. The SNP hoped it would be a stepping stone.

The Labour Party dominated the new parliament but became detached and complacent, and the SNP displaced it as the force of the Scottish left. In 2011 it won a majority in the Scottish Parliament. In 2015 it swept Labour’s Scottish MPs out of Westminster, too. As the devolved parliament has thrived, so the political news Scots digest has become increasingly different from England’s. Scots migrate south less, so cultural ties weaken. Yet, given the choice in 2014, they still opted to stay.

There the story might have ended, were it not for Brexit. Mr Johnson has chosen a hard exit, ditching the EU’s single market and customs union. He has spurned membership of Erasmus, an exchange programme popular with Scottish students, and an easy migration regime. That has cracked the pillars of consent. Scotland has looked suddenly powerless: the views of its voters, their parliament and their MPs in Westminster have counted for little. Brexit cuts deep into the courts and universities, and will make it poorer, as fishermen and bankers encounter trade barriers to Europe where before there were none.

In 2014, with Britain still in Europe, an architect in Glasgow could vote against in-

dependence, for she could have it all, seeing herself as Scottish, British or European, and working as freely in Munich as in Manchester. Now she is being asked to choose which identity she prioritises, and in which single market she wants to work.

Unionists see the SNP’s Europhilia as opportunistic. The party had opposed Britain’s entry into the EU in 1973, reckoning Europe remote and undemocratic. But it changed as dictatorships fell and Europe’s purpose evolved from stopping old countries going to war to helping new ones find freedom and prosperity. Ms Sturgeon welcomed Europe’s embrace of former communist states in 2004 as evidence of the “sheer normality of independence in Europe for small nations”.

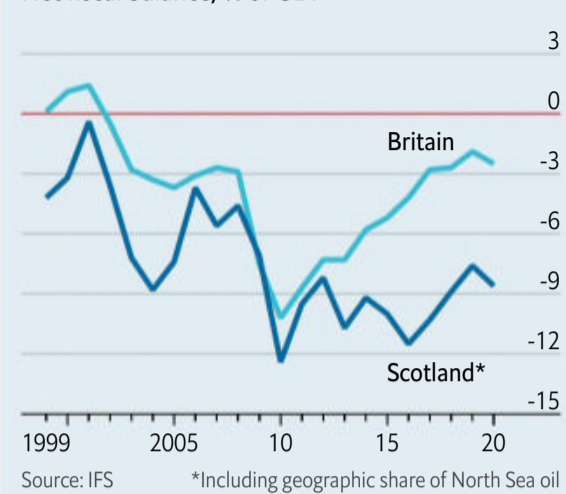
The bloc does the hard work of independence for young, small states: it provides a ready-made currency, a trade policy and market of 450m consumers, and heaps of funding for motorways and wind farms. The EU’s breadth and reach, say nationalists, means independence is not a leap in the dark like Brexit, but a defined destination for which they can prepare. “Our answer to absolutely everything is whatever is working for Ireland, we’ll do,” says one SNP bigwig.

Scotland would blend in fine, as a middling EU member by size and disposition. It has typically European interests—financial services and green energy—and European problems, too—poor demographics and urban decay. Ms Sturgeon sees it as part of an arc of Nordic social democracies (new parents are sent a box of baby things, a policy borrowed from Finland) and has won the sympathy of European leaders.

But Europe may be leaving a light on for a long time. The first step is getting a referendum. Polls suggest Ms Sturgeon will keep her job after May 6th, either with an outright majority or in a pro-independence coalition. A toxic feud with Alex Salmond, her predecessor, has led to his launching a rival pro-independence party, Alba, but it does not seem to have badly dented SNP support. Her main problem

Spending freely

Net fiscal balance, % of GDP



will be getting a British prime minister to approve a new poll. Britain has no equivalent to Article 50, the EU’s unilateral exit clause. Under British law, the union is the exclusive concern of the Westminster Parliament, and the last referendum was held with Mr Cameron’s permission. Ms Sturgeon would like Mr Johnson to follow his lead, arguing that a vote must be deemed legally sound in London and overseas to result in statehood. If he does not, Ms Sturgeon will seek to force his hand by pushing ahead with a referendum law in the Scottish Parliament and daring him to approve it or to challenge it in the Supreme Court.

Mr Johnson says he will refuse, and that a referendum is reckless while Scotland recovers from covid-19. An unauthorised plebiscite would be a significant change in SNP strategy, which he could simply ignore or legislate to ban. Nearly half of English voters would be pleased or indifferent about Scottish independence, according to YouGov, a pollster, but it matters to the Conservative and Unionist Party, as the Tories are properly known. Scottish independence would cause both allies and adversaries to rapidly downgrade Britain’s global role, and inflict emotional trauma. “It would feel like chopping off your own arm,” says one Scottish Tory.

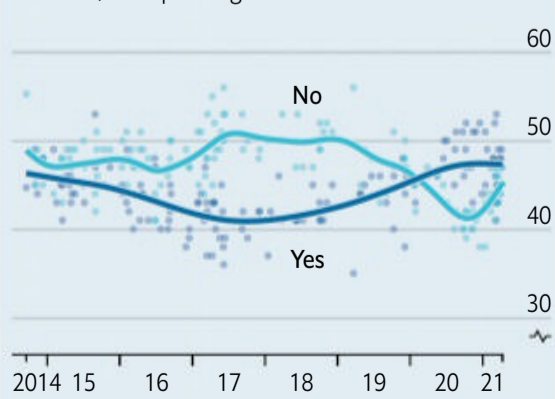
Whereas Mr Cameron offered greater devolution, Mr Johnson’s strategy is to reinforce London’s power, to fly the Union flag and splash the cash. EU funds for bridges and roads used to be handed to the Scottish government, but in future the British government will apportion the cash directly. Such a strategy risks strengthening support for independence. A new referendum, under a future government, may simply become a matter of time.

Unionists will ask Scots to focus on the economics of independence, which are liable to be tougher than Brexit’s. Around 60% of Scotland’s exports go to the rest of Britain, and leaving will cut GDP over the long run by between 6.5% and 8.7%—two to three times more than the cost of Brexit—according to a paper from the London

Let’s split

“Should Scotland be an independent country?”

Scotland, % responding



Sources: Ashcroft; BMG; Deltapoll; ICM; Ipsos MORI; JL Partners; Kantar; Panelbase; Savanta ComRes; Survation; YouGov

► School of Economics. EU membership will do little to mitigate that, it argues, as joining the single market would mean stricter controls at the English border.

The currency is a central weakness. In 2014, the British Treasury rejected the SNP's plan to use sterling. The SNP now says it would use it unofficially, as Panama uses the dollar, before adopting a Scottish currency "as soon as practicable". Since the EU states must consider their exchange rates with the euro "a matter of common concern", Scotland would need to have a new currency or agree to a short transition before joining, notes Kirsty Hughes of the Scottish Centre on European Relations.

As a condition of membership, Scotland would promise to adopt the euro. The SNP argues this can be deferred indefinitely, as Sweden and Poland have done. Fewer than one in five Scots wants the euro, but the difficulties of creating a currency may make Frankfurt's embrace more attractive. With a new Scottish currency, big exchange-rate risks would suddenly appear in cross-border contracts. Wages paid in it may shrink relative to mortgages agreed in sterling, a lesser risk with the more stable euro. Large banks would shift some of their activity overseas, fearing a Scottish central bank would struggle to act as a lender of last resort.

Scotland's public finances would be squeezed, which would frustrate nationalists who want a more generous welfare state. Scotland raises less tax and spends more per person than Britain as a whole. The implied deficit (currently plugged by the central government) was 8.6% of GDP in 2019-20, compared with 2.6% for Britain as a whole (see chart 2 on previous page). Tax revenues from oil and gas are volatile and fell from £10bn in 2008 to £650m last year. Scotland would be expected to meet the EU's deficit criteria of 3% before or soon after joining. A paper commissioned by the SNP in 2018 proposed doing this within ten years by holding down public spending. While the British government can borrow at low interest rates, a new Scottish government would have to establish its own fiscal credibility, a task made harder by raising funds in a new currency.

The Remain camp relied on dry economics before the Brexit vote. Unionists face the same problem. Nationalists counter that trade patterns will shift and independence will give Edinburgh the levers to lift productivity. Goldman Sachs, a bank, has told clients that as well as big challenges, there are "potential economic upsides" to independence if Scotland can spur investment and improve skills. Polls suggest that, despite the gloomy predictions, Scots think Brexit more economically damaging than independence would be, and those most pessimistic about Brexit are the ones most enthusiastic about breaking away.

After Brexit, Tories can hardly ask Scots to heed businesses' concerns.

Unionists, with good cause, argue that the negotiations would be eerily familiar, too. Much of the content would resemble the 177 pages of legalese of the Brexit divorce treaty. That calculated Britain's share of the EU's financial liabilities, the rights of EU citizens in Britain, and tied up a long list of administrative loose ends, creating rules for personal data, nuclear fuel and legal disputes. Independence talks would cover a wider range, and be playing for higher stakes. The SNP wishes to eject Britain's nuclear arsenal, which alarms American military planners. Britain's £2.1trn national debt (98% of GDP) would need to be apportioned, as would its assets, including properties and oil and gas reserves.

The work would consume both governments. Brexit involved 25,000 civil servants (the Scottish government has just 5,000) and crowded out other issues for several years. The two parliaments would churn through a flurry of legislation to dissolve their relationship, create a new Scottish constitution and government, enact their divorce terms and remodel what was left of the rump British state.

And be the nation again

In the Brexit talks the EU had powerful leverage as the bigger party. As for Scotland, its deep integration with Britain would give Westminster the upper hand. The question is how far it would exploit it. "A brutal rupture would pretty much turn the lights out in Scotland," says Philip Rycroft, a former British official who took part in informal preparations for a yes vote in 2014. He would urge ministers not to abuse that power, but an "antagonistic, zero-sum, Brexit negotiation mindset" could prevail, he warns.

Just as Europe feared a cascade of exit votes after Brexit, the fear of Wales and Northern Ireland also wanting to go their own way would drive a hard deal, says the

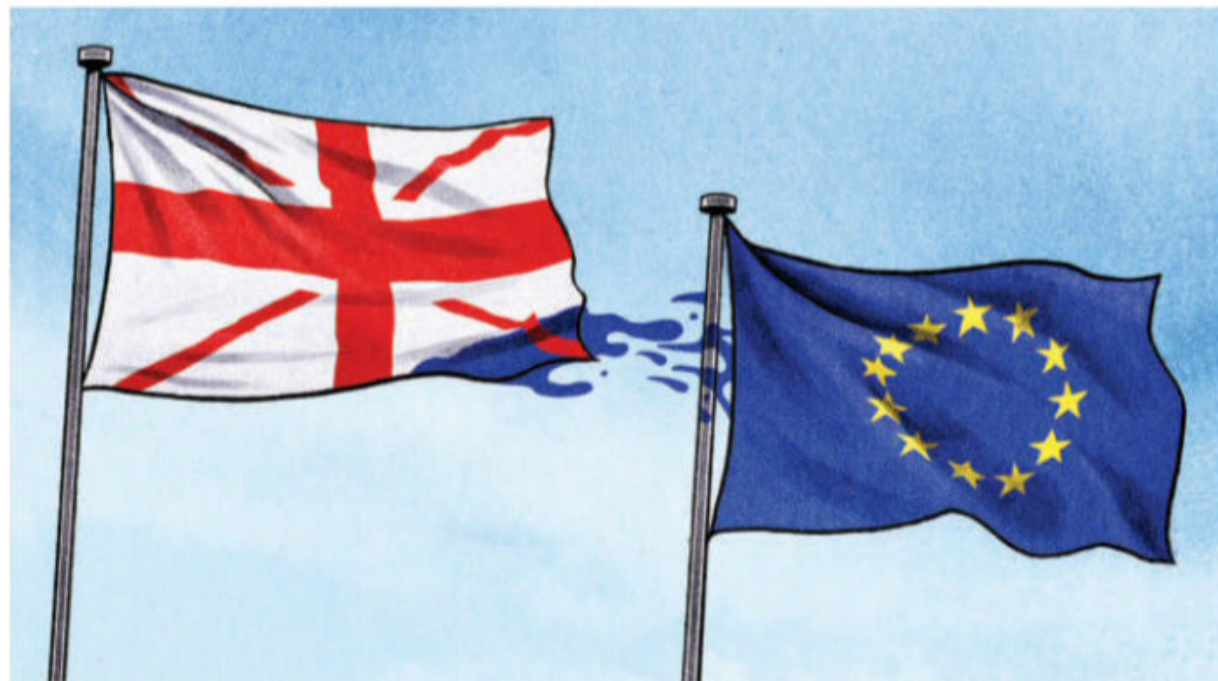
Scottish Tory. "I see very few incentives to go kindly with them."

Accession negotiations with Europe would be more cordial, but exacting. After five decades inside, Scotland should meet the EU's core entry requirements—upholding democracy and the rule of law, and operating a robust market economy—relatively easily. It would need to bring its statute book back into line with Europe's. A bigger task will be building new agencies to enforce rules in fields such as competition, data protection and customs.

Spain, which is fighting Catalan separatism, would be alarmed and wields a veto. Scotland would need nimble diplomacy, stressing that its exit was strictly in accord with Britain's constitution. EU leaders would want to know that Scotland would not replace Britain as an awkward member, nor demand British-style opt-outs of major policies, says Fabian Zuleeg of the European Policy Centre. "But unless there were unreasonable demands, I can't see that you wouldn't get there in the end," he says.

The whole process would strain Scotland's parliament, just as Brexit split Westminster. Senior nationalists want to build a broad coalition for exit talks. They know it would be a gradual process. The Institute for Government, a think-tank, reckons leaving Britain and rejoining the EU would take most of a decade, but the nationalist rank and file want a fast and clean divorce.

Mr Cameron thought the threat of economic and administrative disruption could secure victory in referendums. But it is consent to a union that holds it together. Scottish independence, like Brexit, is a constitutional project, not an economic one. Fixing who governs you takes precedence over an easy life for supermarkets or civil servants. The British divorce from Europe has shown that a committed government, with the mandate of a referendum and an appetite for dislocation, can go a long way. The road back to Europe is long, but bagpipes may play again in Brussels. ■





Myanmar's failing coup

Burmese blaze

SINGAPORE

With the army unable to impose its will, Myanmar is spinning out of control

IT WOULD BE HOURS before Hla Hla Win felt any pain, which was just as well. It was the morning of March 27th and more than a thousand people, Ms Hla Hla Win among them, had gathered in Yangon to protest against the army's coup. When security forces began firing automatic weapons into the crowd, she fled the scene, but not quickly enough to avoid being shot in the hand. Her father, waiting nearby on his motorbike, drove her to the nearest clinic. But as they drew towards it, they saw it was surrounded by armed soldiers.

Ms Hla Hla Win, a 17-year-old student whose name *The Economist* has changed for her safety, retreated home cradling her hand, which now resembled "a bag closed with a drawstring". She did not receive treatment until mid-afternoon, at a monastery where doctors loyal to the resistance had set up a mobile clinic. But lacking the proper equipment, they could not set the broken bone. When the pain finally set in, says her mother, she cried and cried. It was four days before she had an operation.

Last November Myanmar held a general election that returned Aung San Suu Kyi, the de facto leader of Myanmar, and her government to power. On February 1st the army seized power in a coup, claiming without evidence that the poll, which its party had lost resoundingly, had been marred by voter fraud. The public disagreed, and hundreds of thousands of Burmese marched through the streets. But after two weeks, with the protests showing no signs of abating, the commander-in-chief, Min Aung Hlaing, put his foot down.

Since then, he has presided over a reign of terror. At night, shouting soldiers enter residential areas, conduct house-to-house searches, indiscriminately fire live rounds

into buildings, and beat and arrest people suspected of opposing the coup. Over 3,000 people have been jailed; some have been tortured. By day, security services attack protesters and random passers-by with assault weapons and grenades; many have been shot in the head. No mercy is shown to medical staff and doctors, who have been beaten, arrested and killed. On April 9th the army massacred 82 people in Bago, a town in the centre of the country. Local activists say the Tatmadaw, as the army is known, is charging families 120,000 kyat (\$85) to retrieve the bodies. The death toll now exceeds 700.

The junta thinks it can crush the protests using the tactics it deployed against ethnic insurgencies that have simmered in the remote borderlands for decades. To that end it has sent large contingents of battle-hardened troops into the country's biggest cities, including the divisions allegedly responsible for atrocities in 2017 against the Rohingyas, an ethnic minority.

Since early March the army has set up bases in schools, universities and monasteries. Not only do such places make convenient billets, but occupying them deprives its opponents of places to congregate. Hospitals are especially soft targets. The security forces are arresting wounded protesters who seek medical treatment. Ms Hla Hla Win would have been captured by police at the hospital where she was operated on, if plucky nurses had not wheeled ▶▶

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her to safety in the nick of time.

The Tatmadaw is brutalising the very people it is sworn to protect. Yet Burmese refuse to back down. Demonstrations continue, though in cities they are smaller than they were in February. Many protesters are pouring their energies into defending their neighbourhoods by building barricades to make it harder for soldiers to enter. Some are attacking troops with rocks, fireworks and Molotov cocktails, and even inflicting casualties of their own. On April 10th, in Tamu, a town near the border with India, locals lobbed grenades at a military convoy, killing at least 18 soldiers.

Hundreds of people from the centre of the country, which is dominated by the Bamar, the ethnic majority, have travelled to the territories of five different ethnic-minority militias to learn the arts of war. “Myanmar stands at the brink of state failure,” Richard Horsey of the International Crisis Group, a conflict-prevention organisation based in Brussels, told the UN Security Council on April 9th.

Strike, counter-strike

The most effective tactic of the resistance has been a general strike. The junta seeks legitimacy by styling itself an effective manager of the state and the economy. By staying at home, tens of thousands of workers—from civil servants and truck drivers to teachers and doctors—have in effect locked the generals out of civilian administration. Schools and public hospitals are shut. Most bank branches have been closed since shortly after the coup. This has had a huge effect: it is almost impossible to conduct back-office functions, including payroll and interbank transfers. Strikers have prised the levers of government and the economy from the clutch of the generals, rendering the junta unable to govern, says Kim Jolliffe, an analyst.

The generals have tried to force banks to reopen, threatening everything from fines to nationalisation. But many employees are simply too scared to venture outside and head for work. By the junta’s own estimate, just 10% of branches are functioning again. Worried about a run on the banks, the regime has placed limits on withdrawals. “The generals seem unaware that they have destroyed the two most important economic commodities: trust and confidence,” notes the Crisis Group.

Predictably, the economy is seizing up. The World Bank thinks it will shrink by 10% this year. In a report titled “Economic collapse awaits Myanmar”, Fitch Solutions, the research arm of the ratings company, predicts a contraction twice as big. Supply chains are breaking down due to strikes by customs agents, dockworkers, lorry drivers and rail workers. Goods that do make it into port are mouldering there. So many ports are paralysed that some shipping

firms have halted services to the country. Goods exports are likely to plunge by more than 60% this financial year, reckons Fitch Solutions. Disruptions to the internet are not helping.

To prevent a descent into total chaos, activists have engaged in a flurry of organising. Hunger was already a problem in Myanmar, where a quarter of the population subsists on less than \$1.15 a day. The economic crisis is deepening privation. Campaigners and charities are opening food banks and raising money for strikers. In some districts where most civil servants have joined the civil-disobedience movement, they are providing rudimentary health care and managing to keep the lights on and water running, says Philipp Annawitt, who was an adviser to the deposed Pyidaungsu Hluttaw, Myanmar’s parliament.

These are short-term fixes. The resistance is pinning its hopes for a resolution to the crisis on the Committee Representing Pyidaungsu Hluttaw (CRPH), a group of deposed MPs who have formed a provisional government. Confident that it has the loyalty of the Bamar majority, the committee is seeking legitimacy and help on the international stage, and assiduously courting ethnic minorities. It has no guns, but the 20 ethnic militias scattered around the borderlands have plenty. It will need their support if it is to stand a chance of prevailing against the Tatmadaw.

To that end, it talks of drawing on the militias to form a “federal army”. Such a force would have little chance of defeating the Tatmadaw in combat. The regular ar-

my, numbering some 350,000, dwarfs the militias’ combined force of 75,000. And the guerillas’ style of warfare is not suited to lowland areas, where they would inevitably be drawn into open battle with the Tatmadaw. But if the insurgents begin stepping up their attacks on the army, “that would spread the military very thin”, says Zachary Abuza of the National War College in Washington.

The CRPH is trying to win over minorities by promising to realise their dream of turning Myanmar into a federal union. Yet ethnic political parties are wary of signing up. The CRPH is dominated by Bamar politicians, who have a history of marginalising minorities. Politicians from minorities tend not to trust their Bamar counterparts, or each other. Some militias have clashed with each other over territory and money. Getting them to set aside their differences may prove difficult.

Join the committee

Yet there are signs that the CRPH’s charm offensive is converting some. Ten ethnic militias that signed a nationwide ceasefire agreement with the military government in 2015 have walked away from it and have collectively expressed their support for the CRPH. The two largest groups, the Karen National Union (KNU) and the Restoration Council of Shan State, have each had meetings with the CRPH. The KNU has provided armed protection to demonstrations in its territory and granted asylum to members of the CRPH fleeing areas controlled by the Tatmadaw. The army may already be struggling. Even if there is no consensus among the militias towards the CRPH, they are almost all at least “in passive opposition” to the army, says Mr Jolliffe.

The Tatmadaw is the most resilient institution in Myanmar. Soldiers and their families live in cantonments, separated from the rest of society. They are indoctrinated into believing that the Tatmadaw is essential to the country’s survival. There have been almost no desertions. And even if some wanted to defect, doing so would provoke reprisals against their families. The generals can afford to suffer large casualties and, thanks to their involvement in the trafficking of Myanmar’s abundant natural resources, can probably weather the collapse of the formal economy. “I think they’re able to sustain this for the long haul,” says Mr Abuza.

What they cannot do is repair the damage to their reputation. Ethnic minorities, long oppressed by the Tatmadaw, were never under any illusions about the army. But many Bamar regarded it as the guardian of a nation forever at risk of falling apart. Now that the army has turned on the Bamar, they can see the generals for who they really are: defenders not of the country, but of their own interests. ■



Afghanistan

The end of forever

ISLAMABAD

Joe Biden calls time on America's longest war

THE FIRST American forces to enter Afghanistan in 2001 arrived on September 26th, when a CIA team dropped into the Panjshir Valley in the north. At the peak of the war a decade later, America had more than 100,000 troops battling the Taliban.

Another decade on, all of them will be gone and the longest war in American history will be over—for the Americans, at least. On April 14th President Joe Biden announced that every American soldier would leave by September 11th, the 20th anniversary of the attacks that prompted America to invade in the first place.

Mr Biden had inherited a peace deal from his predecessor. In February 2020 Donald Trump's administration had signed an agreement with the Taliban in which America committed to reducing forces and ultimately withdrawing from the country entirely by May 1st 2021. In exchange, the Taliban promised to break with al-Qaeda and discuss a political settlement with the Afghan government.

There is little sign that the Taliban has fulfilled either of its promises. In January America's Treasury department noted that al-Qaeda members remained "embedded with the Taliban", and on April 12th the group said it would not attend a forthcoming meeting in Turkey that would have discussed, among other things, the formation of an interim government.

Mr Biden's military advisers had sought to dissuade him from leaving, warning that the Taliban would seize the country and set back women's rights by decades. Yet in the end Mr Biden, who as vice-president had lobbied against Barack Obama's surge of forces to Afghanistan in 2009-10, decided that the country was no longer a vital interest. Al-Qaeda is a shadow of its former self and the rise of China demands American resources in the Pacific.

Officially, America has 2,500 troops remaining in Afghanistan, supplemented with several thousand private contractors. Mr Biden's hope may be that by announcing a clear end date, he can dissuade the Taliban from attacking American forces after May. Yet the certainty of America's departure also removes any incentive for the Taliban to make concessions to supporters of the current Afghan state. Indeed, a Taliban spokesman warned that "problems will certainly be compounded" if American troops stay on after May 1st.

Once American soldiers and warplanes

leave, the Taliban will be able to press its advantage. That does not mean the state will collapse at once, but it will struggle to stave off the insurgents' advances. The Taliban has been steadily expanding its presence in and around cities, controlling the roads to Kabul and Kandahar. John Sopko, America's Special Inspector General for Afghanistan Reconstruction, has said that the Afghan army is "a disaster".

Mr Biden's move will also force out America's European allies. Approximately 7,000 troops from other countries are deployed to Afghanistan as part of a NATO-led coalition that trains Afghan forces. "Recognising that there is no military solution", as a statement put it, they will leave, too.

America's hope is that, even without troops on the ground, it can continue to keep al-Qaeda and Islamic State (which has a modest presence in the east of the country) in check through long-distance counter-terrorism methods, such as drones and special forces. What is less clear is where those forces would be based.

America may seek to place them in Central Asia or Pakistan. "But the politics of this type of basing remains enormously complicated and the administration hasn't figured out a workable arrangement," says Asfandyar Mir of Stanford University. "Until that happens, al-Qaeda is going to gain."

American officials say they will continue to send money to Kabul, mindful of the lessons of the Soviet withdrawal from Afghanistan, when the Soviet-backed government clung onto power in 1989—only to collapse three years later when funding was withdrawn.

Yet America's departure will create a power vacuum that Pakistan, a longtime supporter of the Taliban, and India, a fervent opponent, will seek to fill, along with China, Iran and Russia. A war that began in 1979, with the Soviet invasion, will take another grim form. ■



Time to go home



Mahua season in India

Botanical blessings

BASTAR

A maligned forest product gets its due

IF YOU LISTEN carefully, there is a new sound: plip-plop, as the *mahua* tree drops its blossoms, one by one, onto a net of saris stitched together like a trampoline. Traditionally, these droplet-shaped flowers would fall directly onto the ground, nestling among a layer of dried leaves. Then the men, women and children of the tribes that live in the forests of central India would crouch through the morning hours, rummaging among the leaves with their baskets. Or they would burn away the clutter, coating the ground with a fine black ash, which made the cream-coloured *mahua* flower easy to spot, if a bit dusty. That dirt did not matter when the harvest was being sold for just 40 rupees (\$0.53) per kilogram, and that was in a good year. A middleman stored and dried the stuff—*Madhuca longifolia* sheds its foliage in March, weeks before it ripens—later selling it back at a steep profit to the same cash-poor tribal communities, who cook most of it into a wondrous moonshine.

Now, with a reusable net made from a few dozen saris that cost just 40 rupees each, the bounty of whole trees can be harvested without back-breaking work. Paired with reliable scales, standardised pallets and better sun-drying techniques, the simple technology is helping the tribal folk turn nature's gift into consumer products.

Mahua's appeal is at least as old as Hinduism. Its wine was extolled in ancient scriptures. The fourth-century poet Kali-▶▶

▶ dasa wrote of Shiva's consort Parvati wearing its flowers as a garland. But its culture is older still, and deepest in India's tribal interior, where the inhabitants have resisted being drawn into the Hindu mainstream. The tree is abundant in the tribal-dominated states of Jharkhand and Chhattisgarh. It grows thickest in districts like Bastar, in Chhattisgarh, which are better known for the armed Maoists, called Naxalites, who have been battling the Indian state since the 1960s. The deep poverty and alienation that sustain the Naxalites have kept microcredit and fair market practices

at bay. But bureaucrat-led efforts to modernise the market for *mahua* are under way.

In January Jharkhand played host to the first Mahua Conference, at which 4m rupees were pledged towards a new dedicated research centre of the kind that most of India's agricultural products already enjoy. It is a welcome change. The Indian state has rarely been a friend to *mahua*. Liquor is regulated mercilessly. Punitive taxation and prohibition have been practised since colonial times. Even the raw *mahua* flower, despite its utility in food, medicine and household oils, has been kept from inter-

state trade and banned outright in some districts. "We have to reduce the negativity associated with *mahua*," an official said at the conference.

With a new brand, Chhattisgarh Herbals, at least one state government is pursuing the experiment of paying more for better stuff. India's consumer class may take an interest in tribal wholesomeness. The prohibition against home distilleries will last longer; bad batches still poison drinkers. Meanwhile *mahua*—the tree, the flower and the liquor—is slowly on the way to regaining the respect it deserves. ■

Banyan Dropped connection

Singapore's ruling clique loses its reputation for predictability

ALL SINGAPOREANS know the deal. They surrender a great deal of personal liberty and most rights to political expression. In return the party that has run Singapore since its founding, the People's Action Party (PAP), delivers progress and predictability. Sometimes, the social contract is made explicit, such as when a delinquent like Jolovan Wham mounts an unconscionable challenge to it. Mr Wham awaits sentencing for holding up a piece of cardboard with a smiley face on it—"illegal assembly", in the prosecutors' eyes. For the most part, however, the contract is implicit, because the gentlefolk of Singapore know to mind their own business, while the authorities settle an intoxicating bliss on the clean, green city-state.

Yet if the people have kept up their end of the bargain, then it is all the more spectacular that the PAP this month broke its side. Singapore has had just three prime ministers since its independence in 1965. The incumbent, Lee Hsien Loong, eldest son of the late independence leader, Lee Kuan Yew, has governed since 2004. In late 2018 years of speculation ended when Mr Lee's fourth-generation, or "4G", successor, the finance minister, Heng Swee Keat, was picked out. Mr Lee also made it clear that he would step down before his 70th birthday in early 2022.

Planning years ahead is what the PAP does. But on the eve of a general election last July, Mr Lee said he would stay on longer (ostensibly to guide Singapore out of the covid-19 pandemic). And on April 8th Mr Heng made the shock announcement that he was giving up his role as Mr Lee's heir apparent. The PAP's reputation for predictability, says Donald Low of the Hong Kong University of Science and Technology, has now "taken a beating".

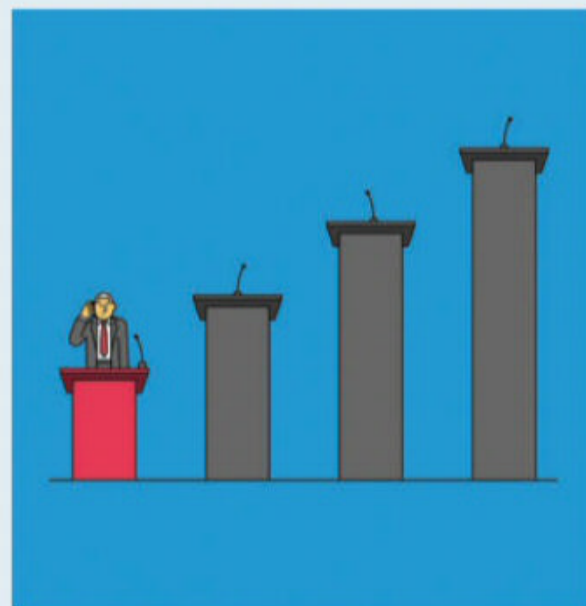
Putting a gloss on things, Mr Heng, who is 60, said he was stepping aside to give the next prime minister a "sufficiently long runway" to master the demands of the job. Lee Kuan Yew was 35 when he took over, Mr Lee 52. In truth, Mr Heng's problems—and his party's—began months ago. The government's effective handling of the pandemic early last year boded well for the forthcoming election. Yet by mid-April infections were racing through the packed dormitories of Singapore's migrant workers, a blind spot in the PAP's containment programme. Apparatchiks suddenly looked unprepared and out of touch. In the election, when it came, the PAP won just 61.2% of the vote. That would be a landslide anywhere else. But in Singapore, where the PAP gerrymanders constituencies, hounds opposition figures and cows the media, the result was a humiliation.

Worse, the PAP team in the multi-member constituency into which Mr Heng was dropped mustered only 53.4% of the vote. Cherian George of Hong Kong Baptist University notes that no prime minister, current or prospective, has underper-

formed the party like that before.

Mr Heng's fate appeared sealed then. His retreat this month lays bare two of the PAP's problems. The first is that Mr Heng, a soft-spoken technocrat with plenty of experience and an ability to listen, was probably the best candidate among the pool of 4G candidates. The second, the lack of a succession mechanism, magnifies the first. Opaque and elitist, the PAP carries out its internal functions with near-Leninist discipline. Its obsession with rules is one of Singapore's defining traits. Yet when it comes to succession, it seems embarrassingly bereft of procedures. That puts it in a bind. It appears unable even to slot Mr Heng's anointed number two, Chan Chun Sing, into the top spot. The scrappy, rough-edged Mr Chan, who last year seemed to think that cotton came from sheep, does not look like great leadership material. That only underscores the shallowness of the available pool.

A top-down regime prevents renewal from below. Mr Lee and his 3G cohorts obsess about preserving the technocratic successes of the past. All the main 4G candidates—the others are Lawrence Wong, minister for education; Desmond Lee, minister for national development; and Ong Ye Kung, minister for transport—are functionaries. The only way to rise through the PAP's ranks, Mr George argues, is to have served as apprentice to party grandees—Mr Heng was private secretary to Lee Kuan Yew himself. No wonder many talented Singaporeans shun the PAP route to politics and leadership. Meanwhile, the gulf widens between an increasingly plural electorate and an ossified ruling party. This month's ructions are indicative of problems within the PAP. When does it become a problem for Singapore?





Covid-19 in Hong Kong

A patriotic jab, or one that works better?

HONG KONG

China is pressing Hong Kongers to accept a home-grown vaccine

SINCE THE middle of March all Hong Kong residents over the age of 30 have been entitled to book a vaccination. They even have the luxury of a choice: between the Pfizer-BioNTech vaccine created in Germany or one produced by Sinovac, a Chinese firm. Yet despite plentiful supply only about 8% of the population have chosen to get a shot. One reason is rock-bottom trust in the government, the product of two years of political turmoil. It is only one way that the dismantling of Hong Kong's freedoms has made controlling the virus more fraught.

The take-up of vaccinations in Hong Kong lags far behind that in comparable places such as Singapore, where about 20% of people have been vaccinated. A survey carried out in January, before the vaccination drive began, found that only 37% of Hong Kongers wanted a jab. Since then local media have kept count of people who die in the days and weeks after a vaccination, despite copious evidence that vaccination makes death less likely, not more so. Infection rates are fairly low, so people who worry about side effects feel they can

afford to put off their shot. On April 15th the government said it was about to start allowing people aged 16-29 to get one.

The vaccine roll-out has become highly politicised. The big role given to Sinovac's vaccine is controversial (people waiting to receive it are pictured). Sinovac has not published data from "phase-three" clinical trials in peer-reviewed journals, an important international standard. It appears to be less effective than the Pfizer-BioNTech and Moderna vaccines, which cut the risk of catching covid-19 by more than 90%. Trials of Sinovac's jab find efficacy rates that range from 83% to a little over 50%, the threshold above which the World Health Organisation deems a vaccine suitable for general use. Speaking at a conference on April 10th, Gao Fu, a Chinese health official, appeared to accept that the efficacy of China's vaccines was not very high and that

it might be wise to combine them with a dose of a different product (he later said his remarks had been misinterpreted).

Hong Kong's vaccine-approval committee was not asked to consider the Chinese jab's efficacy in comparison to Pfizer-BioNTech's (which is distributed in Hong Kong by Fosun Pharma, a Chinese company) or to any other vaccine that had been peer-reviewed, says Keiji Fukuda, one of the members of the committee. "The politicians have all got Sinovac and the medical experts have all got BioNTech: what does that tell you?" says a medical scientist in Hong Kong. China has made decisions about vaccinations trickier by saying it will expedite visa applications for people who prove they have received a Chinese-made inoculation; as a result some people with family or business in the mainland feel compelled to accept it. "About one-third who took Sinovac were coerced, another third did it for some sort of personal gain or to curry favour with someone and the final third just wanted to get vaccinated," says another public-health specialist.

Tense politics has complicated Hong Kong's response ever since the virus was first detected. In January 2020 Carrie Lam, the territory's leader, argued against closing the border with the mainland, saying that doing so would be "discriminatory". In response, 9,000 medical workers in a pro-democracy labour union went on strike. More than 60% of people surveyed by the Hong Kong Public Opinion Research Institute supported them.

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▶ In September the government offered free covid-19 tests to the entire population. That policy borrowed from mandatory citywide testing campaigns that had taken place in some parts of mainland China. Yet fewer than 1.8m Hong Kong residents accepted the screening, out of 7.5m. Refusing the test was a way of expressing dissatisfaction with the government. And some suspicious residents fretted that their DNA might end up in mainland China. Worries about surveillance have also made people wary of mobile-phone apps, which they are supposed to use for contact-tracing purposes by recording their details when they check into venues such as restaurants.

The perception that Hong Kong's health officials are taking instruction from counterparts on the mainland continues to rattle. In December some travelled to Shenzhen to discuss ideas for detecting and containing the virus with authorities there. Since then, officials have taken to conducting what they have called "ambush-style lockdowns", in which apartment blocks are cordoned off at short notice and everyone inside is tested.

A report published in February by researchers at three universities in Hong Kong argues that informal networks formed during pro-democracy protests in 2019 may have helped the city weather the first part of the pandemic. Pro-democracy groups organised bulk purchases of surgical masks and disinfectant. Families, friends and neighbours reminded each other to wear masks and socially distance, drawing on lessons from 2003, when SARS, a disease caused by another coronavirus, killed almost 300 people in the city.

Yet a sweeping security law passed in June 2020 has wrecked civil society. Most prominent pro-democracy activists in Hong Kong are now in jail or in exile. Few other people in Hong Kong have enough credibility to make locals overcome wariness towards vaccination. Pro-Beijing politicians are not much trusted. Lots of the celebrities made famous by Hong Kong's entertainment industries—conscious that mainland China is their largest market—voiced support for the Communist Party during the protests in 2019. That has discredited them for many.

Most public-health experts have concerns about the way China's jab has been promoted in Hong Kong but are scared to speak publicly about it, say three such individuals. They worry that discussing the efficacy of a Chinese vaccine will hurt their careers, or even be deemed a violation of the city's new security law, which bans any act that seriously "undermines" the work of the local or central governments. When the Communist Party imposed that legislation last summer, Ms Lam said it aimed to help Hong Kong "get back to normal". It is very far from that. ■

Robbing graves

A dirty business

GUANGHAN

Tomb raiders are growing more professional

BY DAY MR WEI sold pancakes in Shaanxi, a northern province. By night he led a gang of grave robbers who tunnelled under an ancient temple near his shop. It took 11 months for them to reach the treasures buried beneath, which included gold statues of the Buddha and the bones of illustrious monks. Mr Wei and his cronies went on to dig several more passages from restaurants that they opened in the vicinity of shrines and pagodas. Over five years the looting earned them 12m yuan (\$1.8m). Last year Mr Wei was sentenced to 15 years in prison. It was the second time that tomb raiding had landed him behind bars.

China is redoubling efforts to catch grave robbers. Last year authorities arrested 2,400 such thieves and retrieved over 31,000 lost or stolen items, almost three times the number reclaimed during the previous year. The government agency responsible for protecting relics says it is in the midst of a 12-month crackdown on tomb raiders that involves more investment in staff and equipment. Punishments are growing more severe. In 2017 a man convicted of leading a gang of 200 grave robbers was put to death.

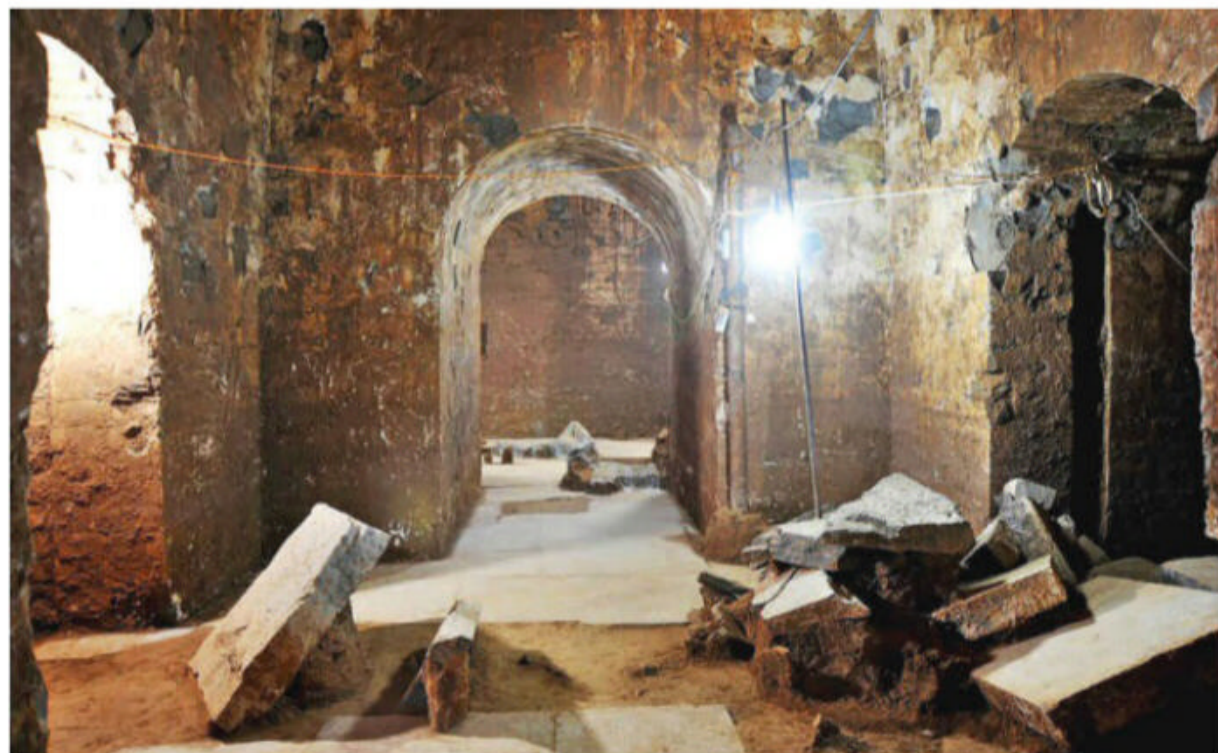
Looting antiquities remains an alluring business, nonetheless. Some 90% of all the major tombs of which the whereabouts is known have been plundered at one time or other, says Ni Fangliu, an independent scholar. Sites in Shaanxi province—home to the world-famous terracotta army,

among other ancient stuff—have been a target for centuries. But thieves are fanning out to new areas, including Xinjiang in north-western China and Inner Mongolia, in the north-east (a looted tomb in Henan province is pictured).

The robbers are increasingly professional and often well-connected. Some are backed by investors who cover travel expenses and stump up for tools. On one visit to north-eastern China, Mr Ni was approached by a thief trying to raise funds to buy an excavator. He turned out to be the brother of a senior policeman. Rummaging around for shiny stuff is not the only way they make grave robbery pay. Criminals have been known to snatch bodies or funeral urns, then ask living relatives to pay ransom.

Taboos around disturbing old graves are fading, a little. These were once so strong that even archaeologists shied from opening tombs, and some still set off firecrackers before digs to repel ghosts. But in 2006 two popular fantasy novels, "Grave Robbers' Chronicles" and "Ghost Blows Out the Light", made it look fun. Grave robbers' picaresque adventures soon became the subject of films and television shows. That makes some officials queasy. In 2016 a Communist Party mouthpiece urged people not to "glamorise the grave robber" because "digging up ancestral tombs has always been a wicked practice".

The craze has had the benefit of strengthening public interest in archaeology. In March the state broadcaster live-streamed a dig that has unearthed 3,000-year-old relics from Sanxingdui, an ancient site in Sichuan province. Millions tuned in. Yang Ying, a 25-year-old history buff milling around the Sanxingdui museum, credits "Grave Robbers' Chronicles" for nurturing her interest in relics. But "lock up the thieves," she says. ■



All cleaned out

Chaguan | Misremembering Mao

The Communist Party builds a propaganda festival around its 100th birthday



ON A COLD and rainy recent night, on a mountain soaked in the blood of early Communist Party martyrs, Chaguan went for a walk to look for ghosts. None could be found. Instead Jinggang Mountain, in the southern province of Jiangxi, revealed itself as an oddly kitsch tourist complex, being readied for nationwide celebrations to mark the 100th anniversary of the party's founding, in July. Toiling in the dark, work crews were installing floral displays and streetlights topped with red plastic flames.

Tens of thousands died on the mountain between 1927 and 1929, as Mao Zedong and pioneering Red Army units took refuge on its bamboo-clad slopes, hiding from the ruling Nationalist regime and prowling warlords. Some died in combat, others in political purges. Others were killed by cold and disease in a region so poor that locals ate wild vegetables and trapped squirrels for meat.

Today Jinggang Mountain is preserved as a "cradle of the revolution". The local mayor, Jiao Xuejun, calls it "a spiritual place" that "purifies minds and clarifies people's beliefs". For all that, visitors hear little about its complex history. Rather, generic slogans reflect the party's modern-day claim to rule, based on decades of economic development. A typical display, formed from illuminated red characters hanging from trees, reads: "The People Have Faith, the Country Has Strength, the Nation Has Hope".

Tour groups, some in replica Red Army uniforms, throng a museum filled with revolutionary relics before heading to souvenir shops selling Mao statues. Nearby, a China Executive Leadership Academy, overseen by the party's Central Committee, trains high-flying officials from around the country. The academy calls itself a furnace where cadres are fired with renewed fervour, via residential courses in party history, discipline and theory: above all, "Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era". Mr Xi visited in 2016. His tribute to the "Jinggang Mountain Spirit" is inscribed on an academy wall.

The mountain witnessed important ideological battles. Mao argued with party chiefs in far-off Shanghai about how to recruit peasants as revolutionary warriors, after urban uprisings failed. Some sharp rows concerned the merits of political terror, and whether to seize land from all landlords, or just the richest. Mao favoured a selective use of violence. He held public-execution ral-

lies at which local gentry were disembowelled with spears, and hung a scaffold with couplets in his own calligraphy, reading: "Watch Us Kill the Bad Landlords Today. Aren't You Afraid?" Mao eagerly recruited mountain bandits as troops and grumbled about the "petty-bourgeois consciousness" of villagers, who rarely volunteered to join the Red Army, wanting instead to farm in peace. When an enemy army drew near in January 1929, Mao abandoned Jinggang Mountain, leaving only a token force to defend thousands of villagers, wounded troops and Red Army wives and children. Massacres followed. An official history published in 1987, during a period of relative candour about Mao's mistakes, cites a party inspector's judgment that the Red Army's 15-month stay left Jinggang Mountain "totally bankrupt".

Such debates are now played down. Chaguan visited the mountain on a government tour, organised to introduce foreign and Chinese journalists to local leaders preparing to fete the party's centenary, as well as to officials studying at the academy. Pressed to explain the Jinggang Mountain spirit, those students carefully refer to Mr Xi's definition of it, which stresses persistence, seeking truth from facts, tackling difficulties and relying on the masses. Smoothly, academy students trace a common "Red culture" connecting early martyrs with material prosperity today. One student, a party chief at a university in central China, recounts how he ferried his son on a bicycle in the 1990s, whereas his soon-to-be-born grandchild will ride in a car. Definitions of happiness evolve, but "the people have always had dreams of a better life," he beams. Another, a provincial vice-president of the All-China Women's Federation, insists that for 100 years "the party's goal hasn't changed, it is wholeheartedly to serve the people."

The right sort of fervour

Academy students take a field trip to a mountain pass, Huangyangjie, made famous after the Red Army held off a bigger enemy force there. Standing to attention in rows, the middle-aged officials recite in unison a Mao poem about this victory. A lecturer assures them—in contradiction of the historical record—that long-ago locals showed "complete loyalty to the party", praising a villager whose eight children all joined the Red Army. "Relying on the masses is not a pretty slogan, it's a reality forged in fire," the lecturer says, drawing a link with the mobilisation of ordinary Chinese to fight covid-19. "The form of the war may change, but the path of relying on the masses is still the right one," he concludes.

Officials offer simple morality tales about the selflessness of party members, from the Red Army commander who carried grain up the mountain to feed his soldiers, to the students who left "great universities" in Beijing to fight in Jiangxi 90-odd years ago. When visitors learn how highly educated patriots in their 20s sacrificed their lives, they realise that they can overcome their own difficulties, enthuses Mr Jiao, the mayor. An academy boss compares revolutionary martyrs to modern-day party secretaries who volunteered to work in harsh, remote villages to alleviate rural poverty, some of whom perished on the job.

The blandness of these approved stories is no accident. It is hard for today's rulers, obsessed as they are with order and conformity, to celebrate a revolution, even one a century old. A revealing commentary in the *People's Daily* this month called for party members to practice "self-revolution" and "self-purification" via strict discipline. In the Xi era, a revolutionary spirit is one that submits to party authority. History is a way to measure how far China has come. Ghosts from the real, messy past are not welcome. ■

adventure

tradition

rejuvenation

mystery

well-being



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Free speech and social media

Rule of thumb

DALLAS

Facebook's Oversight Board, a "Supreme Court" for content moderation, is facing its biggest test yet with the case of Donald Trump

SINCE JANUARY, Donald Trump has been missing from Facebook, Twitter and YouTube, after his online posts about the Capitol riot in Washington, DC, caused the firms to suspend his accounts for inciting violence. For many Americans, the sound of silence is welcome. Without the megaphone of social media, Mr Trump is muted. Facebook has not just blocked his account but is scrubbing other users' content that features his voice.

The ban raises questions about free speech and online platforms' power. Even Senator Bernie Sanders, no Trump fan, confesses to feeling uncomfortable that the ex-president has been silenced by a "handful of high-tech people". YouTube's boss, Susan Wojcicki, has said the video firm will lift its suspension only "when we determine that the risk of violence has decreased". Twitter will not relent, full-stop.

Facebook is taking a different approach. Mark Zuckerberg, its boss, made the call to suspend Mr Trump's account. But whether to reverse that will be decided this month by 19 experts on the firm's Oversight Board

(OB), in effect its "Supreme Court". The board's decision will be a high-profile test of whether a middle ground between unfettered corporate autonomy and government regulation can be an effective tool in tackling thorny decisions on content.

Mr Zuckerberg floated the idea of the board in 2018, and its first slate of members was announced last year. It is meant to be an independent body that can render binding decisions on the social-media giant and suggest policy tweaks. Facebook has put \$130m into a trust to fund it for at least six years. Board members are a global bevy

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35 Lexington: Retreat from Kabul

of brainiacs: ten are academics, five work in non-profits and think-tanks, two hail from journalism, one from politics and one is a Nobel peace laureate. "All the members have free speech as part of their core values," says Ronaldo Lemos, a Brazilian lawyer who is an OB member.

After posts are removed, users of Facebook and its sister social network Instagram can appeal to the OB; this has happened some 300,000 times. The board sifts through appeals to choose cases, which it has 90 days to adjudicate. Facebook itself can also refer cases directly to the OB, as it did with Mr Trump. A computer randomly assigns each case to a five-member panel. Board members are part-time, but the OB employs 40 staff, who help with case selection and research, rather like Supreme Court clerks. Just as interested parties in Supreme Court cases can submit briefs, people can submit comments to the board.

So far it has taken up 12 cases and received 10,000 comments, 9,800 of them related to the Trump ban. When the panel reaches a conclusion, the majority of the board has to approve the decision, which is then written up and made public.

The dozen cases are a varied bunch. Was Facebook right to take down images of blackface? Or a photo of a bare nipple raising awareness of breast cancer? Or a video arguing for access to an unproven treatment for covid-19? Of the seven cases it has ruled on, the board overturned Facebook's decision five times. It does not take into ac-

count the laws of any specific country but weighs Facebook's "community standards" and "values" with international human-rights law. It can also coax Facebook to make changes to its policies. Some of Facebook's tweaks to handling anti-vax content were a response to the board's criticisms.

Which way will it go on Mr Trump? From its first decisions "it was clear how highly the board prizes freedom of expression," says Evelyn Douek, a law lecturer at Harvard. "That made me think Trump's odds just got better." Not everyone agrees. A lot will depend on how the board interprets human-rights law, as opposed to Facebook's standards, which Mr Trump violated routinely. "Trump's account involves not just his free speech but has an impact on other people's rights," says David Kaye, a former UN rapporteur for freedom of expression, who will be "really surprised" if the OB contradicts Facebook's decision.

Either way, controversy will continue. "Facebook is still holding the reins far too tight," says Ms Douek. On April 13th it announced that the board would have authority to review appeals related to content that had been kept on the platform. Until now the board has only been able to review appeals against the removal of content.

Despite criticism, the board is worth watching for several reasons. One is that it will help bring some of Facebook's decisions into the light. "One of the challenges has been the lack of information that's available in how exactly Facebook works and how its automated systems are trained and evaluated," says Nicolas Suzor, an Australian law professor and OB member.

Second, in ruling on Mr Trump the board will guide Facebook on how to treat other politicians, such as Brazil's Jair Bolsonaro and the Philippines' Rodrigo Duterte. Facebook and Twitter have operated with a "newsworthiness exemption" for such leaders, allowing speech that violated their own policies because of the speakers' position and the potential benefit to users from hearing them. "There's the saying, 'with great power comes great responsibility'. But with the newsworthiness exemption, great power comes with indemnification from responsibility," says Renee DiResta of the Stanford Internet Observatory.

And, third, the board's verdicts will ripple across social media. Its decision on Mr Trump will put pressure on Twitter and YouTube. It will become a de facto standard-setter. "If the Oversight Board could be the germ that gets buy-in from industry, that's wonderful," says Sir Nick Clegg, Britain's former deputy prime minister, who is Facebook's communications chief.

Still, Facebook's experiment is just a start. The Trump decision will be contentious. But if there is one thing all can agree on, it is that a single board will not alone solve social media's ills. ■

Police technology

Eyes in the sky

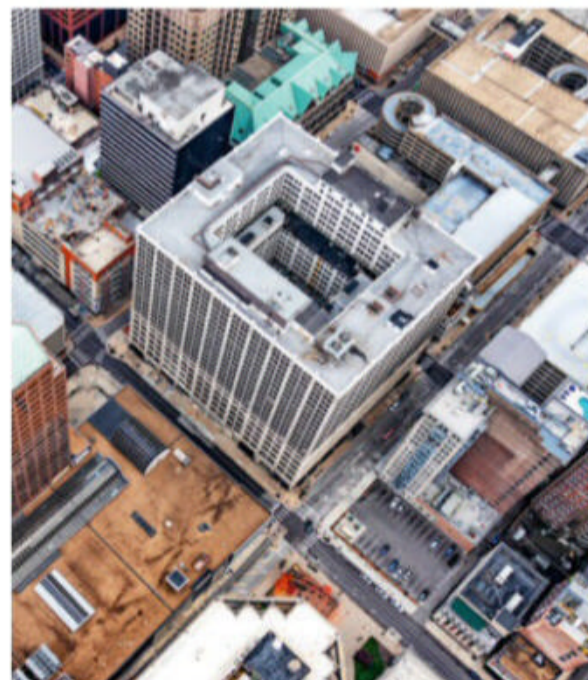
ST LOUIS

St Louis and federal courts mull a controversial surveillance programme

IT WAS JUST one of more than 2,000 murders in 2009 in Ciudad Juárez, a Mexican city across the Rio Grande from El Paso, Texas: someone shot in an alley, no witnesses. Seen from above, though, a fuller story emerged. Four cars converged on the area—two for protection, one each to carry the shooter to and from the scene—and, after the murder, several people gave fruitless chase. The people were indistinct dots, and the cars just rolling lozenges, but drone footage showed where the shooter came from and, more important for police, where he went after the crime.

The notion of putting cameras on orbiting drones to catch malefactors was born on the battlefields of Iraq, where American armed forces wanted to nab people leaving bombs on roadsides. Ross McNutt, a former air-force engineer, founded Persistent Surveillance Systems (PSS) to offer the same service to American cities (and others, such as Juárez) struggling with high murder rates. PSS drones flew over parts of Baltimore, most recently in May-October 2020. St Louis, among America's most violent cities, also considered but is poised to reject PSS's services, which raise difficult questions about how much surveillance Americans are willing to tolerate in exchange for the promise of safer streets.

Putting eyes in the sky gives overworked officers extra visibility, literally, into their own city, and makes them less reliant on help from witnesses, who for a variety of reasons are often reluctant to come forward. That is especially important in a



Another perspective on crime

AIR power

Baltimore police department, share of crimes provisionally solved, May 1st-Oct 31st 2020, %



city such as St Louis, which last year recorded a record 262 murders. Police solved just over one in three of them. By comparison, London, with around 30 times as many people, reported 126 killings last year; nationally, American police forces solve more than three in five killings. Mr McNutt contends that PSS also has a deterrent effect: if people know they might be under surveillance, they will be less likely to commit crimes.

Yet many Americans are uneasy about being put under surveillance, despite having been suspected of committing no crimes. Baltimore first used PSS drones for eight months in 2016, but kept the programme secret until a report from *Bloomberg Businessweek* revealed its existence. The backlash was severe. The experiment ended, but in its aftermath Mr McNutt conducted extensive public outreach—involving as many as 80 community meetings, according to Benjamin Snyder, a professor of sociology at Williams College who was embedded with PSS.

In May 2020, Baltimore sent the drones aloft again for six months, this time after informing the public. One month afterwards, a survey taken by the University of Baltimore, in which most respondents came from high-crime neighbourhoods, found majority support for the programme. A study from the RAND Corporation, a think-tank, concluded that PSS-derived evidence may have helped police solve multiple serious crimes in the city last year (see chart). And Mr McNutt notes that violent crime declined in Baltimore last year compared with 2019, for which he naturally credits his company. ▶

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Police accountability

George Floyd's legacy

NEW YORK

Cities and states start to pare back police protections

BLOCKS AWAY from where George Floyd died under a Minneapolis police officer's knee almost a year ago sits a brick building with one side painted purple, decorated with sunflowers and the words, "You changed the world, George." That is not just an affectionate farewell. Since Floyd's death, numerous jurisdictions have passed measures that change how police operate, including laws requiring de-escalation, limiting the use of force and banning chokeholds.

Most recently, on April 10th, Maryland's Democrat-dominated legislature overrode the veto of its Republican governor, Larry Hogan, to pass a police-reform bill. It repeals the state's Law Enforcement Bill of Rights, which afforded officers extra due-process rights for internal-misconduct investigations. Around 20 states have similar laws (Maryland's was the first), which often require that officers be informed of complaints and complainants before questioning, that they be punished within 100 days of any alleged misconduct, and that departments pay suspended officers' salary and attorneys' fees.

Maryland's new legislation also limits

the use of no-knock warrants, expands access to disciplinary records and establishes a "necessary and proportional" use-of-force policy. Police who violate this and kill or seriously injure someone are liable to ten years in prison.

Three days earlier, New Mexico became the second state (after Colorado) to ban "qualified immunity"—a judicial doctrine that provides officers expansive shields against civil liability for violating people's rights. It has also become the 18th state to legalise cannabis use, which removes a major driver of arrests. Nevada may ban traffic-ticket quotas and require de-escalation before using force.

Police behaviour is changing. Cynics may dispute this, pointing to the shooting of Daunte Wright, a young black man killed by an experienced officer who mistook her gun for her Taser, in Brooklyn Center, near Minneapolis, on April 11th. His death sparked several nights of protests. Yet rather than rationalising or stonewalling, Brooklyn Center's police chief quickly released footage of the shooting. He has also resigned, and the officer who killed Mr Wright has been charged with manslaughter.

Vaccine hesitancy

Seen and not herd

NEW YORK

Why white evangelicals are loth to get the jab, and what to do about it

AT FIRST SIGHT, the decision by America's Food and Drug Administration to pause the roll-out of the covid-19 vaccine from Johnson & Johnson is a comparable setback to that in Europe over the Oxford-AstraZeneca jab. In both cases the worry is about whether there is a link with blood clots. And in both cases, such clots are extremely rare, meaning that in most circumstances not getting a shot is a far higher risk to health. Yet whereas in Europe the AstraZeneca blow came at a time when countries were struggling to supply vaccines, America is now awash with them.

So the main impact in America is less on supply than on people's wariness about getting vaccinated at all. The country is close to delivering jabs to almost all who want them. Unfortunately, only seven in ten Americans are interested. To suppress the coronavirus effectively, 70% or more of the entire population must be vaccinated—a high bar, given that the vaccine is not administered to those under 16. Anything that reduces take-up makes such herd immunity even harder to attain.

One of the largest vaccine-wary groups are white evangelicals, or "born-again" Christians, who voted overwhelmingly for former President Donald Trump last year. They are obstinate in their doubts and about a quarter of America's population. The country's herd immunity may rest on their shoulders.

In February only 54% of white evangelicals said they were likely to get vaccinated or already were, according to polling by the Pew Research Centre. That compares with 64% of non-white evangelicals, 69% of Americans overall and 72% of white non-evangelicals. Vaccine hesitancy was also split along partisan lines: 83% of Democrats wanted the jab, but only 56% of Republicans did.

White evangelical Christians are not unique in their concern. African-Americans are also markedly hesitant. But white evangelicals are unusual in their obstinacy. Over time, all racial groups have become less hesitant, with blacks making the largest gains. In Pew's survey 61% of African-Americans said in February that they had been or planned to get vaccinated (a 19-point improvement in just three months). But white evangelicals remain sceptical. According to Samuel Perry, a sociologist at the University of Oklahoma, 33% of white evangelicals said in October they would ▶▶



Face to face in Brooklyn Center

▶ But the ACLU of Maryland, which champions civil liberties, along with an activist group from Baltimore, has sued Baltimore's police department, alleging its aerial-surveillance programme impinged on citizens' constitutional rights. The police department prevailed, both in the initial case and on appeal, but the case has since been re-argued.

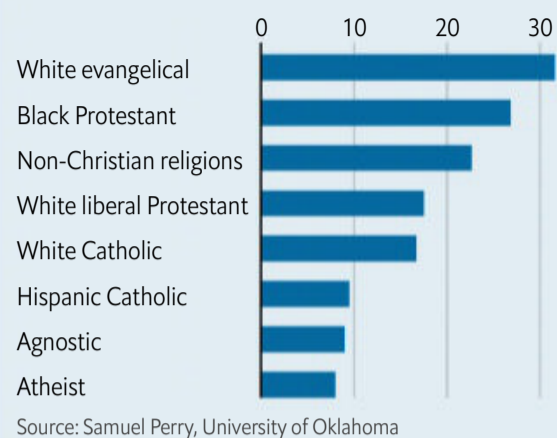
In St Louis, says Mr Snyder, "privacy ac-

tivists...were ready and waiting, and put together a really strong campaign." Despite initial approval by the city council and, says Mr McNutt, strong community support, the council's rules committee unanimously recommended against contracting with PSS. Unless the council overrides the recommendation by April 19th, when the legislative session ends, PSS drones will probably not fly over the Gateway Arch. ■

Jitters about the job

US, "I don't plan to get vaccinated", % agreeing

By race and religion, Feb 2021



▶ not get the vaccine. By February, the figure had budged by only one percentage point, to 32% (see chart).

Why the stubborn hesitancy? One reason may be that evangelicals overwhelmingly denounce abortion, and some are concerned about the jab's connection with the practice. The vaccines currently distributed in America were developed and tested using cell lines from aborted fetal tissue. This has not stopped the Vatican from endorsing their use. But some evangelicals may believe the (false) idea that the vaccines use recently aborted fetuses or require continual abortions.

Another concern relates to the Bible. According to some interpretations, the Book of Revelation describes the end of days: a beast will force his mark on people. Some worry that the vaccine is this mark.

Evangelicals are more likely than non-evangelicals to worry about side effects from covid-19 and childhood vaccines, according to the Understanding America Study, a survey from the University of Southern California. They are also more likely to believe, wrongly, that covid-19 vaccines are not effective in preventing infection. And evangelicals tend to rely on media sources that feed their fears.

Politics plays a part, too. About 80% of white evangelicals voted for Mr Trump in 2020, compared with 34% of non-white evangelicals. Mr Trump at first suggested that covid-19 was not terribly serious—like a bad case of the flu, he said early in the pandemic. This may have reinforced his fans' behaviour (though some of those same fans seem less inclined to follow his more recent advice to get jabbed).

A study in *Nature*, using data from 15m smartphones a day, found that people in Trump-voting counties did 14% less physical distancing than those in Democratic counties during the first wave of lockdowns, in March-May 2020. Partisanship was more strongly associated with physical distancing (or the lack of it) than other county-level factors, including population density, income, race and age.

Tackling all this is not simple. Typical strategies to combat vaccine hesitancy, such as educating sceptics and enlisting the support of trusted leaders, are less likely to be effective among white evangelicals. According to Ryan Burge, a pastor and political scientist at Eastern Illinois University, evangelical culture is individualistic and anti-authority. Evangelicals do not think the average person needs a mediator with God, like the pope for Catholics.

Church leaders such as Franklin Graham, son of the late Billy Graham, have urged their congregations to get vaccinated. Some political leaders have done so, too. Mr Trump encouraged vaccination at a big Republican shindig in February. But these statements have had little impact (and in some cases have caused a backlash). The lack of religious authority within the community allows conspiracy theories to flow unchecked, says Mr Burge.

This combination of religion, politics and misinformation has merged into a worrying cocktail. According to Mr Perry, white evangelicals fear religious and political persecution in America, despite there being no historical or current evidence for this. Some believe that the American government is conspiring against them (though the willingness to pause a vaccine for just six recorded blood-clot cases out of nearly 7m doses hardly suggests a state conspiring against its people).

"It's ironic, since the United States has literally done things like that to minority populations but obviously never to evangelical Christians," says Mr Perry. "They've never been the target of some kind of conspiracy to infect them with disease or to keep track of them, and yet there's this fear that the government is out to get them."

Giving it a shot

Persuading black Americans to take part in a vaccination drive organised by a government that has historically abused them has been more successful than reaching vaccine-hesitant white evangelicals. African-Americans have begun to trust the jab as they learn more about its safety and effectiveness, and see people in their communities get it. More progress is needed, but the gains are promising.

But how do you win over people with deep religious concerns and angst about plots against them, who feed on misinformation and refuse to trust even revered figures prepared to tell them the truth? A successful effort to reduce vaccine hesitancy among white evangelicals will need to tackle their specific anxieties without validating the conspiracy theories or stoking worries of a government takeover. It will take a tricky balance of empathy and frankness. And it won't be any easier now that the pause in use of the Johnson & Johnson vaccine has sown fresh seeds of doubt. ■

State finances

The disaster that wasn't

LOS ANGELES

Some American states are in surprisingly fine financial fettle

LAST MAY California readied itself for budgetary disaster. State officials, forecasting dire impacts from the pandemic, projected that the state deficit would grow to \$54bn over the coming fiscal year. That year has now come and gone, and California instead has a \$15bn surplus, equivalent to about 7% of its budget for 2020. It is so flush with cash that its constitution obliges it to put some away for a rainy day.

California is not alone in defying gloomy projections. In 22 American states, revenues in 2020 were higher than in 2019. Several now have budget surpluses. The governor of Idaho, which is celebrating a historic surplus, plans tax cuts. Utah will spend some of its windfall on transport infrastructure. Vermont intends to boost higher education and broadband internet.

What has gone so right? Sound fiscal stewardship, federal aid, diversified economies and progressive tax systems have all played a part. But the recent downturn has also been a very unusual one.

In recessions, business income typically falls and stockmarkets plunge. States with the most progressive income taxes, which rely more heavily on high-earners for revenue, tend to be worst hit. During covid-19 they have instead been better off. After a sharp fall, corporate profits recovered to record highs. The stockmarket has soared. And high-earners have been largely insulated. This has enabled states to continue counting on their tax dollars.

Early action by the Federal Reserve to shore up capital markets was key, says Ja-▶▶



red Walczak of the Tax Foundation, a think-tank. Federal stimulus propped up incomes, kept businesses afloat and reduced unemployment. Americans unable to spend on travel or services instead splurged on physical goods. Consumer spending rebounded. That money flowed back into state coffers via sales taxes. A Supreme Court ruling from 2018 helped: the decision in *South Dakota v Wayfair* made it easier for states to collect sales tax from the online retailers to whom homebound shoppers flocked in (virtual) droves.

Some states were more prepared than others. The amount they had put away for a rainy day varied dramatically at the start of the pandemic. Illinois and Kansas had saved almost nothing. New York's piggy bank amounted to about 3% of its budget. California, which had stashed away 13%, was able to cushion the pandemic's blow, possibly saving public-sector jobs.

Luck played a role as well. California has had the good fortune to be home to nine of the 37 billion-dollar IPOs in fiscal 2020. States that rely on revenue from limited sources, such as tourism or mining, have suffered more than those with more diversified economies. Wyoming, which prudently had a full year's worth of cash in its rainy-day fund, is nonetheless reliant on its energy sector. It was hit hard by falling oil and gas demand and has experienced one of the worst drops in revenue.

For this reason, says Kim Rueben of the Urban Institute, another think-tank, the pandemic is a good argument for targeted federal relief. "We don't expect states to plan for a once-in-a-lifetime global pandemic," agrees Mr Walczak, who nonetheless frets that the most recent injections of federal aid are now outstripping local need. The new worry may not be states' penury but federal profligacy. ■

decade to finish.

Swapping lead for copper pipes is expensive: it can cost between \$5,000 and \$11,000 to replace one pipe. Joe Biden's "American Jobs Plan" released last month should help. He is calling for \$11bn in water infrastructure, with \$45bn to eliminate all lead pipes and service lines.

Erik Olson, of the NRDC, who flagged Newark's lead problems in a report in 2003, now says Newark could be a model for other cities. "We've had our scraps with the city," he says, "but they have turned things around." The NRDC and NEW Caucus settled their lawsuit with Newark in January. But most cities bicker over cost and access.

Ras Baraka, Newark's mayor, wanted to act fast, but lacked money. Joe DiVincenzo, the county executive of surrounding Essex County, offered to help. He used the county's triple-A bond rating to raise \$120m.

The city's water department and its subcontractors soon blanketed Newark. A city ordinance allowed workers to replace pipes without the homeowners' permission. (Three-quarters of Newark residents live in rented space, and tracking down landlords would have held things up.) Kareem Adeem, the head of the water department, says that had it not been for covid-19 the project would have gone even faster. It has been done not only at high speed but also at low cost—roughly \$7,000 per line.

Yvette Jordan, a teacher, who was part of the NRDC lawsuit, commends the city for its swiftness, but she says that, had Newark residents not protested and had she not filed suit, Mr Baraka would not have acted as he did. Many residents do not yet trust what comes out of their taps and still buy bottled water for drinking and brushing teeth. Others go to Water Boxes, filtration machines operated by the Newark Water Coalition, an activist group, for their weekly supply. Mr Baraka says: "You don't have to take the mayor's word for it. Just test it for free and you'll know." ■

Safe drinking water

Good job, Newark

NEWARK, NEW JERSEY

New Jersey's biggest city has replaced its lead pipes. Can it serve as a model?

FOR TWO years the streets of Newark have been a mess. Residents endured road closures and loud noise. New Jersey's largest city has been replacing 18,500 dangerous lead service pipelines, more than half of all those connecting homes to the main water line. The replacement is nearly done. The speed is remarkable: government guidelines until recently gave American cities up to 33 years to replace lead pipelines. But Newark could not afford to wait.

Lead is highly toxic and can cause a host of health problems, including heart disease and infertility. It harms children's developing brains, raising the risk of cognitive and behavioural problems. New Jersey began requiring major water systems to increase testing in the wake of the water crisis in Flint, Michigan, which did not treat water properly, exposing it to lead.

The lead levels in Newark were appallingly high. The Natural Resources Defence Council (NRDC), an environmental group, and NEW Caucus, made up of Newark teachers, sued the city and state in 2018 for failing to act quickly and for violating the federal Safe Drinking Water Act. By the summer of 2019 thousands of residents were told not to drink the tap water.

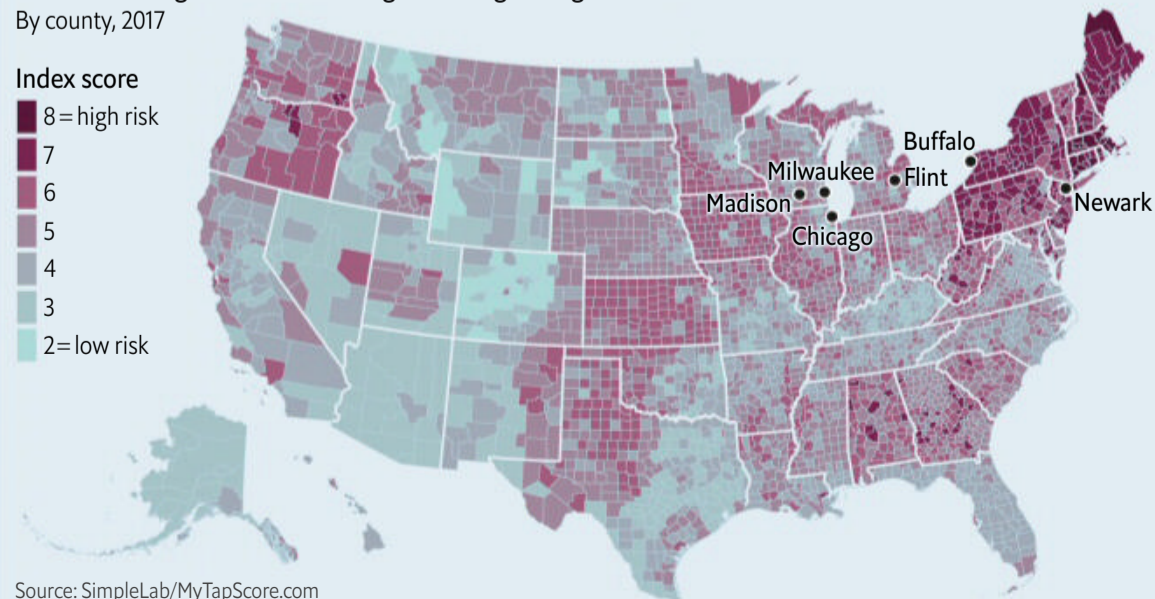
All 50 states have lead pipes. As many as 10m homes rely on them for their connections to the main water-supply lines. New lead pipes were not banned federally until 1986. Newark did so in 1953.

Old cities tend to be particularly plagued by pipes, some dating back a century, which were not maintained (see map). Chicago has more lead water lines than any other American city; it is substituting them at a snail-like pace of fewer than 800 a year. In Milwaukee, replacement will take decades at its current rate. Buffalo has about 100 miles (160km) of lead pipes delivering water to residents. It replaced 400 lines last year. Madison was ahead of the curve. It began removing its lead pipes in 2001, and took more than a

America on tap

Lead risk from groundwater, average home age and groundwater corrosion index
By county, 2017

Index score
8 = high risk
7
6
5
4
3
2 = low risk



Source: SimpleLab/MyTapScore.com

Lexington | Retreat from Kabul

Joe Biden offers unconvincing reasons for ending America's longest war



FOR GENERAL GEORGE MARSHALL, when army chief of staff, the swift defeat of Nazism was essential because a “democracy cannot fight a seven years’ war”. The fact that America has been at war in Afghanistan for almost three times as long does not disprove that. It points to how unaware of the conflict most Americans are.

The 800,000 servicemen and women who have served in Afghanistan represent 0.25% of a general population that has never been less connected to its armed forces. America’s 2,448 victims of bombs and accidents in Afghanistan pale against the 58,000 it lost in Vietnam. The war’s \$2trn cost has been deferred to future generations. Joe Biden’s decision to pull out America’s remaining troops is a withdrawal of choice, therefore, not of political necessity.

It is debatable how many Americans would even have noticed had he decided, as his immediate two predecessors ultimately did, to hang in there for a bit rather than risk the Taliban retaking Kabul. Explaining his alternative rationale, Mr Biden said America could not “continue the cycle of extending or expanding our military presence in Afghanistan hoping to create ideal conditions for the withdrawal”. As the last word on America’s Afghan misadventure, that seemed appropriately muddle-headed.

Mr Biden was certainly right to characterise America’s record in Afghanistan as a triumph of wishfulness over prudence. The campaign’s spiralling cost was long fuelled by an assumption that well-resourced American soldiers and diplomats could deliver a stable, democratic Afghanistan. This was a delusion based much less on Afghan reality than American politics, an overestimation of American military force and a desire to maintain the brief moment of post-9/11 national unity.

America’s shifting objectives were a clue to those competing impulses. The Bush administration’s counter-terrorism mission broadened into a state-building one in response to bad press over the Iraq war and pressure from allies. Barack Obama doubled down on counter-insurgency because, having talked up Afghanistan over Iraq, he felt he must. Donald Trump upped the tempo of strikes against the Taliban because Mr Obama had slowed it. He then launched talks with the insurgents that might have got somewhere had they been less obviously intended as an exit strategy.

Your columnist, a regular visitor to Afghanistan for a decade,

saw most of these shifts unfold. It was striking how little America’s latest plan seemed to be informed by the failure of its previous one, let alone by Afghan history or circumstances.

Just a few facts are enough to explain the inevitability of those costly failures. American forces were superb at war-fighting, but often inept at peacekeeping. The insurgency, being based in Pakistan, was undefeatable. The government, stocked with incompetents and criminals, was incapable of reassuring civilians caught between the two sides. Afghanistan had no history of effective government even before decades of war erased its monarchical state. Few of its 20th-century leaders left office peacefully; most were murdered or deposed.

It did have a record of violent Islamist nationalism. And, sure enough, the combination of increased NATO violence and execrable government fuelled an inexhaustible supply of Taliban recruits, no matter how many thousands America and its allies killed. America still had good reasons to be in Afghanistan. In addition to its security concerns, it accrued a moral responsibility for the Afghans it made promises to and a reputational interest in avoiding defeat. It also maintained local support for its presence. But its objectives were often self-defeating: an exercise in making pursuit of dramatic, unachievable progress the enemy of a more modest, open-ended and sustainable effort.

Because almost everyone—Democrats and Republicans, soldiers, aid-workers and journalists—had supported the war from the start, there was long a reluctance to point this out. America’s failures were ascribed to specific errors: its initial refusal to parley with the Taliban, its slowness to develop Afghan forces, its bombing of wedding parties. But there is no reason to believe that even a flawless American strategy could have delivered much more stability. Post-conflict, pre-modern Muslim societies with lousy neighbours are not transformable.

It follows that Mr Biden is also right to predict that perfect conditions for a withdrawal will not emerge soon. Yet this would be a reason to withdraw only if perfection were still America’s objective in Afghanistan. It is not. After his brief burst of military enthusiasm, Mr Trump withdrew most of the remaining troops, and no one expected Mr Biden to send them back. His choice was therefore to leave them be, at minimal cost, while the peace talks Mr Trump launched ran their course; or to complete a withdrawal that is likely to end the talks and, in the view of America’s intelligence agencies, risks returning Afghanistan to civil war.

He has offered two other reasons for his decision to pull the plug. Neither is convincing. He suggests, first, that America’s interests in Afghanistan no longer warrant even its shrunken commitment. It can now police ungoverned spaces remotely. Yet his agencies, which warn that the withdrawal will make counter-terrorism harder, seem to disagree.

Mr Biden also points to America’s growing focus on competition with China as a reason to shake Afghanistan loose. That would seem more compelling if it were not adjacent to China and already subject to its overtures. It also takes too little account of what China and the world will read into America’s capitulation.

Along the Silk Road

Afghanistan was not only, or mainly, a test of American military power. It was a test of its decision-making and ability to take the long view, including by sticking with a troublesome ally. The Biden administration speaks of the China challenge requiring the same qualities. It has just ducked a chance to display them. ■

Disrupting Corruption – Australia roundtable

The pandemic has increased fraud risk, but clear guidelines and smart use of data will help in the fight, compliance chiefs say

The Economist Events, supported by EY, convened a panel of legal and compliance experts to discuss the impact of covid-19 on business and public-sector integrity in Australia. Pandemic-related disruptions to working patterns, supply chains and employee compensation have increased fraud and corruption risks. According to the EY 2020 Global Integrity Report, much of the perceived risk to organisational integrity is concentrated among managers and supply chains. It is important for organisations “to level-set compliance rules and consequences” for all employees and third parties regardless of rank or cultural norms.

Organisations should have open lines of communication across all levels, to encourage those with concerns to speak up early. Recognising cultural differences is important when considering the willingness of those that

suspect wrongdoing to speak up. Participants noted that allowing a whistle-blower to remain anonymous in the early stages can be helpful in starting a conversation and gaining their trust. But recently introduced legislation in Australia, aimed at preserving whistle-blower anonymity, may actually impede the ability of legal and compliance teams to follow up on complaints or launch formal investigations.

Given the proliferation of remote work, data-analytics tools can help compliance functions detect illicit activity while gauging the effectiveness of policies and procedures. Leveraging data and insights derived from internal systems can help organisations move from passive “checking-the-box” compliance to more active and targeted interventions. Using readily available data to benchmark key indicators could allow for more targeted compliance training and auditing.



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Guns in Brazil

Playing with firearms

RIO DE JANEIRO

Jair Bolsonaro wants to arm Brazilians—especially, it seems, his supporters

“I ALWAYS HAD the American dream,” says Bernardo Mattos, sitting outside his shooting club in Rio de Janeiro. “Thank God, I fulfilled that dream.” Since he launched his club in 2018 membership has risen steadily—particularly so during the past year of pandemic. Now around 350 people come through his doors to rattle off rounds. Mr Mattos, who says he was trained by the United States armed forces, broadcasts his views to even more. He has nearly 90,000 followers on social media. He encourages whole families to shoot together; 14-year-olds are allowed to do so if accompanied by an instructor. “I succeeded in bringing the gun ideology I saw in the United States to Brazil,” he beams.

Brazil’s relationship with guns goes back a long way. In the 1970s gun ownership was commonplace in the countryside, where most people lived, recalls Ivan Marques, a lawyer and the chairman of Control Arms, an NGO. By the 1980s guns were ubiquitous and rules for buying them

were lax. Even supermarkets sold them. But a rise in shootings triggered stricter laws. In 2003 Luiz Inácio Lula da Silva, a left-wing president, signed one that prevented ordinary citizens from buying guns—only those in the armed forces, police and prison guards could do so. It also raised the minimum age and required a background check. Although this helped temper the rise in gun deaths for a while, Brazil remained a violent place, with many illegal firearms. With 22 killings per 100,000 people each year, it has one of the world’s highest rates of gun deaths.

In contrast to his predecessors Jair Bolsonaro, a former army captain elected as

president in 2018, wants more people to own firearms. In his election campaign he frequently posed with weapons; when he couldn’t, he made shooting gestures with his hands. Three of his sons, who are also in politics, have posed at shooting ranges. “Allegedly they have shrines to the NRA in their homes,” quips Ilona Szabó de Carvalho of the Igarapé Institute, a think-tank.

As president, Mr Bolsonaro has tried to approve 31 legal changes that would make guns easier to get hold of. On April 12th the Supreme Court suspended two such changes—including decrees that would have increased the number of guns the armed forces, police and members of the judiciary could legally own for self-defence from four to six, and expanded even further the number of guns that could be owned by specialist hunters and collectors (who already can amass sizeable arsenals).

Despite this setback, however, Mr Bolsonaro’s gun-loving base has been emboldened. The number of registered firearms in circulation has surged by 66% since 2017, to just over a million, or one for every 200 Brazilians. This is far short of the standard set by the United States, which has more guns than people. But still, between 2017 and 2019 the number held by Brazilian hunters, sporting shooters and collectors increased by a whopping 120% (this group registered 271,000 new firearms in 2020). And unlike the United States, Brazil is a ▶▶

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▶ country where few animals can be shot legally, points out Mr Marques. At the moment only wild boars are fair game, as they are not an indigenous species. Brazilians can also now own different kinds of guns, and the amount of ammunition they can own has gone up (though the Supreme Court is querying these changes, too).

Shooting clubs have also multiplied. Last year more than 1,300 welcomed firearm fans, compared with just over 150 in 2019. More everyday folk are giving it a try. And that includes women, many of whom can be found at the Clube de Tiro Ponta Negra, a new place in Manaus. With 34 shooting stalls, it is the country's largest club. "It's incredible, the number of women who have been looking to train, join clubs, and buy guns," gushes Monique Benetton, a 39-year-old manager who hones her aim there. Gunmakers are eager to woo female custom, some more subtly than others. On March 8th—International Womens' Day—Taurus, Brazil's largest gun manufacturer, launched "Strong Women", a pink limited-edition revolver decorated with white flowers. It sold out in just three days.

Mr Bolsonaro's pro-gun stance is mostly political. Loosening gun laws is cheap and simple. Perhaps that is why, unlike the promises he made during his campaign to improve schools and health care, Mr Bolsonaro has been able to keep his word on guns. Also, talking about pistols touches on the "identity of his core supporters", says Rodrigo Soares, an academic. Many may have started to question Mr Bolsonaro's handling of the coronavirus, which has killed more than 350,000 Brazilians and caused the economy to contract by 4%. His

approval ratings have fallen to below 30%.

Others fear darker motives. When the heads of the army, navy and air force resigned on March 30th in protest at a cabinet reshuffle, it seemed to be a signal that they would not go along with some of Mr Bolsonaro's anti-democratic urges. The president has spoken of "my army" and threatened to use it to prevent state governments from enforcing lockdowns. But if the armed forces can be relied on to respect the constitution, that is less clear of the police force, which is badly paid and full of *bolsonaristas*. Some pundits speculate that Mr Bolsonaro, who cheered on the storming of the United States Capitol on January 6th, is arming his base in preparation for 2022, when he will probably face Lula at the ballot box.

The next year or so will show whether this is hyperbole. Police officers benefit from job stability and handouts for themselves and their families, says José Vincente da Silva Filho, a retired colonel of the São Paulo state police. "They wouldn't jeopardise these benefits to join a political adventure in distant Brasília," he thinks.

For Mr da Silva Filho, the most worrying effect of Mr Bolsonaro's rush to arm Brazil will be on crime. Already the statistics are bleak. Although homicide rates vary widely from one part of the country to another, they are rising overall. Last year saw 43,892 gun deaths nationwide, up from 41,730 the previous year. According to Daniel Cerqueira, an expert on guns at the Institute of Applied Economic Research, the inevitable outcome from a rise in gun culture will be "a tragedy" for Brazil—a country that, at the moment, is not short of them. ■

Costa Rica

No longer top of the class

SAN JOSÉ

A once exceptional welfare state comes under pressure

A NEW BUILDING at Hospital México, a public clinic in a quiet neighbourhood of San José, Costa Rica's capital, would not look out of place in most rich countries. Behind its quiet exterior lies a bigger story. Excellent health care, free to all at the point of service, is one reason Ticos—as Costa Ricans are known—and their neighbours talk of the country's exceptionalism. In Central America public services tend to be poor, patchy or absent altogether. By contrast all Ticos get state pensions. When they turn on the tap, drinkable water comes out.

Now the pandemic has turned what was already unsustainable into a debt crisis. Even before covid-19 the country of 5m had the third-highest government debt in Latin America and the highest interest payments. But last year its economy shrank by 4.5%, partly thanks to a reduction in tourism, while the fiscal deficit rose to 8.1% of GDP, up from 6.7% in 2019. Public debt has reached 68% of GDP. Unemployment has risen to 18%, from 12% last year.

The country has lurched from one fiscal crisis to the next for years, but the scale of this one prompted the government to agree, in January, to a loan from the IMF of \$1.8bn, around 3% of GDP. It is dependent on a package of reforms which must be enacted in the coming weeks. The most controversial part of the deal, currently being debated by congress, is to reform public employment. The government spends more than half of its revenues on salaries for its workers, the highest share in the OECD, a club of rich countries that Costa Rica is in the process of joining. Public-sector pay is lavish: teachers in state schools make, on average, more than twice as much as their peers in private ones.

Much of this is thanks to top-ups to public-sector wages. A pay bump for getting married has been abolished, but others, such as for working in hot conditions, remain. The bill would cut these and instead pay a single salary. No one would be allowed to earn more than Carlos Alvarado, the president, as 2,200 of the 305,000 state workers currently do. Mr Alvarado says the IMF deal "is not only a fiscal discussion, it's a matter of equality".

It is, however, controversial. "The social state is slipping away through our fingers like water," claims Albino Vargas, the head of ANEP, a union that represents 17,000 public and private workers. Last ▶▶



St Vincent

On April 9th the Soufrière volcano on St Vincent spewed a cloud of ash 10km (six miles) high. Over the following days there were further explosions. Some 16,000 people have been evacuated from the island's northern region. No deaths have been reported. But even in the southern safe zone, life is tough. Volcanic dust is everywhere. "My chickens are totally confused, they don't know if it's night or day," says one islander.

▶ year protests derailed talks for a loan.

By contrast, this deal is likely to pass. Many reforms have been toned down—for example, the measures to increase revenues, such as by raising a consumer tax, have been removed. The focus is on reducing spending, mainly through lowering the cost of state employees. Indeed, the most accurate criticism is that the deal is too timid. Past governments only took small steps to stave off sovereign default, says Kevin Casas, a former vice-president. This one is no better.

The true risk to the welfare state comes

not from this deal, but from the lack of deeper structural change. That unhappy task will fall to the next government (elections are due in ten months). Mr Alvarado is weak; his party holds only 10 of 57 seats in the legislature. His government previously enacted a tax reform and a cap on spending linked to debt and economic growth in 2018. The IMF deal may merely be setting the scene for more to come.

Such reforms are urgently needed. The quality of public services is deteriorating. Costa Rica spends fully 7% of GDP on education, the highest share in the OECD after

Scandinavian countries. Despite this it ranks second-lowest of the club's members in the PISA rankings, which test the skills of 15-year-olds, just above Colombia.

Much could be achieved while still preserving the welfare state, thinks Juan Carlos Hidalgo, an analyst who is running for Costa Rica's congress next year. Cracking down on tax evasion would help, as would raising taxes. Some state monopolies could be sold off. But without major changes, the country risks becoming more like its neighbours. For many Ticos, that is not nearly good enough. ■

Bello Either way, it's bad news



Two extremists vie in a run-off for Peru's presidency

CAJAMARCA, IN PERU'S northern Andes, is known mainly as the place where Atahualpa, the last ruler of the Inca empire, was murdered by the Spanish conquistadors despite having paid his ransom by filling a room with gold. Today Cajamarca is the capital of a large region of struggling farmers, rough roads and modern gold mines. It still feels betrayed: the mines have brought more prosperity to the nation than to the region, which is Peru's poorest. It is the home of Pedro Castillo, a rural school-teacher and union leader who surprised the country by winning 19.1% of the vote in a presidential election on April 11th, ahead of 17 other candidates. He did so on a platform that calls for the nationalisation of foreign mining firms, a new constitution and a much bigger state.

These are the standard demands of the *chavista* left in Latin America. For the past 30 years Peru, with a fast-growing free-market economy that has slashed poverty, has rejected them. But political instability, corruption scandals and public disaffection have all mounted. The pandemic has overwhelmed an unequal health system. In a run-off election on June 6th that will pit Mr Castillo against Keiko Fujimori (13.4%), a conservative, might Peru break its political mould?

Until a month ago Mr Castillo was barely known, though he was a leader of a three-month-long teachers' strike in 2017. A *mestizo*, like most Peruvians, he has a skilful populist touch. He excoriates a distant governing class "with their golden salaries". "We cannot allow more poor people in a rich country," he says, with a nod to those mines. He is a *rondero*—a member of the vigilante groups that patrol Cajamarca's countryside, originally against rustlers, but which

now act as a local power. He is also a Christian and a social conservative. Having recovered from covid-19 in January he was one of the few candidates to campaign in person, often on horseback and with a cowboy hat. The teachers' union, *ronderos* and evangelicals spread his word.

In the past three elections up to a third of Peruvians, mainly in the Andes, have voted for candidates who promised to change "the model". Only one went on to win a run-off: Ollanta Humala, a nationalist former army officer, lost in 2006 offering *chavismo* but won in 2011 on a more moderate, social-democratic platform. Mr Castillo could be another Mr Humala. As a typical Peruvian trade unionist he combines radical rhetoric with pragmatism. To win the teachers' strike he allied with a movement descended from Shining Path, a terrorist group of the last century, but also with legislators from Ms Fujimori's party.

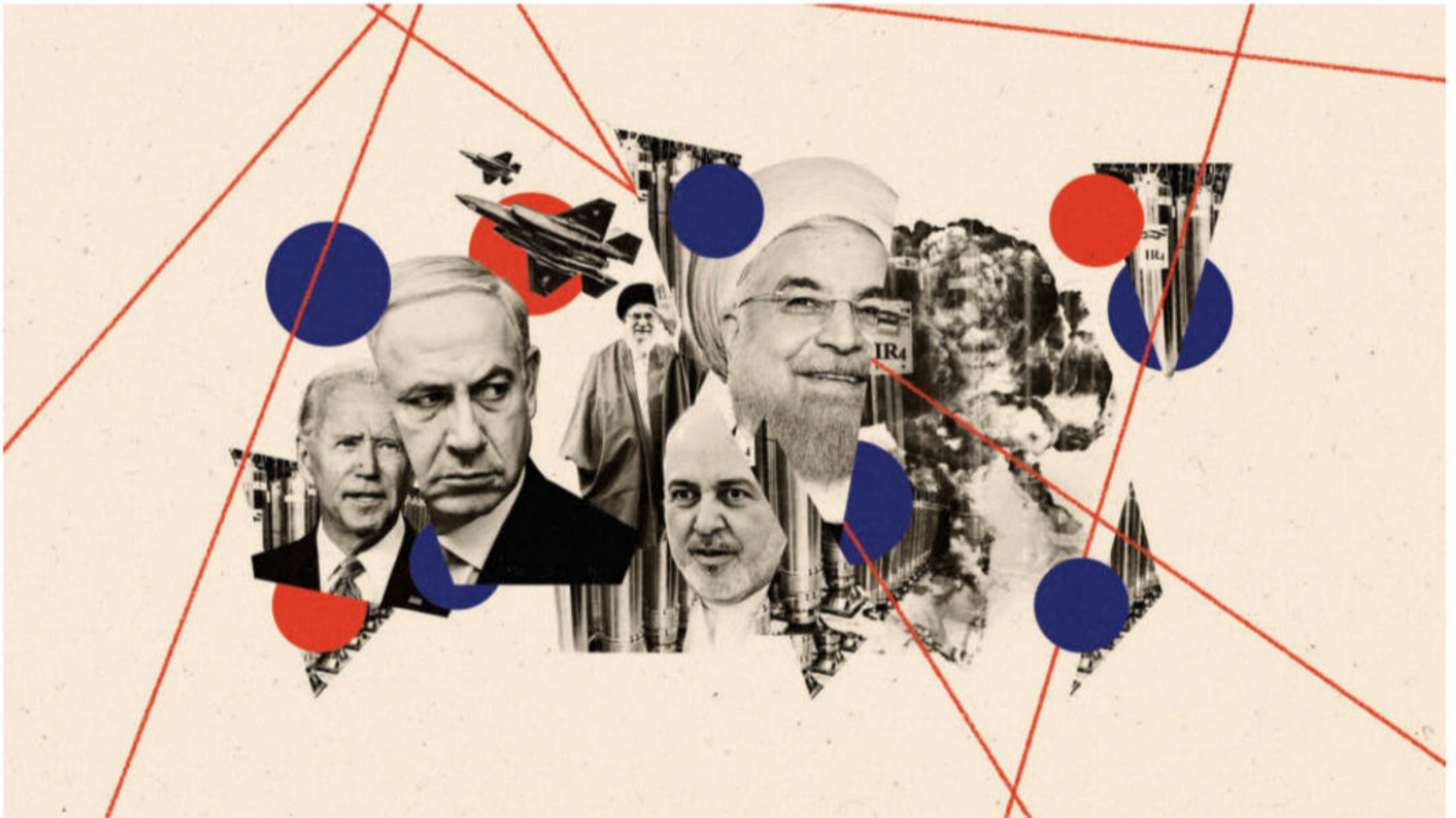
However, Mr Castillo has a problem. Not only does he lack time to re-invent himself, but he stood for a Marxist-Leninist party controlled by Vladimir Cerrón, a

former regional governor disqualified for corruption. Whereas Mr Castillo has been conciliatory in victory, his running-mate, Dina Boluarte, an ally of Mr Cerrón, threatened that "the comfortable middle class of Lima will certainly cease to be the comfortable middle class."

Run-offs in Peru "tend to be a plebiscite on one of the two candidates", says Alberto Vergara, a political scientist. "This will be a plebiscite on Castillo and he will probably lose." Unless he moderates, he is likely to lose by a landslide. But he has one big thing going for him. Ms Fujimori is the most toxic political figure in Peru. Her father ruled as an autocrat in the 1990s. For the past decade anti-Fujimorismo has been the dominant political current. This twice denied Ms Fujimori the presidency. Her party won a majority in Congress in 2016, and repeatedly tried to bring down the government. She spent time in jail on unproven allegations of campaign-finance corruption which she claims are politically motivated. She is the candidate who has the highest rejection rate (though the proportion of people saying they would never vote for her is falling). Like Mr Castillo, she has a lot of work to do.

For many Peruvians, to have to choose between these two extremes is painful. Lots may abstain. The next president will be weak: the two contenders won less than a third of the vote combined; the total of blank and spoiled votes was more than Mr Castillo's haul. The new Congress is likely to be split among 11 parties. Peruvian parties have become the property of individuals, often for financial gain. Their only shared interest is to raid the treasury and central-bank reserves for short-term popularity. That, rather than an ideological shift, is likely to be the biggest risk facing Peru.





Israel, Iran and America

Explosive diplomacy

DUBAI AND JERUSALEM

Will a strike on Iran derail efforts to revive the nuclear deal?

ON APRIL 10th Iran had two occasions for cheer. One was the resumption of talks, earlier in the week, in Vienna to revive the multinational nuclear deal that Donald Trump, then America's president, abandoned in 2018. The other was the celebration of National Nuclear Technology Day, which featured performers dressed as nuclear scientists, huddled around centrifuges at Natanz, a facility in Isfahan province, singing paeans to Iran's scientific prowess. Iranian officials announced they had finally rebuilt part of the facility struck by a mysterious explosion last year. Then, on April 11th, the facility was struck again.

This attack destroyed the power source for the centrifuges, which spin uranium to extract fissile isotopes suitable for use in reactors or, if concentrated enough, in bombs. Thousands of the machines were damaged. Iranian officials blamed Israel, claiming explosives were smuggled into Natanz inside a table. In contrast with previous incidents, Israeli officials acknowledged to reporters that Mossad, Israel's intelligence service, was indeed involved.

The big question now is what effect the

attack will have on the talks in Vienna. President Joe Biden has said that he wants to re-enter the deal, under which Iran curbed its nuclear programme in return for the lifting of international sanctions. First, though, he wants Iran to reverse steps, taken in response to Mr Trump's actions, that are not in compliance with the agreement. Iran wants Mr Biden to lift sanctions, imposed on it by Mr Trump, first.

Enter Binyamin Netanyahu, Israel's prime minister, who is no fan of the deal. Was his aim to goad Iran into more nuclear activity in order to provoke Mr Biden to walk away, or the opposite: to slow down Iranian enrichment, thus easing pressure on Mr Biden to re-enter the deal? Notably, the attack occurred as Lloyd Austin, Amer-

ica's secretary of defence, was in Israel.

Iran has indeed promised to increase its nuclear activity in response. It had already begun testing IR-9 centrifuges, 50 times faster than the IR-1s that make up most of the capacity at Natanz. Since January it has acquired 55kg of uranium enriched to 20% purity, nine-tenths of the way to weapons-grade. Both moves were in breach of the deal. After the attack Iran said it would replace the destroyed centrifuges with newer models and begin enriching uranium to 60% purity at Natanz. That would go even further to reducing the time that it would take Iran to produce a bomb's worth of highly enriched uranium, were it to seek to do so. But Muhammad Javad Zarif, Iran's foreign minister, said the latest breach, like the earlier ones, would be reversed if America lifted its sanctions on Iran.

A decade ago Israel drew a red line against Iran obtaining 240kg of uranium enriched to 20% purity (about enough to make one bomb). But it may have calculated that the renewed growth of Iran's nuclear programme was reason enough to strike Natanz now. Mossad has shown astonishing freedom of manoeuvre on Iranian soil. In 2018 it pulled off an audacious heist in Tehran of thousands of documents related to Iran's nuclear programme. Last year it was blamed for a series of attacks and explosions on missile and nuclear sites, including Natanz, and two high-profile assassinations in or around Tehran: that of Abu Muhammad al-Masri, an al-Qaeda operative, in August; and Mohsen ►►

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► Fakhrizadeh, Iran's most senior nuclear scientist, in November.

Beyond Iran, Israel has intensified air strikes against Iranian targets in Syria and, more recently, Iraq. Israeli forces have also attacked Iran's ships to disrupt its oil exports and arms shipments. Israel is increasingly open about what it calls this "campaign between the wars".

There is also the possibility that Mr Netanyahu was guided more by political convenience than strategic necessity. Three weeks after Israel's fourth parliamentary election in two years, the prime minister, who is on trial for corruption, lacks a majority to form a new government. With coalition-building talks bogged down and the opposition anxious to unseat him, he is appealing to potential allies.

Mr Netanyahu may feel he has little to lose. For over a year Mossad has been working on the assumption that Iran's leaders are eager for relief from American sanctions and will therefore avoid any big escalation. After the attack on Natanz, Iran threatened "revenge in appropriate time", but that vague formulation has in the past provided cover for relatively muted responses. A reported missile strike on an Israeli-owned commercial vessel in the Gulf of Oman on April 13th did little damage.

Iran's desire for sanctions relief is real. The IMF estimated this month that its accessible foreign reserves fell from \$123bn in 2018 to just \$4bn last year. (Gross reserves are much higher, but most of that sum is unusable because of sanctions.) But if America and Iran cannot reach a deal in the next few weeks, talks may be shelved for the summer. Last year Iran's parliament passed a law that would suspend international inspections of its nuclear facilities; it is meant to take effect next month. By then candidates will also be campaigning in a presidential election that will see the incumbent, Hassan Rouhani, forced out by term limits. His successor will not take office until September.

Another complication is that Iran's establishment is mired in infighting. On March 21st state television began airing the second season of "Gando", a thriller believed to have been produced with the help of the hardline Islamic Revolutionary Guard Corps (IRGC). In the show imaginary diplomats who bear a strong resemblance to Mr Zarif and his team are accused of espionage. (Mr Zarif is rumoured as a possible presidential candidate; he denies any interest.) "Many Iranians are probably wondering what the country's security services are up to," says Mohammad Ali Shabani, editor of Amwaj.media, a website that monitors the Middle East. "While Israel blows things up, the IRGC is commissioning fictitious spy thrillers targeting Iran's own government amid sanctions and a deadly pandemic." ■

Hunger in the Arab world

Feast, fast and famine

DUBAI

From war zones to petro-states, citizens worry about food security

RAMADAN, WHICH began at sunset on April 12th in much of the world, is a month of both fasting and feasting, as long days of restraint give way to big meals after sunset. Celebrations were curtailed last year because of the covid-19 pandemic. With looser restrictions now in some Arab countries, families are looking towards a more festive holiday. Yet many will struggle to put food on the table.

The UN's World Food Programme (WFP) estimates that 960m people do not have enough food to be healthy. Some 64m of them are scattered across 12 Arab states. That is about one in six Arabs. Wars and economic crises have made hunger a chronic fact of life for some. And even stable governments are worried about the effect of rising global food prices.

The problem is most severe in Syria and Yemen, where around half the population is hungry (see chart). A basket of staples in Syria—bread, rice, lentils, oil and sugar—was 222% more expensive in February than a year earlier. It now costs more than double the monthly salary of an average state worker. In Yemen the UN warns of looming famine. Aid agencies have cut rations because of tight budgets. Fuel shortages in both countries have pushed up prices.

Meat was already an unaffordable luxury for many Syrians. Dairy and fruit are fast becoming the same. Bread, the cheapest source of calories, often no longer accompanies a meal—it is a meal. Yet it can take hours in a queue to obtain subsidised bread from the government. Before the war Syria grew enough wheat to meet its needs. A study published last year by Humboldt University in Berlin used satellite data to

find that the country lost 943,000 hectares of cultivated land (about a 20% decrease) between 2010 and 2018.

Other countries are grappling with newer challenges. Last year in Lebanon a bowl of *fattoush*, a salad of vegetables topped with toasted bread, cost 6,000 pounds (\$4) for a family of five. Since then a financial crisis has caused the currency to lose around 90% of its value. Food prices have climbed by 417% in the past year.

Though much of Lebanon's food is imported, local products have become more expensive, too. The same *fattoush* now costs more than 18,000 pounds. To serve a simple *iftar* fast-breaking meal—soup, salad, a main course with chicken—each night of Ramadan would run to two-and-a-half times the monthly minimum wage of 675,000 pounds, estimates the American University in Beirut. Supermarkets have seen brawls over subsidised staples like cooking oil, which some shops now distribute under armed guard. On April 13th a man was killed at a food drive.

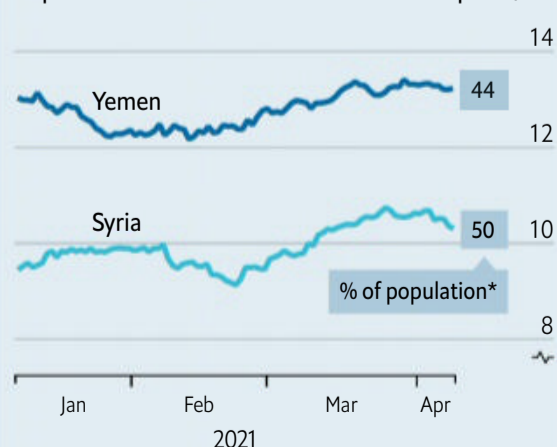
In January Goldman Sachs, a bank, predicted the start of a commodities "super-cycle", with higher demand spurred by loosening pandemic restrictions and a weaker dollar. That is a worry in Egypt, which imports almost 13m tonnes of wheat annually for subsidised bread. The budget is based on an average price of about \$200 a tonne. Earlier this year prices hovered at around \$240, partly due to new export taxes in Russia. Egypt's finance minister says the government may start to hedge its wheat contracts to protect against future increases. Prices for rice, another staple, are also at their highest in years.

Weak demand in Egypt has kept inflation low so far: food prices have been flat or have dipped in recent months. But they may well start to climb later this year. Even a small increase would hurt; a third of Egyptians live on less than 736 pounds (\$47) a month. The UN's global food-price index has climbed for ten straight months, and in March reached its highest level since mid-2014. Food prices are the main cause of inflation in Saudi Arabia. They rose by 11% in February.

In the United Arab Emirates (UAE), one of the world's richest countries, well-heeled citizens and expats happily plunk down \$100 a person for Ramadan buffets. Yet even there, ministers have mooted the idea of price controls on food. The UAE has begun growing its own food in the desert—everything from tomatoes to quinoa—but still imports 90% of what it eats. With a currency pegged to the dollar, as in most Gulf states, a weaker greenback means higher prices in the supermarket. Grocers were told to offer discounts during Ramadan. That is a luxury the UAE can afford. Elsewhere in the region, though, the next few years may be lean. ■

What war has wrought

Population with insufficient food consumption, m



Source: World Food Programme

*At April 8th



Tunisia

The megaphone

TUNIS

A demagogue is on the rise

KHADIJA, LIKE many Tunisians, thinks life was better before the revolution that toppled Zine El Abidine Ben Ali, a dictator, in 2011. For sure, there is more freedom, but democracy has not brought prosperity. Corruption, inflation and unemployment persist. Khadija, 50, does not have a job. Yet she hopes that Abir Moussi, a politician, will turn Tunisia around. “Moussi speaks for the people,” she says.

Since winning a seat in parliament in 2019, Ms Moussi (pictured) has made a name for herself with her populist outbursts. She claims the revolution was a “plot” by foreign countries—in the past it was “Europeans, Americans and Zionists”, now it is Qatar and Turkey. When not spouting conspiracy theories, she is channelling Tunisians’ nostalgia for the relative order and stability of the Ben Ali era. That has made her quite popular. If elections were held today, polls show her Free Destourian Party (PDL) would come top.

As it is, the PDL is the fifth-biggest party in a parliament Ms Moussi says is broken. Plenty of Tunisians agree. Eight prime ministers in ten years have been unable to pull the country out of its rut. But Ms Moussi is part of the problem. She leads frequent protests that disrupt the assembly. Her target is usually Ennahda, the moderate Islamist party that has the most seats. They are “terrorists” trying to impose religious rule, she claims—or, rather, screams. Sometimes she brings a megaphone to work and yells at Ennahda’s leader, the mild-mannered Rachid Ghannouchi, who is also parliament’s speaker.

West Africa’s sea cucumbers

Slug-like and precious

SASSTOWN

Covid-19 has made life harder for intrepid cucumber-catchers

IN A COCONUT grove behind a secluded beach in Liberia is a tin cabin cobbled together by a dozen Sierra Leonean divers. They have been plying the coastline in search of “black gold”. Not oil, but the sea cucumber, a large slug-like creature that infests the ocean floor. Local fishermen have traditionally ignored them, since locals deem them unappetising. Yet if dried and exported to China, they can fetch \$500 a kilo. Chinese chefs and diners adore them. They are also an ingredient in traditional Chinese medicine, and touted without evidence as a way of boosting virility.

The divers, whose tattoos and swagger make them stick out among Liberians, have not always been itinerant. As recently as 2013 their own waters off Freetown, Sierra Leone’s capital, were teeming with sea cucumbers. Young men willing to don a breathing hose could make good money. In the dead of night they would gather their prey. But Sierra Leone’s stocks have shrunk and most of the Chinese traders have left. Some divers have tried their luck elsewhere.

Covid-19 has upended the business. Lockdowns have left cucumber-catchers stranded in remote Liberian villages. And the closure of airports has all but halted sea-cucumber exports. Many catchers sold their canoes, smartphones and designer shoes, says Abdoulaye Mansaray, who leads one group of them. And when they ran out of money for food, they turned to their stock of unsold dried sea cucumbers. This was a culinary challenge for Musa, the cook. He soaked them for three days before frying them

with onions. His creation was shared with curious locals. The divers claim that those who ate the echinoderms were startled by the aphrodisiac effect—and fisherfolk never exaggerate.

This year the catchers have been prospecting farther down the Liberian coast in ropery rented canoes. Their diving season was cut short by the authorities, who seized their motors over a licensing dispute: a sign, perhaps, that Liberian stocks of sea cucumbers will be better managed than Sierra Leone’s. But the sea cucumbers gathered here are too small to fetch a good price. So the divers will be moving on, coiling their hoses, loading their leaky boats and setting off in search of seabeds better endowed with large, chewy slug-like creatures.



Close your eyes and open your mouth

Ms Moussi says a member of Ennahda assaulted her during one episode. But local watchdogs call the PDL the most confrontational party in parliament. Last year its members unbolted the speaker’s chair and held it aloft during a protest. The journalists’ union has called for a boycott of Ms Moussi over what it calls her “fascist practices”. This came after she claimed to have seen a reporter engaging in sexual activities with a parliamentary staff member.

Her rhetoric often sounds like that used by anti-Islamist regimes in the United Arab Emirates, Saudi Arabia and Egypt. Her view of democracy appears similar, too. She wants to strengthen the presidency and security forces, and ban Ennahda. “I don’t think she’s ever specifically said she opposes democracy,” says Youssef Cherif of

the Columbia Global Centre, a research institute in Tunis. “But she seems happy to let people assume that, not least through her crusading against the pillars of Tunisian democracy, such as other political parties or foreign-funded NGOs.”

At rallies Ms Moussi, a former official in Ben Ali’s party, surrounds herself with symbols of the past, while making no mention of the repression Tunisians used to suffer. Nor does she offer many solutions to the country’s problems. Still, a growing number of Tunisians feel that she speaks for them. When she ran for president in 2019, she got just 4% of the vote. The winner, Kais Saied, is the only politician more popular than her. But she would do much better now. Many Tunisians see a strong ruler as the path to prosperity. ■

Ethiopia's war economy

Blowing in the wind

ADDIS ABABA

How much more fighting can Ethiopia's economy take?

“LIKE FLOUR scattered in the wind” is how Abiy Ahmed, Ethiopia's prime minister, describes the Tigrayan People's Liberation Front (TPLF), the ethnically based party that called the shots in Ethiopia for almost three decades. By this he means it is crushed, never to revive. There is no denying that its power has waned. In 2018 the TPLF lost control of the federal government, making way for the ascent of Abiy. Then last November his forces kicked the TPLF out of its seat in the regional government of Tigray, a northern state, killing or capturing some of its leaders and sending the rest into hiding.

But Abiy's description is apt in another way too. His forces are now battling invisible guerrillas whom they are unable completely to subdue. Last year, soon after federal troops entered Mekelle, the Tigrayan capital, Abiy declared victory. Now he admits that defeating “an enemy which is in hiding” will be “very difficult”.

As the war drags on, the human toll mounts. In recent weeks tens of thousands of Tigrayans have fled what American officials have described as ethnic cleansing in western Tigray. Possibly thousands of civilians have been murdered by armed forces on all sides. Women and doctors in Tigray report mass rape by both Ethiopian and Eritrean soldiers. “The conflict is ongoing and human-rights violations are happening every day,” says Finland's foreign minister, Pekka Haavisto, who is the EU's special envoy to Ethiopia.

The war's economic costs are ruinous, too. Life had been improving. Between 2000 and 2016 the share of Ethiopians who could not afford to buy a basket of food containing the minimum number of calories they need fell from 44% to 24%. Such huge gains, made in Africa's second-most populous country, are now under threat.

Start with the direct costs of reconstruction. Eyob Tolina, Ethiopia's finance minister, estimates that the price of repairing damaged infrastructure will be around \$1bn (about 1% of GDP). Schools, universities and hospitals have been looted or destroyed, as have farms and factories.

Longer-term costs are harder to quantify, but are piling up. Before the war Tigray produced a third of Ethiopia's sesame exports, worth almost \$350m a year, a tenth of total exports. Since then, tens of thousands of farmers have fled, abandoning the harvest. Although business in Mekelle is

slowly picking up, banks and markets in much of the region are still closed.

Officials shrug off the economic impact. In January the trade ministry said that the closure of factories and roads in Tigray was losing the country \$20m a month in exports. Abiy has since trumpeted a 21% rise in exports, largely thanks to a huge surge in earnings from gold. The government insists that the economy will grow by 8.5% in 2021. The IMF, however, reckons growth will be closer to 2%.

The government's confidence is based on an assumption that the war's impact will be limited to Tigray, which accounts for less than 10% of the national economy. “Tigray...is a geographically small part of the country,” says a senior government adviser. “Certainly not a big macro issue.” Public debt has fallen by more than a tenth since reaching a peak of almost 60% of GDP three years ago, even after a small rise because of covid-19.

But how long can the economy bear a prolonged conflict? Inflation, which was running at 18% before the war, is now above 20%. Foreign exchange is crippling scarce. On the black market the Ethiopian birr has fallen by 9% against the dollar in recent months. Businesses trying to get foreign currency through official channels often wait at least a year to get their allocation from state-owned banks.

The government has asked the IMF and the World Bank to bail it out. In February it said it would apply for debt relief under a

programme aimed at helping poor countries affected by covid-19. Rating agencies duly downgraded Ethiopia's debt. The government also hopes to get a windfall from auctioning two new mobile-phone licences and later selling a 45% share of Ethio Telecom, the mobile-phone monopoly.

But relief, whether from lenders or investors, may be slow. Faced with reports of atrocities as well as uncertainty concerning elections, which are planned for June, foreign investors are nervous. “Everything is on hold,” reports one of them. Officials fret that extra support from donors may not be forthcoming. In January the European Union suspended €88m (\$107m) of budget support until aid agencies are given full access to Tigray.

Ethiopia also has little room for manoeuvre. Under the terms of an existing IMF programme it cannot easily borrow more. Nor can it just print money. The treasury has been able to finance its deficit by selling treasury bills, mostly to state-owned pension funds (previously it simply forced banks to hold public debt at below-market rates). But the government will face a balance-of-payments crisis unless it can get hard currency to finance imports and service its foreign-denominated debts.

Allies such as China, Russia and, especially, countries in the Gulf may help to plug the gap. Meanwhile the conflict is spreading. People in Tigray are already starving. Mass famine looms. Elsewhere in the country ethnic violence is worsening. In recent weeks hundreds of people have died in clashes between Oromos and Amharas, the country's two biggest groups, as well as between ethnic Somalis and Afars in the east. Eyob, the finance minister, sounds optimistic, arguing that in recent months the economy has shown “resilience” in the face of the crisis. On the ground, though, the situation looks increasingly dire. ■



The cost of war



German politics

A fracturing Union

BERLIN

Germany's conservatives are fumbling the succession of Angela Merkel

“MY PLACE is in Bavaria.” When asked if he hoped to succeed Angela Merkel, who will step down as Germany's chancellor after an election in September, Markus Söder repeated his not-quite-denial so often that it became a running joke. As head of Bavaria's centre-right Christian Social Union (CSU), sister party to Mrs Merkel's Christian Democrats (CDU), Mr Söder (pictured above, right), a cocky, self-assured type, has ruled Germany's brashest, and second biggest, state since 2018. Many thought his ambitions ended there.

Yet April 13th found Mr Söder seated in the Bundestag explaining why his place might be in Berlin after all. The CDU/CSU choose a joint chancellor-candidate to lead them into national elections. Appearing before the parties' MPs, Mr Söder laid out his pitch for the job. Armin Laschet, the mild-mannered CDU leader (pictured, left), made his own case from three socially distanced seats away. Johann Wadephul, a CDU MP who backs Mr Söder, says the four-hour debate was the most intense parliamentary session he can recall.

Two days earlier, in a show of faux-magnanimity, Mr Söder had finally made his

ambitions clear, declaring that he would accept the CDU/CSU, or Union, nomination if the larger party asked. If not, no hard feelings. The next day the CDU's leadership committee unanimously backed Mr Laschet. Yet rather than step back, Mr Söder doubled down. The CDU's top brass was out of touch, he implied; better to consult more broadly. The drama was on.

Shifting the duel to parliament bolstered Mr Söder's argument that his appeal extends beyond his own state and party. His pitch—that his huge polling lead over Mr Laschet, cemented in the course of the pandemic, was good for the Union's electoral prospects—found receptive ears among CDU MPs who fear for their seats. Some read out letters from constituency workers concerned that Mr Laschet would spell electoral doom. But with the CDU leader showing no inclination to yield and MPs enjoying no formal role in the process, the Union was left in stalemate. The two men pledged to reach a deal by the end of the week. How they would do so remained unclear as *The Economist* went to press.

The rivals have been careful to avoid full-frontal warfare, and no doubt the run-

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ner-up will offer the victor unequivocal backing. But this week's episode will leave scars. If Mr Laschet prevails, as seems more likely, he will begin the campaign as damaged goods. True, he is responsible for his own policy flip-flops and faltering communication style. But Mr Söder has shone a harsh light on Mr Laschet's pitiful polling—69% of voters in North Rhine-Westphalia, the state he runs, are unhappy with him—and forced CDU MPs publicly to oppose his candidacy. Mr Söder's late push for the job has harmed the relationship between the sister parties, and exposed splits between the CDU leadership and base.

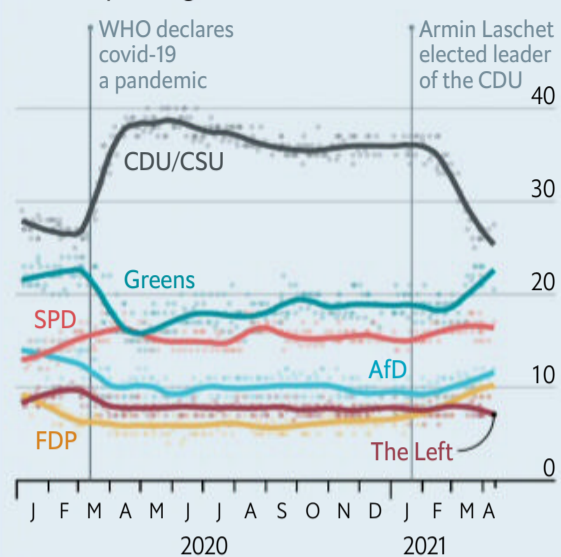
Were Mr Söder to secure the candidacy he would have to deal with a bruised CDU leadership that might not find the will to offer him full-throated support. And the sympathetic coverage he has so far enjoyed from journalists who love to mock the hapless Mr Laschet would fade once he was confronted with the Greens, the Union's main adversary, argues Ursula Münch of the Tutzing Academy for Political Education. Mr Söder, one of Germany's more opportunistic politicians, would see conveniently jettisoned conservative positions on matters like immigration or the European Union exhumed for scrutiny.

For the CDU/CSU, Europe's most important political alliance, to rely on an infor- ▶▶

Correction: Last week we said Slovenia's proposed new public-media laws would let politicians appoint more of the state broadcaster's board. In fact they would let them appoint board members of the state news agency. *The Economist* regrets the error.

Coincidence?

Germany, voting intention in federal election, %



Source: National polls

mal process for such a crucial decision is “ridiculous”, acknowledges Mr Wadepful. But this is also the first time in German history that a governing party will campaign without an incumbent chancellor, and it shows. “There is no blueprint for this,” says Christian Wohlrabe, a CDU candidate in Berlin’s city election, also due in September. The long reign of Mrs Merkel, who herself was forced to yield to the CSU in 2002 before winning office three years later, has left the party out of ideas at the moment it needs them most. “We have new candidates and new issues,” says Mr Wadepful. “It will be a completely different race.” But Mr Söder’s long refusal to rule himself in or out made a contest for the candidacy based on competing visions impossible.

Then there is covid-19. As Germany’s third wave accelerates, the pandemic seems likely to dominate politics well into the summer. The government is legislating to increase its powers over renegade states; among other things, Germany looks set for its first widespread curfew. The seemingly endless lockdown will make it harder for the Union candidate to pull off the already-tricky task of creating a political vision for post-Merkel Germany without disowning the popular chancellor. (Wisely, she has vowed to stay out of the contest.)

The woes of the Union are thrown into sharper relief by the discipline of their political rivals. On April 19th the Greens will announce their first-ever candidate for the chancellery (expected to be Annalena Baerbock, the party’s young co-leader). The party hopes the contrast between its well-managed process and the drawn-out psychodrama of the Union’s will not be lost on voters. Under either Mr Laschet or Mr Söder, the conservatives will remain odds-on to run the first post-Merkel government. But that the notion of a Green chancellor no longer seems outlandish is testament not only to that party’s acumen, but to the agonies of its opponent. ■

Russia and Ukraine

On manoeuvres

A Russian military build-up on Ukraine’s border prompts alarm

THE LAST time that Russia gathered so many troops on Ukraine’s borders, it went on to invade the country and annex Crimea. A deployment in recent weeks “mirrors the size and scope and scale” of Russian activity in 2014, noted General Todd Wolters, America’s senior commander for Europe, on April 13th.

A public acknowledgement that same day by Sergei Shoigu, Russia’s defence minister, that the country had indeed built up two armies and three airborne units, but only for “combat training exercises”, was hardly reassuring—the invasion seven years ago was also preceded by similarly ambiguous manoeuvres.

The aim of the Russian build-up remains unclear. It is certainly not a routine exercise. For instance, a long-range military communication system deployed near Voronezh, some 200km (125 miles) from the border with Ukraine (see map), is only used for very large units and thus “indicative of the scale of the deployment”, notes Janes, a defence-intelligence company. Some units have travelled from thousands of kilometres away. Tom Bullock, an analyst at Janes, says that troops still appear to be moving towards the border.

For all this, notes Michael Kofman of CNA, a think-tank in Washington, the movements are both “decidedly visible”, thus precluding a surprise attack, and organised in a way that points against a major military operation. Units are staging near training grounds, rather than moving to assembly areas or dispersing, making them easier to find and see. Nor is it clear what Russia would actually seize. “I don’t think there is any objective important enough that would necessitate a ground invasion—with all of the repercussions



that would follow,” says Rob Lee of King’s College London.

What is more likely is that Vladimir Putin, Russia’s president, is using his armed forces as an instrument of coercive diplomacy. A ceasefire between Russia and Ukraine over Donbas, a breakaway region of eastern Ukraine, is under strain. The killing of a Ukrainian soldier on April 10th was the 28th this year. Moreover, in February Ukraine enraged the Kremlin by imposing sanctions on Viktor Medvedchuk, a pro-Russian politician and businessman.

Dmitry Trenin of the Carnegie Moscow Centre, a think-tank, argues that Volodymyr Zelensky, Ukraine’s president, began the current cycle of escalation by moving heavy weapons towards the border in February (though the evidence for that is “inconclusive at best”, says Mr Bullock) and cracking down on Ukraine’s Russian-speaking opposition to “provoke Russia” and draw Western support.

In this telling, Russia’s mobilisation is intended to “cool the fervour of Ukrainian leaders”. Mr Putin may hope to frighten Mr Zelensky into offering concessions, such as greater autonomy for pro-Russian rebels in the Donbas.

Yet Mr Putin’s domestic circumstances might also have encouraged his muscle-flexing. His government arrested over 10,000 protesters in January who came out in support of Alexei Navalny, an opposition leader who is languishing in a Siberian prison. Mr Putin’s political ratings have slumped, ahead of parliamentary elections in September. Over two-fifths of Russians say that the country is moving in the wrong direction and the economy is stagnating.

Thus far, Mr Putin has failed to extract anything from Mr Zelensky, who has received vocal support from the West. On April 2nd President Joe Biden phoned his Ukrainian counterpart for the first time. American backing for Ukraine—which is not a member of NATO—will go only so far, warns Oleksandr Danylyuk, who briefly served as the director of Mr Zelensky’s national security council. Mr Biden is wary of the former comic’s lack of experience and his initial effort to make peace with Russia, says Mr Danylyuk.

Yet Ukraine is not without other friends. A week after speaking to Mr Biden, Mr Zelensky visited Turkey, which is selling Ukraine the same sort of low-cost drones which helped Azerbaijan thrash Armenia in a war last year.

Mr Putin, increasingly estranged from the West and eager for recognition, can claim at least one diplomatic victory. On March 22nd Russia said that Mr Biden had rejected the offer of a video conference. Three weeks later, on April 13th, with Russian armour massed, Mr Biden offered a summit meeting “in the coming months”. Mr Zelensky will be watching nervously. ■

Women in Italy

The big divide

ROME

More women have top jobs, but many have no job at all

ENRICO LETTA, a former prime minister who returned from the political wilderness to lead Italy's centre-left Democratic Party (PD), is one of Italy's more courteous politicians. Yet in one respect he has acted ruthlessly since being elected leader on March 14th. Having named a woman as one of his two deputies and given women eight of the 16 seats in the PD's executive, he forced out its male chief whips in both houses of parliament so that women could be appointed to replace them.

Mr Letta's uncharacteristic purge came as a well-judged response to an outcry that followed his predecessor's decision to put men into all three of the ministerial places allotted to the PD in Mario Draghi's coalition government. The indignant clamour was a sign of changed expectations in a country that, back in the 1970s, had one of Europe's most militant and successful feminist movements, but which then lost ground dramatically in terms of equality for women.

Giusi Marchetta, a feminist writer, blames among other factors the influence of Silvio Berlusconi's television channels, with their lascivious portrayal of women. Born in 1982, Ms Marchetta says: "I grew up in an atmosphere in which the notion of women was constantly sexualised."

A turning-point was the nationwide demonstration in 2011 against the hosting by Mr Berlusconi, then Italy's prime minister, of so-called "Bunga Bunga" parties, whose many female guests included a 16-year-old. The subsequent rise of social media has eroded the influence of television, and of Mr Berlusconi's network. Recent years

have also seen a sharpened focus on practical issues, from the levying of VAT on tampons to violence against women and sexual harassment.

Between 2010 and 2018, Italy's gender-equality rating, as measured by the European Institute for Gender Equality, increased by more than ten points out of 100—the biggest rise for any EU state. Last year the institute's index ranked Italy 13th out of the EU's 27 countries, ahead of Portugal but well behind Spain and France. Italy has seen an increase in the number of women in top jobs, largely thanks to the introduction of quotas for female company directors (33%) and national lawmakers (40%). And the pay gap between men and women in Italy is nowadays no wider than in many other European countries.

Still, these advances mask what Francesca Bettio of the University of Siena fears is a larger problem: the limited participation

of women in the labour market. Italy has the lowest female employment rate of any EU country, at 57%; and the worst in the industrialised world bar Mexico and Turkey. Italian women are also far more likely than Italian men to be employed part-time or on short-term contracts.

To some extent this reflects social attitudes, notably the view, especially prevalent in the south, that women should give up work when they first become pregnant. But such attitudes are both cause and effect of things that politicians could change, including a strikingly low level of formal child care. In Italy there are public and private places available for only 26% of children below the age of three, against more than half in both France and Spain. Mr Draghi's government is currently debating whether to earmark part of its share of the EU's €750bn (\$895bn) post-pandemic recovery fund to increase that figure. ■

Norwegian cuisine

Fish tongues, harvested by children

OSLO

The piece of cod that passeth all understanding

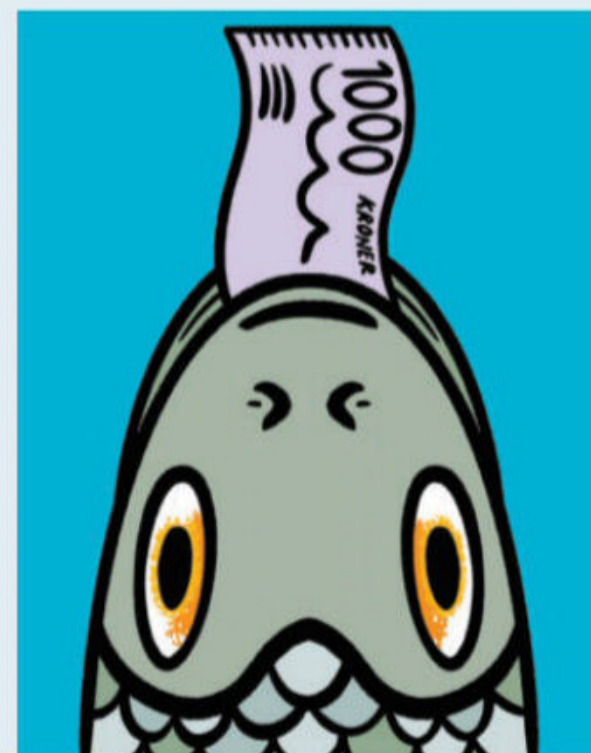
FRIED IN BUTTER with a light flour batter and some dried herbs, cod tongue is a delicacy in Norway and beyond. Around 80 tonnes are harvested every year from fish caught in Norway's northern waters. Softer in texture than the flesh of the fish, cod tongue dissolves in the mouth with a hint of saltiness. It is the "angels' share" of the fish, says Jan-Erik Indrestrand of Fiskarlaget, the Norwegian fishermen's association.

Liv Eva Kirkesæther, a 35-year-old who works for a marine research institute, says that when she was a girl, men and boys dominated the cod-tongue-cutting trade on Lofoten, a Norwegian archipelago. This year, she was happy to see a grandmother and granddaughter selling tongues from a car boot.

In other ways, however, the art of *tungeskjæring* has changed little over the centuries. Most controversially, to modern sensibilities, the fiddly work of removing the tongue from an already-beheaded fish is reserved mainly for children. The practice serves as a kind of apprenticeship for would-be fisherfolk, and it pays handsomely. The tongues are valuable, so an hour's work can pay 1,200 kroner (\$143); not bad if you're six. Modesty guides attitudes in Lofoten and other northern parts, so it would be frowned upon to splash the cash on something frivolous, says Ms Kirkesæther. Youngsters tend to save up for a fishing boat, a car or a deposit on a home.

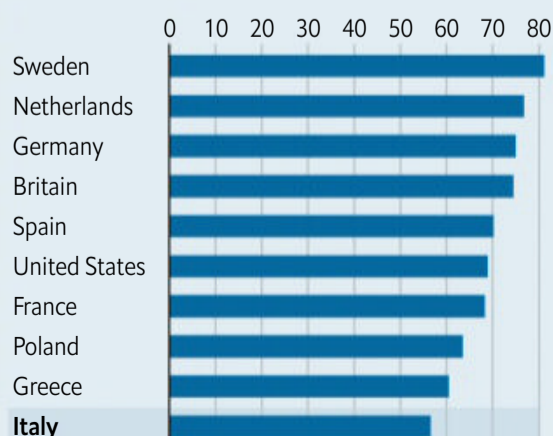
Not everyone gets involved. Those

with bourgeois aspirations keep their distance; tongue-cutting smacks of a fisherman's rough life. And urbanites in Oslo were unsettled by a recent documentary showing the youngsters at work in their blood-spattered oilskins. "Child labour!" they cried. The government looked into the issue, then backed off, out of respect for culture and heritage. A bigger threat to the industry is that stocks are low. From April 27th, Norwegian cod caught in coastal waters will lose its sustainability rating from the Marine Stewardship Council, a global fish watchdog.



Worst in class

Female* labour-force participation rate
Selected countries, 2019, %



Source: OECD

*Aged 15-64

Charlemagne | A Calhounian moment

Forget Hamilton. The spectre of another American politician looms over the European Union



LAST SUMMER it was impossible to discuss the EU without someone mentioning Alexander Hamilton. The decision to issue €750bn (\$895bn) in collective debt sent wonks scurrying to history books (or the musical). A lively debate followed over whether this indeed amounted to a Hamiltonian moment, as in 1790 when the young American founding father persuaded the new country to assume the debts of its states. Time might have been better spent boning up on another figure from the republic's early history, John C. Calhoun. At first glance, an antebellum vice-president and supporter of slavery has few lessons for the EU. But he was also the main advocate of nullification: the right for states to strike down federal laws they deemed unconstitutional. This fight over legal supremacy began with a refusal to enforce tariffs in South Carolina in the 1830s and ended three decades later in civil war.

Two centuries on, a similar debate is throwing the EU's legal order into question. Last month, Germany's constitutional court paused ratification of the debt plan until the court had examined it. The decision could just be legal housekeeping, but some fear it may be more. Last year, the German court declared that the European Court of Justice in Luxembourg had overstepped its mandate in the way it allowed a quantitative easing programme by the European Central Bank. Poland's top court has taken to ignoring the ECJ's rulings. In France, officials discuss ways of circumventing an ECJ decision that struck down a data-retention law, claiming that it clashes with the country's constitution. However much Europeans may resist the idea, they face a "Calhounian moment".

Disagreements over who has the final say in any legal order are manageable, if handled carefully by judges. In any quasi-federal system, conflict between the centre (ECJ judges) and periphery (their German counterparts) is inevitable, argues Holger Hestermeyer of King's College London. The key is for judges to be able to disagree without wrecking the whole system. In British politics, "Good Chap theory" still holds sway: there may not be many checks in the British system, but it does not matter so long as the actors do not overstep the invisible mark. In the EU, this becomes Good Judge theory. Despite their caricature as frothing federalists, ECJ judges in are not lunatics bent on bulldozing the constitutional arrangements of EU countries willy-nilly.

Likewise, it does not matter if German judges play chicken with their counterparts in Luxembourg, so long as they swerve out of the way at the last moment. Another option is to slow down to the point where any collision is a gentle bump. Last year, when the German court accused the ECJ of going too far, it carefully offered an easy way for the disagreement to be solved: central bankers had to explain their decision more clearly. In principle, it was a big deal; in practice, it was easily fixed.

Yet problems lurk in this approach. A flaw of Good Judge theory is that not all judges within the EU are good. Poland's constitutional court has been stacked, with regime-curbing members removed and replaced by cronies. The outgoing president of the German court dismissed the top Polish court as a "puppet". Yet Polish jurists are keen to cite German legal thinking on constitutional pluralism, in which the authority of courts overlaps. "Constitutional pluralism is a bit like nuclear power. It has beneficial peacetime uses, but it is inherently dangerous and can easily be weaponised in times of war," write Laurent Pech of Middlesex University and R. Daniel Kelemen of Rutgers University. If Poland elects to ignore judgments of the EU's top court then it amounts to de facto "Pol-exit". The country would be in the bloc but unbound by its rules.

Such a situation would leave the EU in a tough spot. It has no military power to enforce its will, nor enough spare cash to bribe naysayers into compliance. All it has is its legal order. If that is undermined, then so is the project. That the ECJ's rulings are final and binding on all national courts is what makes the EU unique, explains Mr Kelemen. Strip this out and the EU becomes like any other weak international organisation—an OECD with a flag and an affection for the "Ode To Joy". There is a good reason why the "caveats" sections of analysts' reports often mention the possibility that a German judge might upend the euro zone.

Antebellum Europe

As the EU tiptoes in a Hamiltonian direction, it will have to deal with the Calhounian tendency. There are two main theories as to how to do this. Some think the problem will solve itself over time. Though the EU has been around in some form since the 1950s, the thorniest topics, such as monetary union, were only placed on the European level in the 1990s. In this view, these are teething issues that can be settled via judicial dialogue rather than conflict. For others, only overhauling the EU's treaties, and spelling out directly who has the final say, can fix the problem.

Both approaches are right. Treaty change would clarify the boundaries of EU law, making life easier for judges. Big breakthroughs such as issuing hundreds of billions in collective debt fly in the face of rules that, at first glance, forbid the EU from borrowing to finance its spending. That such measures can be justified with complicated legal gymnastics does little to solve the impression that the rules are being bent. At the same time, a legal system can only prosper with good-faith actors. The EU must rein in countries that stack their courts, such as Poland, while relying on independent courts, such as Germany's, not to overstep the new mark.

Rather than bury fundamental disagreements, treaty change would dig them up. But politics is supposed to be difficult. In recent years, Europe's politicians have developed an unhealthy habit of ducking problems and hoping that the unelected parts of the system, such as central bankers and judges, will work out how to fix them. That is not sustainable. But at least this problem, unlike America's at the time of Calhoun, can be solved without a war. Europe has had enough of those. ■



Northern Ireland

Unhappy anniversary

BELFAST

The unionists have damaged their cause more in five years than the nationalists have in 50

JUST AS THE pen is mightier than the sword, so arrogant stupidity can do a cause more damage than its opponent's guns and bombs. Northern Ireland's 100th anniversary falls next month, and the survival for a century of the six-county state which few expected to last should have been a moment of triumph for unionists. But the province's streets have been lit by riots, and reunification of the island of Ireland seems likelier than it has for decades. Remarkably, it is a unionist leader who has done more to advance that nationalist ideal than decades of republican terrorism.

More likely does not mean that a united Ireland is on the horizon. Polling is inconsistent. Last year a face-to-face survey in Northern Ireland showed 29% support for reunification; an online poll in January put the figure at 42% (see chart on next page). Few believe that nationalists would win a snap referendum.

But since the Brexit referendum of 2016, in which the United Kingdom as a whole voted to leave and Northern Ireland voted to stay, the polling trend has been towards unity. There was already relentless demo-

graphic change. This year's census is expected to confirm that Catholics now outnumber Protestants in a state whose boundaries sought to avoid that.

In 1921 Protestantism was equated with support for British rule, Catholicism with a nationalist desire for independence. As crude as the division was, it made sense to leave as few reluctant Catholics as possible within the new state, trapped on the wrong side of the border.

Northern Ireland's founders viewed the link between religion and constitutional preference as essentially fixed at birth. Ninety years later, 21st-century unionists saw those two issues detach to an extent

→ **Also in this section**

50 Bagehot: Prince Philip

Read more from this week's Britain section:
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which would have astonished their forefathers. By 2016 there was significant Catholic support for the union; not enthusiastic, certainly not flag-waving, and rooted in self-interest. They didn't want to give up the free health care of the National Health Service or to risk well-paid public-sector jobs. Since the Good Friday Agreement (GFA) of 1998, which brought peace and set up a devolved government in Belfast, residents could be legally Irish, enjoying taxpayer support for Irish sports, culture and language while territorially within the UK.

And then unionism's leaders blew it. In five years Arlene Foster, leader of the Democratic Unionist Party (DUP), has arguably done more to advance Irish unity than the 72-year-old Gerry Adams, former head of Sinn Féin, the political wing of the Irish Republican Army (IRA).

Unionism's failure since 2016 is not its first; that part of the story goes back to 1921. In the words of David Trimble, the unionist leader who won the Nobel Peace Prize for negotiating the GFA, "Ulster unionists, fearful of being isolated on the island, built a solid house, but it was a cold house for Catholics. And northern nationalists, although they had a roof over their heads, seemed to us as if they meant to burn the house down."

Guaranteed perpetual power in the new devolved parliament, unionist leaders oversaw discrimination in favour of their voters. Jobs and housing were divvied up on the basis of religion, while electoral boundaries were gerrymandered to reduce ▶▶

▶ nationalist power.

At the opening of the Northern Ireland Parliament in June 1921, King George V hoped for rapprochement: “I appeal to all Irishmen to pause, to stretch out the hand of forbearance and conciliation, to forgive and to forget, and to join in making for the land which they love a new era of peace, contentment, and goodwill.” Despite their loyalty to the monarch, unionists disregarded the King’s advice.

That parliament collapsed in 1972 amid Catholic demands for reform. What had been peaceful protest was overtaken by a vicious IRA campaign and loyalist terrorism which would last for three decades known as the Troubles. In the end the IRA laid down its weapons without having achieved its main goal: Irish unity. Instead, Sinn Fein joined the government.

That violence has returned and the province’s future seems once more uncertain is in large part the consequence of the decision by the DUP, unionism’s dominant party, to back Brexit. It took the decision lightly—partly for reasons of party management—in the expectation that Remain would win. A freakish Westminster election result, in the wake of the Leave victory, gave its ten MPs unprecedented influence.

Drunk with power, the party rejected former prime minister Theresa May’s plan for a soft Brexit, which would have avoided the creation of a border between Britain and Ireland. Instead, it backed Boris Johnson, whose vision of a hard Brexit necessitated the creation of such a border. But where should it be? Mr Johnson promised that it would not be between Great Britain and Northern Ireland, but neither London, Dublin nor Brussels would accept a withdrawal agreement that included a hard border on the island of Ireland. So within three months, Mr Johnson betrayed the DUP and created that Irish Sea border.

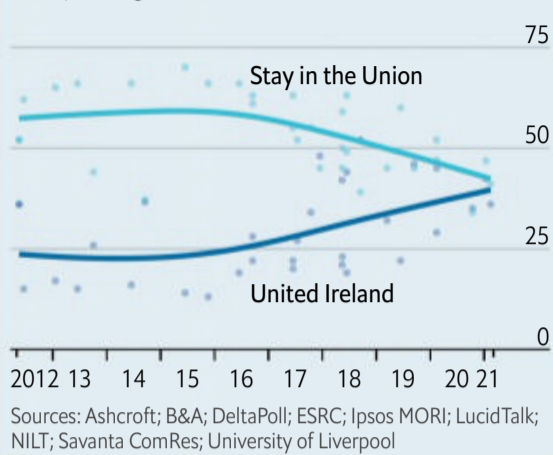
The widening sea

Now the UK has been symbolically and economically divided. Northern Ireland effectively has remained in the EU’s single market and customs union while Great Britain has left. That has meant practical difficulties—online UK retailers refusing to sell to Northern Ireland, a ban on plants in British soil crossing the Irish Sea, and mountains of red tape.

The Irish Sea border is thus accelerating the creation of an all-island economy. Jim Allister, who as leader of the Traditional Unionist Voice party is the voice of unbending unionism, regards this as creeping unification. He points out that Europe began with economic union, and political union followed. The GFA provides a roadmap for the next stage, for it mandates a “border poll”—a referendum—if the Secretary of State for Northern Ireland believes a majority would vote for Irish unity.

Closer

Northern Ireland, support for a united Ireland
% responding



Dismayed by this and other developments, some loyalists have taken to the streets. There was a week of rioting in Belfast and other towns earlier this month. Prince Philip’s death quelled the violence, for the unionists are staunch monarchists; but the respite may only be temporary.

There is little sympathy now for the DUP’s predicament. Their stance alienated people like Sara Canning, born into a republican family but freed by peace to question old orthodoxies. Her girlfriend, a young journalist named Lyra McKee, was murdered by a dissident republican gunman in 2019—a reminder that peace is relative, recent and fragile. Ms Canning had become a “small ‘u’ unionist” who felt that “Northern Ireland is like nobody’s child—nobody wants us. We’re a drain. But at least the UK can afford us.” Since Brexit she is open to whoever can make the best argument for prosperity and stability.

Another Catholic questioning received wisdom was Eugene O’Neill, a priest in north Belfast. Before Brexit, he said publicly that Irish unity was “literally irrelevant” to any priest under the age of 45, but his views have changed. “Brexit has had a strange effect of rattling things that I felt had become our foundations.” Although he says nationalism is in his DNA, he describes the possibility of a referendum on reunification not as exhilarating, but as “very unsettling for me as someone who values societal stability”.

Archbishop John McDowell, leader of the Church of Ireland, a Protestant church that is part of the Anglican Communion, says that despite Northern Ireland having a devolved government, “the place is beginning to feel like a colony again”, with the imposition from outside of policies on the basis that “you won’t do it yourself, so we’ll do it to you—it’s a wee bit like China and Hong Kong”. Northern Ireland seems to be “a stone in the shoe” of a Britain where English nationalism is on the rise, he said.

Unionism’s loss is nationalism’s gain. John Finucane, a Sinn Fein MP, says unity is “probably as close as I’ve ever experi-

enced it in my lifetime”, but accepts that memories of IRA atrocities mean some unionists will always oppose it. He wants unionism to “sell” its vision for the province so that there can be a proper debate about its future. Colum Eastwood, leader of the nationalist SDLP, makes a similar argument, but does not think unionism has much future. “This is only going in one direction. Frankly, I think the United Kingdom is coming to an end and Scotland will be out the door before us.” But he is not pressing for an immediate referendum. Nationalist parties do not have a detailed proposition for voters, he admits: “We’re holding our hands up and saying we haven’t done the work.”

Intense attention is now being paid to reunification in the south, which over recent decades has been transformed from a quasi-theocracy and the poor part of the island into a prosperous and socially liberal democracy. Last month Leo Varadkar, a former Taoiseach, warned that unity will not mean bolting on the north but creating an entirely new county with all that entails, from the flag to the constitution. Some in Dublin fret about a narrow vote to reunify, leaving a million recalcitrant unionists in a state they oppose. Polls show strong support for unity in the south, but it diminishes if there is a big price tag.

Will abandonment by Westminster see unionists give up on the union? It’s unlikely. Today’s burning unionist sense of betrayal by Tory politicians has historical resonance. No one more fully embodied Ulster unionists’ militant defiance than Edward Carson, whose bronze statue dominates the approach to Stormont. Yet in 1921, Lord Carson lamented in the House of Lords that Ulster “has stuck too well to you, and you believe that because she is loyal you can kick her as you like”. ■



Arlene Foster, betrayed with a kiss

Bagehot | The dynasty factor

Prince Philip's death demonstrates the enduring power of dynasticism



THE MODERN world was built on the graves of royal dynasties. The grave-diggers started their work with the American and French revolutions in the second half of the 18th century, paused for a while in the 19th, as Europe recoiled from the excesses of Madame Guillotine and the Emperor Napoleon, and then resumed with gusto in the 20th. The first world war and its aftermath saw the destruction of such great names as Russia's Romanovs, Germany's Hohenzollerns and Austria-Hungary's Habsburgs. Today there are just 26 monarchies left.

The explanation is not hard to grasp. Dynasts inherit their positions regardless of ability. James VI was 13 months old when he became king of Scotland. Edward VI was a sickly child when he succeeded Henry VIII. George III was mad. Dynasty is based on the union of the public and private in the monarch's person. The death of a king could plunge the country into decades of conflict, as with the Wars of the Roses. A royal marriage could reshape international alliances. Hilary Mantel describes the politics of Henry VIII's reign as "graphically gynaecological" because it was dominated by the king's desire to produce a son. Modernity is built on the negation of all of this.

Yet the reaction to Prince Philip's death on April 9th demonstrated that the dynastic principle continues to flourish in one of the world's most advanced countries. The BBC suspended its programming to focus on the news. Newspapers produced special editions framed in black. A vast army of royal experts competed to tell the most heart-warming anecdotes about the crusty royal. Old newsreels of the queen's coronation were rolled out to remind the world that, while most surviving monarchies seem almost embarrassed about their role—witness the bicycling kings and queens of the Nordic world—the Windsors believe that monarchy is worth doing only with pomp and circumstance.

This is all the more remarkable because Prince Philip of Greece and Denmark, as he was born, was himself almost a casualty of the death of dynasties. The family was expelled from Greece shortly after his birth, and his parents quickly went their separate ways—his father to a life of dissolution, his mother to a mental asylum. Philip spent his childhood as an orphan princeling dependent on the kindness of strangers and the whims of his scattered family. It

was only his marriage to the queen, which the old guard at the palace strongly opposed, that enabled him to turn his lineage into a way of life.

Why do the British continue to cherish the dynastic principle at the very heart of the state? There has been no shortage of answers to this question over the past days. One is that the royals are tireless public servants: the prince carried out more than 22,000 solo engagements and countless more as an appendage to his wife, always walking two steps behind her. A second is that they are judicious modernisers: the prince melded clever innovations (such as the Duke of Edinburgh award scheme for youngsters) with ancient rituals. A third is that the monarchy is a source of unity in a country that is often at war with itself.

The first two answers are weak. The theatre of monarchy is not primarily a theatre of works performed and duties fulfilled. It is a theatre of majesty. The only way to fully modernise the monarchy is to abolish it: the point of the institution is to act as a counterbalance to the everyday world of value for money and performance targets. Monarchy is romance or it is nothing.

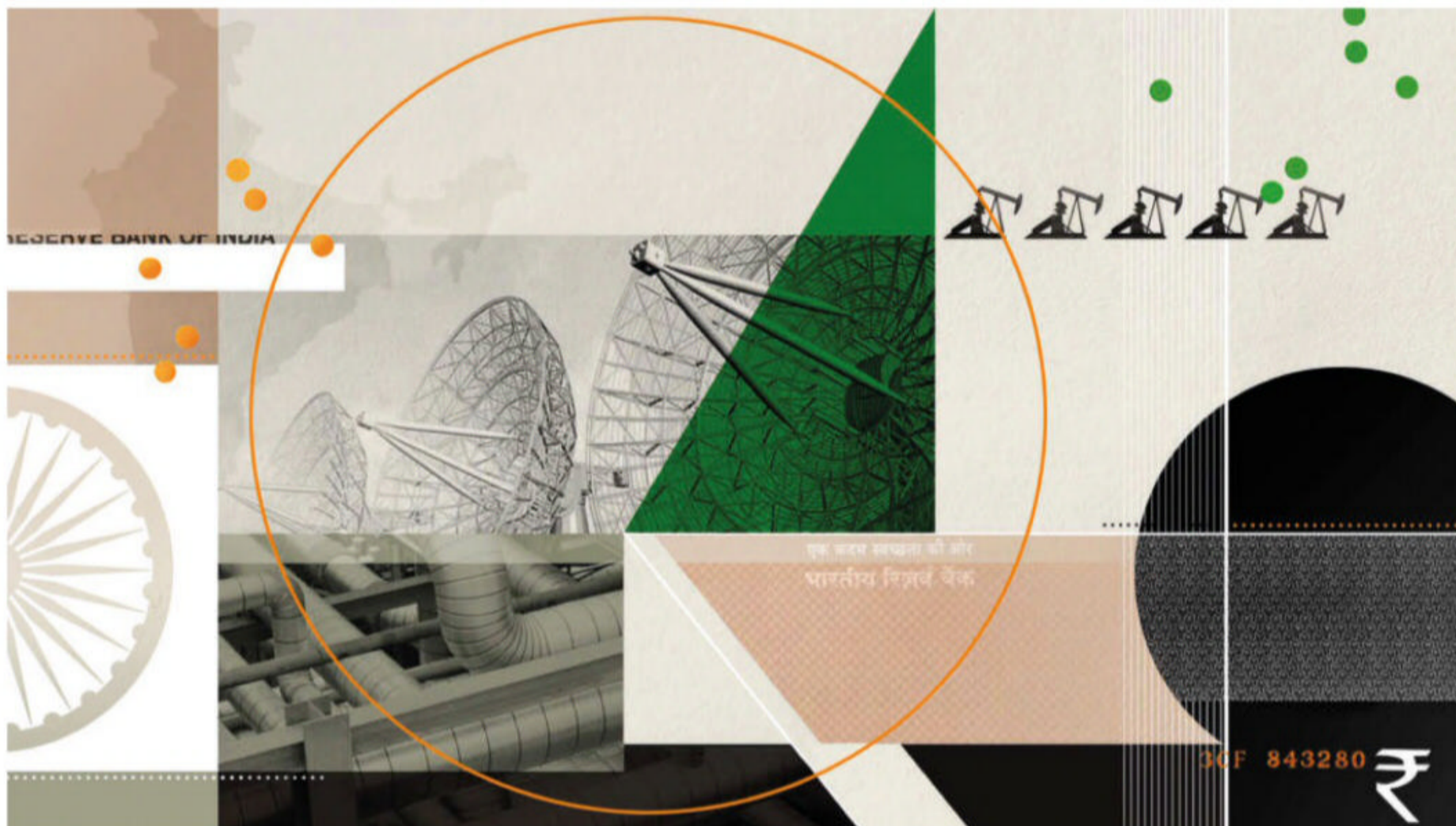
The third answer is closer to the truth. Regular politics is inevitably about differences: rival parties bellow at each other from opposing benches and then vote in something called a division. These disagreements are unusually sharp at the moment: furious arguments about Brexit are now giving way to equally furious arguments about devolution. Questions of identity underlie these issues: what does it mean to be "British" in a multi-ethnic society? And what prevents us from spinning out of control in an age of such hectic change? The reaction to the duke's death was a symptom of a desire to find unity at a time of discord and continuity at a time of flux.

But even this argument contains holes. The BBC received more than 100,000 complaints about its wall-to-wall coverage of the Duke's death, with the postponement of the finale of another national institution, "Masterchef", causing particular fury. Prince Philip's blunt style exacerbated some of the divisions at the heart of the country's culture wars. And recent rows about Meghan Markle—a victim of royal racism to her defenders and an entitled woke princess to her critics—suggest that the monarchy fosters division as well as healing it.

A subtler answer lies in the way that the dynastic principle puts the basic facts of biology right at the heart of the public square. As defined by politicians, the public square is about utilitarian calculations and party manoeuvring; as defined by dynasties, it is about more fundamental things in life.

The most keenly watched royal events are marriages (and their breakdown) and births. The Duke of Edinburgh's death provided a chance to observe on the public stage something that usually takes place only in private. It also allowed people to do at a national level what they usually do within their families: contemplate the way things have changed over the decades. These great royal events are unifying because they are "brilliant editions of universal facts", to borrow a phrase from Walter Bagehot, the great Victorian editor of *The Economist*. They are also consoling, for they remind people that even those with great wealth and status share the troubles from which lesser mortals suffer—unsatisfactory partners, wayward children and, eventually, decay and death.

It is extraordinary that the dynastic principle has survived. That it has done so by taking the most atypical people on the planet—blue bloods living in gilded cages—and turning them into exemplars of our common humanity is quite bizarre. ■



Foreign investment

India Inc

LUSAKA AND NAIROBI

India has proved to be a popular—and clever—investor in developing countries

IN CENTRAL Lusaka a brand-new flyover flutters with the green, white and saffron of the Indian flag. Throughout the Zambian capital lorries produced by Tata Motors, part of the steel-to-tech Tata empire, are used for everything from construction to rubbish collection. Signs inside the vehicles instruct drivers in both English and Hindi. The lorries' occupants phone each other over a mobile network run by Bharti Airtel, an Indian telecoms firm.

Many Zambians, like people in many other developing countries, complain loudly and often about the Chinese firms that are big local investors. India is also a big commercial presence but no one bats an eyelid. Tata Motors has huge assembly plants in many countries, including South Africa and Malaysia. Bharti Airtel is one of the biggest telecoms operators in Africa. The Aditya Birla Group is the world's largest producer of carbon black, an ingredient in car tyres. It is one of Egypt's biggest industrial investors and exporters.

Even in sectors governments deem strategic, such as infrastructure and communications, Indian foreign direct invest-

ment (FDI) is not viewed as geopolitical scheming or hegemonic ambition. "That's one of the selling points for India," says Gareth Price of Chatham House, a British think-tank. "With the obvious exceptions of Pakistan and China, everyone is kind of all right with India."

India was once compared to China as an emerging-market power with capital to splurge. The spectacular rise in Chinese investment over the past decade or so has scotched that analogy. Now poor countries are trying to finance their recovery from covid-19 without deepening their debt or their dependence on China. India's forays are tiny in comparison—around 7% of China's total stock of FDI in developing economies (not counting investment in Hong Kong, which is sometimes included). But its approach has lessons for foreign investors trying to go about their business without setting off alarm bells.

Firms from emerging markets have long invested in other emerging markets. Their experience at home of delays, chaos and financing constraints provide useful preparation. India helped organise the

Bandung conference in 1955, which discussed "South-South" co-operation.

Indian investments in the rich world are more likely to grab headlines. Deals such as the Tata Group's acquisition of Tetley Tea or Jaguar Land Rover involve household names, hundreds of millions of dollars and a smack of reverse imperialism. But India's stock of outward FDI to the poor world is about the same as its stake in rich countries, and has been growing more steadily over time. In 2019 it reached roughly \$46bn, according to the latest estimates by the UN Conference on Trade and Development, up from around \$40bn in 2010. About \$30bn of that is in Asia and around \$13bn in Africa.

Some of the data are sketchy. Multinational companies headquartered in India generally set up local subsidiaries. They route money through tax havens such as Mauritius. And the 18m-odd overseas Indians (those born in the country or holding Indian citizenship) include entrepreneurs who switch passports and register businesses locally. "It becomes a jigsaw," says Jai Bhatia of Cambridge University.

Even if some pieces of the puzzle are missing, those that remain demonstrate the most obvious reason investment from India is viewed with less suspicion than that from China: scale. Even as Indian investment has grown steadily, Chinese investment in the poor world has soared: from \$83bn in 2010 to \$645bn in 2019.

Another reason is that, unlike Chinese investment, little of India's FDI comes ▶▶

▶ from state-controlled companies, which are often suspected of operating with one eye on geopolitical strategy and foreign-policy goals. ONGC Videsh is one of the few sizeable government-owned Indian businesses operating abroad. It has bought up assets in countries as far apart as Mozambique and Colombia.

But its firepower is not in the same league as its Chinese peers. Sinopec, a state-owned oil company, first muscled its way into the Angolan oil industry in the mid-2000s. It gazumped ONGC to buy a stake in a block from Shell, an oil-and-gas giant. Jonathan Hillman of the Centre for Strategic and International Studies, a think-tank in Washington, points out that India has nothing comparable to China's Belt-and-Road Initiative, a global infrastructure-building scheme. "The Indian government hasn't spent as much time presenting grand visions," he says.

Most of India's FDI comes instead from privately held businesses, which undertake projects overseas for purely commercial reasons. They include recently arrived entrepreneurs, (disparagingly dubbed "Rockets" in Kenya for their intention of making fortunes and quickly heading home), multinational investors headquartered in India and diaspora families who have been doing business abroad, especially in Africa, for generations.

Indian traders began settling around the edges of the Indian Ocean centuries ago. In the 19th century thousands more were sent to far corners of the British empire, to work on plantations in Mauritius and build railways in Kenya. Many stayed and built their own businesses. Others braved long journeys on dhows to join them in Africa. "We tend to view things ahistorically and through a geopolitical prism, so it is all about China," says Parag Khanna, an international-relations expert whose father worked for the Tatas in Africa. In a sign of China's rise on the continent, the railway that drew Indians to Kenya in the 1890s has been replaced by the Madaraka Express, a Chinese-built line named after the anniversary of Kenyan independence from Britain (*madaraka* means "ruling power" in Swahili).

The Indian diaspora has sometimes experienced resentment. In the 1970s, for example, Idi Amin, a despot, expelled Asians from Uganda and seized their property. But by and large, a shared history has bred familiarity. Kenya's government has gone so far as to recognise Asians as the country's 44th official tribe. Vimal Shah, whose grandfather emigrated from India, started the Bidco Africa juice-to-cattlefeed empire with his father and brother about 35 years ago. He knows the best Indian food in Nairobi and volunteers at the Jain community centre, but has a Kenyan passport and sees himself as thoroughly Kenyan. "I'm not a

desi [local] from India," Mr Shah says.

After independence, industrialists looked beyond India's borders to free themselves from red tape. One of India Inc's first foreign ventures was a textile mill built by the Birla Group in Ethiopia in 1959. The conglomerate then expanded across South-East Asia, where economies were opening up. A second, bigger, rush of FDI came in the 1990s, when India loosened capital controls. Last year Indian businesses set up 4,590 projects abroad, up from 395 in 2000, according to data crunched by Prema-chandra Athukorala of the Australian National University.

A third reason Indian investment tends to arouse less resentment than that from China is that Indian companies have a largely justified reputation for trying harder than the Chinese to hire and buy locally. In 2006 the World Bank surveyed almost 450 businesses in Africa. On average, Chinese firms employed almost a fifth of their workers from China and other East Asian countries, whereas Indian firms brought less than 10% of their workers from India. The Chinese businesses imported 60% of new machinery from China; their Indian peers bought just 22% from India. That trend continues today, says Harry Broadman, the economist who led the research.

The fact that many Indian companies are still family-run may have something to do with that. Executives worry about both their founders' reputation and the way their actions reflect on Mother India. Rudrarup Maitra, who looks after Tata Motors' international commercial-vehicles business, talks about the company's contributions to development in its overseas markets, including its efforts to get ambulances to Sri Lanka and rubbish trucks to Nigeria. "There is definitely a responsibility we have to brand India," he says.

Some think India does too little to parlay its diaspora into investment. India's first prime minister, Jawaharlal Nehru, was a staunch believer in anti-colonial solidarity and refused to use overseas businesses as a tool for foreign policy. Successive

governments have followed his lead and offered at best limited support to Indian businesses' efforts abroad. Diplomats complain that they can do little to help their compatriots beyond courting local governments and rolling out the red carpet for visiting industrialists. Manu Chandra, who was born in Kenya over 90 years ago to Gujarati parents and is now one of east Africa's best-known industrialists, laments that the government in New Delhi has not made the most of ethnic Indians abroad, using them as neither "a tool" nor "a resource".

Flying the flag

Gurjit Singh, a former Indian ambassador to Ethiopia, Germany and Indonesia, suggests that India Inc might pack a bigger punch if India's government increased support to cut the local cost of financing investment overseas. India provided \$7bn in official medium- and long-term export credit in 2019, according to the Export-Import Bank of the United States. That makes it the world's fourth-largest provider, but is still far behind China's \$33.5bn.

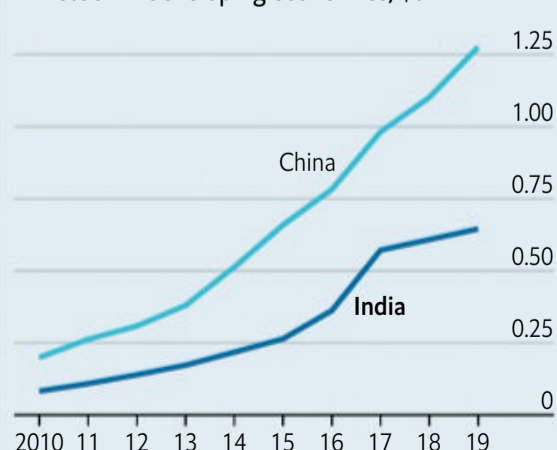
But Indian companies' independence from their home government also brings an advantage: it contrasts favourably with the perception that Chinese ones will unquestioningly do the Chinese state's bidding. Bharti Airtel, which has had a large share of Africa's telecoms market since its 2010 acquisition of Zain Africa, a Kuwaiti telecoms company, has obvious strategic power. Akhil Gupta, a high-up at the company, says Airtel would "without question" do anything an African government asked, including disconnecting its service. But he would certainly not take orders from the Indian government on how to run Airtel's overseas operations, he says. "That is the beauty of democracy."

Not all businessfolk with Indian roots excel as ambassadors for the motherland. Mahatma Gandhi, who spent time in South Africa as a shipping lawyer, created a good impression. The Gupta brothers, less so. The trio, who moved from Uttar Pradesh to South Africa in the 1990s, were at the centre of the corruption scandal that helped end the presidency of Jacob Zuma in 2018. Elsewhere, Vedanta Resources is locked in a bitter dispute with the Zambian government over its copper mines.

The arms-length relationship between New Delhi, India's political capital, and Mumbai, its commercial centre, works well in good times. But when India Inc messes up abroad, India looks bad. And when the state's relationship with another country gets complicated, investors find doing business there harder. "Does flag follow trade or does trade follow flag?" asks Tanvi Madan of the Brookings Institution in Washington. "What you find is that they become intertwined." ■

Two tigers

FDI stock in developing economies, \$trn



Source: UNCTAD

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The political company

From handshake to clenched fist

America Inc used to keep politics at arm's length. What changed?

IF YOU ARE an emblem of American harmony like Coca-Cola, you play your politics carefully, especially on issues as divisive as race and voting. The soft-drinks company did so brilliantly in 1964 when the elite of Atlanta—home to both Coca-Cola and Martin Luther King—threatened to snub the civil-rights leader on his return from winning the Nobel peace prize. Appalled at the potential embarrassment, Coca-Cola's current and former executives worked quietly behind the scenes to persuade other industrialists to attend a dinner in King's honour. They even sang "We Shall Overcome".

Coca-Cola has weighed in this year, too, before and after Brian Kemp, Georgia's Republican governor, signed a new law on March 31st that critics said would suppress black voters. The firm's discreet efforts to soften aspects of the bill before its passage backfired twice over. First, civil-rights groups accused it of pusillanimity. When its boss, James Quincey, subsequently joined other Atlanta natives such as Delta Air Lines in expressing disappointment at the outcome, Republicans branded Coke

and the others "woke" hypocrites.

On April 14th hundreds of companies, including giants like Amazon and Google, and big-name businesspeople, among them Warren Buffett, published a letter opposing "any discriminatory legislation" making it harder to vote. One prominent signatory, Kenneth Frazier of Merck, a drugmaker, told the *New York Times* it was meant to be non-partisan. In the words of William George of Harvard Business School, himself a former CEO, voter suppression "puts democracy at risk, and that puts capitalism at risk".

Republicans, who have been pushing the bills in response to Donald Trump's big

lie that he was denied a second presidential term by widespread fraud, call the corporate finger-wagging nakedly political. That so many household brands and boardroom grandees nevertheless increasingly wag their fingers at the traditionally business-friendly Republican Party shows that they are prepared to break a code of political silence that has served corporations well since the dawn of American capitalism. Why? And what effect will it ultimately have on their business?

America Inc was built on top of a legal innovation: the limited liability company. Originally such corporate structures still needed to secure a government charter to operate, which often involved greasing plenty of official palms. A succession of court rulings in the first half of the 19th century allowed firms to put politics at arm's length. Afterwards they needed only ambition and willing investors. The result was the most fecund business environment of all time.

In the early 20th century some bosses rediscovered politics, using their companies' wealth to buy cronies in government. In the aftermath of the second world war, the door between industry and political office was not so much revolving as wide open. "Electric Charlie" Wilson, boss of General Electric, and "Engine Charlie" Wilson, boss of General Motors, worked for several administrations in the 1940s and 1950s. The period until the 1960s was a time of what John Kenneth Galbraith, a gadfly economist, called "countervailing power". ▶▶

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► Big business was in a well-balanced scrum with big government and big labour. Some CEOs behaved like industrial statesmen, offering jobs for life to workers, building villages and golf courses, and presenting themselves as guardians of society.

That equilibrium was shaken in 1970 by Milton Friedman, a Nobel-prizewinning champion of laissez-faire economics. He argued that executives' sole responsibility was to shareholders. So long as markets were free and competition fierce, maximising shareholder value would help society, by ensuring better products for customers and better conditions for workers. Firms that failed on either count would see buyers and employees defect to rivals. Republicans like Ronald Reagan embraced Friedman through shrinking government and deregulating the economy. This gave rise to superstar firms and the cult of the celebrity CEO in the 1980s and 90s.

Even so, businessmen held their tongues on political matters. Instead, they put their faith in paid lobbyists and used industry groups like the Business Roundtable to campaign on their behalf. The lobbying concerned almost exclusively matters of direct concern to their bottom lines, such as taxes, regulations or immigration

policies that might affect their employees. They studiously kept out of the broader political hurly-burly.

Corporate cash continues to flow into politics. But in recent years it is accompanied by a parallel stream of CEO activism. Weber Shandwick, a public-relations firm, dates this phenomenon back to 2004, when Marilyn Carlson Nelson, boss of Carlson Companies, a travel business, took a stand against sex trafficking. Her fellow travel bosses thought such pronouncements would hurt the industry's neutral image. Instead, she was treated as a heroine by customers. CEOs in other industries took note. Gingerly at first and more conspicuously in the past five years or so, they began weighing in on subjects from the #MeToo and Black Lives Matter movements to religious-freedom laws, gun control, gay rights and transgender-bathroom bills. Mr Trump's divisive actions, such as a temporary ban on visitors from some Muslim countries, withdrawal from the Paris climate agreement or reaction to racist protests in Charlottesville, caused outrage across corporate America (even as it lapped up his tax cuts).

Mr Trump's tenure also coincided with a period when public trust in government

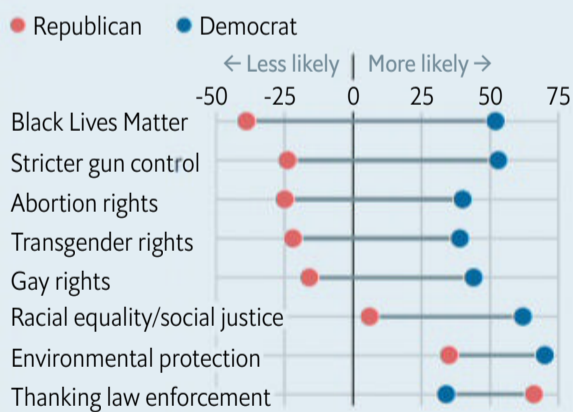
was already in decline, while that in business was rising. Despite corporate America's image as handmaiden of heartless capitalism, Americans trust business a bit more than they do government or NGOs. Edelman, another PR firm, finds that 63% of Americans think CEOs should step in when governments do not fix societies' problems. Heeding the call, in August 2019 members of the Business Roundtable, including bosses of 150 blue chips in the S&P 500 index, pledged to consider not just shareholders but also workers, suppliers, customers, the environment and other "stakeholders" in corporate decisions.

The trouble with such CEO advocacy is a lack of clarity about its motivations and impact—on the issues themselves, as well on the businesses in whose name it is undertaken. Although a lot of it is probably well-meaning, it is muddied by suspicions of hypocrisy and grandstanding. Before Christmas The North Face rejected an order from a Texas oil company for 400 of its pricey outdoor jackets because it did not want its brand associated with fossil fuels. This month an oil-industry group in Colorado awarded the company a tongue-in-cheek "extraordinary customer award". It noted that many of its clothing products ►►

Office politics

"Would you be more or less likely to purchase from a company if they advocated for/supported the following in their advertisements?"

Net likelihood to purchase, %, by party, Apr 2021*



S&P 500 companies, public-interest proposals

% of shareholder votes in favour (excluding abstentions)



"CEOs should step in when the government does not fix societal problems"

% saying, selected countries, Oct-Nov 2020†



S&P 500, public-interest proposals for company proxy votes§, % of total



"We care about environmental and social issues"

% agreeing, by reasons, Jul-Aug 2020‡



S&P 500, share-price performance

August 19th 2019=100



Sources: Morning Consult; 2021 Edelman Trust Barometer; HSBC; Euromoney; "Stockholder Politics", by R. Tallarita, Harvard Law School, March 2021; Refinitiv Datastream; Business Roundtable; The Economist

*Survey of 1,121 American respondents †Online survey of over 33,000 respondents in 28 countries ‡Survey of 2,000 global market participants §2010-19 **Some signatories joined after August 2019

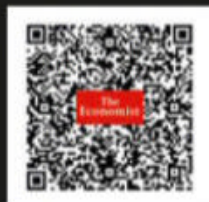


Now & Next

Innovation in a crisis

How inspiration struck during the pandemic

The latest in a series of films exploring the defining themes of the modern age



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▶ are made with products of petroleum—including its jackets.

In terms of its impact on hot-button issues, corporate activism can backfire if it causes the party against which it is directed to dig in its heels. Jeffrey Sonnenfeld of the Yale School of Management, who organised a gathering of CEOs on April 10th to discuss voter laws, acknowledges partisanship is involved. He believes both business and Mr Biden share a common interest in the centre ground. In the face of opposition from “liberal elites”, to which many bosses are seen to belong, Republicans may be more emboldened to press on with restrictive voter laws—just to rub it in.

Chief executives claim that they simply have no choice but to tackle societal concerns because in the age of social media their customers, employees and shareholders demand it. The evidence for such assertions is mixed.

Start with consumers. Some polls show that supporters of each party would buy more goods from companies that lean either right or left. But other research has found that consumers were more likely to remember a product they stopped using in protest at what a CEO said rather than one they started using in support. After a shooting spree in one of its superstores in 2019 Walmart banned some sales of gun ammunition. A subsequent study found that footfall in Walmart stores in Republican districts fell more sharply as a result than it rose in Democratic ones.

The impact on employees is also inconclusive. Many tech firms in the knowledge economy are happy to wear their leftie leanings on their sleeves, believing this will attract bright millennial workers who tend to share such views. But it can go too far. Lincoln Network, a conservative-leaning consultancy, found that firms promoting a political agenda can have an oppressive internal monoculture, which stifles creativity rather than fostering it.

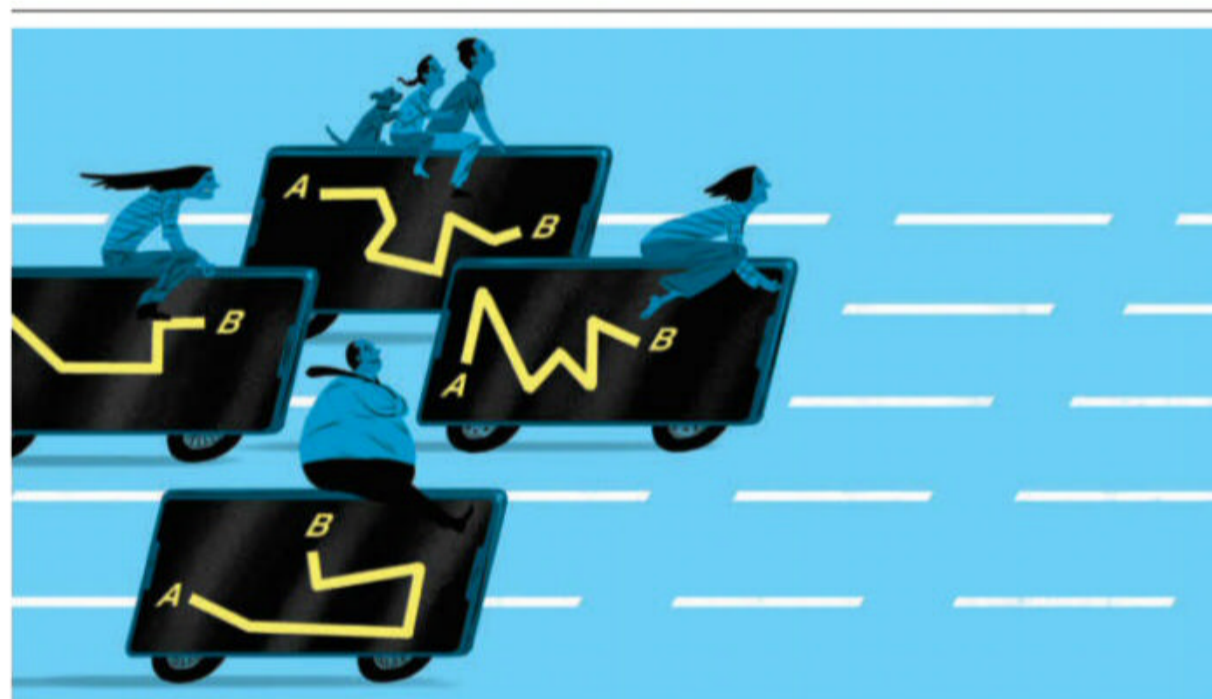
Then there are the shareholders. Bosses rarely consult them before making political statements. Lucian Bebchuk of Harvard Law School found that among signatories of the Business Roundtable’s stakeholder pledge only one of 48 for whom data were available had consulted their board beforehand. That suggests a lot of the pro-social rhetoric is lip service.

Investors seem to see it that way. The share prices of S&P 500 companies whose bosses signed that declaration—which, if taken at face value, would mean that shareholders would have to share the spoils with other stakeholders—performed almost identically to those of companies whose CEOs were not among the signatories. That

implies that markets did not consider the rhetoric to be of material importance. The fact that some of the loudest proponents of stakeholder capitalism, such as Salesforce, laid off workers amid the pandemic despite record revenues suggests that investors may be onto something.

In time, shareholders themselves may become more political. The rise of investment funds that consider environmental, social and governance (ESG) factors suggests an appetite for certain forms of social stance-taking when allocating capital. ESG investors are often willing to accept some-

what lower yields for corporate bonds tied to some do-gooding metrics. After studying ten years’ worth of public-interest proposals at S&P 500 companies, on everything from economic inequality to animal welfare, Roberto Tallarita, also of Harvard Law School, found that virtually no such motions pass. But support for them is on the rise. In 2010 18% of shareholders voted for them, on average. By 2019 this had risen to 28%. One day the boardroom may become as political as the corner office. In the meantime, CEO pontificating is likely only to get louder. ■



Personal transport

The future of getting from A to B

New means of moving about may disrupt the car business no less than Tesla has

IN THE DECADES after the second world war carmakers were the undisputed champions of the personal-transport economy. Competition and economies of scale made cars affordable to millions of motorists in industrialised countries. In the 1980s and 1990s the likes of General Motors (GM) and Toyota boasted some of the world’s richest market capitalisations. When it came to getting around town, nothing beat the automobile.

Today the picture looks different. Of the five most valuable firms in the moving-people-around business only two, Toyota of Japan and Volkswagen of Germany, are established carmakers. Ahead of everyone by a country mile is Tesla, an American company that has disrupted the car industry by turning electric vehicles from an unsightly curiosity (remember the G-wiz?) into a serious challenger to the internal combustion engine. Rounding off the top five

are not carmakers at all but Uber, an American ride-hailing giant worth over \$100bn, and Didi Chuxing, a Chinese one that on April 10th was reported to have filed confidentially to go public in New York and hopes for a similar valuation.

After being slow to react to the threat from Tesla, legacy carmakers are—just about—getting to grips with electrification. Now another disruption lurks around the corner. Changing habits and technology are forcing car companies to rethink how their products are sold, used and owned. In a sign of the times, the boss of Volkswagen, Herbert Diess, concedes that “ownership is not necessarily what you want. You want a car when you need a car.” Competitors are elbowing in; Didi is expected to be the star turn at the Shanghai Motor Show later this month. The private car is not obsolete. But the future business of “mobility”—as the industry has re-

Correction In the article “Unbundling sport” (April 10th) we described Fox in 1993 as a cable-television channel. It was in fact a free-to-air network. Sorry

▶ branded getting from A to B—will involve much more besides.

The market could be enormous. In 2019, ahead of its flotation, Uber put it at \$5.7trn, based on the 20trn or so kilometres that passengers travel each year in 175 countries using road vehicles, including public transport. Consultancies' estimates are more subdued, and vary considerably. But all point to rich potential. IHS Markit reckons that what it calls "new transport" will be worth \$400bn in revenues by 2030. KPMG puts the figure at \$1trn. Accenture calculates that revenues from mobility, includ-

ing car sales, will hit \$6.6trn by 2050; new transport will make up 40% of the total.

Individually owned cars will remain a big part of the new ecosystem. They are still the world's preferred means of transport. For every ten miles travelled Americans use the car for eight, Europeans for seven and Chinese for six. Even in Europe, which is friendlier to public transport than America or China, only one in six miles was travelled on buses, trains and coaches in 2017. Uber accounts for just 1.5% of total miles driven in its home market.

The pandemic has in some ways ce-

mented the car's pole position. Many people have shunned shared vehicles, be they cabs or buses, for fear of infection. A survey of American travel habits by LEK, a consultancy, showed that car journeys declined by just 9% last year, compared with 55-65% for public transport and ride-hailing. Although today's teenagers are less interested in getting behind the wheel than their parents were, that changes when they turn 20. Between 2010 and 2018 America lost 800,000 drivers under 19 but gained 1.8m aged 20-29, estimates Bernstein, a broker. Zeal for cars in China, the biggest ▶▶

Bartleby Stepping down is hard to do

Adjusting to life after the C-suite

HERE COMES a time when even the most glittering career must come to an end. Choosing the right moment to retire is difficult enough, but many people also struggle to imagine what they could possibly do next. In their new book, "Changing Gear", Jan Hall, a former headhunter, and Jon Stokes, a psychologist, discuss the strategies that people can follow when approaching the "third stage" of life, after their childhood and their careers.

As the authors note, the third stage involves individuals redefining their role in the community. This process may be particularly difficult for those who have been in high-powered jobs. They must come to terms with a loss of their status and the realisation that they are both replaceable and mortal. Employment provides people with a lot more than just an income: it gives a structure to the day, opens up new friendships and provides a purpose that comes from taking part in a shared endeavour.

Those who have reached the top of the tree often neglect the other areas of their life—indeed, they may not have got so high if they didn't. For such people, retiring may be a lot like the five stages of grief: denial, anger, bargaining, depression and acceptance. Denial is particularly significant. As Ms Hall and Mr Stokes observe, "those in power gradually become insulated from reality" and "develop an inflated sense of their own importance". Executives may not realise they have grown out of touch with new market developments or so overweening in their behaviour that they are alienating their staff. When others suggest that it is time for them to step down, they may feel angry at the apparent betrayal.

It can also be hard for high-powered people to map out a future after they quit

their posts. While they are working, they may have no time to consider alternative activities. Leaving their jobs may be a little like a drug addict going "cold turkey". The word "retirement" conjures up ideas of passivity and retreat that many find unattractive, Ms Hall and Mr Stokes point out. Individuals may have chosen leadership roles because they like having power over others or sway over events. Shifting into a role as a non-executive, or volunteering for a charity, will not seem like an adequate substitute. They still want to be in charge of something.

Nor will home life necessarily be easy. Spouses and children have often become used to coping without a parent who has worked long hours. They have built their own networks of friends and activities. They may find it hard to adjust to the presence of a bored pensioner knocking about the house. On top of that, it may have been tricky for those in positions of authority to develop close friendships themselves, particularly at work.

The book presents a series of case studies of people who have been through

this kind of upheaval, some a lot more successfully than others. There is, inevitably perhaps, a bit of psychobabble. But readers who tolerate talk of "transition mindsets" and "potential desired competences" will discover that the individual stories are instructive and the questions posed by the authors are important. Those near retirement must work out who they have been, who they are now and who they would like to become.

The answers will vary from person to person; there is "no one size fits all" solution. Bartleby's father was never happier than when, after retiring from his job as a headmaster, he was able to spend his time reading, gardening and listening to Mozart. Other people would be bored to tears by such a life. The authors suggest that people be willing to experiment, to try new activities, develop new skills and talk to others who have been through the same process. Another approach is to keep a journal and make a list of things that you like to do, or have also wished to do.

In addition, those approaching retirement should consider the type of role they like to play. Do they enjoy working with others or working alone? Do they draw satisfaction mainly from developing ideas or from co-ordinating teams? Since self-awareness is a difficult skill, people should talk to a few trusted contacts to discover how they are perceived by the wider world. They may find the answers are surprising.

This is a critical issue. Think of all the time people spend deciding which university they would like to attend, which course they would like to study and which career they would wish to follow. Deciding on their post-career lifestyle is just as important. They may have decades left to enjoy.



▶ market, remains strong. In the first three months of the year Chinese car sales rebounded close to their pre-pandemic peak.

The automobile's appeal endures on the outskirts of cities and beyond. Most driving takes place away from congested urban cores, Bernstein reckons. Nearly 90% of car miles in America are driven in the suburbs, small towns and rural locations, where a private car is often the only choice.

Instead it is in the city centres where a revolution beckons. There the classic ownership model is endangered, new modes of transport are emerging and competition is building from upstart mobility providers that connect customers with a mesh of different services.

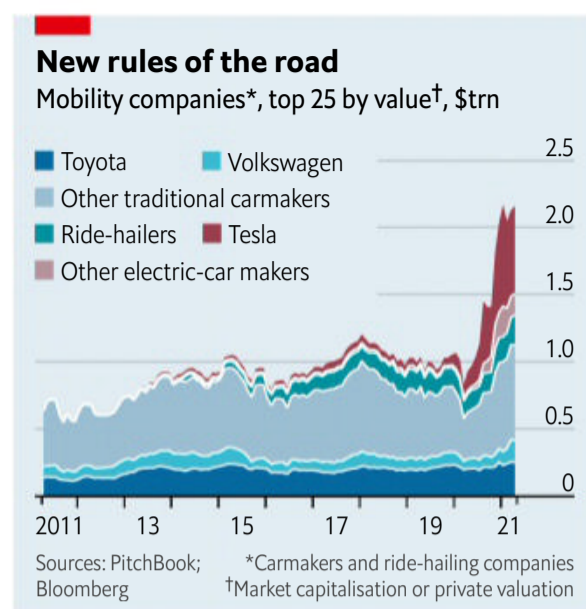
Didi, Uber and others enable rides on demand. Having lost money for years, Uber and Lyft, its smaller American rival, should become profitable in 2022, thinks Morgan Stanley, an investment bank. On April 12th Uber reported record monthly gross bookings (including food delivery). Companies like Zipcar let people rent cars by the hour, or even minute. Turo, a Californian firm, is one of several to offer longer-term peer-to-peer car-sharing. BlaBlaCar, a French one that has signed up 90m drivers in 22 countries, connects those with spare seats to travellers headed in the same direction. Bike-sharing schemes jostle in new dedicated lanes with electric scooters for hire. Before the pandemic consultants at McKinsey reckoned that renting e-scooters might generate revenues of \$500bn worldwide by 2030. Even flying taxis may at last be about to take off; some of their developers, such as Joby, have earned multibillion-dollar valuations.

All interchange

These various modes of transport are being stitched together into seamless trips by specialist journey-planning apps. They let travellers take a scooter to the underground station, take the metro, then jump in an Uber for the last mile—or pick whatever other combination of price and travel time is most suitable. They charge the individual service providers a commission for including them in a journey. Some are experimenting with subscription plans.

Some makers of aggregator apps are startups. Whim of Finland gives access to public transport, taxis, bikes and cars for a single subscription in several European locations. Others are stalwarts of the transport business. Deutsche Bahn, Germany's state-owned railway company, has an app that also lets passengers use a variety of travel options. Frost & Sullivan, a consultancy, forecasts that such aggregators will generate revenues of \$35bn with a decade.

Small wonder carmakers want in. Many have done so by investing in the newcomers. In 2016 GM ploughed \$500m into Lyft and Volkswagen put \$300m in Gett, a Euro-



pean taxi-hailing app. Toyota has invested in Uber, Didi and Grab, a Singaporean ride-hailing company that is going public in a reverse merger valuing it at \$40bn (see Schumpeter). GM has since sold its stake (at a healthy profit) but Toyota and Volkswagen have held on to theirs.

The car firms have also been competing with the challengers head on. It helps that many are already familiar with the principle of charging for use rather than ownership. In Britain more than 90% of cars use some form of financing. Arrangements where the customer pays a monthly sum over two to four years to offset depreciation are a lot like a long-term rental. It is not a huge leap from that to a subscription service. Hakan Samuelsson, boss of Volvo, thinks the shift from ownership to “user-ship” could be rapid.

Five years ago, in a bid to convince investors it was a “mobility” firm, not an irrelevant behemoth, GM launched Maven, a brand offering car-sharing and a peer-to-peer rental. The same year Ford, GM's Detroit rival, acquired Chariot, a shared minibus service, and Volkswagen launched MOIA, which employs 1,300 people developing on-demand transport. In 2019 BMW and Daimler, two German makers of luxury cars, combined their mobility businesses into a joint venture called Free Now, and Toyota launched its car-sharing and travel-planning platform, Kinto, which has since expanded to several European countries.

Some upmarket carmakers, including Volvo (a Swedish brand owned by Geely of China), Audi (part of Volkswagen) and Lexus (Toyota's premium brand), have tried to woo back younger city-dwellers with subscription services. For a monthly fee starting at between \$600 (for a Volvo) and \$1,000 (for an Audi or a Lexus), which excludes only fuel, users get access to a vehicle whenever they need one. Lynk & Co charges users €500 (\$595) a month for its cars. Its boss, Allan Visser, calls his marque (also owned by Geely) the “Netflix of cars”.

As the relationship between car brands and customers gets more continuous, re-

placing some one-off sales, it is also becoming more direct. Tesla pioneered selling cars in its own salons, as Apple does with its gadgets. Other carmakers are beginning to follow suit. Lynk & Co sells its cars online. Volvo said in February that it would start doing the same. The trend has been accelerated by the pandemic, which has pushed car buyers away from dealers' forecourts and onto the internet. Selling vehicles directly forges a bond with individual customers that may help car firms flog them other services in the future.

Not all mobility ventures will succeed. Some have already fallen by the wayside. Ford pulled the plug on Chariot in 2019. Maven was put to rest a year later. A few months ago Free Now quietly wrote off its Hive e-scooter business and in March sold ParkNow, an app that allows drivers to find and pay for a parking space. As Ashish Khanna of LEK observes, ride-hailing will always struggle in outer suburbs where passengers are far less thick on the ground. Assaf Biderman, boss of Superpedestrian, which operates shared e-scooters, notes that city peripheries in particular are still “built for cars”.

Nevertheless, carmakers are not taking anything for granted as they face up to the reality that a few decades from now they may be selling fewer cars in the time-honoured way. If Tesla taught them anything it is that being caught asleep at the wheel can be awfully costly. ■

Microsoft

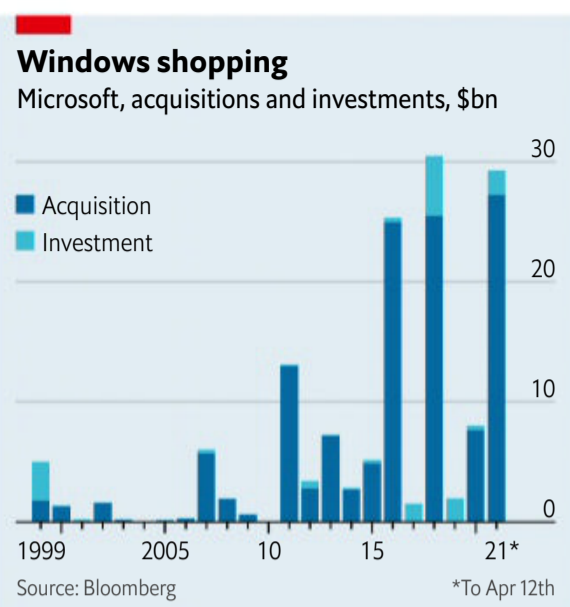
Method in the madness

SAN FRANCISCO

Why the world's biggest software firm looks increasingly acquisitive

TAKE OUR cash, or at least our shares. That appears to be Microsoft's mantra these days. After failing to acquire the American operations of TikTok, a short-video app, last year, the software giant was recently rumoured to be in takeover talks with Pinterest, a virtual pin-board, and Discord, an online-chat service. And on April 12th the firm announced that it would acquire Nuance, a speech-recognition specialist, for nearly \$20bn in cash—its second-biggest acquisition ever.

Even before this latest flurry Microsoft had acquired a reputation for coveting tech firms that looked as alien to its core business of selling office software as TikTok's dance videos are to Word and Excel. Five years ago, in its biggest purchase, it paid \$26bn for LinkedIn, a business-oriented social network. In 2018 it picked up GitHub, a development platform for open-source ▶



► programs, for \$7.5bn. “Is Satya Nadella getting bored?” wondered the *Information*, a website covering the tech industry. Having successfully turned Microsoft around, observers murmured, its boss might be in the grip of merger madness. In fact, there might be a method to it.

For starters, Microsoft’s merger activities are unexceptional by big-tech standards, says Mark Moerdler of Bernstein, a broker. The industry is rife with takeover rumours; most are probably true. Large firms talk regularly to each other about potential deals. It is safe to say that Microsoft has term sheets for many potential targets on file. It still invests far more in expanding its existing businesses than on buying new ones. Excluding the Nuance deal, the company has spent only \$33bn on big acquisitions in the past four years, compared with \$64bn on research and development. It has oodles of cash in the bank (\$132bn at the end of last year) and a valuable currency (its share price is up by more than 600% since Mr Nadella took over in 2014). Unlike rivals such as Alphabet and Facebook, both of which face antitrust cases and have steered clear of big deals lately, Microsoft is no longer on trustbusters’ radar.

By its relatively timid standard, though, Microsoft has indeed become more acquisitive in recent years (see chart). Having provided textbook examples of what not to do, most notably after buying Nokia, a phonemaker, and Skype, an internet phone service, it has learned how to integrate targets successfully. Under Mr Nadella it has taken on a shape that better lends itself to this process.

Simply put, it has become a giant computing cloud that can digest any data and offer any service. An acquisition can thus add to the business in more ways than one—and “feed the beast”, in the words of Brent Thill of Jefferies, an investment bank. Even TikTok would have brought new computing tasks for the cloud, provided reams of videos to train artificial-intelligence algorithms and allowed the firm to beef up its consumer business.

Purchases also help Microsoft to keep growing rapidly by allowing it to ride big industry trends. Discord, like GitHub before it, looked to be a bet on the shift toward creating content and related user communities, which Mr Nadella thinks will dominate life online. A bit like LinkedIn, Pinterest would give Microsoft access to data about people’s interests, which could enable new forms of e-commerce.

The Nuance deal encapsulates all these considerations. The firm is best known for its speech-recognition software and a health-care platform used in 77% of American hospitals. This technology, along with lots of valuable health data, will beef up Microsoft’s “health cloud”. Nuance’s portfolio of patents can be used elsewhere in Mr Nadella’s empire. Though \$20bn looks pricey for a firm with a net profit of \$29m last year on revenues of \$1.5bn, Microsoft can afford it. Discord and Pinterest seem to be off the table for now. But expect Microsoft to surprise with more deals. And don’t be fooled by their apparent randomness. ■

L’Oréal

Hieronimus boss

PARIS

A new chief executive at the beauty giant will have to prove he is worth it

ACCORDING TO INDUSTRY lore, lipstick sales increase in recessions as women opt for affordable indulgences. This time it has been firms peddling masks and video-conferencing software that have prospered. But as face-to-face life slowly resumes in much of the world, purveyors of shampoo, skin creams, perfumes and the like are wondering how the pandemic will have changed beauty habits. At L’Oréal, the world’s biggest such firm, it will be up to a fresh face to navigate this new world.

Nicolas Hieronimus, who is set to take over as chief executive after a shareholder vote on April 20th, will be only the sixth boss since the French firm was founded in 1909. Stability in the upper ranks reflects the fact that L’Oréal has been a standout performer in an industry that has itself grown steadily. Investors, led by the Bettencourt family which inherited what is now a one-third stake worth \$76bn, have emphasised continuity. After 15 years leading the group Jean-Paul Agon will focus on his role as chairman. Mr Hieronimus has been deputy chief executive for four years, and spent his working life at the group.

Mr Agon will feature in the company’s glossy history brochures as the man who brought L’Oréal to China. Having set up its operation there in 1997, he oversaw the

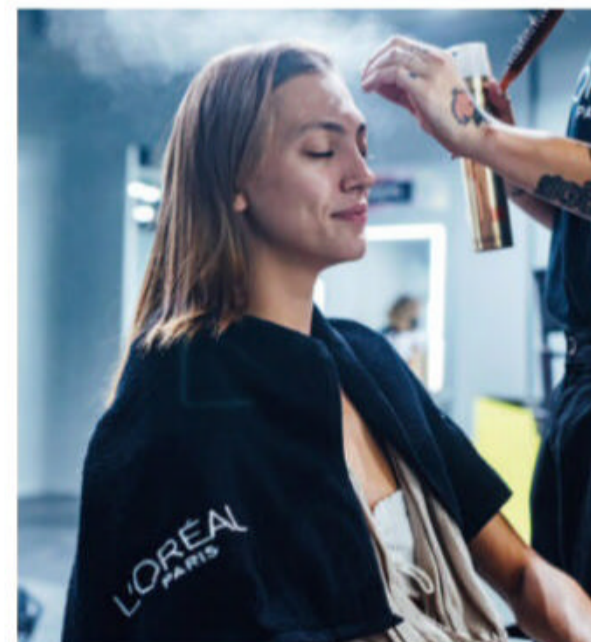
country’s growth into the firm’s biggest market bar America. His closing act will have been to navigate covid-19, which shuttered stores and hair salons everywhere. Sales and profits dipped in 2020, though by a modest 5% or so. That Chinese shoppers kept buying helped, as did a surge in online orders, up by nearly two-thirds to 27% of total sales.

Attention is now turning to the post-pandemic future. Mr Agon has said a fiesta of fragrances and glossy lips is on the cards. Some sales channels, such as airport shops, will probably not recover fast. Like other providers of fast-moving consumer goods, L’Oréal hopes online habits formed in the pandemic will endure.

Mr Hieronimus faces no crisis, but challenges do loom. L’Oréal’s growth in Asia conceals ho-hum performance in other markets, notably America. Its biggest division, which sells everyday shampoos and makeup, was growing sluggishly even before the pandemic. That has left the group dependent on pricier offerings, often sold under the brands it has to license from luxury groups such as Prada.

Another threat comes from new rivals. The rise of e-commerce and social media means launching a beauty brand no longer requires complex distribution and mammoth advertising budgets. That has lowered the barriers to entry for wannabe competitors. L’Oréal, used to featuring celebrities in its advertising campaigns, now has to compete against such “influencers” launching their own beauty ranges.

Industry executives are still grappling with what working from home, or hiding lips behind a mask, will do to the business. In America, where many global beauty trends are forged, makeup was in decline even before lockdowns. Gone are the days of heavy foundation and showy eyeliner; teens increasingly say they are happy with no face paint at all. Luckily L’Oréal’s skin-care range has a slew of chemical potions to help achieve just that natural look. ■



Wake up, sleeping beauty

Schumpeter | SEA of opportunity

South-East Asian technology firms are on a hot streak. Can it last?



WHEN UBER came to South-East Asia, the Silicon Valley ride-hailing giant coaxed customers into cabs with free ice cream, a tactic it had deployed in Western markets. Grab, a local rival based in Singapore, plied riders with durian, a pungent tropical fruit that repels many Westerners but is beloved of people in places like Indonesia, Malaysia and Thailand. GrabDurian, as it called the effort, delivered several varieties of the fruit (as well as desserts made from the stuff). After years of brutal rivalry Grab acquired Uber's South-East Asian operations in 2018. The tale lives on as a lesson for doing business in the region, which is home to nearly 700m people. Digital services such as ride-hailing and food delivery can thrive—so long as they adapt to local conditions.

Now it is Western investors who are salivating. In the past year South-East Asia's internet-startup scene has got hotter than Thai chilli peppers. The market capitalisation of Sea, another Singaporean group that listed in New York in 2017 (and whose name alludes to the shorthand for South-East Asia widely used in the region), has quintupled in the past year, to a mighty \$125bn. On April 13th Grab said it would go public on New York's Nasdaq stock exchange by merging with a special-purpose acquisition company (SPAC). The deal values the company at nearly \$40bn. Gojek, an Indonesian ride-hailing group valued at more than \$10bn, could merge with an e-commerce firm called Tokopedia, before also considering listing via a SPAC in New York. Traveloka, another local unicorn (as unlisted startups worth \$1bn or more are known), is reportedly in talks to list in New York via a SPAC. All told, the region's half-dozen biggest internet darlings are worth nearly \$200bn.

Wall Street, in other words, has finally woken up to South-East Asia's great promise. The region is more populous than the European Union or North America. Its economies are growing fast. Wealthy, English-speaking Singapore at its heart is a global financial centre, with all the bankers, lawyers, consultants, admen and creative types that a modern firm needs. Critically, American and Chinese tech giants have a patchy record of coping with the region's archipelagic geography, potholed roads and unbanked masses. Besides Uber's abortive foray, China's Alibaba has struggled to turn around Lazada, a regional e-commerce firm it bought in 2016. Meanwhile, local internet firms have thrived. As they grow

they will face another challenge: bumping into each other.

The South-East Asian tech firms began in their own separate niches. Sea started out in gaming. When Grab launched in 2012 it was a taxi-hailing service in Malaysia. Gojek gave out smartphones to Jakarta's moped drivers (known as *ojek*), who could then cut through the Indonesian capital's epic traffic jams to bring mangoes, a manicurist or any other product or personal service offered by merchants on its platform to consumers. Traveloka specialised in airline bookings; Tokopedia was a digital marketplace.

All have since expanded, evolving towards becoming "super-apps" with parallels to those run by Alibaba and Tencent, China's biggest internet firms. Grab is present in eight countries and in addition to rides offers food delivery, mobile payments, insurance, investments and health advice. Last year it launched corporate services such as fraud detection, digital maps and advertising. This year it plans to start setting up a digital bank in Singapore. Tan Hooi Ling, its co-founder, says that the firm is "like Uber, DoorDash [an American food-delivery app] and Ant [Alibaba's financial-technology affiliate] all wrapped into one". Gojek, which now offers a similar suite of services, last year bought a large stake in an Indonesian bank. The co-CEO, Kevin Aluwi, also sees similarities between his firm and the Chinese super-apps. "We are a little bit of all those companies in some ways," he observes.

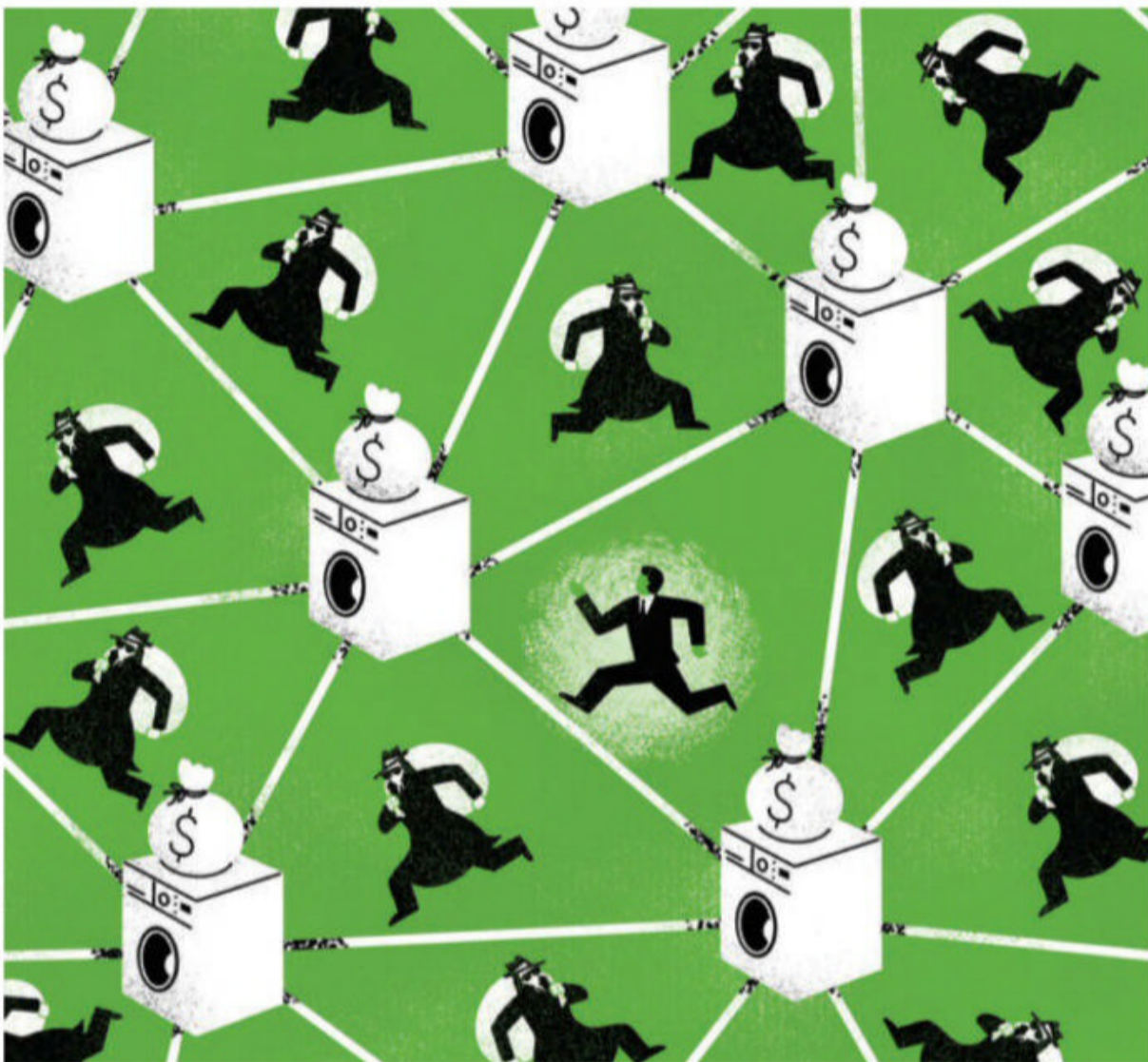
As Grab, Gojek and the others continue to grow they will still have to grapple with some of the problems that have dampened the spirits of the foreign titans. Until roads, transport links and communications networks improve, many of the region's consumers will be too expensive for the tech firms to reach profitably. Nirgunan Tiruchelvam of Tellimer, a broker specialising in emerging markets, notes that the logistical nightmare of delivering online-shopping baskets to Indonesia's 6,000 inhabited islands is vastly different to e-commerce in China, which has world-class infrastructure, let alone the West. What is more, much of the population will remain poor for years to come, with little discretionary cash to spend on online shopping and investment products.

Even if the upstart digital champions surmount these obstacles they will increasingly face one another. As their offerings broaden they will inevitably begin to overlap. Grab and Gojek already compete for the same customers in areas from ride-hailing to finance. In Indonesia, by far the biggest market, they are burning through cash as they fight over customers in markets where switching costs are low. Neither has turned a profit. Grab's gross operating loss narrowed in 2020 but still amounted to \$800m.

Sink or swim?

High growth means investors are tolerant: Sea's revenue expanded by 101% last year and it makes money on its preferred measure of profit, thanks to its gaming business. Grab has told investors that it expects to break even by 2023. Mr Aluwi of Gojek sees enough room for several successful firms. "I don't think this is a winner-take-all market," he says.

Yet to justify the unicorns' sky-high valuations, foreign backers may be assuming otherwise. Since 2015 venture capitalists, tech groups (including Alibaba and Tencent, as well as Google and SoftBank) and Wall Street veterans (such as KKR, a private-equity behemoth) have ploughed \$26bn into the region, according to Dealogic. Grab's SPAC is backed by, among others, BlackRock, the world's biggest asset manager. Some of these investments may leave a bitter aftertaste. But given the region's potential, others are bound to end up tasting as sweet as a ripe durian. ■



Combating money-laundering

Losing the war

The global system for fighting financial crime is expensive and largely ineffective

YET ANOTHER bank is preparing to face the music over alleged failings in its efforts to curb flows of dirty money. In the coming weeks NatWest, one of Britain's largest lenders, is set to appear in court in London to respond to charges that it failed to properly scrutinise a gold-dealing client that deposited £365m (\$502m) with the bank—£264m of it in cash.

NatWest (which has said it is co-operating with investigators) is the latest lender to be accused of falling short in the fight against dirty money. Last year global banks were hit with \$10.4bn in fines for money-laundering violations, an increase of more than 80% on 2019, according to Fenargo, a compliance-software firm. In January Capital One, an American bank, was fined \$390m for failing to report thousands of fishy transactions. Danske Bank is still dealing with the fallout of a scandal that erupted in 2018. Over \$200bn of potentially dirty money was washed through the Danish lender's Estonian branch while executives missed or ignored a sea of red flags.

These cases imply that banks remain the Achilles heel in the global war on money-laundering, despite the reams of regulations aimed at turning them into front-line soldiers in that conflict. However, closer examination suggests that the global anti-money-laundering (AML) system has serious structural flaws, largely because governments have outsourced to the private sector much of the policing they should have been doing themselves.

A study published last year by Ronald Pol, a financial-crime expert, concluded that the global AML system could be "the world's least effective policy experiment", and that compliance costs for banks and other businesses could be more than 100 times higher than the amount of laundered loot seized. A report based on a survey of professionals, published last year by LexisNexis, an analytics firm, found that worldwide spending on AML and sanctions compliance by financial institutions (including fund managers, insurers and others, as well as banks) exceeds \$180bn a year.

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Money-laundering was not even a crime across much of the world until the 1980s. Since then countries from Afghanistan to Zambia have been arm-twisted, particularly by America, into passing laws. The effort intensified after the 9/11 terrorist attacks in 2001 and the passage of America's Patriot Act, which targeted money trails financing terrorism and other crime.

AML compliance has since become a huge part of what banks do and created large new bureaucracies. It is not unusual for firms such as HSBC or JPMorgan Chase to have 3,000-5,000 specialists focused on fighting financial crime, and more than 20,000 overall in risk and compliance.

The AML push has succeeded in stamping out the most pernicious practices, such as using shell banks (those with no real customers) in sunny places to launder suitcases stuffed with drug money. But criminals have not been forced to get particularly creative: it is not much more difficult today than it was 20 years ago to rinse dirty money by setting up a shell company, disguising the loot flowing through it as legitimate revenue and persuading an established bank to process it.

As a result, the numbers tell of a war being lost. The "Global Threat Assessment", a report by John Cusack, an ex-chair of the Wolfsberg Group, an association of banks that helps develop AML standards, estimates that \$5.8trn-worth of financial crime was perpetrated in 2018—equivalent ▶▶

▶ to 6.7% of global GDP. Statistics on how much is intercepted by authorities are patchy. A decade-old estimate by the United Nations Office on Drugs and Crime put it at just 0.2% of the total. In 2016 Europol estimated the confiscation rate in Europe to be a higher but still paltry 1.1%.

Some experts think the success rate may have fallen in recent years, in part because of the rise of “trade-based money-laundering”—which moves dodgy money into the legitimate economy by playing tricks with paperwork for cross-border trade. The covid-19 pandemic, too, has boosted opportunities for financial ne'er-do-wells. Criminals have set up shell companies to exploit vast, poorly policed government-aid schemes. In Britain, the authorities have received more than 50,000 reports of potential misuse of its “Bounce Back Loans” and furlough schemes.

Shell shock

The Financial Action Task Force (FATF), the intergovernmental body that sets global AML standards, admits to problems with the system. Last October its president, Marcus Pleyer, accused the “vast majority” of countries of failing to tackle money-laundering. Some countries have been able to achieve solid marks in the organisation's assessments by passing nice-looking AML laws, only to water them down later or fail to implement key provisions. One offender is the United Arab Emirates, where weak enforcement has helped Dubai become a haven for corrupt capital. But America and Britain also look to game the FATF process, albeit less egregiously.

Global efforts to stamp out money-laundering have, if anything, waned over the past five years, says Robert Barrington of the University of Sussex. In 2016 David Cameron, Britain's then prime minister, hosted a global anti-corruption summit, and other governments queued up to back the cause. But it proved a false dawn. Britain became distracted by Brexit. In America, President Donald Trump showed scant leadership on the issue. China and Russia have stymied attempts to co-ordinate action against corruption.

Three big problems hobble the fight against financial crime: a lack of transparency; a lack of collaboration; and a lack of resources. Start with transparency. Investigators often struggle to identify the real, “beneficial”, owners of shell companies, who often hide behind legal nominees.

Some progress has been made in increasing visibility. Britain launched a public register of company owners in 2016, spurring several others to follow suit. Britain's offshore satellites, such as the British Virgin Islands and Jersey, have been pressed into setting up registers or strengthening existing ones. America recently passed a law requiring ownership

data on firms registered at state level, including in Delaware's incorporation factories, to be held in a federal register.

However, many countries still eschew registers, and those that have them have faced problems. In Britain criminals have been willing to risk filing false information, or none at all, given the modest penalties for doing so. Hong Kong, meanwhile, plans to scale back the details company owners must disclose on its register.

The FATF is seeking to toughen its standard on beneficial-ownership transparency; the current version says merely that “competent authorities” should have access to such information “in a timely fashion”. But getting its 39 core members—from America and the EU to China and Russia—to agree on a new text will be difficult.

The second problem, lack of collaboration, hobbles governments' work with each other, and with banks on the front line. The big money-laundering schemes are sophisticated and transnational, while anti-laundering efforts remain balkanised. Information-sharing between governments is improving, thanks to co-operation among “financial-intelligence units”, national centres that collect data on suspicious transactions. But the “mutual legal assistance” system, which countries investigating crimes use to request information from each other, is clunky.

As for data flowing to and from banks, the benefits of sharing are indisputable. “The value of information coming from a network of banks is thousands of times higher than the information any one bank has, because you can see not just where the money came from, but where it went, and where it went from there, and so on,” says the head of a large international bank. Unfortunately, the level of collaboration is “terrible”. America does best, thanks to the Patriot Act, but even there information-sharing is “on a tiny scale”. Anything more requires a warrant from a judge, “which is hard if you don't know what the crime is yet”. Britain is in second place, he says, with “about 30%” of the data-sharing done

in America. And in third place? “No one.”

A daunting obstacle to sharing information is data-privacy laws, which in many places prevent banks from passing information to authorities, particularly foreign ones. Some big banks have lobbied for exceptions to be made for AML, but “governments don't see it as a legislative priority”, says an executive at another bank.

The third difficulty, a dearth of resources, stems from the fact that white-collar crime is less visible than violent crime. Spending on curbing the latter goes down better with the public. In Britain, fraud makes up more than a third of reported crime, yet gets less than 1% of police resources in terms of officers. Banks can spend all they like on AML, but the criminals won't end up in court if governments fail to invest in policing and prosecution.

Many crime-fighting agencies lack the funding to properly analyse the torrent of “suspicious-activity reports” (SARS) banks file when they spot potentially dodgy transactions. SARS are a cornerstone of the system. But banks file too many low-quality or unnecessary reports because they are incentivised to cover their backs rather than to apply sensible risk criteria. Globally they file millions of SARS a year; in America alone, about 1.2m were submitted by deposit-takers last year (see chart).

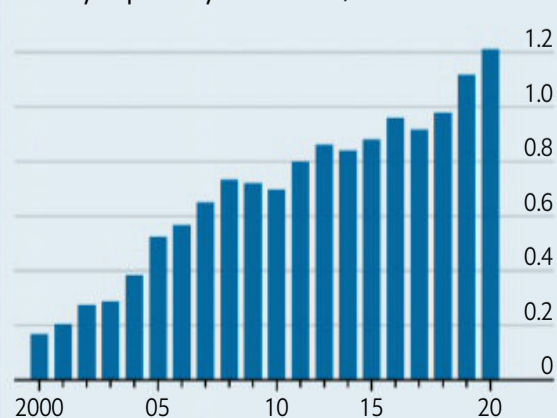
Red-tape revolution

If the AML system is to be fit for purpose, then governments must work harder together. “Blaming banks for not ‘properly’ implementing [AML] laws is a convenient fiction,” Mr Pol's report concluded. It also gives an unfair pass to the non-bank actors that enable corruption. While fines for banks with poor AML controls have risen relentlessly, lawyers who set up dodgy shell companies, accountants who sign off on their fishy filings and the like have been getting away with slaps on the wrist. Britain's revenues and customs agency, for instance, supervises more than 30,000 accountants, estate agents and other businesses for money-laundering purposes; in the 2019-20 financial year it issued just 31 fines, averaging £290,000. Governments also need to get to grips with the AML implications of cryptocurrencies, and the firms and exchanges that hawk them.

Activists who campaign to fix the cracks in the global AML architecture are pinning much hope on the Biden administration, which has said that it views the fight against corruption as a national-security issue and therefore a priority. Whether it can work more profitably than its predecessor with Europe, which is overhauling AML oversight in the wake of the Danske debacle, remains to be seen. Hopes that China can be persuaded to co-operate are not high. Either way, bankers should probably brace for another beating. ■

The SARS epidemic

United States, Suspicious Activity Reports filed by depository institutions, m



Source: Financial Crimes Enforcement Network

Inflation

Base jumping

America's inflation spike begins

IN THE SPRING of 2020 American consumer prices fell for three consecutive months as the pandemic struck. Rents collapsed, hotel rooms went empty and oil prices turned negative. All sudden spurts of deflation or inflation make the news twice: first when they happen and then a year later, when they distort comparisons that look back 12 months. Sure enough on April 13th statisticians announced that consumer prices in March were fully 2.6% higher than a year earlier, up from 1.7% in February. The increase in headline inflation was the biggest since November 2009,

when similar “base effects” were in play after the global financial crisis.

It would be wrong, however, to dismiss the rise in inflation as a mere mathematical quirk. America's economy is emerging from the downturn at great speed as jobs return and vaccinated consumers start spending. In March alone prices rose by 0.6% compared with the previous month, the fastest pace since 2012. Much of that was driven by a big increase in petrol prices but even the “core” consumer-price index (CPI), which strips out food and energy prices, was up by 0.3% (an annualised pace of 4.1%). Services prices in particular have started to rebound: hotel rooms were 4.4% dearer than a month earlier and rent, a big component of the index, has firmed in recent months. Capital Economics, a consultancy, predicts that the combination of base effects and a boomy reopening will drive the headline annual rate of inflation close to 4% by May.

The Federal Reserve targets annual in-

flation of 2%, but on a different measure—the price index for personal consumption expenditures—which tends to run about a third of a percentage point cooler than CPI. Still, if prices rise at a monthly pace consistent with the Fed's target, as they roughly have in recent months, base effects mean that the target will soon be exceeded in annual terms (see chart on next page, top panel). Any heat in the economy will lead to further overshooting.

The path of inflation matters more than usual because of the amount of economic uncertainty in the air. The relaxation of social-distancing restrictions, President Joe Biden's enormous \$1.9trn economic stimulus and the unusual doveishness of the Fed, which is employing a new monetary-policy framework, together comprise an inflation experiment. It has turned some doves into hawks, with economists such as Larry Summers, a former treasury secretary, and Olivier Blanchard, a former chief economist of the IMF, warning of the risk of overheating. And, as the administration follows up its stimulus with an infrastructure bill, how the experiment pans out will help determine how much more deficit spending the economy can take.

The Fed and the White House both expect any pickup in inflation this year to be temporary. Financial markets are less sure. They are pricing in both a growing risk of a prolonged period of inflation above the Fed's target and the possibility of higher interest rates in 2022—whereas at the Fed's most recent meeting in March the median monetary-policymaker did not forecast lift-off until after 2023. The central-banking view stems chiefly from the state of the labour market, which is about 8.4m jobs short of the level of employment in February 2020 and even further behind where it would have been had the pre-pandemic trend continued. That amount of economic slack should keep inflation subdued. ▶▶

China's economy

The devil in the data series

SHANGHAI

Is China's growth soaring or slowing?

THE HEADLINES will write themselves. When China reports its GDP for the first three months of the year on April 16th (after *The Economist* goes to press), growth is expected to have soared to 20% compared with a year earlier. It will be China's fastest growth on record, underlining the strength of its recovery. Yet it will also illustrate the oddities in how GDP is reported.

China's recovery should be old news. Since last March, when the country emerged from its covid-19 closures, a wide range of indicators, from metro ridership to export orders, have pointed upward. But because the convention in China is to report GDP in year-on-year terms, it is only now that the recovery makes a dramatic appearance in its most-watched data series. The nearly normal first quarter of 2021 is being compared with the largely locked-down first quarter of 2020.

America and Japan instead focus on growth in quarter-on-quarter annualised terms: what growth would be if the quarter's pace were maintained for a full year, adjusted for seasonality. Seen this way, America's rebound came in the third quarter of 2020, when annualised growth hit a jaw-dropping 33%. China, by contrast, reported a more modest-sounding rate of 4.9% year-on-year back then.

Both methods have drawbacks, especially in times of extreme volatility.

China's figures are backwards-looking, reflecting the economy's horrid state a year ago as much as its relative vigour today. The American figures, by contrast, exaggerated the economy's vigour early in the rebound, when the unemployment rate still topped 10%. Annualised rates can mislead when output suddenly jumps or plunges; they implicitly assume that a one-off event repeats every quarter for a full year. In annualised terms China's rebound was even bigger than America's, with growth of 55% in the second quarter of 2020.

There is a third way, which is to present quarter-on-quarter growth, without annualising it. This is what most European countries emphasise. China does in fact publish quarter-on-quarter rates, but never puts them in the spotlight, partly because they are so volatile. Growth in the first quarter of 2021 is, for instance, expected to have slowed to about 1% from 2.6% in the preceding quarter.

Such a slowdown might cause the government some blushes. But it would still be wise to draw more attention to the quarter-on-quarter data. They more accurately trace the ups and downs of the economy. For the rest of 2021, the quarter-on-quarter pace is likely to inch higher, even as the annual rate comes down sharply. That picture would better match China's reality. It is a solid, somewhat bumpy rebound, not a giant one.

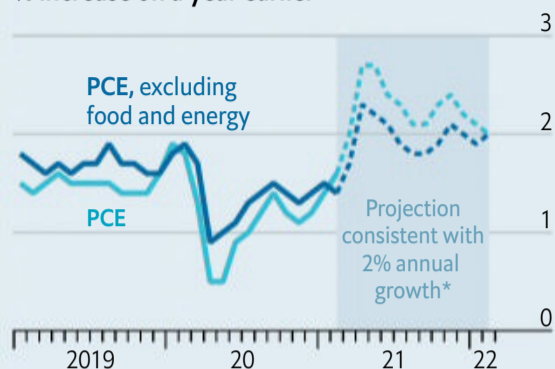


Fuelling inflation

Pricing it up

United States, personal consumption expenditure prices

% increase on a year earlier



January 2019=100



Sources: Bureau of Economic Analysis; Brookings Institution; *The Economist* *At monthly intervals

▶ Yet investors could be forgiven for asking questions of the economists' models. These have consistently underestimated the pace of America's jobs rebound. In the second quarter of 2020 the median respondent to the Philadelphia Federal Reserve Bank's survey of professional forecasters thought unemployment two quarters later would average 11%; in fact it turned out to be only 6.8%. That was the biggest overestimate in the history of the survey and more than three times the next highest such error. In February this year forecasters expected unemployment in the second quarter to average 6.1%, only for it to fall below that rate in March. If the labour market continues to outperform expectations the economy will eat up slack and push up inflation sooner.

At that point the Fed will face a choice. Its new policy framework seeks to overshoot its 2% target temporarily after recessions, in order to make up lost ground. But it has been vague about what this "average-inflation targeting" means in practice. Some recent speeches by officials have suggested that the central bank needs to compensate for lost inflation since last spring. Others have implied that August is the starting point for catch-up policy, as that is when the framework changed. But there has been no inflation shortfall since August (see bottom panel on chart). If the springtime bump in inflation does not melt away, the central bank will be forced to decide precisely what it wants. ■

Wall Street

Hand over fist

NEW YORK

Banks' profits are sky-high as the economy improves and markets roar

THE GOOD old days seem to be returning to America. Now that nearly 200m vaccine doses have been administered, people are gathering in bars, restaurants and shops. The days are warmer and longer. And banks are making returns on equity of 20% once more.

It has been a while since Wall Street has been able to present the kind of stellar results that Goldman Sachs and JPMorgan Chase announced to their investors on April 14th. Both posted record revenues in the first quarter; Goldman's were twice the level in the first quarter of 2020. Returns on tangible common equity, a measure of profits relative to capital, leapt to 29% at JPMorgan and 33% at Goldman. Not since before the global financial crisis, more than a decade ago, have the banks' shareholders been so flush (see chart).

Two factors are behind the boom. The first is the frenzied activity in capital markets in the first quarter. The burst of activity in stock and bond markets, partly spurred by the surge in retail trading, sent JPMorgan's investment-banking profits to a record high. Firms rushed to go public and issue capital into frothy stockmarkets: equity-underwriting revenues were up by 40% at Goldman, compared with the fourth quarter. Dealmaking flooded back after a drought during the worst of the pandemic. Goldman's advisory fees were 40% higher than in the same period last year. And more will come: David Solomon, the bank's boss, told investors that the backlog of transactions it is scheduled to carry out is at an all-time high.

The second factor behind banks' robust results is a rosier outlook for America's

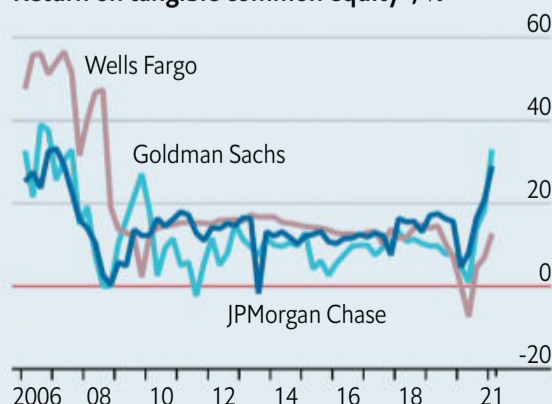
economy. Continued government stimulus has led lenders to revise up their economic forecasts. That in turn means that reserves that had been set aside in case loans soured are no longer needed. JPMorgan wrote off \$1.1bn for bad debts in the first quarter; but it also now expects \$4.2bn of loans it once thought it would have to write off to be repaid, allowing the sum to be counted as income. This boosted profits by 30%. Wells Fargo, which also reported decent results on April 14th but does not benefit as much from busy capital markets, added \$1bn to its pre-tax income thanks to lower expected losses. Other big lenders, including Bank of America, Citigroup and Morgan Stanley, which were due to report earnings as *The Economist* went to press, are expected to enjoy similar tailwinds.

Booming results probably help explain why some banks' share prices have recovered their losses since March 2020, and have even made gains. But neither driver of stellar earnings looks likely to last. Though they have remained very strong for several consecutive quarters, market revenues will probably eventually fall back to more normal levels. Running down reserves set aside for bad loans cannot boost banks' income indefinitely.

You only need to listen to bank bosses to understand how different—and difficult—it is to run a bank in modern times. Even as he told investors that the underlying results were "fabulous", Jamie Dimon, the boss of JPMorgan, lamented how much time his bank had dedicated to discussing the alphabet soup of regulations now levied on big lenders' balance-sheets, from CECL (current expected credit losses), to ▶▶

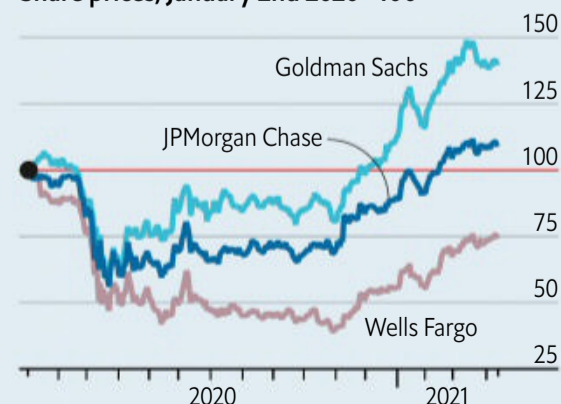
Return to form

Return on tangible common equity*, %



Sources: Macrotrends; Bloomberg; company reports

Share prices, January 2nd 2020=100



*Net profits divided by shareholder equity less preferred stock and goodwill assets

▶ the SLR (supplemental leverage ratio) and the G-SIFI surcharge (an extra capital charge for global systemically important financial institutions).

And even as the pandemic has spurred record profits at many banks, it has also put them in a tricky spot. As the Federal Reserve bought up assets to support the economy, its balance-sheet has ballooned. Each asset bought by the Fed creates a new cash deposit that makes its way to accounts at the banks. Stimulus cheques and robust capital markets, meanwhile, mean that demand for loans from households and com-

panies is low. The result is a pile-up of deposits, especially at big banks—and that in turn is causing post-crisis regulation to bind more tightly. More deposits and liquid assets make for bigger banks in absolute terms, which, for instance, increases the G-SIFI charge and makes leverage ratios look worse. That seems perverse, given that banks are actually safer. “We have \$2.2trn of deposits, \$1trn of loans and \$1.5trn of cash and marketable securities, much of which cannot be deployed to intermediate or lend,” said Mr Dimon. “How conservative do you want to get?”

Regulators have toyed with the idea of relaxing some rules. The SLR requires big banks to fund themselves with equity worth at least 5% of total assets. In March 2020, a realisation that the Fed’s emergency actions had the unwanted effect of making the SLR bind more tightly led regulators to exclude cash reserves and Treasuries from the ratio’s calculation. But extending this pragmatic and sensible exemption proved politically fraught, and it expired at the end of March this year. The good times may be back, but they are not as good as they used to be. ■

Buttonwood A tourist’s guide

The appeal of high-yielding emerging-market dollar bonds

THE HUNT for bonds that pay more interest to retirees and others requiring a fixed income has taken institutional investors to some exotic places in recent years. Last month they alighted on Ghana, which issued \$3bn-worth of Eurobonds, as dollar bonds issued outside America are known. Ghana may be exotic but it is also risky. Its government debt-to-GDP ratio was a hefty 78% in 2020. With such risks come rewards: the yields on Ghana’s new Eurobonds were roughly 8-9%.

The alternatives are hardly compelling. The spread, or additional yield, over Treasury bonds offered by American corporate bonds is close to its pre-pandemic low and not far from its all-time low. For a given credit rating, an investor can usually get a wider spread over Treasuries (and thus a higher expected return) by buying the dollar bonds issued by an emerging-market sovereign, says Yacov Arno of PIMCO, a big bond-fund manager.

There are reasons for the discrepancy. Investors feel more comfortable owning corporate bonds, because the Federal Reserve has, in effect, provided a liquidity backstop for the market since last March. American companies stand to benefit from President Joe Biden’s \$1.9trn fiscal-stimulus package. A rapid vaccine roll-out means America’s economy will get back to normal far sooner than most emerging markets. On top of this lies another factor. The risk of corporate default is something that can be calculated in a spreadsheet model. But working out the chances of a sovereign default is a more complex business.

Start with the things you can put in a spreadsheet, such as debt loads. The IMF divides poorer countries into two categories, middle- and low-income. The first

group saw public-debt burdens rise by around ten percentage points, to 64% of GDP in 2020. Those for the second, which includes Ghana, rose by around five percentage points, to 49.5%. Ghana’s debt burden is thus well above that of its peer group. Like some other poor countries, it had a lot of lumpy dollar debts coming due in 2022-24. That is why it used some of the proceeds of its recent sale to retire a Euro-bond maturing in 2023.

The debt burden and maturity profile only get you so far. There are three other influences that investors might usefully bear in mind. The first is commodity prices. The collapse in crude prices last year left a few oil-producing countries short of hard-currency earnings. It played a part in the troubles of Ecuador, one of six countries to default on its bonds last year. For a while it seemed likely that Angola, a highly indebted oil exporter, would follow suit. Support from China and the IMF saved it, along with a marked pickup in the oil price late last year. Rising metals prices are also helpful to many indebted countries. The copper price is important

for Chile, Peru and Zambia; the price of gold to Ghana and South Africa.

The second factor is exposure to tourism. The hit to the industry from the pandemic played a part in the default of Belize and in stresses elsewhere, says Stuart Culverhouse of Tellimer, an emerging-market research firm. It might take years for tourism to recover fully. The IMF recently sharply downgraded its forecasts for the Caribbean economies. Sri Lanka has been dogged by fears of default, in part because it has heavy debts, but also because of lost income from tourists. For Kenya, an energy-importer with a hefty debt burden, a hit to tourism and a higher oil price is an unfortunate combination.

A third influence is the IMF. Understanding its ways is an essential part of investing in emerging-market bonds. The fund has lent a total of \$110bn, supporting 86 countries, since the pandemic struck. Some of this has been in the form of debt relief; some in rapid-fire lending and credit lines; some of it is programme lending with strings attached. The IMF is readying a \$650bn issue of special drawing rights (SDRs)—essentially an overdraft facility at a negligible interest rate—for its members. The SDR gift will make a big difference to smaller countries, in some cases doubling their foreign-exchange reserves, says Yvette Babb of William Blair, an asset manager.

A frosty relationship with the fund is probably unwise. The kinder, gentler IMF has kept sovereign defaults in check much as central-bank action and fiscal stimulus have kept corporate defaults in check in the rich world. There may well be further setbacks to some sovereign Eurobond issuers. But a lot more yield-starved investors may soon be dusting off their atlases.



Free exchange | The common-sense economist

John Williamson, who defined the “Washington consensus”, died on April 11th



IT WAS IN January 1947, with a song thrush, that John Williamson began the list he kept of the birds he had seen, which would go on to number some 4,000 species. His father, a rose-grower in Hereford, England, was an avid birder too, but Mr Williamson brought to the pastime the focused effort and aptitude for the collection of information that also characterised his work as a macroeconomist and expert on exchange rates. Birding was an understated hobby for an understated man. Yet Mr Williamson gained a measure of fame that eludes most economists when he outlined the “Washington consensus”: a description of policy orthodoxy in the late 1980s that became a flashpoint for intense global debate. Mr Williamson, who died on April 11th at the age of 83, sought merely to gather a list of macroeconomic best practices, the better to boost the welfare of people in developing economies. In that he succeeded, the furore that followed notwithstanding.

Though Mr Williamson had notions of becoming an engineer, a schoolteacher suggested that his maths was too poor, and that he should pursue economics instead. As an undergraduate at the London School of Economics he was inspired by William Phillips, who showed him a draft of a paper describing a relationship between unemployment and inflation—or the Phillips curve, as it would become known. At Princeton University as a graduate student he rubbed shoulders with giants of the profession like William Baumol and Oskar Morgenstern.

Mr Williamson’s academic work focused on exchange rates. He began his professional career as the post-war monetary system (in which many currencies were pegged to the dollar, which in turn was pegged to gold) began to creak under the pressure of an overvalued greenback. Mr Williamson believed that persistently over- or undervalued currencies were a source of economic damage. But he was also sceptical of radical reform proposals: to allow exchange rates to float freely, for example, or to save the system by turning the IMF into a global central bank. Instead, he advocated what he saw as a pragmatic idea: a crawling peg, in which countries with persistent current-account imbalances realigned their exchange rates in a slow, methodical way. He gained a reputation as an exchange-rate guru, with work taking him to Britain’s Treasury, the IMF, and universities in America, Britain and Brazil.

It was the Washington consensus, though, for which he was best known. Its original context is often forgotten. In the 1960s and 1970s, booming Latin American countries borrowed heavily to fund infrastructure projects and industrialisation. When interest rates soared in the early 1980s, those debts became unpayable and a wave of defaults threatened. American politicians, fearing for their country’s heavily exposed banks, introduced a series of plans to coax as much repayment as possible from the region. They grew frustrated, however, at what they took to be Latin American governments’ lack of interest in structural reform. Mr Williamson—who by then had moved to what is now the Peterson Institute for International Economics, a think-tank—knew better, and proposed convening a conference to correct such misapprehensions. He wrote a document to help frame the proceedings; the Washington consensus was described within.

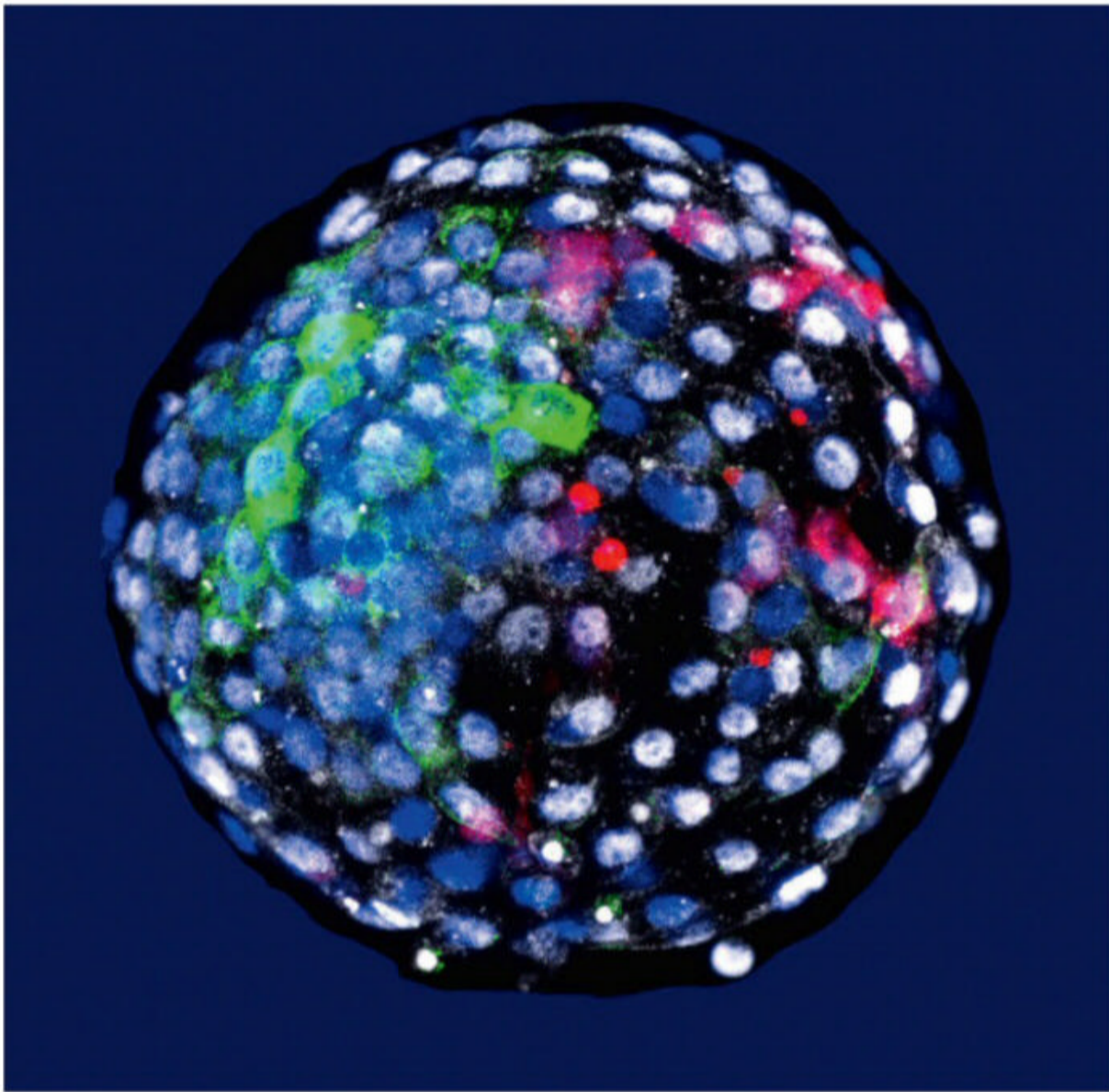
The paper sought to capture what Washington’s intelligentsia agreed were broadly sensible policies. There were ten planks, which Mr Williamson later summarised as encompassing “macroeconomic discipline, a market economy, and openness to the world”. Wild-eyed radicalism it was not; the list was intended after all to reflect only the policies that almost everyone in Washington thought wise. Mr Williamson did not endorse knee-jerk austerity; he emphasised redirecting industrial subsidies towards education and health. Exchange rates should be competitive, but not necessarily freely floating. Openness meant acceptance of imports and direct investment, but not full capital mobility. Deregulation meant liberating sheltered sectors, not gutting environmental and labour standards. It was more a practical guide to avoiding disaster than a manifesto.

The consensus soon came to mean something else entirely, though. Critics associated it with the ideological revolutions of Ronald Reagan and Margaret Thatcher, which they interpreted as fierce hostility to any state intervention. When financial crises racked the developing world in the 1990s, its woes were blamed on the consensus, which was caricatured as a foolhardy attempt to impose orthodoxy on vulnerable places regardless of local conditions. The term became a catchall for neoliberalism, its excesses and failures, real and imagined. Economists found themselves asking whether and how the consensus had gone wrong; Mr Williamson himself acknowledged in 2002 that the term had become a “damaged brand name”. Yet he was also philosophical about his brainchild’s tumultuous public life, and continued, quietly, to explain what his creation was and was not meant to include.

Flight of the concord

There is not much consensus to be found today in Washington, and many old orthodoxies are being questioned. Still, countries that hewed more closely to Washington consensus policies in recent decades—like Chile or Colombia—have kept clear of big crises while others, like Argentina and Venezuela, have not. Discipline and openness alone may not unlock a growth miracle; yet if they help countries avoid costly setbacks that is no small thing.

Indeed, purposeful pragmatism is not a bad way to approach daunting challenges of all sorts. The developing world will have more than macroeconomics to worry about in years to come, as Mr Williamson, who long advocated for action against climate change, well understood. He was a committed environmentalist, a sentiment deepened by treks through woods and fields in search of his birds. That sensible sacrifices should be made to protect such things: on this, surely, reasonable people can agree. ■



Experimental biology

Fantastic beasts and how to make them

Researchers have created embryos from a mix of monkey cells and human ones

THE ANCIENT GREEKS were good at inventing fantastical animals. The chimera, for instance, was “a thing of immortal make, not human, lion-fronted and snake behind, a goat in the middle”. It was eventually slain by Bellerophon, with help from his flying horse.

Not all chimeras are mythological. To biologists, the term describes organisms whose bodies consist of cells from two distinct lineages. In twin pregnancies, for example, one twin can occasionally absorb the other. The resulting individual is built from cells with separate genomes. A 2019 forensic-science conference discussed the case of a man who had received a bone-marrow transplant. Since bone marrow produces blood cells, subsequent DNA tests on the man’s blood matched his donor’s genome, not his own. (More unexpectedly, the donor’s DNA also turned out to be present in swabs taken from the man’s cheeks, and in his semen.)

For several decades scientists have been experimenting with cross-species chimeras, organisms which, as in the Greek myths, are composites of different animals. They have created mouse-rats, sheep-goats and chicken-quails. Now, in a paper published in *Cell*, Tao Tan, a biologist at Kunming University of Science and Technology, and a team of American, Chinese and Spanish researchers, report efforts to extend the principle to humans. They have managed to create embryos that are part-monkey and part-human.

The work builds on earlier endeavours by many of the same researchers. In 2017 Juan Carlos Izpisua Belmonte, a biologist at the Salk Institute in San Diego, announced the creation of chimeric human-pig embryos. But quite how successful those efforts were is uncertain. Only about one cell in 100,000 in the embryos were human, and it was unclear whether they contributed to the organism’s growth. This

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time things are different. The human cells seem happy to co-operate, at least some of the time, with the monkey ones.

The researchers began with 132 embryos of the crab-eating macaque. Six days after fertilisation these were injected with human extended pluripotent stem cells, which can develop into any other cell type found in the body. Tagging the human cells with fluorescent markers allowed the researchers to track where in the developing embryo they, and their descendants, went.

In the early stages of development, mammal embryos develop into four distinct cell types. Epiblasts go on to form the organism itself; hypoblasts develop into the yolk sac; trophoblasts become the placenta and extra-embryonic mesenchyme cells make a membrane that surrounds the embryo. The chimera’s human cells made their way into all four types of tissue, though they were outnumbered in every case. No more than 7% of the epiblast was made up of human cells, and just 5% of the hypoblast (in other areas the numbers were lower still).

Joint venture

The cells’ location seemed to influence which proteins they produced. Human cells in the chimera’s epiblast behaved more like those found in human embryos than those found in monkey embryos. But ▶▶

▶ that was not true of human hypoblast or extra-embryonic mesenchyme cells, both of which behaved more like monkey cells.

The monkey cells, in turn, were affected by the presence of the human ones. The researchers found 126 different sorts of cell-to-cell interactions among monkey cells in the chimeric embryos, compared with just 19 in non-chimeric ones, as well as differences in the activity levels of many genes.

The cells were grown in a lab, which imposed limitations. The number of surviving embryos began falling by day 15. By day 20 none was left. But that was enough time for a process called gastrulation to take place. Gastrulation is a vital development stage in which embryonic cells become primed to form different organs and tissues. The human cells took longer to reach this point than the monkey ones did. But they managed nevertheless, providing more evidence that the human cells were not merely passive passengers, but were “mucking in” to help with the process of embryonic development.

The researchers hope this biotechnological wizardry will help with two goals. One is to shed light on the complicated process of embryological development, which might eventually lead to treatments for some congenital diseases. Chimeras may offer a way around some of the ethical difficulties involved in experimenting on human embryos.

The other is the hope that chimeric animals might one day provide a source of organs to be transplanted into sick humans. In 2017 Japanese researchers demonstrated the principle by transplanting parts of a pancreas that had grown inside a mouse-rat chimera into a diabetic mouse, curing it. Whether that can work in people is, for now, unclear. And research into human chimeras is ethically fraught. America, for instance, forbids federal funding of such work. Most of the work reported in this latest paper happened in China.

But if chimeric human organs do become a reality, macaques are unlikely to be the animal of choice, says Dr Izipisúa Belmonte. The most likely donor would probably be pigs (this is why his 2017 experiment focused on the animals). Their organs are roughly the size of their human equivalents, and, fairly or unfairly, they seem to provoke fewer moral qualms. (Pigs already provide thousands of people with replacement heart valves, for instance.)

The advantage of working with monkeys, at least for now, is that they are much closer, in evolutionary terms, to humans. That may have helped smooth out any compatibility issues between the two sets of cells. The hope is that lessons from experiments with humanity’s close cousins might allow the researchers to revisit their work with its more distant, porcine relatives—and get better results. ■

Psychology

Less is often more

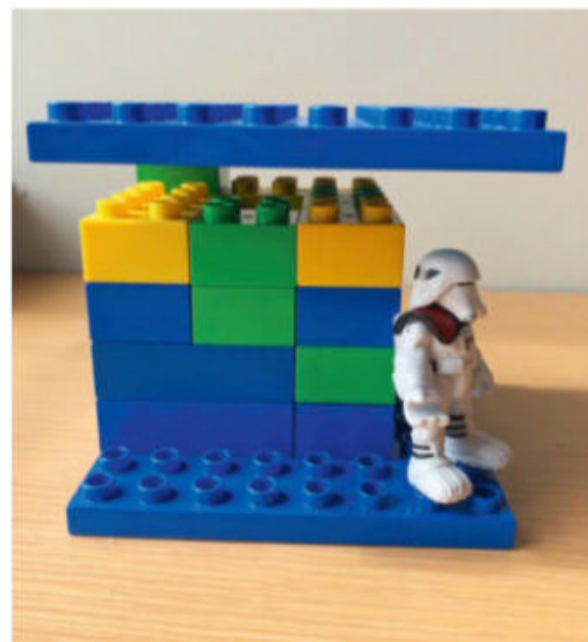
A fact that people routinely forget

COLIN CHAPMAN, the founder of Lotus Cars, was one of motor racing’s most influential engineers. He summed up his philosophy as “simplify, then add lightness”. A stripped-down, featherweight car might be slower on the straights than a beefy muscle-machine, he reasoned. But it would be faster everywhere else. Between 1962 and 1978 Lotus won seven Formula One constructors championships.

It appears to be an uncommon insight. A paper published in *Nature* suggests that humans struggle with subtractive thinking. When asked to improve something—a Lego-brick structure, an essay, a golf course or a university—they tend to suggest adding new things rather than stripping back what is already there, even when additions lead to sub-par results.

The research was motivated by everyday observation rather than psychological theory, says Gabrielle Adams, the paper’s first author, who cites folk wisdom such as “less is more” and “keep it simple”. Perhaps the need for such reminders was evidence of a blind spot in people’s thinking?

Along with colleagues at the University of Virginia, Dr Adams conducted a series of observational studies. In one, participants were asked to alter a pattern on a grid of coloured squares to make it symmetrical. Although that could be done equally well by adding new squares or by deleting existing ones, 78% chose the additive option. Other tasks gave similar results. In three different studies involving modifying structures built from blocks, just 2-12% of respondents chose to remove blocks.



Think carefully...

Asked to alter an essay they had written, 16% cut words while 80% added them.

Nor was this tendency confined to the lab. Of 827 suggestions received by the new boss of an American university for how the institution could be improved, 581 involved adding new things, such as more grants for studying abroad. Just 70 suggested removing something, such as preferential admissions for children of alumni.

Having established that addition does indeed seem to be more popular than subtraction, the next step was to work out why. One possibility was that people were considering subtractive options, but deliberately choosing not to pursue them. Another was that they were not even thinking of them in the first place. Enter a new set of experiments, each with a twist.

Attempts to tilt the pitch in favour of subtraction made people more willing to try it, but only to a point. One experiment asked participants to redesign a lopsided Lego structure so that it could support a house-brick (see picture). Participants could earn a dollar for fixing the problem, but each piece of Lego they added cut that reward by ten cents. Even then, only 41% worked out that simplifying the structure by removing a single block, rather than fortifying it by adding more, was the way to maximise the payout.

Asking people to make a golf course worse rather than better did not change their preference for additions, scuppering the idea that extra features might be seen as desirable in their own right. Practice improved people’s chances of spotting subtractive solutions, suggesting that many were simply not thinking of the possibility, at least at first. That conclusion was buttressed by results showing that people were less likely to try subtraction when they were under “cognitive load”—in other words, having to perform a second, unrelated task at the same time.

What all this amounts to, says Benjamin Converse, another of the study’s authors, is evidence for a new entry in the list of “cognitive biases” that skew how humans think. The 2002 Nobel Memorial Prize in Economic Sciences was awarded for demonstrating that humans are not “rational” in the way economists had used the word. Instead of thinking a problem through and coming up with an ideal solution, they tend to use cognitive shortcuts that are fast and—mostly—“good enough”.

Forewarned is forearmed, and such research has inspired an entire field dedicated to working out when such shortcuts lead people astray. Dr Adams and her colleagues, meanwhile, are keen to probe their result in more detail. One question is whether the preference for addition is innate or learned. Preliminary results from Japan and Germany suggest, at least, that it is not limited to America. ■

Photography

Liquid selfies

The first smartphone with a fluid lens

SERIOUS PHOTOGRAPHERS are usually laden with serious amounts of serious kit, especially multiple lenses. The paparazzi use zoom lenses to get a telescopic view of their subjects. Mid-range lenses are well-suited to street-scenes and portraits. Wide-angle lenses are good for capturing sweeping cityscapes. A macro lens is ideal for close-ups. But what if it were possible to build a single lens that could cover all such eventualities? Xiaomi, a Chinese electronics and consumer-goods company, is taking a shot in that direction.

On April 16th, Xiaomi's new Mi Mix Fold smartphone will go on sale, priced from 9,999 yuan (\$1,526). Like most new smartphones it is packed with whizzy features, including a flexible screen that can be folded open and shut. But what makes this new phone special is that it is the first to come equipped with a liquid lens.

A conventional camera lens consists of several specially shaped and polished glass or Perspex elements inside a tube. These act to deflect incoming light. By moving them closer or farther away, it is possible to focus an image onto the camera's sensor and, if it is a zoom lens, to adjust the magnification. In modern cameras the lenses are moved by electric motors.

There is little or no such paraphernalia involved with liquid lenses. They work a bit like the human eye, in which muscles squash or stretch an elasticated lens, altering its curvature so that a person can focus on objects at different distances. Most liquid lenses consist of an aqueous fluid, sometimes with an associated layer of oil, sitting on a water-repelling surface. This surface causes the fluid to form into a spherical blob, like a bead of water sitting on a lily pad. Applying an electric charge to the edge of the blob attracts molecules in the liquid to the perimeter. This flattens the lens, thus changing its focal length. Conversely, reducing the charge sends the molecules back to the middle, causing the lens to fatten up again.

Liquid lenses of this type already have a number of uses, mostly in industry and medicine. Because they can focus rapidly on objects at different distances and tend not to wear out, they are sometimes employed as image sensors on automated production lines, and to read bar codes. They can also be made tiny, which means they are ideally suited for use with the laparoscopic cameras that are inserted into



A liquid lens at work

people's bodies during keyhole surgery.

Xiaomi, however, has taken a different direction in its new phone. It uses a thin, solid film to contain the lens fluid and a small, high-speed electric motor to stretch or relax this film in order to change the

lens's curvature. The company says its lens can work as a 3x optical zoom (a figure that rises to 30x with "digital enhancement") and as a macro lens, focusing down to 3cm for taking close-up shots.

The company has not explained why it has taken this route with its liquid lens. Perhaps it is more familiar with the technology involved. Nor is it risking putting all its eggs in one basket, as the new phone is also equipped with a standard lens and an ultra wide-angle one. As it will be sold only in China it is, perhaps, partly experimental. Xiaomi did not respond to a request for more information.

As other smartphone-makers have been investigating the technology, it seems only a matter of time before liquid lenses replace some or all of the multiple lenses now appearing on phones. And with phones rivalling even some high-end cameras in picture quality, the makers of conventional cameras might follow with liquid lenses of their own. Snappers, then, can look forward to their gadget bags getting a good deal lighter. ■

Superforecasting

Welcome to the Cosmic Bazaar

Soothsayers beware. Prediction is becoming a testable science

EVERY MORNING for the past year, a group of British civil servants, diplomats, police officers and spies have woken up, logged onto a slick website and offered their best guess as to whether China will invade Taiwan by a particular date. Or whether Arctic sea ice will retrench by a certain amount. Or how far covid-19 infection rates will fall. These imponderables are part of Cosmic Bazaar, a forecasting tournament created by the British government to improve its intelligence analysis.

Since the website was launched in April 2020, more than 10,000 forecasts have been made by 1,300 forecasters, from 41 government departments and several allied countries. The site has around 200 regular forecasters, who must use only publicly available information to tackle the 30-40 questions that are live at any time. Cosmic Bazaar represents the gamification of intelligence. Users are ranked by a single, brutally simple measure: the accuracy of their predictions.

Forecasting tournaments like Cosmic Bazaar draw on a handful of basic ideas. One of them, as seen in this case, is the "wisdom of crowds", a concept first illustrated by Francis Galton, a statistician, in 1907. Galton observed that in a contest to

estimate the weight of an ox at a county fair, the median guess of nearly 800 people was accurate within 1% of the true figure.

Crowdsourcing, as this idea is now called, has been augmented by more recent research into whether and how people make good judgments. Experiments by Philip Tetlock of the University of Pennsylvania, and others, show that experts' predictions are often no better than chance. Yet some people, dubbed "superforecasters", often do make accurate predictions, largely because of the way they form judgments—such as having a commitment to revising predictions in light of new data, and being aware of typical human biases. Dr Tetlock's ideas received publicity last year when Dominic Cummings, then an adviser to Boris Johnson, Britain's prime minister, endorsed his book and hired a controversial superforecaster to work at Mr Johnson's office in Downing Street.

America's sprawling intelligence establishment was the first to apply these principles. Over the past decade, it has carried out more than a dozen forecasting projects, including prediction markets, in which people can bet money or points on the outcome, and prediction polls, like Cosmic Bazaar. The most prominent tour- ▶▶

► nament was the Aggregative Contingent Estimation (ACE) programme, run from 2010 to 2015 by the Intelligence Advanced Research Projects Activity (IARPA), a blue-sky research body for American spooks. A curated team of superforecasters from the Good Judgment Project, a scheme led by Dr Tetlock, were found to be at least one-third more accurate than other research teams.

ACE and similar programmes inspired Britain to create Cosmic Bazaar. One of its purposes is to identify a group of persistently successful forecasters who could help answer difficult questions in a crisis. The top 20 or so competitors are “incredibly accurate”, says Charlie Edwards, who trains British intelligence analysts. They are obsessed with their Brier scores, a measure of accuracy over time, and, in common with findings from the Good Judgment Project, share sources of data and news enthusiastically. The only rewards are virtual badges and branded notebooks. But for analysts accustomed to working with secret intelligence, where success remains in the shadows, a high score here—and the merchandise to prove it—is a “badge of honour”, says Mr Edwards.

The game's afoot

Yet the point is not just to pick star performers. It is also to encourage “cognitive diversity” by ensuring that intelligence draws on talent beyond Britain's smallish pool of full-time analysts. Cosmic Bazaar's anonymity produces an egalitarian backdrop: a junior data scientist can contest the predictions of a veteran ambassador, and the reasoning behind them, without the shadow of rank. The site encourages debate and discussion. Users can “upvote” perceptive comments by others, and questions are supplemented with seminars by experts. Moreover, since the system is unclassified (unlike most of its American-government counterparts), officials can log in from home, or abroad.

The programme is also intended to identify blind spots in analysis. Officials say that so much government attention is spent on covid-19 that slower-burning or more distant matters tend to be missed. In October, for instance, Cosmic Bazaar asked users a question on Mozambique, responses to which suggested that the risk of jihadist activity was greater than thought (as would later prove true), prompting others to look more closely at the matter.

At the moment, Cosmic Bazaar is the largest forecasting tournament in Europe. But others are getting interested. Britain hopes to draw European allies into the contest. Adam Siegel, a co-founder of Cultivate Labs, the firm which wrote the software for Cosmic Bazaar, says that the Czech Republic is using his company's platform for public tournaments involving several government agencies, and that another Euro-

pean government has run a classified version. Regina Joseph of Sibylink, a consultancy, has run tournaments for the Dutch government and the Organisation for Security and Co-operation in Europe.

Yet America's experience with forecasting is a cautionary tale. Despite the attention attracted by ACE, American tournaments and prediction markets have struggled for money and mainstream acceptance. There are no active forecasting tournaments in American intelligence agencies today, though some remain in the Pentagon and elsewhere.

One reason for this, suggests “Keeping Score: A New Approach to Geopolitical Forecasting”, a recent paper by Perry World House, a research group at the University of Pennsylvania, is that such platforms threaten to expose poor analysts and upend existing hierarchies. “Established employees”, the paper's authors write, “may view the potential disruption wrought by a mechanism that outperforms many traditional analysts with a sense of impending doom, as a factory worker might view a new assembly robot.”

However, the larger issue may simply be that the feature which makes precise forecasting possible also limits its appeal. A basic requirement is that questions be falsifiable, so that it is unequivocal, after the fact, who got it right and who wrong. This means there is no room for what psychologists have called “clairvoyance”, or the post hoc claim that a vague prediction came true. Yet policymakers are often drawn to bigger and vaguer questions that resist such score-keeping, such as: “what does Russia want?” or “will China become more aggressive?” Dr Tetlock calls this the “rigour-relevance trade-off”.

One way to approach this problem, says Steven Rieber, who oversees forecasting at IARPA, is to draw on an advanced statistical technique known as Bayesian networking,

which uses conditional probabilities. Forecasters can be asked to judge, for example, the probability that China would seize an island in the South China Sea by a particular date if it were becoming more aggressive—and also the probability of it doing so even if it were not. A big and elusive question can thus be broken down into several smaller and more tractable ones, known as “Bayesian question clusters”. Foretell, a project run by the Centre for Security and Emerging Technology (CSET) at Georgetown University, which also uses the Cultivate platform, employs this methodology to predict the course of technological competition between America and China. It is not yet clear whether that approach will be successful.

For now, forecasters are enjoying a moment in the sun. In Britain, Cosmic Bazaar's insights are trickling into policy teams that work on covid-19 and counter-terrorism. In America, President Joe Biden, one day after his inauguration, announced his intention to establish a National Centre for Epidemic Forecasting and Outbreak Analytics. In March the administration hired Jason Matheny, a former chief of IARPA and the founder of CSET, as an adviser on technology and national security.

The long-term viability of forecasting will depend, though, not just on accuracy, but also explainability. “It's not enough to learn that there's a 70% chance of war breaking out between these two countries in the next year, and not the 30% you thought,” says Dr Rieber. “You need to understand what leads to that higher probability judgment.” An assessment paired with a colourful psychological profile of Xi Jinping is more likely to resonate with a prime minister or president than a percentage figure. “You have to build up a trust relationship with these decision-makers,” says Mr Siegel. “You need to put a story together alongside the numbers.” ■





The cold war

A very close shave

A definitive new account of the Cuban missile crisis sounds a warning

ON OCTOBER 27TH 1962, at the height of the Cuban missile crisis, it was only the purest luck that saved the world from nuclear catastrophe. Five days earlier President John Kennedy had announced a naval blockade of the island to force his opposite number in the Kremlin, Nikita Khrushchev, to withdraw the medium-range nuclear missiles he had sent to Cuba in the summer of that year. US Navy anti-submarine warfare patrols were hunting down Soviet nuclear-armed subs that posed a threat to the blockade.

The plan was to “pressure” the submarines into leaving the area of operation by dropping practice depth charges and grenades, but not to destroy them unless absolutely necessary. Submarine B-59 had experienced the effects of that pressure for two days and its crew were growing desperate from intense heat and toxic levels of carbon dioxide. When it surfaced for air, B-59 found itself harassed by American

Nuclear Folly. By Serhii Plokyh. *W.W. Norton*; 464 pages; \$35. *Allen Lane*; £25.

planes firing tracer bullets and flares.

Convinced that his ship was under attack and that war had broken out, the sub’s captain, Valentin Savitsky, gave the order to dive and prepare to launch a nuclear-armed torpedo. With ten kilotonnes of explosive power, it would produce massive waves and sink or incapacitate any nearby American warships. Two things stopped the order from being carried out.

The commander of one of the American

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destroyers, the *Cony*, realised what was about to happen and flashed an apology for the aggressive behaviour of the planes. The apology would never have been seen had the sub’s signals officer not got stuck with his searchlight in the shaft of the conning tower. That gave the commander of the submarine task force, Vasili Arkhipov, who was behind him, the chance to countermand the order. If the nuclear torpedo had been fired, Kennedy would have had little choice other than to order a strike against Soviet targets with the inevitable consequence of escalatory retaliation.

A few hours earlier, ignoring orders from Moscow, a Soviet surface-to-air missile battery had shot down an American U2 spy plane over Cuba. Soviet forces on the island were jumpy, fearing that an invasion was imminent. The leaders on both sides were fast losing their grip on what was happening on the ground.

The next day, an increasingly alarmed Khrushchev announced that he was taking his missiles out of Cuba. In return he had received the commitment from Kennedy that America would abandon any idea of invading and deposing the country’s revolutionary Marxist leader, Fidel Castro. There were some tricky moments still to come, but the world breathed a collective sigh of relief.

It has become conventional wisdom ▶▶

▶ that disaster was never all that close because both Kennedy and Khrushchev were equally fearful of the nuclear Armageddon their actions could trigger. “Nuclear Folly”, Serhii Plokyh’s new history of the Cuban missile crisis, not only casts fresh light on what happened that autumn but strips away any such comfort.

It is a story of intelligence failures, misperceptions and miscalculations on both sides that had the potential at almost every step to lead to disaster. The American side of that story is relatively familiar from previous accounts of the crisis. What makes this the definitive history is Mr Plokyh’s telling of the tale in gripping detail from the Soviet perspective. A professor of history at Harvard who made his name with a prizewinning book about the Chernobyl disaster, Mr Plokyh realised that the Ukrainian revolution of 2014 could lead to an opening up of former KGB archives. Nearly all the missiles dispatched to Cuba came from Ukraine, while every ship transporting them and the 40,000 Russian military personnel needed to build, man and defend the launch sites carried a KGB officer who filed meticulous reports.

Mr Plokyh vividly describes the lengths the Soviets went to in their effort to keep the mission secret: men (and missiles) were kept between decks away from prying American eyes for the duration of the voyage. The crews encountered difficulties working in unfamiliar tropical waters. Commanders on the ground were convinced they would have to repel an American invasion at any moment. Prepared for combat, they felt deep humiliation when ordered to pack up and go home.

The fog of war

But it is the picture Mr Plokyh paints of the complete failure of the key decision-makers to get inside the minds of their counterparts that is most telling. Khrushchev had convinced himself that Kennedy was a callow patsy who would back down when push came to shove. He reckoned that Kennedy would see there was an equivalence between the Jupiter nuclear missiles America had based in Italy and Turkey a few years before and the missiles the Soviets were sending to Cuba. Khrushchev failed to understand that, facing congressional elections in November, Kennedy would have been indulging in political suicide to have shown such weakness.

For his part, Kennedy was bamboozled by Khrushchev into thinking that a confrontation over Berlin was much more likely than over Cuba, which he believed the Kremlin understood to be in America’s backyard and thus off-limits. Even when Khrushchev’s reckless gambit was belatedly revealed to Kennedy, faulty intelligence suggested that the Soviet force on the island was a quarter of its actual size. It was

not until very late in the day—October 20th—that the president learned some of the missiles were operational.

Until then, Kennedy had kept open the option of a full-scale invasion of the island, a course of action his military chiefs strongly favoured. One of Mr Plokyh’s most unsettling revelations is the extent to which Soviet commanders on the ground had delegated authority, if attacked, to use tactical nukes that Washington knew nothing about until 30 years later. If Kennedy had listened to his generals, they would have been used. Even if Kennedy and Khrushchev were both determined to avoid nuclear war, they were not in control of the events that could easily lead to it.

That realisation was the wake-up call that the two superpowers needed to create the protocols and communication channels required to avoid annihilation by misunderstanding in the future. Khrushchev was ousted two years later and in 1972 the first Strategic Arms Limitation Talks agreement was signed, paving the way for subsequent arms-control agreements, all of which have been aimed at enhancing strategic stability. Those arrangements have still left huge nuclear stockpiles on both sides, but the verification procedures they established helped build a degree of mutual trust that was a factor in ending the cold war. So much so that today existential dread about nuclear war has been largely replaced by anxiety about climate change and, more recently, pandemics.

Such complacency is ill-founded. The era of arms control is unravelling. In 2019 the Intermediate-Range Nuclear Forces treaty of 1987 collapsed after well-grounded American accusations of Russian cheating. This was a harbinger of worse to come. The New START (Strategic Arms Reduction Treaty) agreement has been extended until 2026, but it will be difficult to replace it.

Meanwhile, both Russia and America are renewing their nuclear arsenals at vast expense, while the deployment of new technologies (such as cyber-attacks on nuclear early-warning satellites, or a new breed of fast and accurate conventional missiles) threaten both side’s retaliatory capabilities as well as their command-and-control apparatus.

With relations between the major nuclear powers more fraught than they have been for decades, there is growing potential for a dispute leading to a crisis, and a crisis leading to a war. Meanwhile, other nuclear weapons states—China, Pakistan, India and, particularly, North Korea—are expanding their nuclear forces. Iran’s intentions remain a cause for concern.

In 1962 the world got lucky. But the lessons learned from that narrow escape nearly 60 years ago are in danger of being forgotten. With his masterly book, Mr Plokyh has sounded a warning bell. ■

American history

Band of sisters

The Agitators. By Dorothy Wickenden. Scribner; 400 pages; \$30 and £25

ABRAM LINCOLN had his team of rivals, but they were all white men with high opinions of themselves. Female alliances also worked to end slavery and perfect the union in 19th-century America. In “The Agitators” Dorothy Wickenden of the *New Yorker* profiles three neighbours who sought women’s rights and freedom for African-Americans. They banded together at a time when society mistrusted female activists. A newspaper published a letter calling one of their gatherings a “tabernacle of mischief and fanaticism”.

Even for the time, that was an overreaction. As Ms Wickenden shows, the trio’s success depended on middle-class respectability. Martha Coffin Wright, a Quaker and mother of six, found her voice writing anti-slavery essays for the *North Star*, an abolitionist paper published by Frederick Douglass. Her friend Frances Seward was married to William, governor of New York and a future secretary of state. With a pinched smile she entertained southern grandees and their charming wives. Mindful of his career prospects, William watched Frances’s social agitation with concern, once forbidding her from publicly supporting a school for black students.

The third member of the group is the best known, and the most radical. Harriet Tubman, hailed as Moses, led hundreds of ▶▶



Breaker of chains

► slaves north to freedom along the underground railroad. Her face may soon adorn the \$20 bill, according to a spokesperson for Joe Biden's administration. Tubman found allies in Wright and Seward, both of whom volunteered their homes in upstate New York as underground-railroad stops. "Women, underrated as a matter of course, were less likely to fall under suspicion," Ms Wickenden writes. The three became friends and comrades.

But the civil war scattered them. Tubman went to South Carolina to establish a settlement for freed slaves and serve as a Union scout and spy. Seward spent time in Washington as the discontented wife of a cabinet member. Her household and Wright's sent offspring to fight; both mothers anxiously awaited news of their fates. Yet in a quiet testament to her convictions, Wright told her son that he should die before helping return a slave to the South. So that Tubman could continue her indispensable work, Seward became a godmother of sorts to her ten-year-old niece.

Somewhat miraculously, the war claimed just one life in this network of families. The Seward and Wright boys completed their service safely; Tubman would live until 1913. But on the night of Lincoln's assassination, a co-conspirator came for his secretary of state as well, grievously injuring William Seward and other members of the household. Yet it was not William but Frances who perished. Physically unscathed, she never recovered from the shock of the event and died two months later. "Our calamities do not make us unmindful of the great loss our country has sustained in the death of our good president," she wrote before the end.

By devoting ample space to family life, Ms Wickenden shows how domestic concerns both defined and constrained 19th-century women. Her subjects loved and wanted the best for their children, but were expected to range no further. Wright chafed at these limitations, as did Seward, whose activism created marital tension (particularly when her husband positioned himself as a moderate in the pre-war years). Yet neither Seward nor Wright went as far as their sometime collaborators Susan B. Anthony and Elizabeth Cady Stanton, whose single-mindedness in pursuit of women's equality eclipsed all else.

The book's weakness is conceptual. Including Tubman in the circle of friends will no doubt broaden this volume's readership, but in every way she stands apart from her allies. Her risks and achievements so outweigh those of Seward and Wright as to place her on a different plane entirely. She belongs in the pantheon of the greatest Americans, not among genteel letter-writers sleeping warmly in their beds. Still, as Ms Wickenden observes, even Moses needed an entourage. ■



New British fiction

The will to live

Lean Fall Stand. By Jon McGregor. *Fourth Estate*; 288 pages; £14.99. To be published in America in September by *Catapult*; \$26

IN "RESERVOIR 13", a novel by Jon McGregor published in 2017, a teenage girl disappears while on a winter break with her family in the Peak District, a region in the north of England. As the case goes unsolved, and is gradually forgotten, the book changes focus and looks at the people directly and indirectly affected by the tragedy. Mr McGregor takes a similar approach in his new novel, "Lean Fall Stand". The breathtaking opening chapters describe a research expedition which goes horribly and fatally wrong. It starts out as a white-knuckle ride of a story, before Mr McGregor changes course.

Thomas and Luke, two post-doctoral researchers collecting geographic data, are dispatched to Antarctica to undertake months of essential fieldwork. Robert, an assistant technician and guide, with decades of experience and a somewhat sinister and controlling manner, is assigned to help them. Isolated in a tiny hut, the three men are caught off guard by a sudden fierce storm which, with protocol breached and communication lost, leads to the death of one of the young academics.

Mr McGregor's account of the early tensions within the group, particularly due to Robert's alpha-male instincts, set against the backdrop of the blue stillness

and unexpected savagery of the ice peaks and floes, could have made for an absorbing novel on its own. Instead, in a stunning move, the perspective switches solely to Robert—who suffered a stroke in the midst of the blizzard—and his family. His long and often tortuous journey back to health takes place in hospital, first in Santiago, then in Cambridge, and finally at home.

For Anna, Robert's wife, who has become accustomed to her own solitary, satisfactory existence as a respected researcher, his return upends not only her career but her expectations of this part-time marriage. Now she is a carer, receiving only occasional help from the couple's grown-up children and harried occupational therapists.

With skill and compassion Mr McGregor evokes an underfunded social-care system as well as the determination and inventiveness of its workers. Thanks to the efforts of Amira, one of his caregivers, Robert slowly rebuilds his strength and comes to terms with his condition. The author conveys so successfully the aftermath rather than the accident itself that the inquest into the catastrophe (and its cover-up) barely registers. Instead, this fine novel is reminiscent of "A Change of Climate", Hilary Mantel's novel of 1994, with its shifting perspectives and emphasis on a single, life-altering event. The far-ranging human story in "Lean Fall Stand" simultaneously unfolds and enfolds.

Contemporary art

Beyond the frame

SAN FRANCISCO

Museum visitors expect not just to look at art but to be in it, too

ACROSS ALL four walls of a vast hall, Vincent van Gogh's blue irises begin to sway. They bloom gently at first, then more violently, as the music builds to a crashing crescendo. Visitors to "Immersive Van Gogh" (pictured), now showing at a former music venue in San Francisco, sit or stand in socially distant circles on the floor, their bodies bathed in the glow of these animated laser projections.

On America's other coast, visitors will do more than marvel when a new exhibition space covering 50,000 square feet (4,645 square metres) opens on April 22nd. At Superblue Miami they will be able to touch the blossoms snaking across a huge wall, and in doing so make the artwork move and change. "Proliferating Immense Life—A Whole Year per Year", a digitally projected installation by teamLab, a Japanese art collective, is a shimmering cycle of the seasons in which visitors' hands cause plants to bloom and decay, petals scattering in a balletic display. No two visits are ever the same.

"Immersive art" experiences are on the rise, not just in America but across the world. Tens of thousands of people have walked completely dry through a "Rain Room" of streaming water in Shanghai, Melbourne and Sharjah. Others have entered a gallery filled with disorientating yellow fog in Berlin, slid down a giant slide in London or visited a mirrored "infinity room" in New York. More and more, the experience of contemporary art is just that: an experience.

These installations share a common trait: an urge by artists to create—and audiences to enjoy—a space in which visitors participate and play. "It's a bit like going into the museum and being *in* the picture," says Florian Ortkrass, co-founder of Random International, an art collective which has followed its blockbuster "Rain Room" with other hands-on exhibits that probe the tension between human bodies and technology. "If this kind of work is done well, it engages people emotionally, it lifts them out of their everyday rut," adds Hannes Koch, Random International's other co-founder. "It heightens your awareness and perception of people and the space around you—and people like that."

Immersion in a sensory experience—a *Gesamtkunstwerk* or total work of art—has a long pedigree in human history, with the cave paintings at Lascaux and the over-

whelming aesthetic experience of the Gothic cathedral. Yet through the 19th and 20th centuries artmaking became more individual and focused on the autonomous painted or sculpted object. Only in the 1960s did artists return to "reinventing art as the environment", in the words of Marc Glimcher, head of Pace Gallery and co-founder of Superblue, a new offshoot dedicated to interactive art.

This "experiential turn" grew out of artworks based on light and space by such practitioners as James Turrell and Robert Irwin in California. In New York another strand included more performance-based, multimedia explorations by Robert Rauschenberg and Yayoi Kusama. The big immersive bang came in 2003, when Olafur Eliasson, a Danish-Icelandic artist, hung a giant "sun" in the Turbine Hall of Tate Modern, under which hordes of visitors happily basked. Artists have been experimenting with ambitious installations ever since, enabled by ever more sophisticated technological tools.

These shows are proving hugely popular. Visitors wait hours for a 60-second slot at the various versions of Ms Kusama's "Infinity Mirror Room" around the world. There are now around half a dozen competing Van Gogh shows circulating in America, most of them sold out. L'Atelier des Lumières in Paris from Culturespaces, which popularised laser projections of

**A starry night out**

dead masters, attracted 1.4m visitors in 2018. "The House of Eternal Return", a psychedelic building with tactile rooms in Santa Fe, New Mexico, by an outfit called Meow Wolf, has wowed more than 2m people since it opened in March 2016.

Whizzy new technology is part of the reason for immersive art's appeal. In a screen-saturated world, there is also an undeniable "relief that comes with being in a physical environment that sparks the imagination," says Ali Rubinstein, co-chief executive of Meow Wolf. "People want to connect to artmaking," agrees Mr Glimcher of Superblue. More profoundly, as humans become more urban and isolated, "we need our artists to help us connect to a sense of awe—to the transcendent and to each other," he adds.

Art is always a reflection of the spirit of its time, notes Dorothea von Hantelmann, professor of art and society at Bard College Berlin. What she calls "the shift from object to experience" is a phenomenon of the rich world that reflects many things: a surfeit of stuff, a young, more interactive generation with a sophisticated aesthetic, and, perhaps, "a new kind of thinking which one might call ecological thinking, which is to think in connections, in relations."

Working wonders

A transformation in how people consume contemporary art is under way. These huge and costly installations, in turn, put pressure on institutions designed for a different age. In an art market built on tradable objects, how can museums and galleries remain relevant and artists who make ephemeral experiences get paid?

"We're going back full circle to the Renaissance, where you need patrons" for these kinds of huge projects, says Mr Koch of Random International, whose forthcoming work involves visitors painting with light. Both Meow Wolf and Superblue represent ambitious new business models, based on ticket sales, that are poised to spread across the globe. Meow Wolf is a "social-impact art project" whose primary goal is to value the role of artists by paying them a competitive wage, Ms Rubinstein says. The company weathered the pandemic and has just opened a surreal grocery store called "Omega Mart" in Las Vegas, with another venue opening in Denver this year and plans to expand in Asia.

Superblue, for its part, aims to create a new market infrastructure for its modern art. The firm, partly funded by Silicon Valley entrepreneurs, finances large-scale works upfront, then splits the proceeds of ticket sales with the participating artists. It will act as a lender to museums and galleries and broker big public art pieces. Watch for more mesmeric movement and light as it rolls out other "experiential art centres" around the world. ■

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HSCC/Mauritius/EYE/2021 **NOTICE INVITING TENDER (NIT)** Date: 07.04.2021

Ministry of Health & Wellness, Republic of Mauritius invites international bids on item rate basis through their Consultants HSCC (India) Limited from eligible contractors/firms for the following works:

Name & Description of Work	Estimated Cost (in Mauritian Rupees)	Tender Documents available for sale and Last date of submission & opening of Tender	Bid Security (in Mauritian Rupees)
Construction of Eye Hospital at Mauritius	737.17 Million	From 20.04.2021 to 19.05.2021 upto 15:00 hrs and opening on 19.05.2021 at 15:30 hrs.	8.37 Million

Completion period is 18 calendar months.
For tender details, please refer detailed NIT on HSCC website <http://www.hsccltd.co.in>, <https://www.dgmarket.com> and Republic of Mauritius websites www.health.govmu.org and publicprocurement.govmu.org. The **pre-bid meeting** shall be held on 07.05.2021 at 15:00 hrs at Consultant's Office – HSCC India Limited, E-6(A), Sector-1, NOIDA- 201301, Uttar Pradesh, India. For bid submission and other details refer to the detailed NIT.
Ministry of Health & Wellness, Republic of Mauritius/ HSCC reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.
Prospective bidders are advised to regularly scan through HSCC website <http://www.hsccltd.co.in>, <https://www.dgmarket.com>, www.health.govmu.org, and publicprocurement.govmu.org as corrigendum/amendments etc., if any, will be notified on this portal only and separate advertisement will not be made for this.

Deputy Permanent Secretary,
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Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units		
	% change on year ago latest	quarter*	2021†	% change on year ago latest	2021†	%		% of GDP, 2021†	% of GDP, 2021†	10-yr gov't bonds latest,%	change on year ago, bp	per \$ Apr 14th	% change on year ago			
United States	-2.4	Q4	4.3	5.5	2.6	Mar	2.1	6.0	Mar	-2.7		-13.5	1.6	88.0	-	
China	6.5	Q4	10.8	8.5	0.4	Mar	1.6	5.5	Feb [§]	2.6		-4.8	3.0	97.0	6.53	8.1
Japan	-1.4	Q4	11.7	2.7	-0.4	Feb	0.2	2.9	Feb	3.2		-9.0	nil	-8.0	109	-1.6
Britain	-7.3	Q4	5.2	5.1	0.4	Feb	1.7	5.0	Dec ^{††}	-3.9		-12.6	0.9	54.0	0.73	8.2
Canada	-3.2	Q4	9.6	4.8	1.1	Feb	2.1	7.5	Mar	-2.1		-9.2	1.5	77.0	1.25	11.2
Euro area	-4.9	Q4	-2.6	4.2	1.3	Mar	1.2	8.3	Feb	3.3		-5.9	-0.3	12.0	0.84	8.3
Austria	-5.7	Q4	-5.6	3.8	2.0	Mar	1.7	5.7	Feb	3.0		-6.1	nil	-10.0	0.84	8.3
Belgium	-5.1	Q4	-0.6	4.0	0.9	Mar	1.0	5.7	Feb	-0.6		-6.3	nil	-21.0	0.84	8.3
France	-4.9	Q4	-5.7	5.3	1.1	Mar	1.1	8.0	Feb	-1.7		-7.2	nil	-14.0	0.84	8.3
Germany	-3.6	Q4	1.4	3.5	1.7	Mar	1.8	4.5	Feb	6.8		-4.0	-0.3	12.0	0.84	8.3
Greece	-5.9	Q4	11.1	3.2	-1.6	Mar	nil	15.8	Dec	-5.1		-5.0	0.9	-98.0	0.84	8.3
Italy	-6.6	Q4	-7.5	3.4	0.8	Mar	0.7	10.2	Feb	3.0		-8.3	0.8	-104	0.84	8.3
Netherlands	-2.8	Q4	-0.5	3.1	1.9	Mar	1.9	3.6	Feb	11.4		-3.4	-0.3	-17.0	0.84	8.3
Spain	-8.9	Q4	0.1	5.8	1.3	Mar	0.8	16.1	Feb	1.5		-8.7	0.4	-43.0	0.84	8.3
Czech Republic	-4.8	Q4	2.5	4.1	2.3	Mar	2.2	3.3	Feb [‡]	1.1		-5.5	1.9	52.0	21.7	12.9
Denmark	-1.4	Q4	2.7	3.0	1.0	Mar	0.7	4.6	Feb	7.4		-1.3	nil	17.0	6.21	9.5
Norway	-0.6	Q4	2.6	2.6	3.1	Mar	1.6	5.0	Nov ^{†††}	2.4		-1.7	1.4	75.0	8.39	23.0
Poland	-2.8	Q4	-2.8	4.0	3.2	Mar	2.4	6.5	Feb [§]	2.1		-4.9	1.5	8.0	3.81	8.4
Russia	-1.8	Q4	na	2.7	5.8	Mar	4.6	5.7	Feb [§]	4.0		-1.7	7.2	46.0	75.6	-3.7
Sweden	-2.1	Q4	-1.0	2.3	1.7	Mar	1.4	9.7	Feb [§]	3.7		-2.3	0.4	34.0	8.46	17.7
Switzerland	-1.6	Q4	1.3	2.5	-0.2	Mar	0.3	3.3	Mar	8.1		-0.9	-0.2	9.0	0.92	4.3
Turkey	5.9	Q4	na	4.0	16.2	Mar	11.1	14.1	Feb [§]	-1.9		-3.1	17.3	351	8.10	-15.9
Australia	-1.1	Q4	13.1	3.1	0.9	Q4	2.0	5.6	Mar	2.2		-7.6	1.6	72.0	1.30	20.0
Hong Kong	-3.0	Q4	0.7	3.3	0.4	Feb	1.8	7.2	Feb ^{††}	3.2		-3.6	1.3	49.0	7.77	-0.3
India	0.4	Q4	42.7	13.0	5.5	Mar	5.2	6.5	Mar	-1.2		-6.7	6.0	-48.0	75.1	1.6
Indonesia	-2.2	Q4	na	3.3	1.4	Mar	2.8	7.1	Q3 [§]	-0.1		-6.5	6.6	-146	14,603	7.0
Malaysia	-3.4	Q4	na	4.4	0.1	Feb	2.4	4.8	Feb [§]	3.6		-6.3	3.1	-26.0	4.13	5.1
Pakistan	0.5	2020 ^{**}	na	1.7	9.1	Mar	8.8	5.8	2018	-1.9		-6.9	10.1	136	153	9.0
Philippines	-8.3	Q4	24.4	6.8	4.5	Mar	4.0	8.7	Q1 [§]	-1.1		-7.2	4.1	-9.0	48.5	4.4
Singapore	0.2	Q1	8.3	4.8	0.7	Feb	1.8	3.3	Q4	16.5		-4.1	1.6	48.0	1.34	5.2
South Korea	-1.2	Q4	5.0	3.3	1.5	Mar	1.5	4.3	Mar [§]	4.5		-4.7	2.0	52.0	1,117	9.0
Taiwan	5.1	Q4	5.8	4.5	1.3	Mar	1.6	3.7	Feb	15.1		-0.5	0.4	-14.0	28.4	5.6
Thailand	-4.2	Q4	5.4	3.6	-0.1	Mar	0.8	1.5	Dec [§]	5.0		-5.7	1.7	55.0	31.5	4.0
Argentina	-4.3	Q4	19.4	6.2	40.7	Feb [‡]	41.9	11.0	Q4 [§]	2.1		-6.0	na	na	92.7	-29.3
Brazil	-1.1	Q4	13.3	3.2	6.1	Mar	6.7	14.2	Jan ^{†††}	-1.0		-7.6	9.6	209	5.68	-8.6
Chile	nil	Q4	30.1	6.0	2.9	Mar	3.5	10.3	Feb ^{§††}	-0.2		-6.9	3.5	39.0	709	20.0
Colombia	-3.5	Q4	26.5	4.8	1.5	Mar	2.6	15.9	Feb [§]	-3.3		-8.9	6.1	-78.0	3,668	5.3
Mexico	-4.3	Q4	13.7	5.1	4.7	Mar	3.8	4.5	Feb	2.4		-2.8	6.3	-66.0	20.1	17.5
Peru	-1.7	Q4	37.9	8.5	2.6	Mar	2.4	19.0	Feb [§]	-0.2		-7.0	4.8	52.0	3.62	-6.3
Egypt	2.0	Q4	na	3.1	4.4	Mar	6.0	7.2	Q4 [§]	-3.5		-8.2	na	na	15.7	0.8
Israel	-1.4	Q4	6.4	3.4	0.2	Mar	1.4	5.1	Feb	3.9		-9.2	1.1	31.0	3.28	9.4
Saudi Arabia	-4.1	2020	na	3.0	5.3	Feb	2.5	7.4	Q4	3.1		-3.0	na	na	3.75	0.3
South Africa	-4.1	Q4	6.2	2.0	2.9	Feb	3.7	32.5	Q4 [§]	-1.2		-9.2	9.2	-120	14.4	26.9

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

Markets

In local currency	Index	% change on:	
		Apr 14th	Dec 31st 2020
United States S&P 500	4,124.7	1.1	9.8
United States NAScomp	13,857.8	1.2	7.5
China Shanghai Comp	3,416.7	-1.8	-1.6
China Shenzhen Comp	2,218.5	-1.8	-4.8
Japan Nikkei 225	29,621.0	-0.4	7.9
Japan Topix	1,952.2	-0.8	8.2
Britain FTSE 100	6,939.6	0.8	7.4
Canada S&P TSX	19,171.7	0.2	10.0
Euro area EURO STOXX 50	3,976.3	0.5	11.9
France CAC 40	6,208.6	1.3	11.8
Germany DAX*	15,209.2	0.2	10.9
Italy FTSE/MIB	24,574.7	-0.7	10.5
Netherlands AEX	712.6	0.3	14.1
Spain IBEX 35	8,588.4	-0.1	6.4
Poland WIG	60,146.6	0.8	5.5
Russia RTS, \$ terms	1,490.0	4.2	7.4
Switzerland SMI	11,156.2	0.3	4.2
Turkey BIST	1,409.2	-0.6	-4.6
Australia All Ord.	7,280.6	1.4	6.3
Hong Kong Hang Seng	28,900.8	0.8	6.1
India BSE	48,544.1	-2.3	1.7
Indonesia IDX	6,050.3	0.2	1.2
Malaysia KLSE	1,598.3	-0.1	-1.8

	index	% change on:	
		Apr 14th	Dec 31st 2020
Pakistan KSE	45,311.2	3.1	3.6
Singapore STI	3,179.4	-0.5	11.8
South Korea KOSPI	3,182.4	1.4	10.8
Taiwan TWI	16,866.0	0.3	14.5
Thailand SET	1,541.1	-1.0	6.3
Argentina MERV	47,299.0	-5.6	-7.7
Brazil BVSP	120,294.7	2.3	1.1
Mexico IPC	48,329.8	0.9	9.7
Egypt EGX 30	10,115.5	-1.1	-6.7
Israel TA-125	1,697.3	0.4	8.2
Saudi Arabia Tadawul	9,847.6	-1.7	13.3
South Africa JSE AS	67,812.1	1.0	14.1
World, dev'd MSCI	2,913.5	1.1	8.3
Emerging markets MSCI	1,336.6	-0.2	3.5

US corporate bonds, spread over Treasuries

	Basis points	% change on:	
		latest	Dec 31st 2020
Investment grade		120	136
High-yield		365	429

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

Commodities

The Economist commodity-price index	% change on				
	2015=100	Apr 6th	Apr 13th*	month	year
Dollar Index					
All Items	164.5	167.8	2.3	63.7	
Food	125.8	127.3	0.2	39.0	
Industrials					
All	200.7	205.5	3.6	82.4	
Non-food agriculturals	151.6	158.8	7.7	85.4	
Metals	215.3	219.4	2.7	81.7	
Sterling Index					
All items	181.2	186.5	3.5	50.2	
Euro Index					
All items	154.1	156.0	2.1	50.6	
Gold					
\$ per oz	1,744.1	1,742.6	0.8	0.7	
Brent					
\$ per barrel	62.9	63.8	-6.7	114.8	

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

For more countries and additional data, visit [Economist.com/indicators](https://www.economist.com/indicators)

→ Tottenham underachieved relative to their resources in 2006-20, but overperformed before then

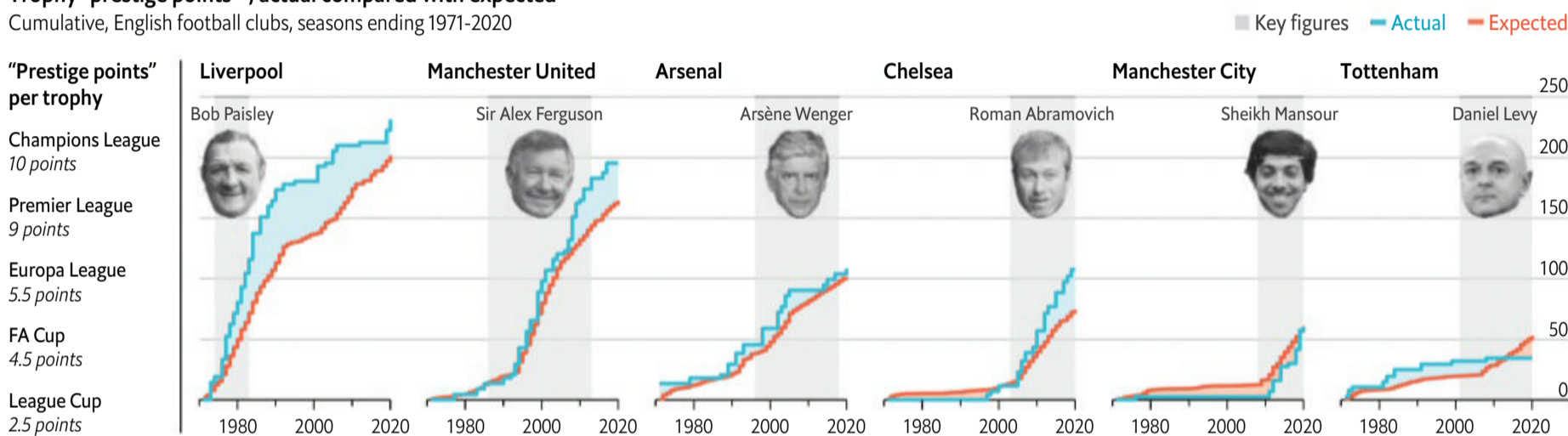
Number of trophies, actual compared with expected*

English football clubs, seasons ending 2006-20



Trophy "prestige points"†, actual compared with expected*

Cumulative, English football clubs, seasons ending 1971-2020



*Based on players' estimated market value from 2006-20 and Elo rating from 1971-2005 †Based on a poll of how much fans value each competition Sources: ClubElo.com; Transfermarkt.com; The Economist

What goes down must come up

Better days lie ahead for the perennial underachievers of English football

"IT IS THE history of Tottenham," once gloated Giorgio Chiellini of Juventus after his team knocked Tottenham Hotspur out of the Champions League, Europe's top football competition. London's "Spurs" have secured just two trophies in the past 30 years, both from the relatively minor League Cup. On April 25th Tottenham will have a shot at a third, when they face Manchester City in the League Cup final. Betting markets give them just a 25% chance.

Are Tottenham truly cursed? They are far more successful than most clubs, who languish in lower divisions. To be seen as cursed, a team must be good enough to inspire realistic dreams of glory, but useless enough not to fulfil them. Many supporters who blame divine intervention simply overrated their teams in the first place.

To estimate the odds that some Arsenal-loving god has it in for Tottenham, we ran a study. We defined "cursedness" as the gap

between a team's trophy haul and how it should have fared, based on the calibre of its players. If some clubs regularly win less than their talent implies, another factor (be it mundane or supernatural) may be at work. But if results mostly mirror players' skill, teams seen as hapless underachievers may in fact be talentless underdogs.

To determine how fans value different competitions, we ran a poll on Twitter. On average, respondents said that if a Champions League trophy was worth ten "prestige points", a domestic league title would get nine. Other knockout cups scored 2.5-5.5.

Trophy "prestige points"† compared with expected*

European football clubs, seasons ending 2006-20



Next, we calculated expected performance. From 2006 on, we got good predictions of league tables by adding up estimates from Transfermarkt, a football website, of sale prices for every player on a team's roster. For earlier years, we estimated these values using performance-based ratings from ClubElo, a statistical website.

Our study did find circumstantial evidence for a hex. In 2006-20, Spurs were the worst underachievers in Europe, with just 2.5 prestige points against an expected 32.

However, such periods of underperformance were common. A truly cursed club would let fans down for generations. And Spurs cannot claim outrageous fortune in the long run. In the 1970s and 1980s they won more trophies than expected, by beating stronger rivals in knockout cups.

Overall, we found no correlation in over- or underperformance from one decade to the next. Clubs that won more than they "should" have tended to drift back towards the pack, whereas ones that looked cursed mostly got their just deserts later on. The best predictor of a team's results is the players on the pitch, regardless of improbable successes or failures in the past.

That is good news for Spurs. If they sustain their 2016-20 level of skill, they have a 90% shot to win another trophy by 2026. ■



Pledge of a lifetime

Prince Philip, husband of Queen Elizabeth II, died on April 9th, aged 99

HIS HUGE, red hands were what you noticed first. On his wrist the plain watch with its brown leather strap, and the copper bracelet he wore to ease the rheumatism that so plagued his later years. Moulded by his genes and by life, those hands, big as lion paws, in turn moulded those around him: his wife, their children, her subjects.

Had Philip been the soft-skinned English aristocrat that the king and queen would have preferred for their elder daughter, Elizabeth, it would have been different. But he was an outsider. By the age of 26, when he married his second cousin once removed, he had lost virtually all his early roots. His father was dead; his mother, having suffered a mental breakdown, had withdrawn into a religious order. She wore a grey habit to the end of her life. Three of his four sisters married Nazis; none was welcome at the royal wedding in Westminster Abbey just after the end of the war.

By then, Philip had also lost his birthright, his home, his name, nationality and church. Even his birthday—fixed first in the Julian calendar and then in the Gregorian—was no longer the same. The 20th century would test Britain's monarchy with divorce, democracy and disdain. But the man who held its future in those hands had an immigrant's hunger for tradition and hard work.

He came to Britain by accident. He was born in 1921 on the island of Corfu. His father, son of the king of Greece, was of Danish and Russian origin mainly; his maternal grandfather grew up in Austria and Germany, and became British. As a toddler, Philip was carried aboard ship in a cot made from an orange crate when his family was banished from Greece. Until he was ten they lived in exile in St Cloud, a leafy Paris suburb.

His German family wanted him brought up in Germany, and sent him to the school they had founded at Schloss Salem in Baden-Württemberg. But Hitler's rise to power put paid to that. Philip followed the Jewish headmaster, Kurt Hahn, to Scotland, where

he founded a new school, Gordonstoun, with a forthright philosophy and the motto, "More is in you (than you think)". As a school-boy Philip was often naughty, though never nasty. He developed a strong sense of public duty and a taste for speed; he excelled at sports and learned to sail, often being given the job of galley cook as he seemed immune to seasickness.

At 18 he went on to Dartmouth Naval College in the south of England, where he was named best cadet. When the second world war broke out that same year, he sailed to Colombo and joined a lumbering battleship escorting convoys of Australian troopships bound for Egypt. On board Philip passed some of his time filling out Admiralty Form S519, "Journal for Use of Junior Officers", a ruggedly bound volume with marbled endpapers. The entries reveal a passion for technicalities and a waywardness with spelling. Hitler's Axis allies are consistently "Italiens"; buoys pop up as "bouys"; he writes "misstakes", and "exept". On the title page he signed his name, Philip, Prince of Greece; the men called him Pog. In the evenings he was "Captain's Doggie" and one of his duties was to make the cocoa.

Only after Italy's invasion of Greece in June 1940 did Philip begin to see any action. And when it came, it was dramatic. His ship, *HMS Valiant*, was at the centre of the battle that destroyed the Italian navy. Philip was mentioned in dispatches, and emerged from the war one of the youngest first lieutenants. In Buckingham Palace the teenage Princess Elizabeth kept a photograph on her dressing-table of the bearded young officer serving in her father's navy. He bore a striking resemblance to her grandfather, King George V.

Later, his staff often described him as "bracing". When asked by a (female) journalist about rumours of a colourful private life in the 1960s, he barked: "Good God, woman! I don't know what sort of company you keep." But he was good at getting things done: his Duke of Edinburgh Award Scheme for teenagers now operates in more than 140 countries.

In public his job was to walk two steps behind his wife, trying not always successfully to make small talk. In private, he took the lead and urged her to spread her wings with the words, "Come on, Lilibet." His passport listed him as a "Prince of the Royal House", but he cast himself as a moderniser. Within a few days of moving into Buckingham Palace he began an "Organisation and Methods Review". He visited every one of its 600-or-so rooms and asked each member of staff what they did there and why.

Later he extended his brief. His first-floor study there offered a panoramic view of his interests. On a long wall of bookcases was stowed his collection of model ships in glass cases. Between them stood the books that had caught his attention—on wildlife, anthropology, history, naval strategy, sailing. In a corner were the biographies that had been written about him. And on a table by a window stood an array of family photographs in black and white. Lots of relatives, but no children, other than a big, misty colour portrait of the doughty Princess Anne taken shortly before she married for the first time, in the early 1970s. She was his favourite of the four children, the one most like him. His sons exasperated him, none more than the sensitive Charles whom he sent to Gordonstoun despite knowing he would be bullied.

Keeping calm and carrying on

Marriage brought the young, rootless prince a home, a country, a passport, a new religion and the first real stability in his life. In return, the immigrant boy gave it his total support. Philip was the first of the senior peers to pay homage after the queen's coronation at Westminster Abbey, where they had married just over five years earlier. "I Philip, Duke of Edinburgh, do become your liege man of life and limb and of earthly worship," he promised, kneeling before her and placing his large hands between hers. "And faith and truth I will bear unto you, to live and die against all manner of folks. So help me God." Rising to his feet, he touched his fingers to her crown and kissed her on the cheek. ■

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