

The Economist

China bullies Cathay Pacific

How recessions begin

Who should run Italy now?

Gravity waves and nuclear pasta

AUGUST 24TH–30TH 2019

What are companies for?

Big business, shareholders and society

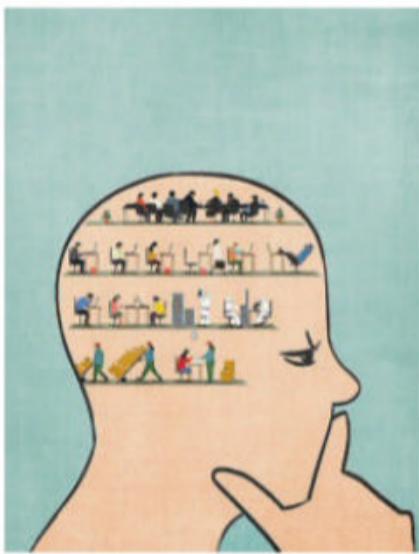


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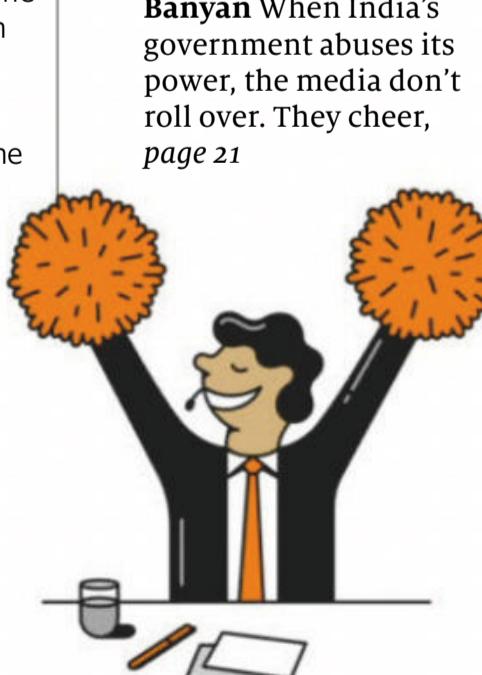
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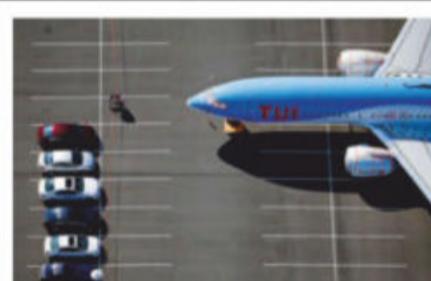
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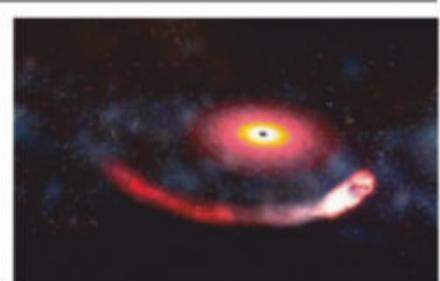
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Giuseppe Conte, Italy's prime minister, resigned after Matteo Salvini, the leader of the Northern League party, withdrew his support for the coalition government. The coalition's other party, the Five Star Movement, must now try to form a new government. If that fails, Italy may face a general election.

An Italian prosecutor ordered a ship carrying around 80 illegal **migrants** to dock after some of the passengers jumped into the sea. The ship, operated by a Spanish charity, had been held off the Italian coast for three weeks because Mr Salvini, who is also Italy's interior minister, refused it entry to a port.

International radiation monitors confirmed they had detected a recent accident near the **Russian** port of Arkhangelsk, believed to involve a nuclear-powered cruise missile. Separately, and despite worries about safety, Russia launched the world's first floating nuclear-power plant, which will power its eastern Arctic region.

Poland's deputy justice minister resigned amid claims that he had aided a smear campaign against judges deemed insufficiently loyal to the ruling Law and Justice party. The EU has launched legal proceedings against Poland for interfering with the independence of the judiciary.

Boris Johnson, **Britain's** new prime minister, wrote to Donald Tusk, the president of the European Council, to urge that the Irish "backstop", a means of avoiding a hard border with Ireland post-Brexit, be removed from Britain's withdrawal agreement.

with the EU. Mr Tusk's response was negative. Angela Merkel, the German chancellor, suggested that Mr Johnson had 30 days to come up with an alternative. Emmanuel Macron, the French president, insisted that the backstop is not open to renegotiation.

Exit, stage left?

In a televised speech, Nicolás Maduro, the president of **Venezuela**, confirmed that with his permission senior aides have been holding discussions with American officials for months. That stoked speculation that America might be discussing a deal to remove Mr Maduro, whose socialist policies have ruined Venezuela. The UN has reported that 20% of the population is malnourished.

Argentina's finance minister resigned in the wake of the market turmoil that followed a triumphal showing by the populist-Peronist presidential ticket in a pre-election vote. The IMF held talks with the government about a \$57bn bail-out package, which could be in jeopardy if the populists win October's actual election.

São Paulo was shrouded in smog caused by fires raging in the Amazon rainforest 2,700km away. Data from Brazil's national space centre have shown an 84% rise in the number of fires in the Amazon this year compared with last. Without evidence, Jair Bolsonaro, Brazil's president, accused green groups of lighting the fires to make him look bad.

Fingers crossed

The junta in **Sudan** signed a power-sharing deal with opposition leaders that could pave the way for civilian rule. A transitional government is to run things until elections are held in 2022. Some worry that the generals, who unlike the civilians have lots of guns and money, will spoil the deal. Sudan's former dictator, Omar al-Bashir, appeared in a court-room in Khartoum, where he is on trial for corruption.

Nigeria marked the third year without a documented case of polio, which cripples children. When it is certified as free of the virus, the whole of Africa will be considered polio-free. Only Pakistan and Afghanistan still harbour the disease.

Gibraltar released an **Iranian tanker** that had been detained on suspicion of shipping oil to Syria in violation of European sanctions. America threatened sanctions on any country that helps the ship. Greece, its stated destination, said it would not assist the vessel.

Dozens of civilians were killed in a Russian-backed offensive by the **Syrian** government against the last big rebel stronghold. Government soldiers moved into the town of Khan Sheikhoun, which lies on an important supply route and has been under attack since April. Turkey, which backs some of the rebels, said one of its convoys was hit.

Donald Trump said he would probably release his plan for peace between **Israel** and the **Palestinians** after the Israeli election on September 17th.

The killing machine

Islamic State claimed responsibility for a bomb at a wedding in Kabul. At least 80 people died; it was the worst attack in the **Afghan** capital since January 2018. IS was not represented at America's peace talks with the Taliban; a deal under which most American troops will leave Afghanistan is said to be close.

A policeman and a suspected militant were killed in a gun-fight in Indian-administered **Kashmir**, the first reported deaths since the government recently ended the region's decades-old special status.

India's Chandrayaan-2 spacecraft began its orbit of the Moon. The country's space agency said it will touch down on September 7th, becoming the first-ever mission to land at the Moon's south pole.

More protests were held in **Hong Kong**. The largest was a rally that passed off peacefully and which organisers claimed was attended by 1.7m people. Twitter removed 936 accounts from its platform which it said were based on the Chinese mainland and had tried to sabotage the territory's democracy movement.

China reacted furiously to the American government's formal approval of the sale of 66 F-16 fighter jets, worth \$8bn, to **Taiwan**. China said the deal undermined its security interests and threatened American companies involved in the sale with sanctions.

Flexing its military muscle

America's test of a medium-range **cruise missile** elicited angry responses from China and Russia. The test was conducted just weeks after America officially left the Intermediate-Range Nuclear Forces Treaty, claiming that Russia was not sticking to the rules.

Some Democrats renewed their call to boycott Israel after two American **congresswomen** were barred from entering the country because they support sanctions against Israel.



How serious was Donald Trump when he said he wanted America to buy **Greenland**? The president appeared to be joking when he posted a picture on Twitter of a golden Trump skyscraper imposed on the Danish territory's landscape. But then he cancelled a state visit to Denmark because, he said, the prime minister had no interest in discussing the purchase and had been "nasty" to him.

The Business Roundtable, America's foremost association of chief executives, caused a stir when it redefined the **purpose of a company**, ditching the decades-old orthodoxy that increasing shareholder value should be the only objective. Now, the bosses say, companies should also look out for the interests of customers, workers, suppliers and communities, and aim to increase diversity and protect the environment. The statement was signed by almost 200 CEOs, encompassing relative upstarts, such as Amazon and Apple, as well as companies that trace their roots back well over 100 years, including ExxonMobil, General Motors, JPMorgan Chase and Macy's.

The minutes from the **Federal Reserve's** latest meeting revealed splits over whether to lower its main interest rate. The central bank opted for a cut of a quarter of a percentage point, but two of the ratesetters wanted a half-point cut. Others wanted to hold rates steady.

Germany's central bank warned that there was a real risk the country could slip into recession, describing the economy as "lacklustre". The Bundesbank pointed to data showing that industrial production is still slowing.

Thailand's government announced a \$10bn stimulus package to spur growth in the economy, which has been hit by a surging currency, leading to a slump in exports. GDP rose by 2.3% in the second quarter compared with the same three months last year, the slowest rate since mid-2014. The stimulus measures include incentives for Thais to holiday in their country, as well as extra support for farmers, small businesses and the poor.

In a move that it described as a "market-based reform", **China's central bank** set a new benchmark interest rate, the Loan Prime Rate, which will more closely resemble what commercial banks pay it to borrow.

American regulators approved an easing of the restrictions on trading by banks that had been introduced under the **Volcker rule** during the financial crisis. The changes, first mooted in May 2018, simplify the legal definitions of what constitutes proprietary trading, where banks use their own money to invest. Critics contend that weakening the rule will allow banks once again to engage in risky bets through opaque financial instruments.

Drop the pilot

Cathay Pacific's share price had another turbulent week following the surprise resignation of Rupert Hogg, its British-born chief executive. Based in Hong Kong, the airline has become enmeshed in the city's recent political strife. China's state-run press has called for a boycott of Cathay because of its staff's participation in ongoing street protests. Separately, **Alibaba** has reportedly postponed a blockbuster listing of shares on the Hong Kong exchange in part because of the political uncertainty.

America's Commerce Department extended the exemption period under which some American companies can conduct business with

Huawei, to November 19th. This is primarily to allow rural telecom providers more time "to wean themselves off" the Chinese maker of telecoms equipment, which has been slapped with a ban over national-security concerns.

SoftBank was reported to be planning to lend staff up to \$20bn so that they can buy stakes in Vision Fund 2. That would come on top of the \$38bn that the Japanese conglomerate is itself ploughing into the venture-capital project, raising questions about SoftBank's exposure to potentially risky tech startups.

A long stretch of cost-cutting and the sale of its shale-gas business boosted the fortunes of **BHP**. The mining company reported underlying income of \$9.1bn for the 12 months ending June, its best annual profit in five years, and returned a record dividend to shareholders. Although demand for BHP's iron ore, copper and coal is still strong in China, it flagged trade tensions as a potential threat to business.

As it works towards restoring investor confidence following its troubled acquisition of Monsanto, **Bayer** agreed to sell its animal-health business for

\$7.6bn. The German drugs and chemicals group recently sold its Coppertone sun-cream unit and Dr Scholl's foot-care division, bringing in more cash. Bayer faces a host of legal claims that its Roundup weedkiller, which it inherited when it took over Monsanto, causes cancer.

They're over here for the beer



The weakness of the pound, which lowers the cost of buying British assets to overseas investors, was reportedly one of the factors behind an offer from **CK Asset Holdings**, a property investment firm based in Hong Kong, for **Greene King**, a pub chain. The deal is worth £4.6bn (\$5.6bn). Founded in 1799, Greene King operates around 2,700 pubs, which CK Asset believes will continue to form a central part of British culture long after Brexit. Cheers to that.



What companies are for

Competition, not corporatism, is the answer to capitalism's problems

ACROSS THE West, capitalism is not working as well as it should. Jobs are plentiful, but growth is sluggish, inequality is too high and the environment is suffering. You might hope that governments would enact reforms to deal with this, but politics in many places is gridlocked or unstable. Who, then, is going to ride to the rescue? A growing number of people think the answer is to call on big business to help fix economic and social problems. Even America's famously ruthless bosses agree. This week more than 180 of them, including the chiefs of Walmart and JPMorgan Chase, overturned three decades of orthodoxy to pledge that their firms' purpose was no longer to serve their owners alone, but customers, staff, suppliers and communities, too.

The CEOs' motives are partly tactical. They hope to pre-empt attacks on big business from the left of the Democratic Party. But the shift is also part of an upheaval in attitudes towards business happening on both sides of the Atlantic. Younger staff want to work for firms that take a stand on the moral and political questions of the day. Politicians of various hues want firms to bring jobs and investment home.

However well-meaning, this new form of collective capitalism will end up doing more harm than good. It risks entrenching a class of unaccountable CEOs who lack legitimacy. And it is a threat to long-term prosperity, which is the basic condition for capitalism to succeed.

Ever since businesses were granted limited liability in Britain and France in the 19th century, there have been arguments about what society can expect in return. In the 1950s and 1960s America and Europe experimented with managerial capitalism, in which giant firms worked with the government and unions and offered workers job security and perks. But after the stagnation of the 1970s shareholder value took hold, as firms sought to maximise the wealth of their owners and, in theory, thereby maximised efficiency. Unions declined, and shareholder value conquered America, then Europe and Japan, where it is still gaining ground. Judged by profits, it has triumphed: in America they have risen from 5% of GDP in 1989 to 8% now.

It is this framework that is under assault. Part of the attack is about a perceived decline in business ethics, from bankers demanding bonuses and bail-outs both at the same time, to the sale of billions of opioid pills to addicts. But the main complaint is that shareholder value produces bad economic outcomes. Publicly listed firms are accused of a list of sins, from obsessing about short-term earnings to neglecting investment, exploiting staff, depressing wages and failing to pay for the catastrophic externalities they create, in particular pollution.

Not all these criticisms are accurate. Investment in America is in line with historical levels relative to GDP, and higher than in the 1960s. The time-horizon of America's stockmarket is as long as it has ever been, judged by the share of its value derived from long-term profits. Jam-tomorrow firms like Amazon and Netflix are all the rage. But some of the criticism rings true. Workers' share of the value firms create has indeed fallen. Consumers often get a lousy deal and social mobility has sunk.

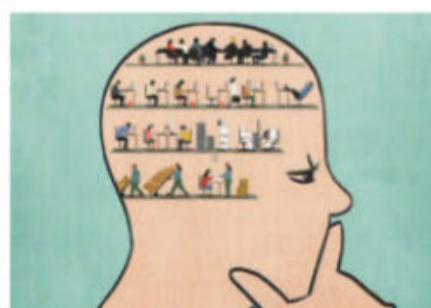
Regardless, the popular and intellectual backlash against shareholder value is already altering corporate decision-making. Bosses are endorsing social causes that are popular with customers and staff. Firms are deploying capital for reasons other than efficiency: Microsoft is financing \$500m of new housing in Seattle. President Donald Trump boasts of jawboning bosses on where to build factories. Some politicians hope to go further. Elizabeth Warren, a Democratic contender for the White House, wants firms to be federally chartered so that, if they abuse the interests of staff, customers or communities, their licences can be revoked. All this portends a system in which big business sets and pursues broad social goals, not its narrow self-interest.

That sounds nice, but collective capitalism suffers from two pitfalls: a lack of accountability and a lack of dynamism. Consider accountability first. It is not clear how CEOs should know what "society" wants from their companies. The chances are that politicians, campaigning groups and the CEOs themselves will decide—and that ordinary people will not have a voice. Over the past 20 years industry and finance have become dominated by large firms, so a small number of unrepresentative business leaders will end up with immense power to set goals for society that range far beyond the immediate interests of their company.

The second problem is dynamism. Collective capitalism leans away from change. In a dynamic system firms have to forsake at least some stakeholders: a number need to shrink in order to reallocate capital and workers from obsolete industries to new ones. If, say, climate change is to be tackled, oil firms will face huge job cuts. Fans of the corporate giants of the managerial era in the 1960s often forget that AT&T ripped off consumers and that General Motors made out-of-date, unsafe cars. Both firms embodied social values that, even at the time, were uptight. They were sheltered partly because they performed broader social goals, whether jobs-for-life, world-class science or supporting the fabric of Detroit.

The way to make capitalism work better for all is not to limit accountability and dynamism, but to enhance them both. This requires that the purpose of companies should be set by their owners, not executives or campaigners. Some may obsess about short-term targets and quarterly results but that is usually because they are badly run. Some may select charitable objectives, and good luck to them. But most owners and firms will opt to maximise long-term value, as that is good business.

It also requires firms to adapt to society's changing preferences. If consumers want fair-trade coffee, they should get it. If university graduates shun unethical companies, employers will have to shape up. A good way of making firms more responsive and accountable would be to broaden ownership. The proportion of American households with exposure to the stockmarket (directly or through funds) is only 50%, and holdings are heavily skewed towards the rich. The tax system ought to encourage more share ownership. The ultimate beneficiaries of pension schemes and investment funds should be able to vote in company elections; this power ought not to be outsourced to a few ►



► barons in the asset-management industry.

Accountability works only if there is competition. This lowers prices, boosts productivity and ensures that firms cannot long sustain abnormally high profits. Moreover it encourages companies to anticipate the changing preferences of customers, workers and regulators—for fear that a rival will get there first.

Unfortunately, since the 1990s, consolidation has left two-thirds of industries in America more concentrated. The digital economy, meanwhile, seems to tend towards monopoly. Were profits at historically normal levels, and private-sector workers to get the benefit, wages would be 6% higher. If you cast your eye down the list of the 180 American signatories this week, many

are in industries that are oligopolies, including credit cards, cable tv, drug retailing and airlines, which overcharge consumers and have abysmal reputations for customer service. Unsurprisingly, none is keen on lowering barriers to entry.

Of course a healthy, competitive economy requires an effective government—to enforce antitrust rules, to stamp out today's excessive lobbying and cronyism, to tackle climate change. That well-functioning polity does not exist today, but empowering the bosses of big businesses to act as an expedient substitute is not the answer. The Western world needs innovation, widely spread ownership and diverse firms that adapt fast to society's needs. That is the really enlightened kind of capitalism. ■

Coal and climate change

Betting on black

Asian governments are the biggest supporters of the filthiest fuel

IN THE DENSE gloom about climate change, news of coal's decline seems like a pinprick of hope. President Donald Trump may adore "beautiful, clean coal", but even he cannot save it. A growing number of countries want to phase out coal entirely, a transition eased by cheap natural gas and the plunging cost of wind and solar power.

That is good news. Coal has been the largest engine of climate change to date, accounting for nearly a third of the rise in average temperatures since the Industrial Revolution. Any pressure on it therefore counts as progress.

However, last year coal-fired electricity emitted more than ten gigatonnes of carbon dioxide for the first time, 30% of the world's total. It may be in decline in the West, but many Asian governments continue to promote coal-fired power generation. They are making a dangerous bet.

Asia accounts for 75% of the world's coal demand—China alone consumes half of it. The Chinese government has taken steps to limit pollution and support renewables. Yet coal consumption there rose in 2018, as it did the year before. In India coal demand grew by 9% last year. In Vietnam it swelled by almost a quarter. To keep the rise in global temperatures to no more than 1.5°C relative to pre-industrial times, climatologists insist that almost all coal plants must shut by 2050, which means starting to act now. Today's trends would keep the last coal plant open until 2079, estimates UBS, a bank. Asia's coal-fired power regiment has a sprightly average age of 15, compared with a creaky 40 years in America, close to retirement.

There are several reasons for this, but one stands out: government support. In India state-owned companies invest more than \$6bn in coal mining and coal-fired power each year; state-backed banks provide some \$10.6bn in financing. Indonesia doles out more than \$2bn annually for consumption of coal-fired power. China supports coal not just at home but abroad, supplying about \$9.5bn a year in foreign funding. Japan and South Korea finance coal projects outside their borders, too.

Government support is hardly surprising. State-backed coal firms make money and create jobs. Wind turbines and solar panels provide power only intermittently; for now, dirtier power plants are needed as back up. Gas is pummelling coal in America,

but remains a bit-player in India and much of South-East Asia, since it has to be imported and is relatively expensive.

Disentangling coal from the region's economies is difficult. Indonesian coal companies are a powerful lobby; not coincidentally, power tariffs favour coal over wind and solar projects. In India coal subsidises passenger fees on railways. And heavy lending by state-owned banks has tied the health of the financial system to that of the coal industry.

Nevertheless, governments betting on coal face three big risks. One is environmental. Emissions from coal plants that are already built—let alone new ones—will ensure that the world exceeds the level of carbon-dioxide emissions likely to push global temperatures up by more than 1.5°C.

There is an economic risk, too. Public-sector zeal for coal is matched only by private-sector distaste (see Asia section). Banks, including Asian ones, have increasingly said they will stop funding new coal plants. Wind and solar farms make coal look increasingly expensive. A study has found that private banks provided three-quarters of loans to Indian renewables projects last year; state-backed banks doled out two-thirds of those for coal.

And then there is politics. Voters do not like breathing soot. More of them are concerned about climate change, too, as they face unpredictable growing seasons, floods and droughts.

Promisingly, more Asian politicians are voicing support for clean power. In July Rodrigo Duterte, the Philippines' president, instructed his energy minister to reduce his country's dependence on coal. In June India's government said it planned to have 500 gigawatts of renewable power by 2030. But to speed the transition, governments in Asia and elsewhere must do more.

Politicians should move faster to reduce state support for coal. Rich countries should find ways to help. Middle-income countries in Asia would be right to point out that wealthier counterparts used coal to fuel their own growth and that America, Britain, Germany and Japan are among those that continue to support coal, for instance through tax breaks and budgetary transfers (and imports from coal-powered Asia). Abandoning coal in Asia may require diplomacy on a scale that few governments are ready to contemplate. But abandon coal they must. ■



Italian politics

Time to govern, not campaign

A snap election could make Italy's budget woes worse

THE REMARKABLE thing about the fall of the Italian government this week was that it did not happen sooner. Parties that depict themselves as outsiders, such as the Northern League and the Five Star Movement (M5S), typically find their first stint in office a fiasco. A coalition of two such outfits, one a hard-right nationalist group and the other an eclectic set of economic populists, greens and internet utopians, was bound to come unglued. Moreover, whereas the M5S finished first in last year's election, the League has since far surpassed it, polling at 37% to the M5S's 17%. The League's leader, Matteo Salvini, has proved more astute than the M5S's Luigi di Maio. It is not surprising that he pulled his support from Giuseppe Conte, the prime minister, in a bid to trigger an election and win the job for himself. Just now, however, an election would be a grave mistake for Italy and Europe.

That might seem unfair. After all, the composition of parliament does not reflect public opinion. But this is a precarious moment for Italy (see Europe section). Its economy is feeble, with growth this year expected to be just 0.1%. Its immense government debt, of more than 130% of GDP, is the greatest single threat to the euro zone. An election would take months, threatening Italy's efforts to pass a budget by the end of the year. That could upset markets at a time when much of Europe is already on the edge of recession.

Should the pro-Kremlin, anti-immigrant Mr Salvini win a vote, he would seek clashes with the European Union over refugee settlement and foreign policy—a distraction when the public finances are at stake. Worse, the European Commission must review Italy's budget to ensure that it deals with the country's debt. A proposal is due on October 15th. When the previous government's initial draft of last year's budget was rejected by Brussels,

it led to months of haggling. Mr Salvini's promises of tax cuts suggest that any government he leads will face similar problems.

A second reason to delay lies in Rome. Mr Salvini has spent the past year relentlessly undercutting and upstaging the M5S. On some issues, such as the conflict over a high-speed-rail tunnel that precipitated the fall of the government, the M5S and the League are diametrically opposed. Mr di Maio deserves a chance to show whether his party can govern.

Rather than stage an election, the M5S should form a new coalition with the centre-left Democratic Party (PD) and independent lawmakers. A temporary, less rivalrous coalition with the PD could give voters time to get a better sense of the M5S's abilities before they pass judgment. More important, such a government could pass a compromise budget, and then hold elections early next year. A coalition would face the daunting task of finding spending cuts of €23bn, equivalent to 1.3% of GDP, to avert steep value-added-tax rises. It may well exceed deficit rules, as Mr Salvini surely would. But, by putting off the election for later, it would gain time to talk to the EU.

It will not be easy for the M5S and PD to work together. Mr di Maio will have to overcome his party's reluctance to join one of the traditional parties it has vowed to supplant. The PD is even more divided. Matteo Renzi, its former leader, favours a coalition. Nicola Zingaretti, the current one, is sceptical. The party has set out five reasonable conditions for collaboration, such as the M5S renouncing anti-EU rhetoric. But Mr Zingaretti has also insisted on a clear-cut break with the past, which could be a veiled attempt to exclude Mr di Maio from the next cabinet. If such demands force new elections, it would be a mistake. This is not the time for Italy to play political games. ■



Business in China

Cathay's mayday

China's bullying of foreign companies reveals the Communist Party's disregard for rules and free markets

AS THE TRADE war chips away at its allure, China wants to retain the affection of foreign businesses. It has promised to level the playing field between them and their domestic rivals. This pledge is meant as reassurance that Chinese firms will receive no special favours. But it has taken on a different light over the past week, in the wake of China's assault on Cathay Pacific, Hong Kong's flagship airline. China is taking a hard line against foreign companies that displease it, lashing out at their bosses and demanding obedience, much as it wields control over domestic enterprises. Firms in Hong Kong are in the cross-hairs, but it would be a mistake to think China will stop there.

With 26,000 employees in Hong Kong, Cathay initially took a neutral stance as protests engulfed the city. The airline would not dream of telling its employees what to think, its chairman

proclaimed. His defiance withered, though, as criticism from China mounted. When the Chinese aviation authority, absurdly, accused the airline of imperilling safety because its employees had joined the protests, Cathay dumped its chief executive. A climate of fear now pervades it. Chinese inspectors have started screening the phones of Cathay crew for anti-Beijing material.

Global firms may console themselves with the thought that Cathay was uniquely vulnerable. Although it is Asia's biggest international carrier and a perennial contender for best airline in global rankings, its fate rests almost entirely on China. As much as 70% of its cargo and passengers pass through Chinese airspace. Its biggest shareholder is Swire Pacific, a Hong Kong-based group immersed in China, from soft drinks to property. Swire executives appear to have concluded that any resistance ►

would be an act of corporate self-immolation.

Cathay is far from alone. It joins a list of foreign firms that have wound up on the wrong side of politics in Beijing. Often the remedies are relatively simple, if nauseating. A series of luxury brands—Versace, Coach and Givenchy—have recently offered profuse apologies for selling t-shirts that appeared to identify Hong Kong as being separate from China (see Chaguan).

As a general rule, the more foreign companies prize China's market, the more they have to fear (see Business section). HSBC, Europe's biggest bank, has come under pressure for sharing information with American authorities that helped them build a fraud case against the chief financial officer of Huawei, a Chinese telecoms giant. With its strategy predicated on growth in China, HSBC cannot afford to become a villain there. This month it ousted both its chief executive and the head of its China unit, though it denied any connection with the Huawei controversy.

Cathay's predicament shows why global boardrooms are growing more anxious about Chinese anger. The main worry used to be consumer boycotts, fuelled by state media. These

harmed Japanese carmakers and South Korean retailers, but their Chinese sales typically recovered after a few quarters.

The attack on Cathay went further. China's airline regulator declared it unsafe, the international arm of ICBC, a bank, recommended selling its shares and CITIC Bank boycotted it. The bogus regulatory warning gave all Chinese firms a pretext to shun it. These entities are not household names outside China but are active around the world. ICBC is the planet's biggest bank by assets. CITIC Bank belongs to one of the most global of Chinese state conglomerates. Their participation in the flagellation of Cathay is a reminder that their ultimate loyalty is to the party.

Using state firms as battle spears gives the lie to China's claim that it is managing them according to market principles. And weaponising regulators undermines China's ambitions to play a bigger international role. The airline supervisor had earned respect in leading the charge to ground the 737 MAX, Boeing's troubled aeroplane; its Cathay warning makes it look like a political hack. The party may well get foreign companies to toe its line on Hong Kong. In the process it is revealing its true nature. ■

Germany's economy

Take aim

The case for more fiscal stimulus in Germany is overwhelming. Here is how to do it

ON AUGUST 19TH the Bundesbank warned that Germany could soon be in recession. The economy shrank in the second quarter of the year; two consecutive quarterly contractions are often taken to define a downturn. In June industrial production was 5.2% lower than a year earlier, the biggest fall in a decade. Some investors hope that the run of bad news will persuade Germany to overcome its deep-rooted suspicion of fiscal stimulus. Sure enough, a day before the central bank's warning, Olaf Scholz, the finance minister, said the government could afford a hit to its finances of €50bn (\$56bn)—about 1.4% of GDP.

Unfortunately Mr Scholz has shown little desire to use that money now. Chancellor Angela Merkel has said she sees no need. That is lamentable. The case for using fiscal stimulus to fight the downturn has recently become overwhelming.

There are arguments to be made against higher deficits when economies weaken and inflation is low. Spending can be unaffordable because the government is already too indebted. Some critics argue that it is up to central bankers, not finance ministers, to cope with the economic cycle. A worry is that more borrowing will drive up interest rates, deterring private-sector investment.

None of these applies to Germany. Stimulus is patently affordable. The government can borrow for 30 years at negative interest rates. As a result, it could probably spend double what Mr Scholz suggests for years and still keep its debt-to-GDP ratio steady at around a prudent 60%. Central bankers are hamstrung. Short-term interest rates cannot fall much further. The European Central Bank is likely to start buying more assets in September, which will help but may not be enough. And crowding out investment is not a concern. Negative rates are a sign that Europe is awash with savings and bereft of plans to put them to use (see Buttonwood). If Germany deployed them to improve its decaying

infrastructure, its firms would probably invest more, not less.

The country needs looser fiscal policy in both the long term and the short term. It has neglected infrastructure in pursuit of needlessly restrictive fiscal targets, most recently its "black zero" ban on deficits. This has, for example, left 11% of its bridges in poor condition and its railways plagued by delays. Germany should replace the deficit ban with a rule allowing borrowing for investment spending. It should use tax breaks to encourage its private firms, innovation laggards, to invest more too, including in research and development.

In the short term Germany needs demand. This necessity has grown in strength this year as the economy has deteriorated. Al-

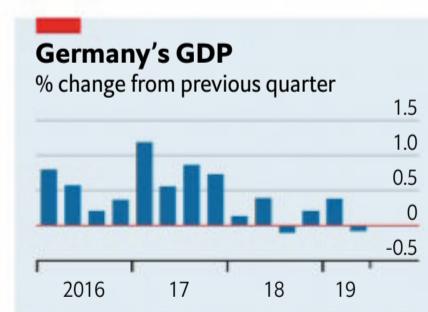
though unemployment is just 3.1%, the Bundesbank has warned that joblessness could soon rise. The domestic economy cannot endure brutal global trading conditions for ever.

It would be better to use fiscal policy to prevent a deep downturn than to wait for recession to bring about a bigger deficit of its own accord. If a preventive stimulus turned out to be premature, the worst that could happen is slightly

higher inflation than today's 1.1%—which would in any case help the ECB hit its inflation target of close to 2%. A little more inflation would also even out imbalances in competitiveness between Germany and the rest of the euro zone.

Unfortunately infrastructure projects take time to get going. They face planning hurdles and bottlenecks in the construction industry. The federal government has already struggled to spend all of its existing meagre infrastructure budget.

The best thing, therefore, would be to supplement a long-term programme of infrastructure investment with an immediate, temporary boost, such as payroll-tax cuts, designed to forestall a downturn. Germany stands to benefit from both prongs of this strategy. Continuing to reject them is fiscal folly. ■





VISIONARY LIVING

Barcelona's new masterpiece by Odile Decq

Globally-renowned architect Odile Decq has created a peerless residential landmark that will transform the Barcelona skyline. A unique combination of city and seaside living, artistic design, distinctive amenities and unrivalled panoramic views over the Mediterranean, Antares elevates the ambition of modern residential living. Welcome to an address that provokes the senses.

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Preserving the Amazon

You misrepresented the position of the Brazilian government on the protection of the Amazon rainforest ("Death-watch", August 3rd). In fact, combating deforestation is an unwavering commitment of the government. The single largest operation ever conducted to combat illegal deforestation in the Amazon took place recently, on June 5th. It brought together 165 federal environmental agents, who dismantled a criminal organisation specialising in illegal logging and timber trafficking.

Brazil has reduced deforestation in the Amazon by 72% over the past 15 years. We have regenerated 9.4m hectares of vegetation (more than the total area of Scotland) and replanted forests in another 2m hectares. As the report rightly indicates, Brazilian agriculture is a clear example of how environmental protection and economic development can go hand in hand. Only 30% of Brazilian territory is dedicated to agriculture and ranching, while in European countries these figures usually range between 45% and 65%.

The deforestation data published in June come from a satellite system, DETER, the main purpose of which is not to generate compiled deforestation rates, but to release deforestation warnings to guide the work of forces on the ground. It is a crucial instrument, which will be preserved, but one that is not suitable for this kind of analysis. Deforestation rates are published once a year through a different satellite system, PRODES. Finally, as an additional layer of oversight, the Brazilian government is buying a new system of high-resolution satellite images to be collected on a daily basis. This will be another tool in the fight against deforestation.

FRED ARRUDA
Ambassador of Brazil
London

I read your report while bouncing down logging roads in the Madre de Dios region of the

Peruvian Amazon. During my visit I personally took a chainsaw to an 80-year-old cumaru tree. But for our harvesting that tree eventually would have stopped growing, stopped metabolising carbon dioxide into oxygen and decomposed, releasing its carbon and methane. Instead, the tree's lumber will be turned into useful products and its carbon sequestered. More importantly, these concessions will protect the forest for up to 80 years. Leaving this managed paradise, I saw first-hand what happens to forests that aren't sustainably harvested. They are burned to the ground to make way for farms and mines.

Sustainable forestry is our best opportunity to preserve the lungs of our planet, by ensuring that the Amazon is sustainably commercial. We should be consuming more wood products, as I'm sure my fellow subscribers to the print edition would agree.

W. GARNER ROBINSON
Chief executive
Robinson Lumber Company
New Orleans

Can we all stop pretending that humanity cares about the environment? The reality is that the organising principle of civilisation is maximising consumption. When consumerism runs up against the environment, consumerism will, in the end, win. The sooner public policy faces up to this fact the better. Sadly, the only Amazon most people care about is the one that offers same-day delivery.

DANIEL MAURO
Chicago

Factor investing

Just because a good idea becomes well-known, or widely accepted, doesn't make it any less effective. Buttonwood (July 20th) raised the question of whether investment factors such as value, momentum, size, quality and minimum volatility may lose their long-term effectiveness because of overcrowding. Yet a large body of academic work, including from six Nobel-prize winners,

has substantiated the broad and persistent returns generated by these investment strategies over time.

In published research papers, we have estimated factor capacity by examining assets managed in those strategies and weighing transaction costs. Our findings suggest there is ample capacity to make factor investing effective for some time to come. Based on our research, the amount of money allocated to factor strategies is a fraction of the \$26trn in total market capitalisation of the broader S&P 500 Index (as of July 31st). Factor-investing strategies have the capacity to absorb more than 100 times the amount that is invested today. We believe factor strategies globally may reach at least hundreds of billions and, in many cases, trillions of dollars of assets before we concern ourselves with capacity.

ANDREW ANG
Head of factor investing
BlackRock
New York

Note: links to the papers cited in this letter can be found at: www.economist.com/letters

Speech is not violence

Toni Morrison was a great writer, but her statement, "Oppressive language does more than represent violence; it is violence" is off the mark ("On malign words", August 10th). In fact, it contradicts the First Amendment of the constitution, which relies on the distinction between oppressive speech and violence, protecting the former but not the latter. Morrison was right that oppressive language should "be rejected, altered and exposed", but the government may not punish it.

FELICIA NIMUE ACKERMAN
Professor of philosophy
Brown University
Providence, Rhode Island

E-scooters make you unfit

Charlemagne mused about how the electric scooter is making European cities car-free (August 3rd). But a study of

e-scooters in Barcelona by the automobile club found that 38% of the people that took to them used to walk, 10% used to cycle and 33% used to travel by public transport. Only 10% replaced their car or motorbike with an e-scooter. The overall effect of e-scooters might be negative, as people stand on them instead of walking or cycling and they take custom away from public transport.

IGNACIO MARTIN VELASCO
Paris

A bridge too far

Bartleby has an unerring ability to detect the nonsense emanating from HR (July 13th). At my job operating a drawbridge I am expected to set performance goals relating to "core competencies." These include building relationships, oriented outcomes, creativity and innovation. Curiously, they do not include safely operating the 900-tonne piece of mechanical infrastructure entrusted to my care. At my annual review, learning agility is defined in terms of "an awareness of changing workplace trends". That such skills are valued more highly than not crushing pedestrians says something.

KRISTIAN WILLIAMS
Portland, Oregon

Alternative indicators

"Weak foundations" (July 20th) reported that declining sales of decorative paints foretold the downturn in 2008. In the early days of the consultancy I work for we used to ask one of the partners how his family's dry-cleaning business was doing. When people tighten their belts, we noticed that the first thing they do is to postpone the dry-cleaning of their smart suits and dresses.

SIMON BLAKELY
Bradford, West Yorkshire

The World Health Organization seeks Members for its Independent Expert Oversight Advisory Committee (IEOAC)

The World Health Organization (WHO) is the United Nations specialized agency for health. WHO is seeking applications for positions on its Independent Expert Oversight Advisory Committee (IEOAC).

- The primary purpose of the IEOAC is to provide expert advice on financial and accounting policy, risk management and the effectiveness of oversight mechanisms including audit, evaluation and investigations.
- Service on the Committee is for a 4-year term and is without remuneration.
- Members are expected to attend an average of three sessions each year and for which an air ticket and travel expenses will be provided.
- Members must be independent from the WHO Secretariat and the Executive Board and cover WHO's geographic representation. Once selected, they shall serve in their personal capacity and shall neither seek nor accept instructions from any government or other authority.
- Applicants should have relevant professional financial qualifications and recent senior-level experience in accounting, auditing, risk management and other relevant and administrative matters.
- Interested applicants are invited to submit an application, not more than four pages to include brief career details, qualification and personal information, by email at IEOAC@who.int. Further information on WHO and the IEOAC's full terms of reference and recent reports can be found on the following website:
http://apps.who.int/gb/ieoac/PDF/TORB132_R12-en.pdf

Deadline for applications: 15 September 2019

WHO is a non-smoking environment



"Promote health, keep the world safe, serve the vulnerable"
Dr Tedros Adhanom Ghebreyesus,
Director General



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AT WWF, WE ARE LOOKING FOR HIGHLY QUALIFIED CANDIDATES FOR OUR GLOBAL ENVIRONMENT AND SOCIAL SAFEGUARD UNIT (ONE DIRECTOR AND 3 REGIONAL HEADS ROLES)

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

To further strengthen our deep commitment to working with people, including local and indigenous communities, and to respecting human rights, WWF is setting up a central unit to spearhead, manage and support the implementation of robust global Environmental and Social Safeguard Framework (ESSF) across our entire network of WWF offices and operations worldwide.

We are looking for qualified and passionate candidates to lead the further development, implementation and update of WWF's Network policies and practices relevant to mainstreaming the ESSF into all WWF's global operations;

The Director Environment and Social Safeguards is an expert, with

excellent management and communications skills, who will lead the due diligence work of the WWF network, related to social safeguards, providing quality assurance over risk screening and mitigation planning. The Director will further be responsible for periodically updating standards, procedures, guidance and toolkits. They will also oversee safeguards' knowledge management and capacity development.

Three Regional Heads, Safeguards (Africa, Americas and Asia) will use their extensive knowledge of these respective regions and of the challenges of environment conservation and social and economic development to provide guidance and support to project teams in the implementation of WWF's ESSF and, under the direction of the Director Environment and Social Safeguards, provide quality assurance for WWF's safeguards work, in line with ESSF standards.

For full details on this position and ways to apply: <http://wwf.oxfordhr.co.uk/>

OMBUDSPERSON ROLE

WWF International is establishing an independent monitoring and review function to assist in the resolution of complaints and ensuring WWF offices comply with the Environmental and Social Safeguards Framework (ESSF). WWF is recruiting an Ombudsperson to lead the Office.

The Ombudsperson will be appointed by, and report to, the WWF International Board, under the administrative oversight of the WWF Network Executive Team (NET).

This is a very senior role requiring world-wide experience of work in development/international organizations, combined with superb judgement and excellent people, communication and negotiations skills.

For full details on this position and ways to apply: <http://wwf.oxfordhr.co.uk/>



I'm from a company, and I'm here to help

The idea that companies with a sense of purpose could tackle social injustice, climate change and inequality is sweeping through parts of the business world

AT A RECENT dinner in London, a chief executive promised that his airline would soon offer electric flights. A credit provider enthused about increasing financial inclusion in the developing world; a luxury-car executive promised to replace the leather in her vehicles' opulent interiors with pineapple matting and mushroom-based *faux* leather. They seemed to think such things made the companies they run sound more attractive. They probably felt that they were doing good.

Businesspeople, being people, like to feel they are doing good. Until the financial crisis, though, for a generation or so most had been happy to think that they did good simply by doing well. They subscribed to the view that treating their shareholders' need for profit as paramount represented their highest purpose. Economists, business gurus and blue-chip CEOs like those who make up America's Business Round-table confirmed them in their view. In a free market, pursuing shareholder value would in and of itself deliver the best goods

and services to the public, optimise employment and create the most wealth—wealth which could then be put to all sorts of good uses. It is a view of the world at the same time bracing in its simple rigour and comforting in the lack of social burdens it places on corporate backs.

It is also one which has faced increasing pressure over the past decade. Environmental, social and governance (ESG) criteria have come to play a role in more and more decisions about how to allocate financial investment. The assets managed under such criteria in Europe, America, Canada, Japan, Australia and New Zealand rose from \$22.9trn in 2016 to \$30.7trn at the start of 2018, according to the Global Sustainable Investment Alliance. According to Colin Mayer at the University of Oxford, whose recent book "Prosperity" is an attack on the concept of shareholder primacy, ESG has shot yet further up investors' agendas since. Some of the world's biggest asset managers, such as BlackRock, an indexation giant, are strongly in favour of this

turn in events. The firm's boss, Larry Fink, has repeatedly backed the notion that corporations should pursue a purpose as well as, or beyond, simple profits.

The discontent does not end with investors. Bright young workers of the sort businesses most desire expect to work in a place that reflects their values much more than their parents' generation did. And the public at large sees a world with daunting problems—most notably climate change and economic inequality—that governments aren't solving. It also sees companies which it holds partially responsible for these dire straits using their ever greater profits (see chart 1 on next page) to funnel cash to stockholders, rather than investing them in ways that make everyone's life better. The lollygaggers should be pulling their weight.

If they won't do so willingly, perhaps they should be forced. Senator Elizabeth Warren, one of the leading contenders for the Democratic presidential nomination, says that being a big company is a privilege, not a right. She wants big American companies to apply for charters that would oblige them to look after stakeholders, especially local ones. Those who let the side down would have their charters revoked. Ms Warren talks of herself as a defender of capitalism; many see her plans as bordering on the socialist. But that may not matter. Among young Americans, socialism is ever less of a boohoo word (see chart 2 on next page). ►

In the face of this rising tide, the Business Roundtable has either seen the light or caved in, depending on whom you ask. On August 19th the great and good of ceo-land announced a change of heart about what public companies are for. They now believe that firms should indeed serve stakeholders as well as shareholders. They should offer good value to customers; support their workers with training; be inclusive in matters of gender and race; deal fairly and ethically with all their suppliers; support the communities in which they work; and protect the environment.

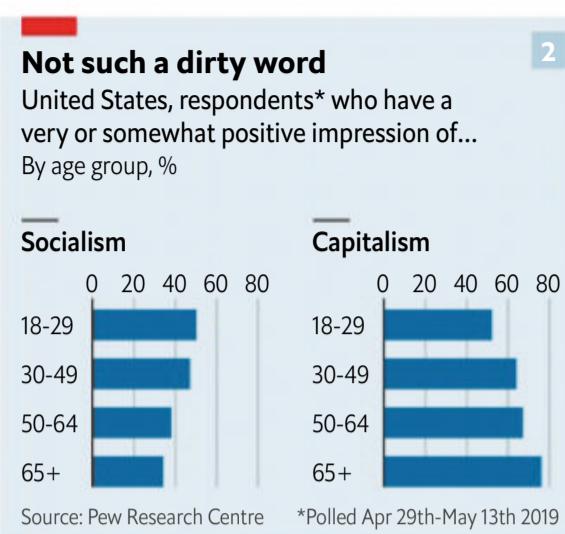
There was an immediate backlash. The Council of Institutional Investors, a non-profit group of asset managers, swiftly denounced it. Others railed against it as “appeasement” of politicians like Ms Warren, and a decisive step towards the death of capitalism. This might seem extreme: at first glance, the roundtable’s recommendations border on the anodyne. But if the purpose of the company slips its shareholder-value moorings, who knows where it might end up?

Whose company is it anyway?

The most quoted assertion of the primacy of shareholder value comes from Milton Friedman, an economist. In 1962 he wrote that “there is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.”

At a time when governments expected companies to be patriotic and communities saw some of them as vital resources his forthrightness shocked many. But though subsequently traduced as extreme, Friedman’s position had a fair amount of give in it. He called on companies not just to stay within the law but to honour society’s more general ethical standards, too; he did not equate shareholder interests with short-term profitability.

But that was not how it felt. The way that



business schools and management consultants in America, Britain and continental Europe proselytised for shareholder value in the 1980s and 1990s offered little by way of nuance. The biggest corporate-governance concern was the agency problem: how to align managers with the interests of the value-seeking shareholders. “Any chief executive who went against [that] orthodoxy was regarded as soft and told to get back on the pitch,” recalls Rick Haythornthwaite, the chairman of Mastercard.

Such heretics can now hold their heads up again. This is not simply because of the political climate or the public mood. Some economists argue that Friedman’s position belongs to a simpler time. Oliver Hart of Harvard University and Luigi Zingales of the University of Chicago see his argument as principally motivated by a form of the agency problem; he didn’t like managers being charitable with shareholders’ money, even if it was ostensibly in the firm’s interests. The shareholders could, after all, lavish their profits on such good causes themselves.

True, perhaps, back then, say Mr Hart and Mr Zingales. Now, they argue, the externalities that businesses impose on society are sometimes impossible for shareholders to mitigate as individuals, particularly if the political and legal system is a barrier to change. Individual shareholders cannot do much in law to prohibit weapons in America, for example. But they can exercise their rights as owners to influence the firms that sell guns. Thus companies can have purposes—but owners must provide them, not managers.

Others argue that the idea of shareholder value, while still central, needs some modifications. Raghuram Rajan, an economist at the University of Chicago and former head of India’s central bank, advocates taking note of the non-financial investments workers and suppliers make in a company with a new measure of “firm value” which explicitly takes note of a specified set of such stakeholdings.

Some companies have taken on board the idea that their increased power puts new demands on them. Satya Nadella,

chief executive of Microsoft, says that a sense of purpose—together with a mission that is “aligned with what the world needs”—is a powerful way for his company to earn public trust. And because trust matters, this puts purpose at the core of Microsoft’s business model. “As technology becomes so pervasive in our lives and society, we as platform companies have more responsibility, whether it’s ethics around artificial intelligence, cyber-security or privacy,” he says. “There is a moral obligation.”

Firms in other industries are having similar thoughts. In each business, says Mr Haythornthwaite of MasterCard, a wave of digitisation is likely to lead to one company pulling ahead. Because of that concentration of power, he says, the winning platform will need to forge a close link with society to maintain trust.

Climate change is perhaps the most obvious example of companies doing more than they have to in a good cause. Twenty-five big American companies, including four tech giants, campaigned against America’s withdrawal from the Paris agreement in 2017. Globally, 232 firms that are collectively worth over \$6trn have committed to cut their carbon emissions in line with the accord’s goal of limiting global warming to less than 2°C.

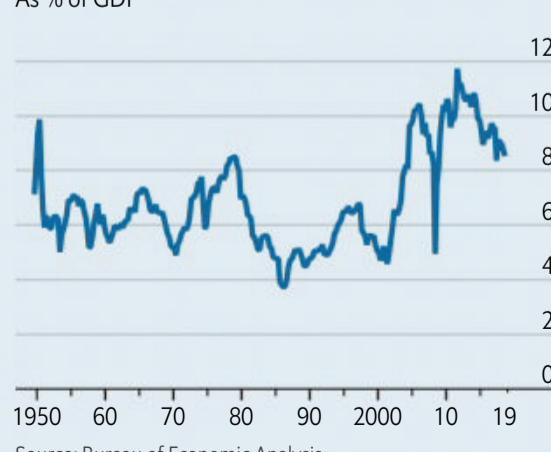
Some 1,400 companies around the world either already use internal carbon prices or soon will. Many big firms now aim for carbon neutrality in their operations. Some have made big investments to that end. Apple has a renewable energy capacity equivalent to its total energy use.

Laudable as some of this is, it is hardly a response commensurate to the climate crisis. Companies going carbon-neutral are mostly consumer-facing ones, rather than intensive emitters. Money for coal may now be scarce, at least in the rich world, but big institutional investors own a sizeable chunk of the world’s major oil companies—many of which apply a theoretical price of carbon to investment analysis but still keep pumping fossil fuel. And net-zero pledges may reinforce the misapprehension that the best way of fighting climate change is through the choices of individual companies and consumers, rather than a thoroughgoing economy-wide transition.

Companies are also backing liberal social causes. In 2015 Marc Benioff of Salesforce, a software firm, led other bosses, including Apple’s Tim Cook, into opposing a bill in Indiana that would have allowed discrimination against gay people. After President Donald Trump’s election in November 2016, bosses mounted the barricades over his ban on travel to America from Muslim-majority countries. In 2018 Nike created an advertisement featuring Colin Kaepernick, a quarterback fired after kneeling during America’s national anthem in protest against police racism. Pay- ►

They've got the money

United States, global post-tax corporate profits
As % of GDP



► Pal has blocked some groups, including white nationalists, from using its services.

The firm's boss, Dan Schulman, says PayPal's aim is to broadcast its broader purpose. Others might deride it as "virtue signalling". But that modish phrase does not quite capture what is going on. In economics and evolutionary biology, where the idea of signalling grew up, a valid signal needs to be costly—otherwise it can be easily faked. These corporate positions do not look costly; indeed they may well be profitable. A stand in favour of Colin Kaepernick fits Nike's brand, which celebrates the goal-oriented individual and has keen black fans. Nike's stock dipped a tad when the controversy hit; but its sales rose immediately and its shares soon recovered.

There are risks to such strategies. Nike had little to fear from red-staters calling for boycotts. Others may be more susceptible. Backlash can come from the other side, too; corporate sponsorship of Pride marches in London and New York has led some LGBTQ activists to organise alternative events from which business is excluded.

From each according to their abilities

There is also the problem of setting yourself up for a fall. Salesforce stumbled last year when its software turned out to be being used by US Border Patrol to deal with illegal immigration. Ben & Jerry's, which sprinkles its ice cream with a do-the-right-thing anti-capitalist vibe, found itself scolded by Britain's advertising regulator this summer for plastering ads for fatty frozen calories around schools in London.

The politics of the consumer are not the only ones that firms need to consider; in tech, particularly, the politics of the workforce matter. It was the company's employees who complained about Salesforce's links to immigration control. Last year, employees at Google forced the firm to stop providing the Pentagon with AI technology for drone strikes and to drop out of the procurement process for JEDI, a cloud-computing facility for the armed forces. Google depends, perhaps more than any of its peers, on a smallish number of cutting-edge data scientists and software engineers; their views carry weight. Microsoft, despite similar misgivings from its employees, is still in the running for the JEDI contract. Amazon, for its part, is facing employee pressure over contracts with oil and gas companies.

If corporate political stances can be justified in terms of keeping workers or consumers happy it does not mean that they are insincere—simply that they may be overdetermined. This can be irksome for the right. Companies rarely make a stand for the rights of the unborn, or for border security. But this is the market at work. Companies tend to have a preference for both consumers and employees who are

young, educated and affluent—which is to say, who can be expected to embrace socially liberal politics.

What the world has not yet seen is a situation where ESG issues come into material, systemic conflict with profits. Purpose is flavour of the month, says Stephen Bainbridge, professor of law at the University of California, Los Angeles, "but are companies really going to give shareholders a 10% haircut for the sake of stakeholders?"

Such issues become particularly clear when it comes to increasing spending on the poorer parts of the workforce. Relentless downsizing makes little sense. "There are diminishing returns from firing people over and over again," says Jeff Ubben of ValueAct Capital, a hedge fund. "It is not the right strategy for the future". Some firms have lifted minimum wages and are spending more on retraining workers to cope with future automation. But profits

versities, hospitals, charitable endowments and so on is itself a social good—a very high one". What is more, he notes, this social good is one that no entity other than the corporation can sustainably provide.

There is also a problem of accountability. "Once the corporation decides that earning returns is no longer its primary purpose, to whom will it be accountable?" says Mr Singer. The answer, he thinks, is "the loudest and most passionate political activists"—though others might hope the settled convictions of the shareholders would come into play.

One answer to these criticisms could be to devise a framework that would allow companies and bosses to state clearly that they want to do more besides make a profit. Almost 3,000 companies worldwide have been certified "B corporations" in the past decade, which means that their ethical, social and environmental practices have been certified by independent monitors to meet the standards laid down by B Lab, a non-profit group in Pennsylvania. But not many big companies have applied. Those which have are mostly consumer brands.

An alternative to this approach would be to have companies say what purpose they had beyond shareholder value and then hold them to it. This is the approach Mr Mayer of Oxford recommends for Britain: a legal requirement for companies to have a purpose in their articles of association and provide measures to prove it is being fulfilled. Stating the purpose in such a way as to make it open to such measurement, though, would prove hard.

As capitalism takes flak from all sides, it is hard for those in the business and investing class to object to firms voluntarily doing their bit to tweak the system. But when reliable returns are put at risk, things can change. Last year Jason Perez, a police sergeant in Corona, California, had enough. His state could no longer afford wage increases for police and other public servants partly because CalPERS, one of the world's biggest pension funds, was underfunded. It had also been an early standard bearer for ESG investing. In 2001 it dumped tobacco stocks—which then outperformed.

By 2017, CalPERS was underfunded to the tune of \$139bn. Its ESG strategy had cost only about \$2bn. But Mr Perez took the reasonable view that a couple of billion was real money. "Eleven people in my family are in law enforcement and I had to make sure their pensions were protected," he says. To that end he campaigned for a board seat at CalPERS on the basis of letting the fund invest in law-abiding, profit-maximising companies purely on the basis of potential returns. Pitted against the fund's chief ESG guru, Priya Mathur, he won. However companies reset and refine their purposes in the years to come, they will still need to perform for people like Mr Perez. ■



are very sensitive to labour costs. According to Darren Walker, president of the Ford Foundation, one of America's biggest charitable endowments, plenty of chief executives are having conversations about how to spend more on workers and benefits, but feel they cannot do so alone. "They will need cover," he says; a broader shift towards corporate purpose could provide it.

Many influential investors and bosses imagine a return to something like the "managerial capitalism" of earlier times, when some CEOs, their interests presumably insufficiently aligned with those of shareholders, paid more attention to stakeholders and local communities. Not all are enthusiastic. Paul Singer, founder of Elliott Management, the world's biggest activist hedge fund, says that the current debate over corporate purpose "risks obscuring the fact that earning a rate of return for pension plans, retirement accounts, uni-

**Power generation**

Down and dirty

SAN CARLOS

Asia digs up and burns three-quarters of the world's coal. That must change if the climate is not to

A LARGE SIGN in the city hall of San Carlos, on the island of Negros in the Philippines, lays out the local government's ambitions. It wants San Carlos to be "a model green city", "a renewable energy hub for Asia" and "a sustainable tourism destination". But the local officials sitting directly beneath the sign are keen to talk about something else: why a plan to build a coal-fired power plant nearby is an excellent idea.

Coal drives Asia. Between 2006 and 2016 the continent's consumption of it grew by 3.1% a year. Asia now accounts for fully 75% of global demand for the stuff (see chart 1 on next page). China is the world's largest producer and consumer of coal. Largely as a result, it also emits more carbon dioxide than any other country. India is the second-biggest consumer. Japan and South Korea are also big consumers, while Australia and Indonesia are big pro-

ducers. South-East Asia was the only region in the world in which coal's share of power generation grew last year, according to the International Energy Agency (IEA), a research body. And four of the five countries that shell out the most in subsidies for the fuel are Asian.

Asia's passion for coal, in turn, threatens the health of the planet. The Paris agreement on climate change (which every country in Asia, from Afghanistan to New

Zealand, has signed) aims to limit the increase in global temperatures above pre-industrial averages to "well below" 2°C. To avoid 1.5°C of global warming, virtually all of the planet's coal-fired plants need to close by 2050, climatologists say, given the vast quantity of greenhouse gases produced by mining, transporting and burning coal. No new coal-fired plants should be built from next year on, the secretary-general of the UN says. But UBS, a Swiss bank, reckons that Indonesia and Vietnam may still be building coal-fired power stations in 2035. Asia's last coal plant, it projects, will close only in 2079. Curbing global warming depends on convincing Asian governments to take a different path.

China accounts for about half the coal the world consumes each year—far more than any other country. Happily, its appetite seems to be waning. Although it burned through almost 4bn tonnes last year, a slight increase on the year before, that is still below the peak of 4.24bn tonnes in 2013. Coal's share of China's energy mix has fallen by about ten percentage points over the past decade, to 59%.

This is the result of a sustained and multifaceted official campaign to clean up China's energy generation. There has been huge investment in renewables, leaving China with a third of the world's wind tur-

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bines and a quarter of its solar panels, according to the IEA. In 2013 a national plan on air pollution gave Beijing, the capital, five years to reduce its coal consumption by half, among other measures. And in 2017 the government introduced a national carbon-trading scheme. In the Paris agreement it pledged that its carbon-dioxide emissions would stop growing by 2030.

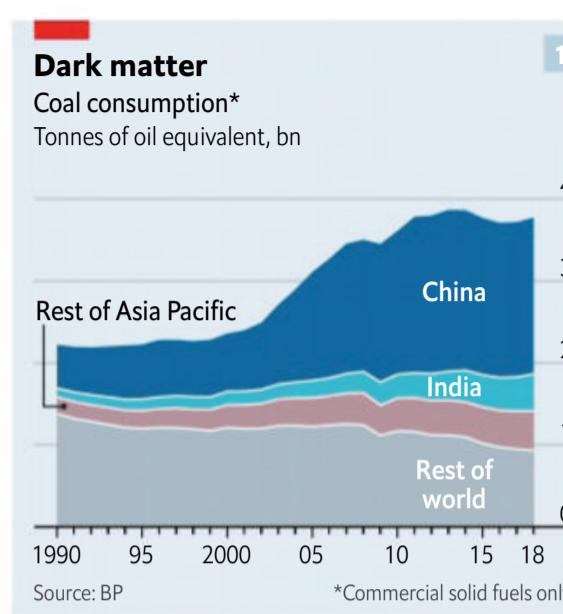
China's efforts to clean up have left India as the world's most enthusiastic builder of coal-fired plants. In its submissions for the Paris accord, India predicted that its demand for electricity would triple between 2012 and 2030. About 48 gigawatts of coal-fired capacity are under construction in the country. Coal consumption increased by 9% last year, according to BP, a big oil firm.

That is partly because India lacks obvious alternatives, at least for back-up generation when the wind is not blowing and the sun is not shining. It cannot afford to import cleaner but more expensive liquefied natural gas, as Japan, South Korea and, increasingly, China do. Partly, however, India's addiction to coal stems from government bias. The government owns more than 70% of Coal India, the giant mining firm that produces most of the country's coal. India's state-owned railways depend on the cash generated by transporting coal to subsidise passenger tickets (coal provides 44% of freight revenues). Coal generates hundreds of thousands of jobs, many in the poorest states. The government has an enormous vested interest in seeing the industry prosper.

Grime-stoppers

Nevertheless, even in India, the outlook for coal is becoming hazier. For one thing, growth in energy demand has slowed thanks to improved energy efficiency and the growing importance of services to the economy. Demand has also been curbed by a failure to invest in transmission capacity and by the inefficiencies of unprofitable power-distribution companies. This means that the increase in coal-fired generation has outstripped the increase in demand for energy in recent years. Coal plants are already operating far below their potential capacity. At the same time, levies and transport costs have risen more quickly than Coal India's prices, according to research by Rahul Tongia and Samantha Gross for the Brookings Institution, an American think-tank.

These difficulties are mounting just as greener power sources are beginning to spread. Shortly after Narendra Modi became prime minister five years ago, his government announced a plan to quadruple India's renewable-energy capacity to 175 gigawatts by 2022. The scheme supports one of India's promises under the Paris accord. If it is successful, the share of renew-



ables in the generation mix could rise from 7.8% to 19%. Steep cost falls help. Indian renewables now cost less than three rupees (\$0.04) per kilowatt-hour, well below domestic coal at four rupees per kilowatt-hour, according to Tim Buckley of the Institute for Energy Economics and Financial Analysis, a green think-tank.

South-East Asia has seen a similar shift in prices. The government of Vietnam projects that demand for coal will more than double by 2030. But Matt Gray of Carbon Tracker, a British think-tank, argues that, if the cost of building solar- and wind-farms keeps falling (reductions of 50% and 30% respectively have been seen in Vietnam in recent years), they should be cheaper than new coal plants as soon as next year. "The economics are there and this is what I think Asia is going to wake up to," says an investor in Vietnamese wind farms.

Renewables offer other advantages over coal as well. Given the difficulty of getting power to South-East Asia's most remote areas—Indonesia has more than 13,000 islands and the Philippines another 7,000 or so—solar and wind installations can offer electrification without costly extensions of the grid. The region also has manufacturers who would benefit from a stronger



push for renewables. Malaysia, for example, is the third-largest manufacturer of solar cells in the world.

Coal is coming in for more public criticism. A recent documentary in Indonesia portrayed the harm caused by the fuel to farmers, fishermen and the natural resources upon which they depend. In the Philippines the Catholic church is wading in. Gerardo Alminaza, a bishop, is a leading figure in a campaign against the proposed coal plant in San Carlos, for example. He has given talks at banks on the need to divest from coal. Rodrigo Duterte, the president of the Philippines, recently instructed his government to hasten the shift from fossil fuels to renewable energy.

Some investors are growing leery of coal. A new report from the Centre for Financial Accountability, an Indian think-tank, reveals that private lending to coal-fired power plants in India declined by 90% last year. One of the largest banks in South-East Asia, DBS of Singapore, announced in April that it will stop funding new coal plants after its existing slate of projects is completed. Last year Marubeni, a huge Japanese trading house, said it will no longer invest in coal plants; it intends to halve its own coal-fired capacity by 2030. And the energy arm of Ayala Corporation, a Filipino conglomerate, announced plans last year to sell up to half its coal assets and to invest more in renewables.

Coal comfort

The shifting sentiment is reflected in the recent sharp decline in investment approvals for new coal-fired plants (see chart 2). But even if the private sector were to wash its hands of coal altogether, that would not guarantee its demise. In both China and India, the biggest banks are state-owned, and their lending decisions are as much a function of government policy as of expected returns. The Chinese government, in turn, although pursuing cleaner energy at home, does not seem particularly keen to encourage it abroad. The Belt and Road Initiative, a big Chinese infrastructure-development scheme, will see billions spent to build coal-fired plants in Bangladesh, Indonesia, Pakistan and Vietnam, among other countries. Chinese financial institutions are helping to fund more than a quarter of coal-fired power stations under development around the world.

Finance for the coal business in India, meanwhile, comes mainly from the state. Between 2005 and 2015 state-owned banks provided 82% of the funding for coal-fired power plants, according to the Centre for Financial Accountability. If the governments of China and India continue to pump money into coal via state-owned banks, the fate of the climate will be sealed, whatever encouragement they give to other forms of generation. ■



Racism in Indonesia

Independence day

JAKARTA

Violent protests mark a turning point for a restive region

WHITE AND RED were the colours of the day. It was August 17th, the anniversary of Indonesia's liberation from the Dutch, and TV screens showed the national flag, with its red and white stripes, billowing across the country. But in Surabaya, a city in eastern Java, one flag lay in the gutter. Responding to allegations that someone had torn down an Indonesian flag the day before and then retreated to a dormitory housing university students from Papua (the Indonesian part of New Guinea), police fired tear gas into the building before barging in and arresting 43 residents. As they were rounded up, a jeering mob is said to have called the Papuans, who tend to have darker skin than most other Indonesians, "monkeys".

The next day, thousands of people took to the streets in cities across Papua, blocking roads and burning tyres. In Sorong they vandalised the airport and set fire to a prison (258 prisoners escaped). In Manokwari, the capital of West Papua province, they burned shops and the provincial parliament. In addition to holding banners reading "We're Papuans, not monkeys", protesters waved the Morning Star flag, a symbol of Papuan nationalism, and chanted: "We are not white and red, we are Morning Star". As *The Economist* went to press on August 22nd, the protests had not abated.

In a statement about the protests Benny Wenda, a Papuan separatist, linked the struggle against racism to the fight for independence. Papua remained a Dutch colony after the rest of Indonesia became independent in 1945. It was only in 1969 that it voted to join Indonesia in a referendum. But the vote was a sham: out of a population of some 800,000, the Indonesian army selected just 1,026 people to take part. Indonesian security forces have tried to suppress a tiny separatist movement, often with brutal tactics. Widespread unrest has

America and Taiwan

Tsai's prize

TAIPEI

America defies China with a big arms deal for Taiwan

FOR TAIWAN, there is nothing like an American president who is not squeamish about outraging China. Even before he took office Donald Trump stirred indignation in Beijing by answering a congratulatory phone call just after his election from Tsai Ing-wen, the president of Taiwan. (China saw this as a breach of the "one-China principle", under which it demands that countries that maintain diplomatic ties with it do not also have them with Taiwan, which it views as part of China.) He recently allowed Ms Tsai one of the longest visits to America ever granted to a Taiwanese president, and sold Taiwan tanks and anti-aircraft missiles worth \$2.2bn. But this week Mr Trump took a step that China will see as an even bigger affront.

On August 18th Mr Trump decided to sell Taiwan 66 new F-16 fighter jets. The sale, worth \$8bn, still needs congressional approval. But leading Republicans and Democrats alike have championed it, seeing Taiwan as a bulwark against China's growing assertiveness in South-East Asia and the Pacific.

The fleet of new F-16s will boost Taiwan's ageing air force, but hardly tip the military balance against China's increasingly powerful armed forces. The real power they embody is that of a psychological shock for the one-party state across the strait. The last time America sold fighter jets to Taiwan was in 1992.

Taiwan first asked America for more F-16s in 2006, under the previous president from Ms Tsai's Democratic Progressive Party, which typically has especially testy relations with China. His successor, Ma Ying-jeou, of the more China-friendly party, the Kuomintang (KMT), reiterated the request. But China persuaded the administrations of both George W. Bush and Barack Obama to refuse. During Mr Obama's presidency in particular, China portrayed the sale of F-16s as a red line. It never tires of reminding America that in 1982 it promised

to reduce arms sales to Taiwan.

Ms Tsai, who is campaigning for re-election in early 2020, was delighted with the news. Her campaign presents her as a foil to an ever more repressive, assertive China. Her KMT challenger, Han Kuo-yu, whom critics accuse of being too cosy with China, also applauded Mr Trump's decision and pledged to deepen military ties with America if elected. Arthur Ding, of National Cheng-chi University, thinks the deal, despite its hefty price tag, will fly swiftly through the sometimes combative legislature.

China was not so happy. A spokeswoman for the foreign ministry said on August 16th that American arms sales "severely violate the one-China principle". But it is not clear if it plans anything more than a rhetorical response, such as suspending military exchanges with America. The impact on other disputes between the two countries—over trade, for example, or the protests in Hong Kong—is also uncertain.



Expect fireworks

been rare—up to now.

Veronica Koman, a human-rights lawyer, believes these protests mark a new chapter in the liberation movement. She cites the sheer intensity of the protesters' anger, and the power of videos of the protests on social media to convince Indonesians of Papuans' commitment to their cause. A few politicians are showing some sensitivity: the governor of East Java prov-

ince apologised for the racism in Surabaya, and President Joko Widodo announced plans to visit Papua. But the communications minister shut down the internet in certain parts of Papua, ostensibly to prevent false rumours fanning unrest, while the minister for security blamed the protests on "negative news". On August 20th extra troops were deployed to Papua. Morning Star flags were there to greet them. ■

Social life in South Korea

Dropping the mic

SEOUL

Long karaoke sessions with colleagues are no longer compulsory

AFTER-WORK gatherings in South Korea used to follow a pattern. After a boozy dinner and several rounds of beer and soju, a local spirit, the party would decamp to a dingy basement and squeeze onto faded upholstery in an airless room with a karaoke machine. There, employees would be pressed into accompanying the boss on the tambourine as he howled his favourite ballads and forced to offer their own renditions, before being allowed to stumble home in the early hours. Karaoke parlours, imported from Japan in the early 1990s and originally intended as entertainment for teenagers and families, did brisk business with drunk office workers.

No more. Changing work patterns and social tastes are pushing *noraebang* ("singing rooms", as they are known in South Korea) out of business. The government recently restricted the working week to 52 hours, cutting the scope for late-night gallivanting. Growing awareness among employers of sexual harassment and other bad behaviour in the dark basements means that more and more dinners wrap up early, or conversation is continued over non-alcoholic drinks at late-night coffee shops. It is slowly becoming more acceptable for employees to say no to group activities after work and spend their spare time alone or with friends.

Industry analysts expect the decline in the number of *noraebang*, which has been accelerating for a couple of years, to speed up. Nearly 33,000 of them survive (down from a peak of more than 35,000 in 2011). But more than 1,400 shut in 2018, and 650 went during the first quarter of this year alone. Similar trends are afoot in Japan, the home of karaoke, where desperate owners have reportedly resorted to renting out their unused parlours as temporary offices during the daytime.

Karaoke is not dying. South Koreans are relieved that their careers no longer hinge on jangling a tambourine for their tone-deaf bosses. But many still like to use their newly won spare time for singing. Places aimed at groups are shutting down, but "coin *noraebang*" for individuals and couples are becoming popular with teenagers, students in their 20s and older single professionals. Unlike old-school karaoke parlours, they tend to be above ground, well lit and colourfully decorated. Rather than pay hourly rates of between 15,000 and 20,000 won (\$12-17), users can sing individual

**Suite Seoul music**

songs for as little as 500 won. Kim, a 24-year-old conscript from Seoul, says it is a good way to kill time on his own. "I love singing but I'm not very good at it, so practising alone also makes it less embarrassing when I'm with my friends."

The move towards belting out tunes on one's lonesome does not seem to have affected musical preferences. Apart from current hits, the *noraebang* charts are dominated by old-school ballads and cheesy Western pop staples. Even as Seoul's basements are refitted for other purposes, South Koreans and their guests will continue to come up with off-key renditions of Queen. ■

Crime in India

Silence or the grave

DELHI

The justice system does far too little to protect witnesses

THE TEENAGER riding down National Highway 31 was already living a nightmare. Two years earlier she had been raped, she claimed, by a group of men starting with Kuldeep Singh Sengar, a powerful politician in her home district of Unnao, in Uttar Pradesh, India's most populous state. Her family tried to file a complaint with the local police, who brushed them off. Then they began receiving death threats. In 2018 her father was allegedly beaten senseless in broad daylight by Mr Sengar's brother and a bunch of goons—and then jailed on unrelated charges. His daughter despaired of finding justice in Unnao and left for the

state capital of Lucknow, where she stood before the residence of the chief minister, Yogi Adityanath, a Hindu cleric, and doused herself in kerosene, but was overpowered before she could light it. The next day her father died in police custody.

The victim continued to seek justice, to no avail. A witness to her father's death died in jail. Her uncle was sentenced to ten years in prison on a 20-year-old charge. Mr Sengar and his allies in the Bharatiya Janata Party (BJP), including Mr Adityanath and the MP from Unnao, celebrated a resounding victory at the polls in May. The victim wrote a letter to the chief justice of the Supreme Court asking for help.

At 1.30pm on July 28th, the same young woman, now 19 years old, was seated in a compact car with her two aunts, on their way to visit the jailed uncle. They were supposedly under police protection, although the assigned officers did not escort them on the journey. A lorry travelling in the opposite direction swerved into their lane. Its licence plate was blacked out and it did not slow down. The impact flattened the front of their car and killed both the aunts. A month later, the rape victim remains in intensive care, unable to speak. If she does not recover, it is likely that her rape will go unpunished, since no witness's testimony may stand as evidence until it can be subjected to cross-examination.

It is a dangerous business being the witness to any serious crime in India, especially when the accused are powerful. Intimidated witnesses often recant their initial testimony and refuse to co-operate with the prosecution. As cases drag on, it becomes harder for victims and their families to bear the pressure. Catastrophic miscarriages of justice are not unusual. In 2013 riots in Muzaffarnagar, also in western Uttar Pradesh, killed at least 65 people, most of them Muslims. All 53 of the men accused in 40 related homicide cases were acquitted. All the witnesses changed their minds, including five who had previously reported seeing their own relatives murdered. A murder case that involved the man currently responsible for India's internal security, Amit Shah, ended with no convictions after 92 witnesses recanted.

Lorries with blacked-out number plates have become especially dangerous in recent years. Prashant Pandey, an expert witness in corruption cases against the previous state government of Madhya Pradesh, narrowly survived a collision that tipped over his family car. Early this year the family of Sanjiv Bhatt, a decorated civil-service officer who had made an enemy of many senior BJP members, was rammed by another heavy, blank-plated vehicle.

Conviction rates tell the tale. Whereas in most rich countries 80% or more of those charged with crimes are found guilty, in India the rate is between 40% and 50%—►

► and for cases involving politicians just 6%. In December the Supreme Court was moved by the plight of witnesses for the prosecution of a cult leader accused of rape and murder, who were dropping like flies. It found "the conditions of witnesses in the Indian legal system can be termed 'pathetic'." As a stopgap, the court ordered that a witness-protection scheme devised by the home ministry be put into effect in all India's states within a year.

Shiv Singh, a lawyer in Delhi, says the main principle of the scheme, that "protection measures shall be proportionate to the

"threat" against the witness, is correct. But few states will meet the deadline. Moreover, money for witness-protection can be sent to a place like Unnao, but the chances that local officials will put together a watertight system are very small indeed. Another advocate practising in Delhi, Abhinav Sekhri, recommends normalising an existing procedure whereby magistrates sometimes record witnesses' initial statements, although this would not necessarily stop them from abjuring these accounts later on. In small towns, time is not on the side of justice.

Public outrage also helps. The details of the Unnao case grew so grotesque and the uproar in the media so loud that this month the BJP at last distanced itself from Mr Sengar, saying that he had been expelled from the party. He has been charged not only with rape, but also with orchestrating the arrest of the victim's father. He and his brother have been charged with the murder of the victim's father, too. The greater the public indignation and scrutiny, the unlikelier it is that all the witnesses to these alleged crimes will suddenly change their tune or fall under a bus. ■

Banyan Fawning frenzy

When India's government abuses power, the media don't roll over. They cheer

IT IS NEARLY three weeks since the government of Narendra Modi, in one swoop, scrapped Jammu & Kashmir's constitutional autonomy, ended its status as a state and divided it into two parts, both to be ruled from Delhi. It carried this out not by consulting the region's 12m-odd inhabitants on whose behalf it claims to be acting, nor after a national discussion or even the semblance of a proper parliamentary debate.

Rather, it achieved its ends by cutting phone lines and access to the internet, arresting nearly the whole political leadership and imposing, in effect, a curfew. As Pratap Bhanu Mehta, a public intellectual, puts it, the act of supposedly integrating the former state more fully into India has begun by casting the mostly Muslim inhabitants of the Kashmir valley "under a pall of suspicion". Kashmiris' first experience of Indian law as a union territory, he notes, is of untrammeled executive power.

The best that can be said is that it is not a constitutional putsch on the scale of Indira Gandhi's "Emergency" of 1975, when democracy was suspended across the country. Soon after it was restored, Lal Krishna Advani—a co-founder of Mr Modi's very own Bharatiya Janata Party, who had been at the sharp end of the Emergency, having been imprisoned for 19 months—castigated India's press. "You were asked only to bend," he told journalists, "yet you crawled."

Today, far from crawling, India's press and television channels are jumping up and down and cheering. Talking heads vie to outdo one another in celebration. Few match the bombast of Arnab Goswami, whose brand of shriek show has launched a new network, Republic TV. He labelled the BBC's reporting of both a huge protest in Kashmir and shots fired

by Indian security forces to disperse it "a dirty and a motivated lie". He seemed little bothered that video footage confirmed the BBC's account.

Ending Kashmir's special status, and (as a subtext) humiliating its Muslim population, has long been a goal of India's Hindu nationalists, whom Mr Modi leads. Yet when, on August 8th, the prime minister appeared on television to explain why India should celebrate while Kashmir lay incarcerated, gone was the jaw-jutting nationalist. Instead, as Arundhati Roy put it in the *New York Times*, he spoke with "the tenderness of a young mother...his most chilling avatar to date". Even former critics of Mr Modi filled the next day's column-inches with gushing praise.

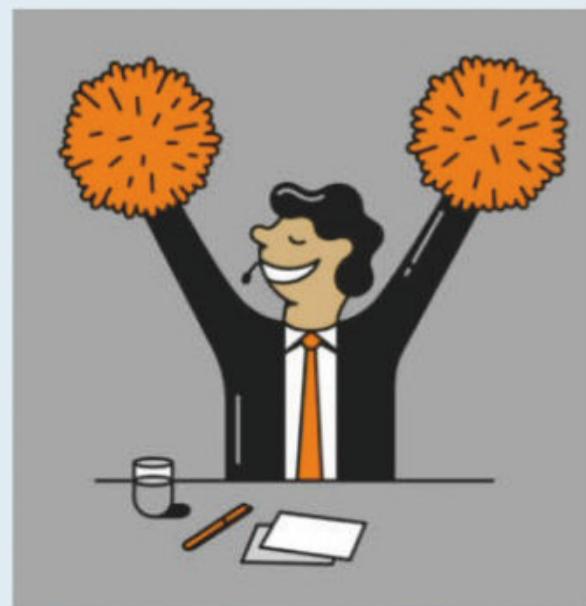
Kashmiris are demonised, the Indian authorities praised. This week CNN News18 polled viewers on whether Shehla Rashid Shora, the co-founder of a recently launched mainstream party in Jammu & Kashmir and a leader of the main student union at Jawaharlal Nehru University (boo!), should be arrested. Her crime? She claimed that the army had tortured detain-

ees in Kashmir, relaying the screams by loudspeaker to intimidate locals.

Reporting on what is really going on in Kashmir is hard. Foreign journalists are hindered from going there. The Kashmiri press is stymied from getting its story out. This month Delhi's Press Club of India succumbed to pressure not to show a documentary, "Kashmir Caged", that carried testimony of Kashmiris' treatment at the hands of the security forces. It is only thanks to brave Kashmiri and other Indian journalists filing for foreign news outlets that any picture at all of the benighted region is possible.

In truth, the press's current sycophancy rises from a hinterland of intimidation, trimming and currying favour dating back to Mr Modi's rise to national power in 2014. Government ads are pulled in retaliation against newspapers that have been critical of the BJP, such as the *Hindu* and the *Telegraph*. Meanwhile, businessmen are shyer of voicing criticism in public. Ramachandra Guha, a historian, talks of the "silence of the successful". Back in 1992 several industrialists put their name to a full-page ad decrying the destruction by a Hindu mob of the Babri Masjid mosque. Today's generation of businessmen, Mr Guha says, would be too scared to sign a similar ad over Kashmir. Meanwhile, lack of scruple rules: Mr Goswami's original backer, one of a new breed of Modi-supporting industrialists and a member of the upper house of parliament, profits through arms sales from the militarism Mr Goswami extols on air.

Back in 2015 Mr Advani, no fan of Mr Modi, said that he wouldn't be surprised if, sooner rather than later, another emergency was declared. That remains wild conjecture. But one thing is for sure: the press will be ready.





Hong Kong

Property and protest

HONG KONG

The link between the unrest and the unbearable expense of housing

WHEN BRITAIN returned Hong Kong to China in 1997, the Communist Party promised two things to the anxious people of a territory with political and economic systems very different from the mainland's. The first was political autonomy: in time Hong Kongers would even be able to choose their own leaders. The second was to preserve Hong Kong's swashbuckling capitalism and light-touch government.

China has not lived up to the political promise. Especially since Xi Jinping came to power in 2012, China has undermined Hong Kong's autonomy and strangled political life. For nearly three months the consequences have played out, with the world looking on, on Hong Kong's streets in the form of anti-government protests that have sometimes tipped into violence. For the past week the territory has been relatively calm, with a rare lull in the barrages of tear-gas. The airport, following a sit-in and an unprecedented two-day shutdown, is up and running again. Yet pro-democracy feelings run no less high. Under mon-

soon rains on August 18th crowds in signature black t-shirts called for universal suffrage in central Hong Kong's biggest park. The organisers claimed 1.7m people attended, over a fifth of the population. Another big march is planned for August 31st and a general strike on September 2nd.

Yet while breaking its political promises, China has hewed closely to its economic ones. That, too, has fed popular resentment. By preserving Hong Kong's economic system in aspic, China has helped to generate extreme inequality, due largely to the extraordinary expense of housing. A coterie of tycoons with a lock on the property market continue to enrich themselves at the expense of others. Many young protesters say they have lost hope of a prosperous future. Being able to afford a

decent home appears inconceivable. The latest "nano" flats are not much bigger than a large car.

Thanks to light regulation, independent courts and a torrent of money from China, Hong Kong has long been a global financial centre. But many of the resulting jobs are filled by outsiders on high salaries, who help push up property prices. Mainlanders seeking boltholes do too. And then there is the contorted market for housing. The government artificially limits the supply of land for development, auctioning off just a little bit each year. Most of it is bought by wealthy developers, who by now are sitting on land banks of their own. They have little incentive to flood the market with new homes, let alone build lots of affordable housing. The average Hong Kong salary is less than HK\$17,000 (\$2,170) a month, hardly more than the average rent. The median annual salary buys just 12 square feet, an eighth as much as in New York or Tokyo.

The patriarchs of the main business families—for instance, Peter Woo of Whelock, Lee Shau-kee of Henderson Land and the Kwok brothers of Sun Hung Kai—were already at the top when Britain ruled Hong Kong. In addition to property, such families dominate industries with limited competition such as ports, utilities and supermarkets. Before the handover, China assiduously cultivated the oligarchs with a view to securing their loyalty—not least by offering them juicy land deals on the main- ►

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► land. They duly fell into line.

Since the handover the tycoons have come to dominate not just the economy but also government, opposing calls for more democratic representation, a more generous welfare state and, of course, a programme to build mass, cheap housing of the kind that Singapore has long promoted (and used to keep voters quiescent). Part of the tycoons' clout comes from their contribution to Hong Kong's finances: 27% of government revenues come from land sales. Since the start of the crisis Hong Kong's chief executive, Carrie Lam, has not met any democracy activists, but she has consulted with several plutocrats.

In public, however, the normally voluble tycoons have fallen silent. They are presumably hoping to avoid offending both their patrons in Beijing and their customers in Hong Kong. For a Chinese government demanding that business bow down (see Business section), that is no longer good enough.

Chinese media have taken to attacking Hong Kong's oligarchs for insufficient displays of loyalty. Over the weekend several showed up at a pro-government rally. Li Ka-shing, Hong Kong's richest man, has placed full-page advertisements in the local press, calling for restraint. But his message—some enigmatic quotes from classical literature—was ambiguous. Was it aimed at the protesters, the local government or the authorities in Beijing?

In a recent meeting with visiting Western dignitaries, a senior Chinese official complained about Hong Kong's tycoons. The crisis was exposing the shortcomings of Hong Kong's capitalist system, the official said: it was not spreading wealth around as much as the central government had hoped.

That realisation, if it is widely shared in Beijing, is a welcome development. Just as a political solution to the crisis has to involve a less rigged system of political representation, so an economic dimension has to involve a less rigged property market. Perhaps leaders in Beijing think such a reform would be a substitute for democracy. Either way, they appear to be starting to appreciate that Hong Kong's property cartel needs to be challenged by policies that see much more land released for low-cost housing.

The potential, says Johnny Kember of KplusK Associates, an architectural practice, is vast. Over 1,000 hectares of brown-field sites could quickly be developed, he notes. There is also the 170-hectare golf course in Fanling, whose lease comes up next year. Many of Hong Kong's fat cats would surely resent giving up their weekends there to help the very people who are out making trouble. But given the souring mood in Beijing, that is what they may yet be forced to do. ■

Macau

Betting on red

MACAU

The former Portuguese territory shrugs off the turmoil in Hong Kong

ON THE EVENING of August 19th at least two dozen police officers could be seen loitering at the entrances to Senado Square, a narrow, busy plaza in the heart of old Macau. They took down the names of passing youngsters, especially anyone in black or white clothing. Some were led to a nearby car park to be searched. A few were taken away for further questioning.

The cops were there to discourage people from participating in a silent rally that had been advertised online a few days earlier, and to intercept people who had talked of confronting them. The rally organisers, who have not been named, hoped people in Macau would come out to condemn the way police in nearby Hong Kong have dealt with anti-government protests there. Local authorities, unusually, disallowed the event; police warned that attendees risked up to two years in jail. Around the same time the city began renovating a famous fountain protesters had planned to gather around. It will be hidden behind blue hoardings for a month.

Leaders in Macau seem anxious about contagion from Hong Kong, which lies 65km to the east along China's southern coast. The former Portuguese colony has been allowed to run its own affairs since it was handed back to the mainland in 1999. But like Hong Kong, its institutions are flawed. Only 14 out of the 33 legislative assembly seats are directly elected, the rest being doled out to interest groups. The



Ho hum

city's chief executive is elected every five years by a committee of 400 bigwigs. At a meeting on August 25th they will ask Ho Iat Seng (pictured), a businessman, to take up the job in December. It is the fourth time in a row that the Communist Party's preferred candidate has run unopposed.

Macau is very unlikely to develop an anti-government movement of the sort seen in Hong Kong. With only about 600,000 residents, its economy is heavily reliant on money and visitors from the mainland, and its small political class is loyal to the party. Although its laws guarantee rights to speech and assembly, Macau has plenty of tools for dampening dissent, including stern national-security legislation of a type that does not yet exist in Hong Kong. People associated with pro-democracy movements in Hong Kong sometimes get stopped at Macau's borders. That is more common than being denied entry to the mainland, says one.

Although youngsters are growing more politically aware, Macau's people are "largely apolitical and pragmatic", says Sonny Lo of Hong Kong University. The city's GDP per person is among the highest in the world. Some government revenue, derived primarily from the territory's enormous casinos, is distributed to residents as an annual cash handout. This year the give-away is 10,000 patacas (\$1,250) per adult. Macau has a more generous welfare system than Hong Kong, including better provision of social housing. Beneficiaries are loth to rock the boat.

Elections in 2017 brought fresh faces to the legislature, most notably Sulu Sou, a pro-democracy lawmaker who, at 26, was the youngest to ever join the body. But the pro-reform bloc grabbed only about a quarter of votes, not much changed from the previous election. Mr Sou thinks that media coverage of protests in Hong Kong has hardened pre-existing views in Macau. He says that in recent weeks conservative voters who have long been suspicious of calls for fuller democracy seem to have become much more vehement.

At a meeting with officials and journalists on August 10th Mr Ho said that his new administration would aim to make Macau's youth more patriotic, including through the education system. That has its perils: a few years ago ham-fisted efforts to tinker with Hong Kong's curriculum caused a backlash that presaged the more recent unrest. In the nearer term nervous authorities will have to resist overreacting to locals inspired by Hong Kong's protests. No one wants police to keep interrupting people's evening strolls. ■

open future

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Chaguan | When patriotism is in fashion

China's thin-skinned online nationalists want to be both loved and feared by the West



ON AUGUST 10TH a Chinese fashion blogger, "Stylist Zoe", invited her 7.4m followers to take an online poll, asking whether they would wear freshly cooked shrimp as earrings. A mere 1,300 voted. Two days later, however, Zoe hit the jackpot. Over a million netizens responded to her poll, posted on Weibo, the country's largest microblog platform, asking what followers think of foreign brands that "insult China". Her timing was impeccable. Her survey surfed waves of patriotic indignation crashing over the Chinese internet, heightened by puffs of windy outrage in the state media.

This tempest involves a charge new to the annals of great power competition: that Western brands have been subverting China's sovereignty by means of overpriced T-shirts. Specifically, Versace, Coach and Givenchy were denounced for selling T-shirts that variously bore the place-names Hong Kong, Macau or Taiwan, without adding wording making it clear that the first two cities are not in fact sovereign states, but Special Administrative Regions of the People's Republic of China, and without specifying that—at least in the view of the Communist mainland—the democratic, self-governing island of Taiwan is a province of China.

Not content with going after designer-shirt peddlars, state-run news outlets have denounced Amazon for selling "Free Hong Kong" T-shirts, though the online giant does not operate inside China. Other well-known brands have been taken to task for dropdown location menus on company websites that could be interpreted as suggesting that Hong Kong and Taiwan are countries.

To outsiders, these alleged offences may seem footling. But luxury brands—whose largest single market is often China—offered grovelling apologies. Expressions of contrition from foreign designers and CEOs were paraded across social-media sites, joined by resignation letters from Chinese celebrities, noisily quitting as envoys for errant brands and stressing their love for the motherland.

One possible take on this dispiriting saga is that China's hair-trigger patriots are themselves victims. In this telling, if young Chinese netizens are easily offended, it is because they have spent their formative years cut off from the world behind a Great Firewall of digital censorship, and pounded by a drumbeat of nationalism.

A closer look at those online nationalists is more troubling. It is true that government propagandists have worked hard to whip up

this latest storm. Communist Party social-media accounts have gleefully asserted that foreign firms must work harder to uphold China's sacred territorial unity, or feel the "cold, cold" wrath of 1.4bn patriotic consumers.

But a sad truth about nationalist anger is that it can be manipulated and sincere at the same time. No party commissar told Stylist Zoe's followers to choose the most extreme response in her poll, vowing that they would rather go naked than wear clothes from an anti-China brand, yet 770,000 of them did so. More sobering still, by definition those attacking foreign brands are unusually worldly, whether they hail from the aspiring middle classes or are members of China's globe-trotting elites. Those advocating boycotts know their Versace from their Valentino. Their ringleaders also clearly have access to the internet beyond the Great Firewall. Brands have been attacked, in recent days, over the precise wording of English-language apologies posted on platforms that are banned in China, such as Twitter, Facebook or Instagram. That means either overseas Chinese are involved, or netizens with access to online tools that allow them to vault the firewall.

Some unhappy patriots hold plum jobs at the foreign companies under attack. Chaguan spoke this week to a Chinese staffer employed by one of the firms accused of insulting China. The staffer described Chinese colleagues debating their firm's actions on WeChat, a social media app ubiquitous in China, adding that Western colleagues "either didn't dare or didn't want to talk about it with Chinese staff". The firm did not set out to offend China, the employee believes. But China's market power deserves more deference: "If you make a profit from us, you also need to respect us."

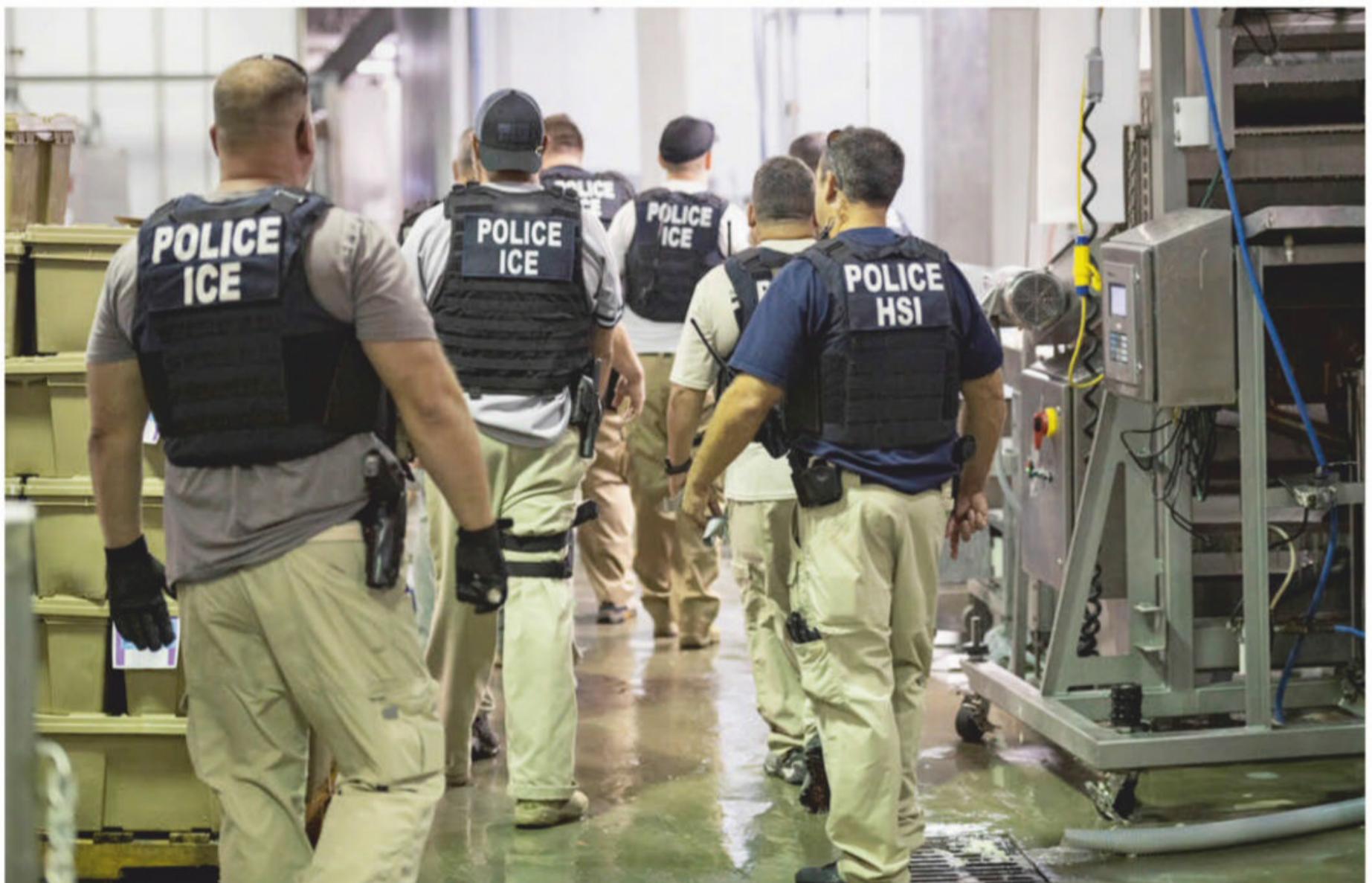
If recent mistakes by luxury brands seem small to foreigners, they are missing the larger causes of Chinese anger, says "Fashion-Models", a blogger with 9m followers on Weibo, speaking via social media while on a trip to Japan. America and Europe remain "culturally more powerful" than China and have yet to change "their very condescending attitude", he says.

When more than T-shirts were at stake

History offers insights into today's online Chinese nationalism, with its complicated blend of assertiveness and insecurity. Arguably China's first modern consumer boycott began in 1905, targeting American goods. It was launched by Shanghai merchants in protest at the (very real) mistreatment of Chinese immigrants in America. The first law against Chinese immigration was passed in 1882. But as Wong Sin Kiong of the National University of Singapore has documented, the boycott took off only after American immigration officers began humiliating educated Chinese as well as labourers. America, in effect, provoked a test of national dignity involving many social classes. Newfangled technology also helped. The telegraph, the WeChat of its day, allowed far-flung Chinese to share tales of outrage and to organise.

One more parallel is important. Patriotic pride back in 1905 was mingled with shame, and soul-searching questions about why the Chinese were too dazzled by foreign goods to resist them for very long. Jump to 2019 and not much has changed. A popular comment on Stylist Zoe's poll laments that Chinese fashion-lovers are too quick to forgive brands that insult the country.

A big difference is that the boycott in 1905 had a moral argument at its core, and hurt Chinese merchants as much as American ones. Today's campaigns often turn on trivialities and are painless or even profitable for their promoters. Propagandists have done their work well. They have made indignation an industry. ■



Immigration policy

Headless chickens

MORTON, MISSISSIPPI

What a raid on poultry processors says about the Trump administration's immigration strategy

THE SCHOOL day on August 7th was just beginning when a counsellor pulled 16-year-old José out of class. Immigration and Customs Enforcement (ICE) agents were raiding seven poultry-processing plants; did he know anyone who worked at one of them? He did. José worked afternoon shifts. His parents worked days, were then at the plant and, like him, were undocumented. They brought José (not his real name) and his family to America four years ago. His thoughts ran to his four brothers and sisters. If his parents were detained and deported, who would feed and care for them? How would they pay rent?

José's parents ended up among the 303 people released after being arrested that day. Another 377 remain in ICE facilities in Louisiana and Mississippi. Father Roberto Mena, parish priest of St Michael's Church in nearby Forest, says his parishioners are frightened. Mark Bowman, a pastor in neighbouring Carthage, says that when his

parishioners showed up to donate boxes of food to families of the detained, some "wouldn't come to the door, because they thought we might be ICE".

Barack Obama's administration deported large swathes of undocumented immigrants. But his directives to ICE were to avoid sweeping raids. President Donald Trump has revived them and has moved to change the way detained migrants are treated. On August 21st his administration unveiled plans that could allow for the indefinite detention of undocumented families—including children—who cross the

border illegally. The new rules would replace a decades-old agreement on levels of care for migrant children and the length of time the government can detain them.

In 2017 Tom Homan, who then headed ICE, ordered workplace enforcement to be increased "four or five times" over then-current levels. The Mississippi raids comprised the seventh workplace raid since April 2018 in which more than 100 people have been arrested. It was the biggest since a raid on a slaughterhouse and meatpacker in Pottsville, Iowa yielded nearly 400 arrests on May 12th 2008, near the end of George W. Bush's presidency.

That raid occurred in a different political world. Muzaffar Chishti, a lawyer and policy analyst with the Migration Policy Institute, a think-tank, contends that the Pottsville raid was intended to nudge congressional Republicans into supporting immigration reform by showing them how inhumane enforcement would be without an agreement. The current raids, says Mr Chishti, are "the signal of an anti-immigration president to his base".

Bryan Cox, an ICE spokesman, insists that ICE is "equally focused...on those who unlawfully seek employment [and] the employers who knowingly hire them". But between March 2018 and March 2019 just 11 employers were charged for hiring undocumented workers. None has yet been ►

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— Lexington is away

charged after the raids in Mississippi. Koch Foods, one of the raided processors, noted in a statement that employers cannot demand more documents when employees present authentic-looking papers, and that E-Verify, an online system that is supposed to confirm employees' legality, does not catch workers using the stolen or borrowed identity of a legal migrant.

As a show of force, such raids are impressive. As a matter of policy, they are inefficient, requiring large resource expenditures to arrest a few hundred workers. It may sound tough to say that every undocumented immigrant is an equal priority, but from a public-safety perspective it makes no sense. A workplace raid absorbs time that then cannot be spent on more dangerous undocumented immigrants.

There are signs that this shift in priorities is having consequences. The number of deported people convicted of a crime fell to its lowest level in 2017 since 2008, the year before Mr Obama became president. That figure has started to climb, but remains below the average from Mr Obama's time in office.

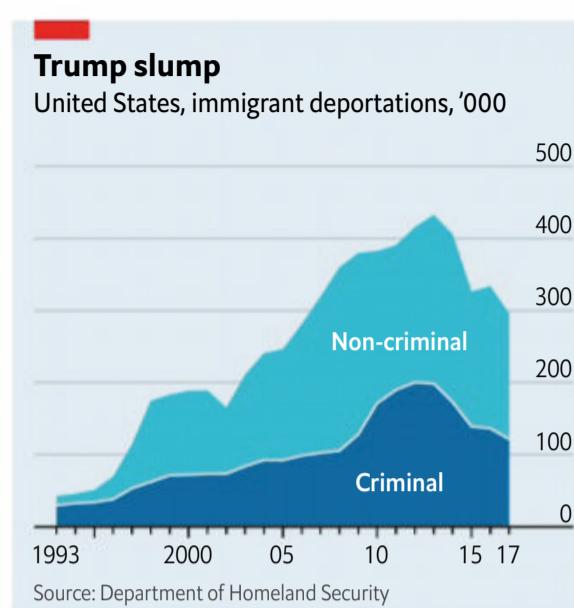
Nor is it just immigrants whom these raids make nervous. Poultry is Mississippi's biggest agricultural industry, but cutting chickens is a dangerous job and processors were already struggling to find workers. Allison Crittenden, the congressional-relations director at the American Farm Bureau Federation, an agricultural lobbying group, says her members worry about raids causing "a potential disruption to farming operations".

So what do these raids accomplish? For one thing, they help Mr Trump keep his deportation numbers up now that local police are less co-operative than they used to be. Between Mr Bush's inauguration and the start of Mr Obama's second term, deportations rose markedly—from 189,000 in 2001 to 432,000 in 2013 (see chart).

Much of that increase stemmed from local police assistance. Metro areas that offer sanctuary to illegal immigrants—as more than three-quarters of those housing most of America's undocumented population do—limit such co-operation. ICE agents cannot simply wander through immigrant neighbourhoods at random demanding proof of citizenship. Workplaces provide large numbers of undocumented people at a single, predictable site.

Mr Trump may believe that raids deter would-be migrants, but no evidence backs him up. It is difficult to imagine that someone whose children have been targeted by gangs in Honduras will factor the prospect of being caught in a raid in Mississippi or Ohio into their decision to flee. Raids dominate a couple of news cycles, scare immigrants and let Mr Trump project toughness.

On a recent afternoon, José's neighbourhood was deserted. Yet if the adminis-



stration had set itself against José and his family, his neighbours had not. Pastor Bowman says his parishioners tend to be politically conservative, but also believe that "God tells us explicitly to feed the hungry, to clothe those in need of clothes, to provide shelter to those who are homeless and to care for the immigrant population within the boundaries of our country." ■

Party politics

Rural change

EVELETH, MINNESOTA

Republicans see an opening in a longtime Democratic stronghold

SUPPORT FOR miners is ubiquitous in Eveleth, Minnesota. Hand-painted signs on roadsides and placards in bars and other businesses proclaim mining to be the region's lifeblood. Bob Vlaisavljevich, the mayor of this small town in the north-eastern corner of the state, lauds taconite and other minerals as the spine of the local economy. "The mining rank and file think like me," he says, recounting the story of his grandfather, who migrated to the area from Serbia a century ago.

Loyalty to resource extraction endures in Eveleth and across four small mining cities—called the Quad Cities—in a region known as the Iron Range. But much else is shifting. Mr Vlaisavljevich, who was first elected in 1987, recalls how the Quad Cities had some 14,000 miners in the 1980s. That has dwindled to just 4,200. Their well-paid jobs once sustained a roaring regional economy. Eveleth alone boasted several car dealerships, jewellery and furniture shops, restaurants and "houses selling like crazy". No more. "Back then it was hard to find parking," says the mayor, gesturing to a wide, near-deserted street by the town hall.

Mr Vlaisavljevich has also changed. He and his family were long proud Democrats,

like most on the Range. He voted for Barack Obama as president. Today he has a placard praising Donald Trump glued to his mayoral desk. He points to a Christmas card sent from the president on his wall. On the desk a joke roll of toilet paper bears an image of Hillary Clinton.

"You know what I am? I'm a Democrat that supports Republican policies," he says, describing his political transition. "The Democrats are two parties in one, and the left has abandoned the middle class." He lauds Republican tariffs on imported steel, saying that would once have been a Democratic policy. He thinks Democrats are soft on immigration. He resents rich, big-city folk in Minneapolis, for "selfishly" blocking plans to establish open-pit mines for copper and other materials. "Now it's a survival thing. With all the environmental groups, they want to stop all that mining."

In nearby Hibbing, Todd Hall is also from a mining family of fervent Democrats. But he and his wife, Kirstie Hall, have jumped party, calling liberal-minded Democrats out of touch. "The working class don't recognise the Democratic Party," claims Mrs Hall. She calls a state-wide plan to increase petrol taxes an emblem of neglect for rural concerns. The Halls are also troubled by an influx of Somali refugees to other towns in the state.

So for three years she has organised a Republican float for Hibbing's annual street parade. At first, she says the float was met with no more than boos and jeers. But sympathy is growing, she says. Mr Hall says it was once socially unacceptable to admit to supporting Republicans but that the taboo is lifting. Mr Vlaisavljevich says local union leaders know rank-and-file members are drifting to support "that guy", meaning Mr Trump.

Jennifer Carnahan, who leads the Republican party in Minnesota, calls the Range ripe for expansion. "Union workers need to take advantage of resources, create jobs, to reinvigorate the area," she says, using the sort of language long deployed by Democratic leaders. She says state Republicans can emulate a strategy that worked in neighbouring Wisconsin by winning over small towns and blue-collar voters even if cities remain out of reach.

But could gains in the Iron Range help to tip Minnesota Republican in the 2020 presidential election? Mr Trump says he is eyeing the state. He came within only 44,000 votes—a 1.5% margin—of taking Minnesota's ten electoral votes in 2016, when Republicans won 78 of the state's 87 counties. Mrs Carnahan wants Mr Trump to hold three big rallies across the north, south and west of Minnesota, which she says could help put the state in play. Republicans did poorly last year in the midterms, especially in suburbs. But they flipped the 8th congressional district, ►

► which includes the Iron Range.

Larry Jacobs of the University of Minnesota agrees a tight contest is likely, calling the state a "toss up". That is a remarkable judgment, considering Democrats have won the state in 11 successive presidential elections since 1976 and rarely bother to campaign much there. He points to frequent Republican successes in statewide legislative races. Farmers in the south and west of the state, along with miners in the Iron Range, are leaving the Democratic fold, he says, while urban and suburban voters flock to it. Much is in flux.

Mr Trump's attacks on Ilhan Omar, which have raised the standing of the first-time congresswoman of Somali descent in Minneapolis, have also helped to expose an urban-rural fault line among Democrats, says Mr Jacobs. Ms Omar, who can be outspoken in criticising Mr Trump and his policies, is intensely popular among her urban constituents. But in small-town, blue-collar and overwhelmingly white places like Eveleth and Hibbing, her high profile makes some uneasy. The state is 80% white and has a relatively fast-growing non-white population. Some voters beyond cities, anxious about racial change, could fall in with Mr Trump.

How might Democrats respond? Heidi Heitkamp, a senator in North Dakota until this year, is leading a national effort called "One Country" to persuade rural voters that Democrats have their interests at heart. She cites the Iron Range as typical of where the party must pay more attention. "Democrats failed to show up and listen to legitimate concerns" in such places, she says. The party should offer a message of infrastructure investment and of tapping rural labour for white-collar jobs, she says, even if it won't commit to reviving mining.

Ms Heitkamp also wants Democrats to change their tone when addressing voters in towns like Eveleth. "I think miners want to hear the truth. Right now rural America depends on trade aid, but there is a real high bullshit factor," she says, meaning politicians have not been straight when explaining that a changing economy requires government help in retraining for new jobs. Mr Trump may make simple vows to restore old mining work, but Democrats could explain how tourism, technology, engineering, health care and other industries can bring economic revival.

Such messages won't win over all rural voters, she admits, but they are better than silence. "Rural America is movable," she argues, pointing to the appeal of Laura Kelly, the Democratic governor of Kansas, in suburbs, small towns and cities. Similar successes may only be replicated if candidates show up in places like Eveleth. "It is a game of inches, not yards," says Ms Heitkamp. If Democrats fail to play, Republicans will make the running on the Range. ■

Evictions examined

Pushed out

WASHINGTON, DC

New research probes eviction's causes and consequences

AT NINE O'CLOCK on a recent Friday, some 80 people—mostly black—waited on pew-like benches for the start of their eviction cases at housing court. The few lawyers in attendance—all white—were present to bring the day's cases on behalf of landlords, often several dozen at a time. The 25 people who did not show up for court received default eviction orders in the span of a few minutes. Those present could choose to mount legal defences. Most did not.

Similar scenes play out almost daily in courtrooms across the country. In 2016 there were an estimated 2.4m eviction cases filed in America and nearly 900,000 completed, according to the Eviction Lab, a research outfit at Princeton University led by Matthew Desmond, a sociologist. His bestselling book, "Evicted: Poverty and Profit in the American City", argues that "eviction is a cause, not just a condition, of poverty". It won the Pulitzer prize in 2017 and has reinvigorated the neglected field of eviction research.

It is rare for a sociology book to be widely read, let alone acted on. Yet since the publication of Mr Desmond's book, New York City has become the first place to guarantee a right to legal counsel in eviction proceedings. Like several other cities, it has also strengthened its emergency rental-assistance programme. The city's eviction

numbers have plummeted from a high of 28,849 in 2013 to just 18,152 in 2018.

Landlords have the right to enforce tenants' legal obligation to pay rent. Almost all eviction filings are caused by a tenant failing to meet these obligations. Yet it has become clear that the engine behind evictions is poverty and that they are bad for tenants. The looming question for researchers now is how bad.

Housing instability wrecks credit histories and disrupts work and school. Seeing one's possessions thrown onto the street can be scarring. But quantifying the effects on tenants—and, consequently, the benefit of forestalling evictions—is difficult. That is because those facing removal from their homes are often already in dire straits.

However, economists have recently found that the financial consequences of eviction look less dismal than might be expected. In a recent working paper from the National Bureau of Economic Research entitled "Does eviction cause poverty?", four economists examined every eviction filing made in Cook County, which includes the city of Chicago. The researchers compared financial outcomes for tenants who were evicted with those who were not. They found that both groups were in remarkably poor financial shape in the years leading up to their eviction cases. They both re-



When a house is no longer home

mained similarly destitute in the years after. Taking advantage of the random assignment of judges—some of whom are more lenient than others—also let the researchers isolate the unique effect of eviction on measures such as credit scores, debt loads, use of payday lenders and neighbourhood poverty levels.

As expected, the authors found negative effects on people who had been evicted. But these were not very large. Credit scores declined somewhat. Yet debt out for collection, use of payday lenders and neighbourhood poverty levels appeared unchanged regardless of whether residents had been evicted or not. “The small causal impacts mean that merely avoiding the eviction itself is unlikely to alleviate a lot of the financial distress that low-income tenants are facing,” says Winnie van Dijk, an economist at the University of Chicago who is also one of the study’s authors. The unfortunate event of an eviction, in their view, is better understood as a culminating indicator of “long, multi-year financial strains”.

Another recent study by Robert Collinson and Davin Reed, two economists, applied a similar methodology to research on evictions in New York. They found very small negative effects on evicted residents’ employment and earnings. At the same time, they did not see markedly higher use of government benefits such as welfare or food stamps. “Overall, these results suggest that formal evictions may have a quantitatively small direct effect on poverty,” they wrote. Still, an eviction seemed to increase the chances of using both homeless shelters and hospitals for mental-health treatment. Uniquely among American cities, New York maintains a “right to shelter” for all homeless residents, including single adults, which may explain some of the findings. It is possible that evictions may not substantially worsen the financial states of those at risk.

Even if eviction does not appear to trig-

ger calamitous financial insecurity—if only because it was pre-existing—that does not mean the newfound attention to the problem is undeserved. Homelessness and hospitalisation present enormous costs to the rest of society. In New York the typical eviction case is filed over back rent of \$3,900. This amount pales in comparison with the \$41,000 the city spends on each homeless resident each year. The long-run consequences of eviction on poor children have not yet been thoroughly studied, but are unlikely to be good. What the new findings suggest is that intervention should not happen only when a case is filed in housing court. The nascent movement towards providing free legal counsel by right is a good one, because tenants with lawyers are able to negotiate better terms.

But measures such as these can only slow the pace of evictions. They will continue because for a significant share of the population—particularly for black women, whose incomes remain low—housing costs remain high and access to housing

subsidies remains sporadic. The second problem might be the most immediately remedied, if there was the will. Approximately one in four Americans who are poor enough to qualify for rental vouchers actually receive them, because housing assistance is not an entitlement.

Instead, it is a literal lottery in which a mere 25% of randomly selected hopefuls receive vouchers. The losers get nothing and the waiting list for a voucher in high-cost areas such as Washington, DC, is more than a decade long. “There’s a hollowing out,” says Daniel Clark, a lawyer at Rising for Justice, a free service which provides advice to tenants facing eviction. “Those people who do qualify have been insulated, but those [who] do not get squeezed out,” he adds. When asked where those people go, Mr Clark gestures to an elderly black man who has just shuffled into the hallway dragging a suitcase. He was a former client who had been evicted but is now homeless. Every few days he comes by to linger outside their office. ■

Late-term abortions

Abortion war

WASHINGTON, DC

Rare but controversial third-trimester procedures prove fertile ground for campaigners, including the president

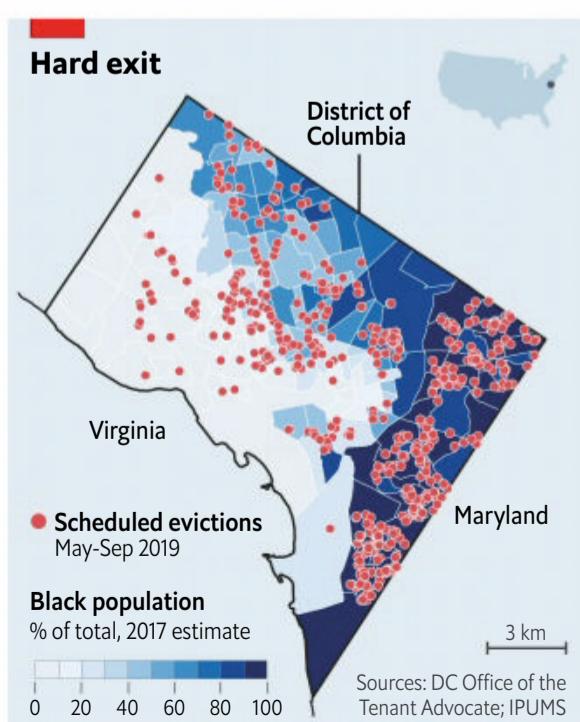
WHILE LEROY CARHART, a doctor who specialises in late-term abortions, was finishing his most recent termination, the manager of his clinic in Bethesda, Maryland, outlined the procedure. Abortions in the second half of pregnancy take between two and four days, said Christine Spiegoski, a nurse wearing a t-shirt that read: “Don’t like abortion? Prevent pregnancy by f**king yourself!” First, the doctor injects potassium chloride or digoxin into the fetus’s heart, killing it within minutes. If he is unable to reach the heart and instead pumps the drug into the amniotic sac, death can take up to 24 hours. Dr Carhart euthanises the fetus at the beginning of the procedure because its tissue and skull then soften and contract, easing removal. At 25 weeks a fetus weighs around a pound and a half and is over a foot long; some of those Dr Carhart aborts are older.

Over the next two or three days, medical staff at the clinic, one of only three in America to provide third-trimester abortions, insert small sticks into the woman’s cervix to stretch it open. Then the woman is induced and the fetus delivered. The goal, says Ms Spiegoski, is a delivery “as much like regular labour as possible”. The procedure she describes is quite different from President Donald Trump’s oft-repeat-

ed claim that late-term abortions involve babies being “ripped from their mother’s womb”. But it is not difficult to understand why many people, including those broadly in favour of abortion choice, find it problematic. This is also why Mr Trump has seized upon late-term abortion, the most controversial dimension of an issue that has inflamed American politics for almost half a century, as a campaign issue.

Data on abortion late in pregnancy in America are patchy. Not all states are required to report abortion statistics to the Centres for Disease Control (CDC), a federal agency, and the 40 states that do provide the gestational ages of aborted fetuses use ranges that do not reveal how many terminations take place in the third trimester. Still, the data suggest late abortions are extremely rare. In 2015, 1.3% of abortions took place after 21 weeks. But they carry huge political weight, as Mr Trump, who once described himself as “very pro-choice” is keenly aware.

The two sides in America’s abortion war have driven each other to new extremes this year. A flood of early-abortion laws in conservative states, some tantamount to total bans, have prompted other, socially liberal, states to make it easier to have an abortion at the other end of pregnancy. ►



► Meanwhile, the Trump administration has set new rules for Title x, a federal family-planning grant programme dating back to the Nixon administration. Organisations receiving Title-x funding are no longer allowed to provide abortions or refer patients to doctors for them. On August 19th Planned Parenthood responded by announcing it would withdraw from the programme—forgoing some \$60m in funding—to avoid the new rules.

Mr Trump's declaration of war on late abortions, a common theme at his rallies, is not only designed to please the evangelicals who helped elect him in 2016. Gallup polling suggests that whereas a majority of Americans think abortion should "generally be legal" in the first trimester, only 13% think it should in the third.

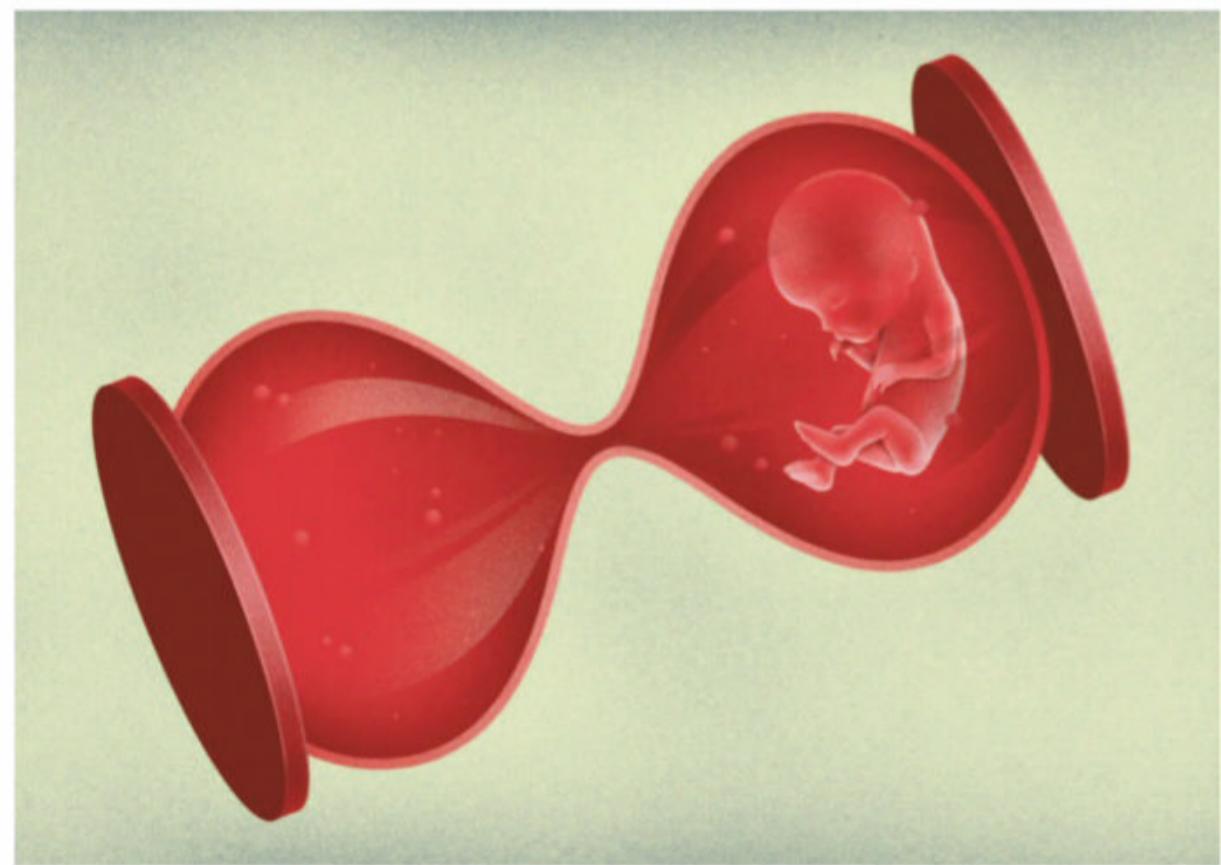
Dr Carhart says that people would change their minds sharply if they or someone they loved needed a late abortion. He vowed a decade ago to continue the work of George Tiller, an abortion doctor in Kansas shot dead by an anti-abortion zealot in 2009. Dr Carhart says he is motivated by injustice: women, he says, tend to shoulder the burden of an unwanted pregnancy. "Men...can just walk away if they don't want anything to do with it," he says. "It should be both of their responsibilities." If a woman feels she cannot, "she shouldn't be punished to go through that."

Try telling that to those on the debate's opposite side. In the first seven months of 2019 at least 16 states passed or introduced early abortion bans flouting *Roe v Wade*, the Supreme Court ruling that in 1973 declared abortion a constitutional right. They were emboldened to do so by Mr Trump's appointment of Justice Brett Kavanaugh, which gave America's highest court a solidly conservative majority. They hope that one such law will make it to the Supreme Court and help overturn *Roe*.

Socially liberal states have pushed back. This year, Illinois, Maine, New York, Rhode Island and Vermont have passed laws loosening restrictions on abortion later in pregnancy, codifying protections for abortion rights, or allowing medical workers other than doctors to perform them.

These measures are in part designed to ensure uninterrupted abortion services if anti-abortionists' efforts to overturn *Roe* prove successful. But they are also, like the legislation that sparked them, political. "We wanted to send a message and make it explicit," says Ann Pugh, a Democratic congresswoman in Vermont who co-sponsored the bill there, "that the very private, personal matter of abortion should be decided by a woman and a medical practitioner." Vermont is one of seven states that have no laws governing when or for what reason a woman may have an abortion.

Why did the two sides become so polarised? The main reason is the way abortion



was legalised. In many countries, abortion laws were voted for by elected politicians or in referendums. In America, a seven-to-two majority of justices declared abortion a constitutional right. Anti-abortionists question the interpretation of the constitution that produced that ruling and are furious their voices were not heard. Abortion advocates remain fired up by the knowledge that *Roe* could yet be overturned.

Had America's abortion laws been fought over in Congress, they would probably have been more restrictive. Instead, they are among the most liberal in the world—another reason why abortion is fertile ground for Mr Trump. Of 59 countries that allow abortion on demand, America is one of only seven that allow it after 20 weeks of pregnancy. Supreme Court rulings allow it until the fetus is viable, around 24 weeks.

Thereafter, according to another ruling handed down on the same day as *Roe*, abortions are allowed if the fetus has an anomaly or the mother's life or health is at risk. *Doe v Bolton* defines health in capacious terms, to encompass many aspects of well-being, from the economic to the familial. Research suggests a minority of abortions later in pregnancy are performed because the fetus has an anomaly or the woman's life is endangered, so most come down to the health exception.

For his part, Dr Carhart says that a woman requesting an abortion "has to be a fairly good storyteller. She has to convince me that this really is a problem. The fact that she wants to get into a size eight bathing suit next week—I'm not going to do it for that." He will always refuse to perform an abortion if the woman is not certain. "I'd rather do an abortion at 30 weeks than have her come in at eight weeks and have the

abortion and all of a sudden realise, 'I wanted to have that baby,'" he says.

America's comparatively liberal laws do not mean it is easy to get an abortion. Since 1973, lawmakers have chipped away at *Roe* by introducing hundreds of state-level regulations. Many of them seem trivial—prescribing, say, the precise width of clinic corridors—but their cumulative effect has been devastating. At least seven states have only one abortion clinic left.

The result of that may be more late abortions. Data on the procedures are limited, but research by Daniel Grossman, a professor of gynaecology and reproductive sciences at the University of California, San Francisco, found that abortion restrictions introduced in Texas in 2013 led to a 27% increase in second-trimester abortions the following year.

America's abortion war has curtailed access to abortion in other ways, too. Since 1976 the Hyde Amendment has forbidden the use of federal funds for abortion. Some women may have to delay abortions while they raise cash to pay for it. Dr Carhart, meanwhile, says he has performed abortions late in pregnancy because pro-life doctors have chosen not to tell their patients the fetus they are carrying has an anomaly—and then a few weeks before the due date warn them about the condition.

He says that women often ask for tips on how to disguise their abortions from their doctors for fear they refuse to see them again. "I say to them, why the hell do you want to see that doctor anyway?" He advises those women to find a doctor who shares their beliefs. Even the medical profession is polarised. The only thing that could end America's destructive abortion war is a political consensus. That, unfortunately, is unimaginable. ■



Paraguay and power

A dam mess

SÃO PAULO

A secret hydropower deal with Brazil causes a political crisis in Paraguay

WHEN BRAZILIAN soldiers invaded Paraguay in 1865, after banding together with Argentina and Uruguay, the country lost a quarter of its territory and perhaps 90% of its male population. A century later Brazil sent soldiers to a disputed border region and withdrew only after the two countries agreed to build the world's largest hydro-electric dam.

The dam, named Itaipu, is still a sore subject in Paraguay. Last month it emerged that in May Paraguay's current president, Mario Abdo Benítez, had struck a secret deal with Brazil, further reducing Paraguay's access to cheap power. The resulting outcry has put Mr Abdo Benítez at risk of impeachment. The fiasco has underlined the importance of renegotiating the dam's governing treaty, which expires in 2023.

Under the current agreement, which was signed in 1973, each country has the right to half the dam's output. Paraguay, a country of 7m people with little industry, only uses about a quarter of its share,

which fulfils 90% of its electricity needs. It sells the rest to Brazil, which depends on the dam for 15% of its power. But Paraguay is paid only the cost of production (including debt repayments for construction), not the market price of electricity. According to the calculations of Miguel Carter of DEMOS, a think-tank, had Brazil been made to pay full whack, between 1985 and 2018 it would have paid \$75.4bn more, or roughly twice Paraguay's current annual GDP.

In 2009 Brazil's then-president, Luiz Inácio Lula da Silva, agreed to triple Brazil's annual payment and to take steps to allow Paraguay's state power company, ANDE, to sell directly to private Brazilian compa-

nies. But in May's secret deal, a clause that would have made Brazilian companies bid for power was struck out. Paraguay also agreed to receive around 18% less money over the next three years.

The agreement became public in July, when the head of ANDE, Pedro Ferreira, refused to sign it, resigned and accused Mr Abdo Benítez of "high treason". He and Paraguay's minister of foreign relations—who also resigned, along with three other officials—told prosecutors that a "parallel negotiation" was under way to sell power exclusively to a Brazilian energy company, Léros. A politician from the party of Brazil's president, Jair Bolsonaro, travelled to Paraguay three times on behalf of Léros.

Mr Ferreira gave text messages to the Paraguayan press purporting to show that an adviser to Paraguay's vice-president, Hugo Velázquez, acting with the knowledge of Mr Abdo Benítez, was arranging meetings with Léros and lobbying on its behalf. In the messages, the adviser, José Rodríguez, claims that the Brazilian politician, Alexandre Giordano, represents not only Léros, but also Mr Bolsonaro's family and the Brazilian government.

The vice-president now denies employing Mr Rodríguez, though he admitted to meeting him to discuss the possibility of Léros buying energy from Paraguay. Mr Ferreira has a different story: he says the vice-president personally introduced Mr Rodríguez to the Paraguayan president, who then invited him to a meeting with Mr Abdo Benítez.

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► guez as his legal adviser. In one of the text messages, Mr Velázquez asks Mr Ferreira how negotiations for the sale are going.

News of the secret deal prompted thousands of people to take to the streets, calling for Mr Abdo Benítez to be impeached. On August 1st Mr Bolsonaro agreed to scrap the agreement. Proceedings in Paraguay's congress, which had the support of some of the president's allies, were then dropped. But it is too late to stop the outcry about energy policy. In 2023 the \$2bn loan taken out to build the dam will at last be paid off. The question is what to do then. "People on the streets are already talking about the rene-

gotiation [of the deal]," says Mercedes Canese, a former vice-minister from Frente Guasú, an opposition party.

Many in Paraguay argue that the country should use the excess power itself to industrialise. Drawn by low taxes as well as cheap electricity, car companies have started manufacturing cables in Paraguay to export to Brazil. In Ciudad del Este, just south of the dam, many locals engage in Bitcoin mining, an exceptionally power-hungry business. Demand from homes and offices is growing quickly, too. Within a few decades, Paraguay's half of Itaipu's output "will go to air-conditioning", says Christine

Folch, the author of "Hydropolitics", a forthcoming book about the dam.

At that point, the country will need new energy sources. Until then, however, most of the power will still be sold to Brazil. Brazil's economy is 50 times bigger than that of its landlocked neighbour. And Paraguay's negotiating position is weak. Whereas Mr Bolsonaro put a trio of generals in charge of the Brazilian half of Itaipu, Paraguay does not even have a fully fledged energy ministry. The messages published by Mr Ferreira show how Brazil sets the agenda.

Public pressure may help change that. On August 7th Paraguay's government appointed Geraldo Blanco, an engineering professor with a plan to use more of Itaipu's electricity in Paraguay, to the dam's governing council. As it contemplates its strategy for 2023, Paraguay may look to other smaller countries' battles with big neighbours. In the 1970s a campaign involving the actor John Wayne helped persuade America to pass a law that returned Panama's canal in 1999. As for the businesses best suited to provide the investment needed for Paraguay's industrialisation, they are right over the border in Brazil. ■

The burning Amazon

Darkness on the edge of town

RIO DE JANEIRO

Forest fires blacken the sky in Brazil's biggest city

IN THE MIDDLE of the afternoon on August 19th South America's largest city went dark. Under a thick, black cloud at 3pm, the lights flickered on in São Paulo's skyscrapers; on the motorways brake lights started to glow in the city's bumper-to-bumper traffic, and many Paulistanos were worried. Social-media users posted pictures of the gloom, juxtaposing the dystopian afternoon sky with fictional apocalyptic places such as Gotham City from "Batman", Mordor from "Lord of the Rings" and "the upside down" from "Stranger Things".

Meteorologists scrambled to explain what was going on. But the most likely explanation, most accept, is that fires burning far away in the rainforest are to blame. Climatempo, a popular private meteorology website, reported that a cold front brought low-lying clouds which then combined with smoke to form the thick black smog. According to the National Institute for Space Research (INPE), forest fires are more common than ever. The number detected so far this year is 84% higher than in the same period last year. Just over half of the fires are in the Amazon.

During the Amazon's dry season, it is common for farmers to set fires illegally to clear land. Brazil's populist president, Jair Bolsonaro, has encouraged them by weakening the agencies that enforce environmental regulations. He holds the view that protecting the forest hinders economic development. When asked about the fires, he ludicrously responded by accusing environmental NGOs of setting the fires themselves so as to make his government look bad, in retaliation for his cuts in their funding.

Mr Bolsonaro argues that he is fighting an "information war" over the Ama-

zon; he says he wants foreign governments and NGOs to stop meddling in Brazil. After INPE released data showing increasing deforestation in July, the president claimed the numbers were fake. He then sacked the head of the agency, Ricardo Magnus Osório Galvão, a well-respected physicist.

Such belligerence outrages scientists and environmentalists. "Firing the director is an act of revenge against those who expose the truth," says Marcio Astrini of Greenpeace, a pressure group. But the destruction of the rainforest tends to be out of sight, out of mind for a lot of Brazilians, most of whom live in large cities near the coast. The darkness brought deforestation to their doorsteps. "We don't have much time," a columnist wrote in the daily newspaper *Folha de São Paulo*. "Night will fall on all of us."



Today the highway is dark

The Mexico City marathon

Chocolate rush

MEXICO CITY

How to clean up the world's most cheated-in marathon

IN RECENT YEARS the Mexico City marathon has caused crowding on the city metro. That is not just because the city shuts down numerous roads above ground for the 42-kilometre race. It is also because cheating marathoners have been known to hop on for a quick detour to the finish line. Last year 5,000 of the 28,000 runners who finished were disqualified. Hundreds more were kicked out mid-race. No other race admits to stripping so many competitors of their places. Ahead of this year's event, on August 25th, organisers are hoping for scurrying without skulduggery.

Most of the *corredores de chocolates* (Mexican slang for fake runners) are easy to spot. Each runner carries a chip across electronic checkpoints placed along the course. Those who skip to the end are doomed to disqualification—but only days later, well after they receive their medal and the crowd's adulation. Over the past six years marathon medals have each been emblazoned with a letter. Collectively, they spell out "Mexico". That has motivated some people to cheat and complete the set, says Javier Carvallo, the Mexico City marathon's chief. This year a new series of six ►

► medals, which together will make up a map of the city, begins.

Other cheaters give their bib to a speedier "bib mule" before the race, hoping to attain a time in their name that qualifies for the prestigious Boston marathon. In 2017 organisers disqualified a man for wearing a bib registered to a woman called María. Others still enlist multiple runners for the race who treat the bib like a relay baton. Organisers track them down by reviewing interval times to see if a runner's speed is unrealistically quick or varies suspiciously.

Many Mexicans think that paying the

650 peso (\$33) entrance fee gives them a right to run the race however they like, says Mr Carvallo. In 2007 Roberto Madrazo, a former presidential candidate, was disqualified from the Berlin marathon after cutting a third of the course. Mr Madrazo insisted he had never intended to run the whole race. Social media can warp behaviour. Those who broadcast their preparation for the race grow desperate to post a triumphant selfie after it. But boasts on Facebook and Instagram are risky, Mr Carvallo says. Clutching a medal without a bead of sweat can lead to disqualification.

Serious runners and jealous friends enthusiastically dob in suspects to organisers.

All this tomfoolery dents the reputation of the marathon, which is among the fastest-growing in the world. It also affects the contest. Die-hard runners expect clear streets only to find them full of plodding course-cutters, says Derek Murphy of Marathon Investigation, a blog that dashes after the bad sports of marathons around the world. This year, an ad campaign is promoting honesty. For the first time, cheaters will be banned for life. That might be enough to keep *los chocolates* at bay. ■

Bello The limits of technocracy

What went wrong for Argentina's president

IF YOU CAN'T beat them, join them. That seems to be Mauricio Macri's response to his crushing defeat in presidential primary elections on August 11th. He won 32% of the vote against the 48% secured by the Peronist slate of Alberto Fernández and Cristina Fernández (no relation), a populist former president. At first Mr Macri blamed the outcome on the voters for "believing that returning to the past is an alternative", a scolding for which he later apologised. Then the blame shifted to his finance minister, Nicolás Dujovne, who had been slashing the budget as demanded by the \$57bn agreement the government negotiated with the IMF last year. Mr Dujovne resigned on August 17th after Mr Macri scrapped VAT on staple foods, increased hand-outs and temporarily froze petrol prices in a desperate effort to placate Argentines. These are the kind of measures typically associated with his Peronist opponents, and they are contrary to the IMF agreement.

Mr Macri is not quite beaten yet. The presidential election is not until October 27th. But in Argentina's peculiar system, the primaries are a dress rehearsal. Few think he can overturn a 16-point deficit in nine weeks. The fact that the peso crashed after the primary result will add to inflation of 50% a year and makes his task even harder.

This drubbing came as a shock, but it probably should not have done. Mr Macri's search for a second term always looked quixotic after the economy ran into trouble last year. Argentines are worse off than they were four years ago. The economy is forecast to have shrunk by around 4% over this period; prices have increased by more than 250%; the peso has gone from 15 to the dollar to almost 60, while real wages have fallen by 10% in the past 15 months.

Many had high hopes for Mr Macri, a former businessman turned successful mayor of Buenos Aires. After years of economic debauchery under Ms Fernández, he promised that Argentina would rejoin the world as a normal country. He appointed a team of brilliant technocrats. So what went wrong?

One hypothesis is that he erred in trying to stabilise the economy gradually. That decision was political: the hope was that growth would cushion the blow of cuts and big rises in the cost of electricity and transport as Ms Fernández's huge subsidies were withdrawn. It meant that the government had to finance a still-large deficit, mainly through debt. In 2018 investors became alarmed about Argentina, forcing the government into the arms of the IMF and the economy into recession.

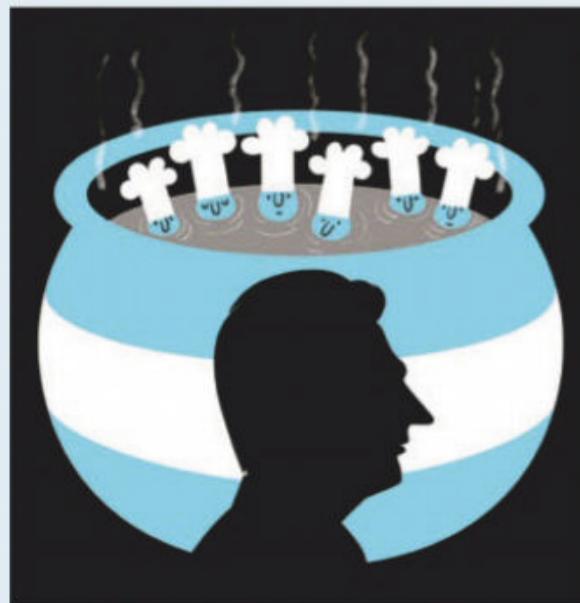
That alarm was partly because of the rise in interest rates in the United States. A severe drought also cut Argentina's farm exports, driving up its current account deficit. But the main blow was self-inflicted: the government's decision in December 2017 to loosen its own inflation targets,

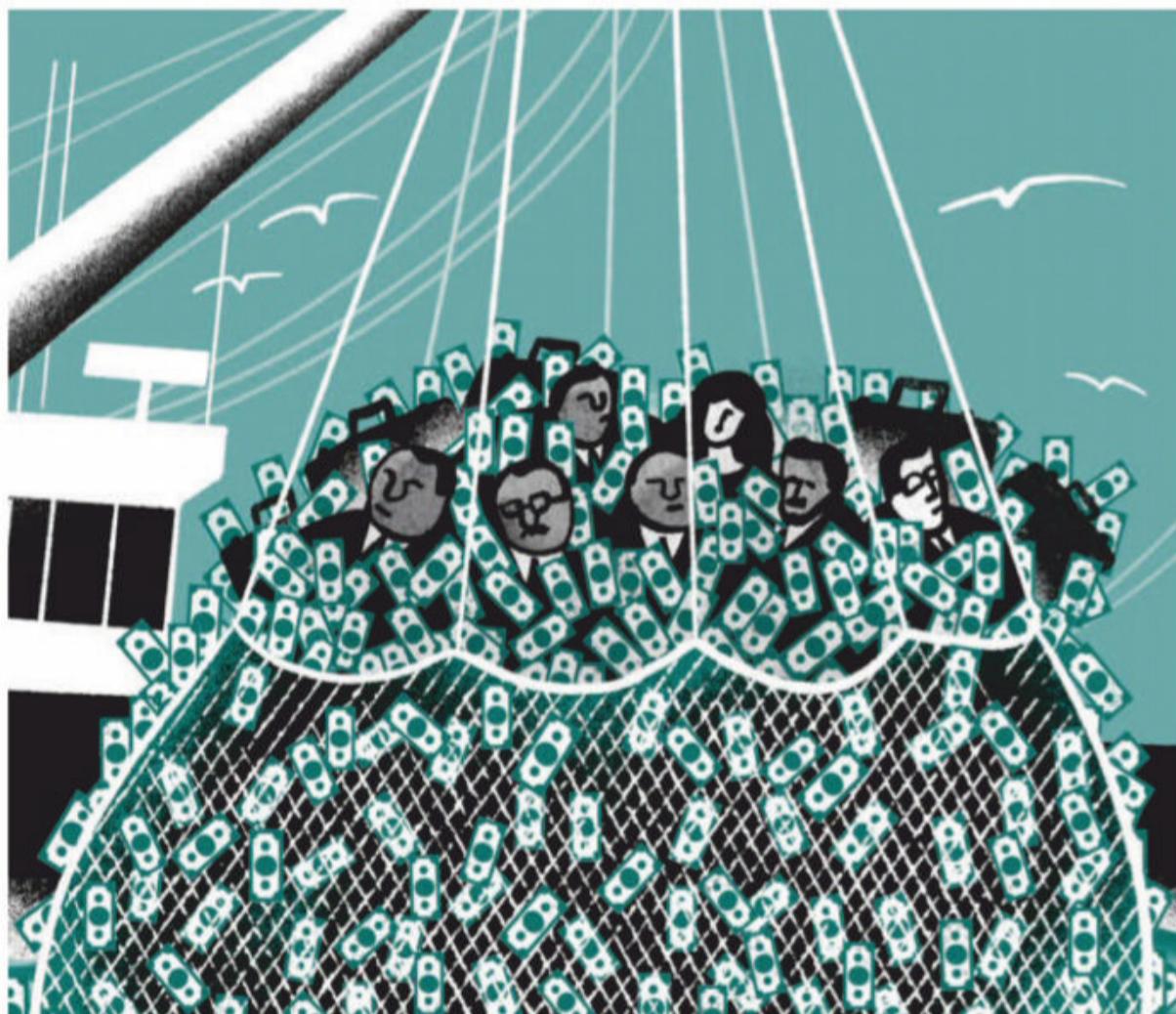
which undermined the credibility of the central bank. According to Federico Sturzenegger, the bank's then-president, who opposed the decision, it did so because (other) officials worried about the bank's relatively tight monetary policy; some did not want inflation to fall so swiftly because of the fiscal cost. Tax revenues would rise less in nominal terms but much spending (such as on pensions) would keep rising fast, because it was indexed to past inflation.

As this highlights, the government had too many economic cooks following different recipes. They wanted, variously, to slash inflation, increase economic growth and tighten the budget. Some wanted a weaker peso (for growth) and others a stronger one (to fight inflation). They should have accepted that the price of fiscal gradualism was tighter money.

Populist politicians are often skilled at explaining away economic reverses and persuading voters that they feel their pain. Technocrats find that harder. Mr Macri's re-election campaign was based on fear, that the return of Ms Fernández would turn Argentina into Venezuela. She deftly defused that. By opting to run for vice-president behind Mr Fernández, a more moderate Peronist, she turned the election into a referendum on Mr Macri's economic record.

Mr Macri's advisers trusted in social media and marketing, and failed to see the strength of sentiment on the Argentine street. "What happened was that the government ended up with no politics and couldn't explain anything," Mr Fernández told *Clarín*, a newspaper. Everything suggests Argentina will end up with him. Many fear the worst. But Argentina's current circumstances leave little room for populist excess. And Mr Fernández is not his namesake.





Corruption in Mozambique

The net tightens

MAPUTO

A \$2bn loan scandal sank Mozambique's economy. Justice is finally catching up

THE LATEST exhibition by Nelsa Guambe, an artist from Mozambique, is a startling chronicle of her country's predicament. Strange faces stare from a collage of newspaper headlines about corruption. "Sharks of Maputo", reads a clipping pasted onto the tie of an unnamed government minister. A grotesque beast—captioned "the monster of the West"—looms over a city, grasping at a shoal of fish.

The inspiration for these jarring images is a colossal debt scandal, which has sunk Mozambique's economy and rocked its political elite. Between 2013 and 2014 three state-backed companies took on more than \$2bn of questionable debt, guaranteed by the government (equivalent to about 13% of GDP). Some \$1.2bn of it was borrowed in secret, behind the backs of parliament and the public. The hidden loans were revealed in 2016, but only now is justice catching up with the alleged conspirators, who are accused of pocketing millions. A string of court cases this year has drawn in a billionaire shipbuilder, a trio of ex-Credit Suisse bankers and a former finance minister.

The context for the three deals was that

interest rates in the rich world were low. Investors could find better returns in Mozambique, where huge natural-gas reserves had been found offshore. A plan evolved across three continents. In Mozambique a clique of officials created three companies, ostensibly to build shipyards, police the coast and catch tuna. They bought trawlers and patrol boats from Privinvest, a shipbuilder headquartered in Abu Dhabi. The purchases were paid for with loans arranged by Credit Suisse, VTB and BNP Paribas, three European banks.

Fishy business

Only one of the deals was made public: an \$850m loan for a fishing fleet. The loan was chopped up and sold on to investors. In 2016 the government agreed with investors to swap this "tuna debt" for a conventional bond, issued directly by the state. At the time it said little about the other, secret loans—but admitted their existence weeks later. Foreign donors were horrified, and stopped contributing to the budget. The IMF packed its bags. Mozambique's currency lost more than a third of its value against

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the dollar in six months. Inflation surged and the central bank hiked interest rates. Growth collapsed. The companies made no profit; the trawlers caught few fish.

Uncovering the alleged corruption has been difficult. The same party that oversaw the scandal is still in power. President Filipe Nyusi was, until 2014, head of the defence ministry, which had links to the tainted companies. An audit of the loans, funded by the Swedish embassy and published in 2017, complained that it had not been given access to relevant documents and was unable to trace \$500m in borrowed funds. Debt campaigners say that their phones are tapped, their houses broken into and their meetings spied on.

Pressure has come from the American Department of Justice, which dug into suspicious payments wired through American banks. Last December it filed an indictment charging eight people with crimes relating to bribery, wire fraud and money-laundering. The conspirators created the maritime projects, it alleges, "as fronts to raise money to enrich themselves". The companies bought equipment from Privinvest at vastly inflated prices, it claims. In return, say prosecutors, Privinvest diverted more than \$200m into bribes and kickbacks, including over \$150m to Mozambican officials and some \$50m to the bankers who arranged the loans.

The indictment touches three points of a triangle. First, it names the three ex-Credit Suisse bankers: Andrew Pearse, Detelina Subeva and Surjan Singh. It says that they ►

hid information, invented fake competing bids and prepped Mozambican officials with answers to due-diligence questions, wrong-footing their own compliance department. Mr Pearse and Ms Subeva left the bank in the summer of 2013, as the second loan was being finalised, and joined a Privinvest subsidiary. They have each pleaded guilty to one charge against them in a New York court (Mr Singh is yet to plead). Separately, Mozambique is suing Credit Suisse, Privinvest and others in London for damages relating to the secret loans.

Second, the indictment names the lead salesman of Privinvest, who is in American custody, and its chief financial officer. It does not charge the firm itself or its chief executive, Iskandar Safa, a French-Lebanese billionaire (and former discus champion). But in a court statement last month Mr Pearse said that Mr Safa knew about bribes that Privinvest was paying, prompting Mozambique to sue Mr Safa as well. Privinvest and its employees have denied wrongdoing. A lawyer for the group questions whether America even has jurisdiction over alleged crimes on the other side of the world.

At the third point of the triangle are three Mozambican officials, including Manuel Chang, the finance minister who approved the loan guarantees. He was arrested in Johannesburg airport in December, and has been the subject of a legal and diplomatic tussle ever since. The American government is requesting his extradition. But so too is the government of Mozambique, which wants him to face justice at home—perhaps to prevent him spilling the beans on others in a foreign courtroom.

The American intervention has stirred Mozambican authorities into action. In February they arrested several people in connection with the debt scandal, including the son of Armando Guebuza, who was president when the loans were made. This month 20 people were indicted on charges including corruption and money-laundering. But this is not a genuine quest for justice, says Fernando Lima, a veteran journalist in Maputo. The government is desperate to get back into the good books of the international community. It also has one eye on elections in October.

Meanwhile, the debts are not being paid back. Whether they should be is an open question. The three loans are tainted with corruption and were all guaranteed without parliamentary approval, which is required by the constitution (parliament retroactively approved the loans after the scandal broke). As part of its case against Credit Suisse, Mozambique wants the guarantee on the first hidden loan to be ruled invalid. It is trying to restructure the other hidden loan, arranged by VTB, a Russian state bank.

The tuna debt is a different matter. In June the top constitutional court in Mozambique ruled that the initial loan, contracted in 2013, was indeed illegal. But it is unclear what weight the ruling has in English law (under which the debt was issued). A crucial question is whether the sin of the original loan carries forward to the bond which replaced it in 2016. Matthias Goldmann of Goethe University in Germany says it should not be possible to wash clean a dirty deal by swapping it for a new one. Many lawyers think otherwise. So far Mozambique has said it will repay bondholders, albeit later than it first promised.

Mozambique may be able to win enough damages to pay off some of its debts, especially if more evidence of corruption comes to light. It could also sell off the trawlers, which bob idly in Maputo harbour. But beneath the legal questions lies a moral one, say many in Mozambique. "We should not pay," argues Denise Namburete of the Budget Monitoring Forum, a civil-society group. Many players are responsible for the scandal, she says, but not the Mozambican people. ■

Polio in Africa

Vanquishing the virus

Africa is on the verge of being polio-free

ERADICATING POLIO is hard. It is even harder when politicians and imams fan the conspiracy theory that the polio vaccine is part of a Western plot to sterilise Muslims, as happened for several years in northern Nigeria. So in 2015 Nigeria's president, Muhammadu Buhari, decided to set an example. He gave the vaccine to one of his grandchildren on television, before rallying politicians and tribal leaders to join the campaign.

His efforts, and those of hundreds of thousands of volunteers, have paid off. On August 21st Nigeria marked three years since its last documented case of wild polio. That means the country is set to be declared polio-free by the World Health Organisation-backed Global Polio Eradication Initiative. If that happens, probably next year, all of Africa will be officially free of the virus. Polio will remain in only Afghanistan and Pakistan; and one day it will be completely eradicated, like smallpox was in 1980.

Mass vaccination in Nigeria, Africa's most populous country, was a logistical challenge. Health workers went village to village in round after round of campaigns. They were stationed in markets and at border crossings. To reach remote spots, they got creative. Satellite imaging was used to map the islands around Lake Chad. Then health workers went by canoe to deliver the vaccine.

Violence was a big problem. Polio was last found in a child in Borno, a north-eastern state ravaged by Boko Haram. The jihadist group prefers kidnapping children to vaccinating them. It helped spread the myth about sterilisation. So brave health workers have been rushing into areas from which it retreats (even temporarily). An improving security situation has helped. In 2015 about 600,000 children were not accessible. Now that number is under 100,000.



No anti-vaxxers here

Volunteers trained to spot the virus have been crucial in preventing outbreaks—not just of polio. In 2014 they helped trace nearly 900 people who may have been exposed to Ebola after an infected man from Liberia arrived in Lagos. Nigeria quickly contained the virus, which killed eight in the country.

The big worry now is that polio from Afghanistan and Pakistan may be brought to Africa and lead to new outbreaks. In the past polio from India made its way to Angola and Congo after they were declared polio-free. The strain from Pakistan is already travelling: it was recently found in sewage in Iran. That is one reason why it is important to maintain high vaccination rates in Africa.

This week's anniversary is good news, but risks remain. Mutations of the weakened virus in the vaccine are circulating in several African countries, including Nigeria. Higher vaccination rates will solve that problem, too. More work is still needed.

WHAT IS AVAXHOME?

AVAXHOME -

the biggest Internet portal,
providing you various content:
brand new books, trending movies,
fresh magazines, hot games,
recent software, latest music releases.

Unlimited satisfaction one low price
Cheap constant access to piping hot media
Protect your downloadings from Big brother
Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

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Sudan

The start of something new?

A power-sharing deal paves the way for civilian rule. The generals could spoil it

IT WAS A stunning sight for many Sudanese. For nearly 30 years Omar al-Bashir led a crooked and genocidal regime in Sudan. On August 19th, four months after being ousted in a coup, Mr Bashir sat in a cage in a Sudanese courtroom. It was the first day of his trial for corruption. When asked where he lived, Mr Bashir seemed amused by his comeuppance. "Formerly the airport district, at army headquarters, but now Kobar prison," he said with a laugh.

Sudan is entering a new chapter, and the trial of Mr Bashir is only part of it. A day earlier, after months of negotiations, the military junta that has run things since the coup agreed to share power with civilian leaders. A transitional government led by Abdalla Hamdok, an economist, is expected to take over on September 1st. If all goes well elections will be held in 2022. News of the deal caused the streets of the capital to erupt in celebration. But many of the democrats rejoicing were also nervous about the path ahead.

That is because the generals still hold much sway. They signed the agreement only after coming under intense pressure from foreign powers. Under the deal, a new Sovereign Council responsible for defence and foreign affairs will be made up of five soldiers and six civilians. But it will be led by Lieutenant-General Abdel Fattah al-Burhan for 21 months (after which he is supposed to hand over to a civilian). The army also controls the defence and interior ministries, which have large budgets and were responsible for past abuses. The generals,

who accumulated vast wealth under Mr Bashir, are already buying off opponents.

The appointment of Muhammad Hamdan Dagalo (known as Hemedti) to the council is particularly worrying. The paramilitary commander is said to be one of the richest men in Sudan, having strong-armed his way into the gold business. He is also intensely feared. His Rapid Support Forces (RSF) grew out of the Janjaweed, a militia responsible for genocide in Darfur. The RSF led a bloody crackdown on protesters in June, killing more than 100. The generals may worry that real reform will lead to accountability. It is notable that Mr Bashir is on trial only for corruption—not torture or murder, in which the armed forces and security services were complicit.

Sudan is huge and disunited. Rebel leaders in Darfur, Blue Nile state and South Kordofan rejected the power-sharing agreement, arguing that it did too little to accommodate them. The generals have tried to cut separate deals with these groups. "Given the junta's desire to divide and rule, the civilian opposition cannot afford to be seen as excluding the rebels from the transition," says the International Crisis Group, a think-tank. But the opposition is itself divided. Some factions have rejected the agreement because of the role of former junta members and the failure to hold them accountable for past violence.

The new government faces immediate challenges, not least a collapsing economy. It will try to convince America to remove Sudan from its list of state sponsors of terror, which would open it up to foreign investment. The IMF and World Bank might then help Sudan deal with a mountain of public debt. All that will take time. Meanwhile, Sudanese people are suffering from shortages of food, fuel and electricity. Anger over a spike in the price of bread sparked the first protests against Mr Bashir last year. More unrest may be unavoidable. But for now, at least, there is hope. ■

Hosni Mubarak

La vache qui vit

CAIRO

The former president and his sons are stoking nostalgia in Egypt

HOSNI MUBARAK once shut off the internet to discourage protests. So what happened to one of his biggest online supporters this summer is ironic. Karim Hussein shares photos and videos of the former dictator with the 3m followers of his "I'm Sorry, Mr President" Facebook page. Many of his posts are subtly political, like a tongue-in-cheek list of reasons why Egyptians wanted to overthrow Mr Mubarak in 2011: a stable pound; manageable external debt; thriving tourism. (All have worsened since the revolution.)

Mr Hussein also wrote that the ex-president allowed a free press. That was an exaggeration. But the current president, Abdel-Fattah al-Sisi, does not tolerate even the limited political freedoms his predecessor did. On July 9th police arrested Mr Hussein on suspicion of "spreading false news".

Back in 2011, when a popular uprising ended Mr Mubarak's 30-year rule, it was hard to imagine much nostalgia. Many Egyptians felt their country was adrift, led by an old man who was not up to the job. They mocked his doddering demeanour by calling him *la vache qui rit*, the laughing cow, after a French brand of processed cheese with a beaming bovine on the box.

Eight years later, more than a few Egyptians view the past through rose-tinted glasses. Ordinary people recall a president who maintained a subsidy scheme that kept prices low. The dispirited remnants of Egypt's civil society miss the relative openness. Mr Mubarak allowed a bit of space for opposition, as a safety valve and a sop to the West. Mr Sisi has ramped up executions and persecutes even supporters who step out of line. "They were professionals. Now they're amateurs," says one activist of those in charge.

Mr Mubarak and his sons have stoked nostalgia by returning to the public eye. In May the former president sat for a rare interview with a Kuwaiti journalist. The discussion was largely about foreign affairs. He held forth on Iraq's invasion of Kuwait in 1990 and Donald Trump's efforts at Israeli-Palestinian peace. But it cast him back in his cherished role as a well-travelled elder statesman. His eldest son, Alaa, has also become more visible. He pops up in photos on social media, playing backgammon in humble cafés or dining in El Prince, a popular haunt in the working-class Imbaba district, famed for heaping portions of fried liver and other healthy fare. ■



On track, for now

All of this seems to unnerve Mr Sisi. On June 26th Alaa was photographed cheering for Egypt at an Africa Cup football match in Cairo. The authorities revoked his fan ID card shortly after, barring him from future matches. Last month he tweeted criticism of a minister who quipped that those who speak ill of Egypt should have their throats cut. A sycophantic newspaper soon accused him of links to the banned Muslim Brotherhood. Samir Sabri, a hyperactive pro-government lawyer, sued him for "solidarity with a terrorist group".

This seems irrational. No one truly ex-

pects Alaa to challenge Mr Sisi. His patrimony would not protect him—even a former army chief who stood for the presidency last year wound up in jail. But the public has soured on Mr Sisi, who lacks a political party or trusted allies (ironically, his own sons are increasingly powerful aides). "Mubarak had a regime. Sisi has himself," says an activist. The government's overreactions are signs of its weakness, not Mr Mubarak's strength. Coincidentally, your correspondent noticed last month that Egyptair no longer serves processed cheese with its in-flight meals. ■

have already returned since the end of 2017, either on their own or with the help of the agency's "voluntary return" scheme, which buses ostensibly consenting refugees back to Syria. In April Lebanon's top defence council issued orders to start deporting Syrians who cross into Lebanon illegally. Hundreds of Syrians, including army defectors, have since been deported without due process, according to aid groups. "This is a red line that has been crossed," says Ghida Frangieh, a lawyer with Legal Agenda, a local advocacy group.

Those who want to send the Syrians home note that Lebanon has more refugees relative to its population than any other country. (Half of Mexico could settle in the United States and Lebanon would still come first.) Officials say refugees strain roads, hospitals, schools and electricity and water supplies, while crowding Lebanese out of jobs. They suspect that many Syrians cross the border just for the handouts, and that aid workers are exaggerating the crisis to justify their jobs. "Who is the only loser here? Lebanon," says Nicolas Chedrawi of the FPM.

The actual impact of refugees on the economy is less clear. Syrians do compete with Lebanese for low-skilled jobs. But increased demand for teachers, doctors and other service-providers has created new work, too. An injection of aid money has boosted consumption. Most of Lebanon's problems, from power cuts to the non-collection of rubbish, are not because of refugees, but because of Lebanon's dysfunctional and corrupt politics.

Lebanese officials push the idea that Syria is now safe. "That is stupid, stupid, stupid," says an aid worker. Dozens of civilians have been killed recently, as the Syrian government tries to retake the last major rebel stronghold, in and around Idlib province. The risk of arbitrary detention and disappearance remain high. Young men who return face military conscription. Others are exposed to revenge attacks from embittered neighbours or Syria's many unruly militias.

The authorities in Lebanon appear undeterred by the principle of *non-refoulement*, which prohibits sending people back to countries where they will face persecution. Other governments in the Middle East and elsewhere are considering similar actions—and taking them. Turkey, which has 3.6m Syrian refugees, stands accused of deporting some of them to Idlib.

Many Lebanese think Mr Bassil is whipping up nativist fervour to further his own presidential ambitions. "In a way, he is our Trump," says Ahmad Fatfat, a former lawmaker with the Future Movement, a Sunni party. The response from other politicians has been muted. Most seem content to scapegoat Syrian refugees, instead of taking responsibility for their own failures. ■

Syrians in Lebanon

No refuge

BEIRUT

A wave of nativist ire has left refugees with nowhere to turn

THE CONCRETE walls ringing the Al-Awwadah camp for Syrian refugees in Lebanon appear cheerful. Pink hearts adorn one segment, SpongeBob SquarePants another. The walls, though, are the only remaining traces of 178 homes that were demolished in June, ostensibly for building-code violations. "It's an upsetting thing," says Abu Jawad, a longtime resident. "Even if it was only temporary, this was where you raised your children."

The demolitions are part of an increasingly vicious campaign against the estimated 1m-1.5m Syrian refugees in Lebanon. Over the past few months the Lebanese government has deported hundreds of them and tightened restrictions on those who remain. Politicians have blamed them for a raft of economic problems. Spurred on by incendiary reports in the press, vigilantes have attacked camps and harassed Syrians in the streets. "I don't think there is any scenario where this ends well," says Carmen Geha of the American University in Beirut.

On an official level, Syrian refugees were never welcomed in Lebanon. Stiff work and visa restrictions and local measures, such as curfews, have been in place for years. When the refugees started arriving in 2011, the government stopped aid agencies from setting up formal camps. Politicians feared that if the Syrians stayed it would upset the sectarian balance underpinning Lebanon's power-sharing system. In 2015, when Syrian refugees were about a quarter of the population, the government told the United Nations to stop registering new asylum cases.

But the recent campaign is more intense. The charge has been led by the Free Patriotic Movement (FPM), a Maronite

Christian party that rules in alliance with Hizbullah, a Shia militia-cum-party. Gebran Bassil, the foreign minister and son-in-law of President Michel Aoun, alarmed many when he tweeted about the positive "genetic" qualities of Lebanese in June amid a crackdown on foreign labour. Sympathetic media have broadcast footage of members of the FPM youth wing harassing Syrians in Beirut. Police raids have targeted unlicensed Syrian workers. "If you're dying from hunger, what are you supposed to do?" shouts a Syrian taxi driver. "I have to work to live."

According to Lebanon's main intelligence agency, more than 170,000 refugees



A window into despair



Italy's government falls

Salvini's gamble

ROME

"Il Capitano" hopes for elections. His opponents hope to avoid them

IT SEEMS AT times that Italy's role is to terrify the euro zone's other member states. In 2011 the refusal of its then prime minister, Silvio Berlusconi, to tackle the euro crisis drove the single currency to the brink of collapse. Since then the country has had six governments and as many market-spooking crises. Its latest government fell apart on August 20th, when Giuseppe Conte resigned as prime minister, ending a rickety 14-month coalition between two populist, Eurosceptic parties: the anti-establishment Five Star Movement (M5S) and the nationalist Northern League. The previous week Matteo Salvini, the League's leader, had withdrawn confidence in the government. He wants the top job for himself. How alarmed should Italy's partners be?

Not very, thought investors. The following day, as President Sergio Mattarella began consulting party leaders on the way forward, the yield gap between Italian and German government bonds (an indicator of market concern) shrank to its narrowest since the end of July. Bank shares rose, as did the Milan bourse as a whole. That reflected expectations that Mr Mattarella would not call an election, but would in-

stead broker a coalition deal between the M5S and the centre-left Democratic Party (PD). With the support of some independents, they could muster slim majorities in both houses of parliament.

Nicola Zingaretti, the leader of the PD, fuelled the optimism. After weeks of apparent resistance to the idea of a coalition with the M5S, he said his party had given him a mandate to negotiate a deal. Mr Zingaretti set five conditions: allegiance to the European Union; environmentally sustainable development; changing immigration policy to get Europe involved; more economic redistribution; and fully accepting parliamentary democracy. Curiously, only the last point is likely to be difficult for the Five Stars. The party was founded on a commitment to let citizens vote directly on legislation via the internet (though in practice it has let that idea slide).

Other issues may prove more troublesome. The PD are economic Keynesians who favour big infrastructure schemes; the Five Stars often oppose them on environmental grounds. Mr Zingaretti's demand for a clean break with the previous government may mean he would veto a cabinet

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post for the M5S's leader, Luigi Di Maio, who served as deputy prime minister. And there is suspicion that Mr Zingaretti may not work hard to avoid an election: the PD has won ground in the polls since the previous election and now leads the M5S.

The parties do not have much time. Italy is rather slow to dissolve a parliament and convene a new one; in 2018 it took almost three months. If an election is to be called this autumn, it must happen soon. Parliament needs to pass a budget by January. That will be especially tricky this year. At least €23bn (\$25bn) in spending cuts or new taxes are needed to meet the EU's fiscal rules and shrink the state's immense debt, equivalent to 132% of GDP. Otherwise Italy will have to push ahead with plans to impose a whopping value-added-tax increase, which could kill off the feeble economic recovery.

Ironically, European Commission officials would prefer a coalition that includes Forza Italia, the centre-right party of Mr Berlusconi. The M5S favours higher welfare spending, and it is felt in Brussels that an "Ursula government" (so named because the PD, the M5S and Forza Italia all backed Ursula von der Leyen's bid for the Commission presidency) would dilute its influence. But the anti-corruption M5S shuns Mr Berlusconi, a convicted tax fraudster.

For Eurocrats, as for markets, the most daunting scenario is an election. Control of the Italian parliament can be secured with around 40% of the vote. Polls suggest the League could take 37%. The Brothers of Italy, a party of former neo-fascists, might get ➤

► 6%. That could yield an uncompromisingly right-wing, nativist, Eurosceptic government with Mr Salvini at its helm.

Although EU officials see the League's economic policies as marginally better than those of the M5S, it is "considered worse for everything else", says Mujtaba Rahman of the Eurasia Group, a consultancy. The League opposes humanitarian efforts to rescue migrants crossing the Mediterranean. It is close to Russia (one of Mr Salvini's associates was recently caught on tape discussing funding from Kremlin-friendly oil interests). And it is opposed to the euro zone's 3% cap on budget deficits. Mr Salvini has promised that, if elected, he will introduce big tax cuts in an attempt to revive Italy's stagnant growth. With Europe's economy slowing, a no-deal Brexit looming and a new commission just entering office, a victory for the League could be a perfect storm for the EU. Markets may be sanguine, but Italy's politics could yet wreak havoc in the euro zone. ■

Presidential rudeness

Arctic antics

How Greenlanders feel about Donald Trump's talk of buying their land

MOST DANES thought it was a joke when President Donald Trump said America might buy Greenland, a self-governing island that forms 98% of Danish territory. Denmark's prime minister, Mette Frederiksen, dismissed the idea as "absurd". When Mr Trump reacted by calling her "nasty" and cancelling a visit to Copenhagen, his would-be hosts were stunned. But many Greenlanders were not.

"I knew from the start this was to be taken seriously," says Aleqa Hammond, a former prime minister of Greenland. It was not the first time an American president had suggested such a purchase. In 1946 Harry Truman offered \$100m for Greenland (\$1.3bn in today's money).

Today the island has only 57,000 inhabitants, yet it is of growing strategic importance, as Russian submarines reappear in the Arctic and China dreams of a "polar silk route" through newly ice-free seas. Denmark is responsible for Greenland's external affairs and defence. NATO membership once allowed Greenlanders to sleep easy, but since Mr Trump has undermined that alliance, their security is less certain.

Greenland's feisty legislators, including Kim Kielsen, the current prime minister, all agree that the island's sovereignty is not for sale. But they are flattered that outsiders are interested, and insist on their right

to parley with all comers. As Ms Hammond says: "If Mr Trump wants to discuss Greenland, let him come here, not to Denmark."

As Mr Trump observed, Danish taxpayers send Greenland more than \$600m a year in subsidies. But that dependence does not deter the island's politicians from pursuing their own bargains. Last year Mr Kielsen found Chinese contractors for an upgrade to the island's airports. That terrified NATO, and Denmark pressed Greenland to find Danish contractors instead. One of the parties in Mr Kielsen's coalition marched out in protest. Greenlanders who want independence say that widening the range of economic partners could wean them off Danish aid.

Aqqaluk Lynge, a veteran leftist, said the spat with Mr Trump might make Danes and Greenlanders appreciate one another more. It might, for example, remind Danes who moan about subsidising their Arctic cousins not to take them for granted.

Today Greenland exports mostly seafood. When Mr Trump joked that he did not want to build a skyscraper with his name on it in Greenland (see picture), he was surely telling the truth. The real economic opportunity is that vanishing glaciers are opening up its mineral resources, including rare earths and possibly oil and gas. Minik Rosing, a Greenland-born geologist, noted the irony in a man who once called global warming a "hoax" coveting territory that owes its rising value to melting snows. Yet he also thinks a more tactful American leader might persuade Greenlanders to upgrade their links with the United States at the expense of their Danish ones.

Perhaps. But were they ever to decide to become part of America, which for now seems highly unlikely, they would get a culture shock. Not only do Greenlanders have Nordic ideas about social welfare; they also ban private ownership of land. ■



It ain't easy being Greenland

European unemployment

Work in progress

AGUEDA AND MADRID

Why southern Europe's labour markets are still fragile

VITAL ALMEIDA is on the hunt for workers. The boss of Ciclo Fapril, a firm that makes metal components for foreign manufacturers, needs to hire 200 staff by the end of the year to meet new orders. But luring workers—even unskilled ones—to Agueda, a rural town in central Portugal, is proving difficult. To attract more, he is running open days, setting up internships and building relationships with local schools.

This is a far cry from the state of affairs just over a decade ago, when the global financial crisis struck. Many of Mr Almeida's neighbours, also metal-bashers, were forced to close down. He weathered the drought by closing the factory on Friday afternoons and freezing pay.

As southern Europe was racked by the crisis, joblessness rose dramatically. Unemployment rates in Spain and Greece exceeded 25%; youth rates neared 60% (see chart). Populations shrank as many left home in search of better fortunes abroad.

These trends have reversed since 2015, when economic recovery took hold. In the euro area nearly 8m jobs have been created, one for every 20 adults of working age. The unemployment rate has returned to pre-crisis levels, even as the pool of available workers has grown. Older people are working longer: nearly two-thirds of 55- to 64-year-olds in the euro zone are in the labour market, compared with less than half in 2007. In southern Europe, net migration has turned positive.

Even so, the labour-market recovery in the south has further to go. Unemployment rates are above pre-crisis levels in Greece, Italy and Spain; youth rates are still 30-40%. Part of the explanation is anaemic economic growth. In Greece and Italy, output is still below pre-crisis peaks.

But in Spain, despite an impressive economic recovery, 1m more people are still out of work than in 2008. Comparisons with the years immediately before the crisis are tricky, because Spain was enjoying a construction boom and unemployment may have been unsustainably low. But Marcel Jansen of Fedea, a think-tank in Madrid, also points the finger at underperforming job centres and schools.

Nearly 40% of Spain's unemployed have been jobless for over a year, and need well-designed programmes to get them back into work. But the country's employment services are run by regional authorities with little central co-ordination. In ►



► comparison to those elsewhere in the OECD, they find work for very few of the unemployed. Young Spaniards are more likely than peers elsewhere to drop out of school. And across the south, notes Stefano Scarpetta of the OECD, employers offer less vocational training and fewer apprenticeships than in Germany or the Netherlands.

High unemployment also reflects a long-standing feature of southern labour markets: a relatively large share of workers cycle in and out of temporary jobs. Cushy contracts for permanent workers, with high severance pay and lengthy appeals procedures, make it costly for bosses to sack them. Instead they hire lots of temporary staff, and respond to downturns by cutting their wages or not renewing their contracts. Collective-bargaining agreements for permanent staff can be inflexible—in Portugal, for example, they cannot include wage cuts, making it hard to cope with downturns.

Many countries have enacted reforms since unemployment soared during the crisis, in some cases as a condition of bailout funds. These included cutting severance pay for permanent staff in order to make temporary contracts less attractive to bosses, and allowing firms in dire straits to depart from wage bargains. Wages were sometimes cut or frozen.

Those reforms have had mixed results. In Spain and Portugal pay cuts and freezes, though unpopular, helped restore competitiveness. But the share of temporary workers—at around a fifth of jobs—has barely budged. That is not because these people are satisfied: fully 80% would like to find a permanent job, compared with around a third in Britain and 14% in Germany. Pedro Martins, a former employment minister in Portugal who is now at Queen Mary University of London, wonders whether bosses are still too uncertain about the economy to take a punt on a permanent hire.

Another risk is that reforms may be rolled back. France is an exception: since 2018 it has taken steps to encourage permanent hiring and vocational training. But

Romania goes wild

Butting back

TRANSYLVANIA
An ancient beast returns

CURT THE bison is not sure he wants to return to the wild. After 20 hours in a lorry from Germany to Romania, he takes a few hesitant steps down the ramp, chews at some leaves, then heads back inside. Two hours later he is still there, delaying the bolder females, stuck deeper inside the lorry. Finally the rangers shoot him with a tranquilliser dart. Eight men, two per hoof, carry him into an enclosure, where he quickly recovers. The other beasts trot dutifully after him across a small bridge. They will join two herds already about 50-strong. Transylvania just got a bit wilder.

European bison were hunted to the brink of extinction in the early 20th century. Fewer than 60 individuals remained, all in captivity. In the United States, the American bison's population fell below 600. Yet both species have since been nursed back to health. Herds have already been re-established in Poland and Belarus.

Eastern Europe's ecologically diverse wildflower meadows and old-growth forests provide near-perfect conditions for bison and other scarce species. Wild bees, dragonflies and glow-worms (and the birds which feed on them), threatened by intensive agriculture in western Europe, still thrive here. In the communist era, wildernesses benefited from a reluctance to farm agriculturally marginal land. More recently, rural areas have seen mass emigration since Romania joined the European Union. The population of Caras-Severin county, where Curt and his herd will roam, fell from 380,000 in 1990 to 280,000 today.

"On the face of it, we're just releasing some big animals into the forest," says Rob Stoneman of Rewilding Europe, a

group overseeing the project with the Worldwide Fund for Nature, a charity. "But this is a keystone species. They open the forest up." Bison herds will prevent shrubs from spreading across pastures. Red deer will flourish in their wake. Deer and bison will be preyed on by grey wolves and brown bears.

Some locals have doubts about bringing back the giant ruminants. But they seem to be coming around. Simona Boieriu, who owns a small farm on the slopes of the Tarcu mountains, now sells her tomatoes to bed-and-breakfasts that cater to eco-tourists. The bison, she says, are "attracting people from other cultures to visit us, people interested in nature conservation". Romanians, she adds, are less so. From farther up the valley comes the thunder of a summer storm. Or perhaps it is the hooves of the mighty but tentative Curt.



Bison rising

farther south a backlash against wage austerity is encouraging governments to adopt risky measures.

Minimum wages have been raised—sensible enough after years in the deep freeze. But some of the rises appear excessive. Spain's has risen by 22% this year, after a 12% increase in 2017-18, despite double-digit unemployment. The Bank of Spain warns the uplift could cause 125,000 job losses, though others dispute that.

Other reforms seem half-baked. In 2018 Italy's government raised severance pay for permanent workers and lowered time limits on temporary contracts, despite a warning from the national social-security ad-

ministration that it would lead employers to shed temp workers. Thirty-year-old Giulia lost her job when the law came into force. "The situation was absurd," she says: although employers were happy with her work, they were forbidden to renew her temporary contract, and decided to hire and retrain someone else instead. Frustrated by her experience in Italy, she has taken up a job offer in Marseilles.

As the global economy slows, the spectre of job losses returns. Another full-blown crisis is probably not in the cards. But, frets Mr Martins, a rollback of reforms could limit employers' ability to spread the pain of job and wage cuts more evenly. ■

Charlemagne | Ghosts of Terezin

It will take more than Holocaust memorials to curb anti-Semitism in Europe



TEREZIN IS AN old garrison town in today's Czech Republic that was used by the Nazis as a Jewish ghetto during the second world war. Some 33,000 Jews died in Theresienstadt, as it is known in German, and over twice that number were transported from there to death in extermination camps further east. Today it is an eerie site: part town and part ghost-town, walls speckled with commemorative plaques, train tracks overgrown. The ghetto museum contains drawings by children who were imprisoned there. One by Arnost Jilovsky, born in 1931, depicts a wire fence with wheeling birds and fluffy clouds beyond. Doris Weiserova, one year younger, sketched butterflies fluttering through a flowery meadow. Both died in October 1944 in Auschwitz.

The literary immortalisation of Terezin's strange atmosphere came in 2001 with the novel "Austerlitz". Written by WG Sebald, a German author, it recounts the narrator's sporadic encounters with Jacques Austerlitz, an architectural historian whose Welsh foster parents concealed his true origins as one of the Jewish children evacuated to Britain under the Kindertransport initiative. Having for decades avoided 20th-century history, Austerlitz eventually traces his story back to Terezin, where his mother was interned before being killed. In the ghetto museum he finally comes to terms with the facts of the Holocaust. Pacing the streets outside, he particularly notices "the gates and doorways... all of them obstructing access to a darkness never yet penetrated."

Like many European countries, the Czech Republic contains myriad historical markers documenting the evil of anti-Semitism. One is a memorial in Prague's main station dedicated in 2017 by children of the Kindertransport to their murdered parents. Reminders of the lessons of history are plentiful for those willing to learn. Yet a report last month by the Federation of Jewish Communities revealed a 189% increase in anti-Semitic incidents in the Czech Republic between 2015 and 2018. Returning from Terezin to Prague, Charlemagne noticed a fresh crack on the Kindertransport memorial. Someone had recently taken a hammer to it.

A poll by the European Union of 16,000 Jews in 12 member states found that 89% thought anti-Semitism had risen in the past five years, and that one in three had experienced harassment in the past year. Sometimes resurgent anti-Semitism is violent and

proud, as with the beating with a belt of two men wearing skull-caps in Berlin last spring. Elsewhere it wears a mask of false innocence. Viktor Orban, Hungary's prime minister, maintains excellent relations with his Israeli counterpart Binyamin Netanyahu—yet he employs anti-Semitic themes in propaganda against George Soros, a Hungarian-born liberal philanthropist. The leaders of Britain's Labour Party have for years tolerated anti-Semitism in the ranks. All this in a continent awash with memorials of what happens when one turns a blind eye to bigotry.

There are two possible conclusions to draw. One is that Europe's commemorations of the Holocaust simply need to be bigger. But ten minutes by cab from the site of last year's belt-beating in Berlin is the Memorial to the Murdered Jews of Europe, a sea of gravestone-like pillars taking up an entire city block. If prominence were the key, this should curb the attacks. The more awkward conclusion is that memorials are not enough—that, read wrongly, they can imply that anti-Semitism belongs only to the past, and engender complacency about the present. Mr Orban can point to the cluster of iron shoes near the Hungarian parliament, marking the shooting of Jews there by fascists in 1944 and 1945, as proof that his country takes history seriously. Meanwhile, the opening of Budapest's newest Holocaust museum was delayed for years over complaints that it downplayed Hungarian collaboration with the Nazis.

Formal events and sites marking the Holocaust and other acts of anti-Semitism are of course essential and moving. Terezin is one of many examples. But the lessons to which they bear testament cannot just be compartmentalised as acts of penance separate from everyday life. They must somehow impose themselves outside of commemorative events and memorials. They must invade the comfortable consciousness of ordinary citizens.

Remembering, not just remembrance

A survey by Comres and CNN last September found that 34% of Europeans said they had heard little or nothing of the Holocaust. Education and explanation are understandably at the heart of the European Jewish Congress's recently published action plan to tackle anti-Semitism. It proposes a clearer definition of the phenomenon, new guidelines for schools and more funding for teaching and researching the Holocaust. But that will be an uphill struggle. Ignorance and indifference are laying fresh tracks on which anti-Semitic hatred can travel.

How to derail the train? Law enforcement must crack down systematically on anti-Semitic crimes. Leaders must shun politicians who blur the boundaries between mainstream politics and anti-Semitic filth. Educators and civil-society organisations must spread the lessons of the past. All must play their part in bridging the divide between memorials and everyday life. "Only when the generation that survived the war is no longer with us," said Angela Merkel last year, "will we discover if we have learned from history."

Sebald's novel should act as inspiration. Austerlitz's trip to Terezin, to his first reckoning with his past after decades of denial, is prompted by the resonances of the oppressive violence of the past in the buildings he encounters on his travels. He is particularly obsessed with Europe's great train stations: places of happiness, but also silent witnesses to exploitation and oppression, to soldiers marching off to war, to exile and deportation. In Sebald's Europe the past cannot merely be contained by designated places of memory. It seethes and writhes insistently, barely below the surface of everyday life. To learn the lessons, that surface must be broken. ■

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Higher education

Searching for students

COVENTRY AND EXETER

Who are the winners and losers of the great university free-for-all?

IT IS A-LEVEL results day and the phones are ringing at the University of Exeter. The university is much bigger than it was half a decade ago, so there is lots to do. Some 120 staff and students advise applicants making a late bid, as well as ones who have missed the grades they need to get in. Scribbled posters count the remaining spots, and remind those on the phones to check for an English-language qualification. Most important, one concludes, is to "have fun...we are making (some) dreams come true! :)"

At Exeter, the mood is calm. But at other universities, it will be closer to panic. Each institution's future depends on securing enough students. This reflects a change in government policy. Admissions used to be managed, with limits set on the number of students each university could take. But beginning in 2012 restrictions began to be lifted, before disappearing entirely in 2015, since when universities have been free to take as many as they want. The result, says Sir Steve Smith, vice-chancellor at Exeter, is "the market, red in tooth and claw".

There is lots of variation, but in general

elite institutions have been the biggest growers. Some, including Oxford and Cambridge, have chosen not to expand. But most prestigious universities have sucked up students, grateful for their fees, which subsidise research. The intake of British

students at members of the Russell Group of older, research-focused universities has grown by 16% since restrictions were lifted. Some have ballooned. Bristol's intake has shot up by 62%, Exeter's by 61% and Newcastle's by 43%.

Universities lower down the pecking order have fared less well. The intake of British students at institutions in the post-1992 group of universities, former polytechnics which offered vocational qualifications, is flat. London Metropolitan's intake is down by 42%, Kingston's by 33% and Southampton Solent's by 28%. Some have diversified by offering more qualifications sponsored by companies, postgraduate degrees or apprenticeships. Others are getting into financial difficulty.

Universities are keenly aware that they are mostly competing with a handful of rivals for students, and that geography plays a big role in determining who those rivals are. Exeter, in south-west England, has commissioned research which shows it attracts students who live near the M5 motorway that runs into town, and struggles to recruit from anywhere north of Birmingham, in the Midlands. The university therefore keeps a close eye on Bath and Bristol, nearby institutions held in similar regard. Mark Corver of dataHE, a consultancy, notes that many larger London universities, which take students with weaker grades, have struggled as the capital's secondary schools have got better, providing youngsters with the qualifications to aim higher. So too have universities in remote

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► parts of the country, including Cumbria and Aberystwyth.

Students seem to prefer close-knit, campus universities. Exeter is one example. Others include Aston, which takes 66% more British students than it did before the cap was lifted; East Anglia, which takes 34% more; and Bath, which takes 24% more. It tends to be easier to build on a campus than in a city centre, says Mike Nicholson, head of admissions at Bath. And for a generation of students who party less, study more and are often influenced by cautious parents, campus universities are a nice half-way point between school and adulthood.

Universities not attracting enough students have to adapt. Since the new system was introduced, almost all have charged the maximum allowed—now £9,250 (\$11,250) a year. Since students are entitled to government loans, which they don't have to repay until they earn more than £25,725 a year, they are relatively unfussed by upfront costs. But price competition has begun to emerge in the form of hefty scholarships. A more common way to appeal to students is to lower the grades for entry. At its most devious, this takes the form of offers which do not require the applicant to achieve any grades at all, provided they make the university their first choice. Recruiting students will at least get easier as the number of 18-year-olds rises in 2021.

Improving a university's appeal through more reputable means is hard, but not impossible. Coventry has shot up the rankings, and has a 50% bigger intake than a decade ago. In 2010 a "shocking" low score in its student-satisfaction survey prompted a rethink, says Ian Dunn, the university's provost. Now feedback is requested midway through a course and students are informed of changes made as a result within five days. The university has set up a college which offers degrees from £6,350. It has also cut back joint courses, like accounting and finance, which students enjoyed less. Before the rules changed, Exeter had gone further still, getting rid of weak departments, including chemistry. But nationwide, student satisfaction is yet to rise, indicating these universities are in a minority (the measure is, though, a lagging indicator, as students fill in forms only after finishing their degree).

Growth is no guarantee of financial stability, as can be seen at Cardiff and Surrey, which have taken in lots more students but not enough to match their spending. That is little consolation for the small number of universities, struggling to attract applicants, which are said to be near bankruptcy. Changes in policy have caused a great deal of flux in higher education. But the growing number of students at elite universities would probably regard the flux as a price worth paying. ■

Foreign policy after Brexit

All at sea

The capture and release of an Iranian tanker shows Britain's diplomatic bind

A SUPERTANKER LOADED with oil headed east from the Strait of Gibraltar into the Mediterranean, bound for Greece, just before midnight on August 18th. Nothing unusual in that—120,000 vessels navigate the strait each year, carrying a third of the world's oil and gas. But the Iranian-flagged *Adrian Darya 1* was no ordinary tanker.

Days earlier she had been renamed and reflagged, with fresh paint covering her old identity, *Grace 1*. That accompanied her release from over a month of detention in Gibraltar, a British overseas territory. The episode not only marked the latest chapter in a bitter struggle between Iran and America. It also highlights Britain's strained effort to balance its Iran policy between American belligerence and European emollience.

The backdrop is President Donald Trump's withdrawal last year from a multinational nuclear agreement that his predecessor, Barack Obama, reached with Iran in 2015. This deal had limited Iran's nuclear programme in exchange for relaxing sanctions. But American sanctions were tightened sharply in April under Mr Trump's policy of "maximum pressure". Iran has hit back, apparently attacking ships in the Gulf of Oman in May and shooting down an American spy drone on June 20th. The latter caused Mr Trump to order—and then cancel—air strikes on Iran.

That was the febrile atmosphere on July 4th, when British marines abseiled onto the deck of the *Grace 1* in Gibraltarian wa-

ters. They did so on the basis of American intelligence suggesting the tanker's oil was bound for Syria, whose main refinery is under EU sanctions. On July 19th Iran procured a bargaining chip by grabbing a British tanker, the *Stena Impero*, in the Strait of Hormuz. That may have strengthened Iran's hand. But it was not until it promised that the *Grace 1* would not be sent to Syria, or any other forbidden destination, that Gibraltar agreed to release the vessel.

That was a relief to Britain. The threat of further ship-grabs would diminish, and Iran would probably release Britain's tanker in turn. But with the *Adrian Darya 1*'s paint barely dry, a court in Washington, DC, issued a warrant for its re-seizure, on the basis that the ship was secretly controlled by Iran's Islamic Revolutionary Guard Corps, which America considers a terrorist organisation. That cut no ice with Gibraltar. It pointed out that the EU's sanctions laws differ from America's, and that Europe—like the rest of the world—does not deem the Revolutionary Guards terrorists.

The diplomatic tussle has put Britain in a tight spot. Like its European allies, it wants Iran to stick to the nuclear agreement. In January Britain spearheaded, with France and Germany, the creation of Instex, a barter mechanism to enable certain Europe-Iran transactions, particularly for humanitarian supplies. British diplomats are eager to soothe Iran with trade. The seizure of the *Grace 1* threw a spanner in the works, not least because Britain was prodded into action by American intelligence.

Boris Johnson, who succeeded Theresa May as prime minister midway through the tanker crisis, has adopted a confrontational position towards the EU regarding Brexit. He has also courted Mr Trump, who is holding out the prospect of a post-Brexit trade deal to help cushion the British economy.

That leaves Britain's Iran policy in a parlous position. Should Mr Johnson keep siding with the Europeans, he may anger America, risking the promise of a trade deal. But if he backs Mr Trump and heaps pressure on Iran, he could cause the collapse of the nuclear deal and a spat with Europe. "You can't maintain that post-Brexit you'll be a loyal ally of European nations in matters of security and ditch 20 years of Iran policy by moving over to the American side," says Sir Richard Dalton, Britain's ambassador to Iran in 2003-06.

So far Mr Johnson has sought a balance. Whereas Mrs May tried to organise a European security mission for the Gulf, Mr Johnson signed up to an American-led scheme. John Bolton, Mr Trump's national security adviser, noted with pleasure that the choice "reflects a change from the prior government". But the *Adrian Darya 1*'s release shows that even Mr Johnson is unwilling to break with Europe and join Mr Trump in throttling Iran. At least not yet. ■



Oil and trouble

Bagehot | Boris's brain

The Downing Street Policy Unit is back at the heart of government



AT ITS BEST, the Downing Street Policy Unit can be one of the great engines of British government—a generator of new ideas and a recruiter of bright outsiders. Under Margaret Thatcher it championed privatisation and deregulation. Under Tony Blair it powered public-sector reform. But under Theresa May it withered into insignificance. In Mrs May's glory days—they did exist!—Nick Timothy tried to do all the thinking and after her disastrous election the lights in the Policy Unit went out completely.

They are blazing once again. The Policy Unit is now more than 20-strong, with impressive new recruits such as Liam Booth-Smith, a think-tanker, and John Bew, a professor at King's College London and author of an excellent biography of Clement Attlee. So far the atmosphere is all energy and camaraderie. The unit's members feel like commandos who have been given a momentous mission (taking Britain through Brexit) and have survived a hazing by a tough sergeant (Dominic Cummings). The day starts with a meeting at 8am and ends with another one at 7pm.

Boris Johnson has a journalist's interest in ideas—the bigger and brighter the better. He also has a Churchillian taste for mavericks. During the second world war Churchill surrounded himself with oddballs like Frederick Lindemann ("the Prof"), reasoning that unconventional times required unconventional solutions. Mr Johnson has concluded from the past two years of paralysis that the safest option may be the riskiest, and the riskiest the safest.

The maverick-in-chief is Mr Cummings, who sits above the Policy Unit rather than in it but whose influence is omnipresent. Mr Cummings is nothing if not an ideas man and frequently sets his underlings weekend homework such as finding areas of British comparative advantage that will strike fear into the European Union. The head of the Policy Unit, Munira Mirza, is a former member of the Revolutionary Communist Party, a Trotskyite groupuscule, and enthusiastic contributor to its house organ, *Living Marxism*. Many of her former comrades-in-arms such as Claire Fox, a member of the European Parliament for the Brexit Party, are prominent in Conservative Eurosceptic circles.

Will the Policy Unit be able to preserve its place at the heart of government? It is one thing to work yourself up into a frenzy of enthusiasm when Parliament is in recess and you've been in your job

for a month. It is another to keep going when Parliament is in turmoil and hundreds of thousands of protesters are on the streets. Mr Johnson's government could easily end up being one of the shortest-lived in history. Yet if it survives—and particularly if it survives with an enhanced majority after an autumn election—there is a good chance that the Policy Unit will remain at the heart of Boris-world. Mr Johnson has a close relationship with Ms Mirza, forged when she was one of his deputies as mayor of London and reinforced when she defended ill-judged comments he had made about burqas. During Mr Johnson's first few weeks he has demonstrated the value of energy in the executive, setting a clear agenda for government, issuing a flurry of domestic-policy initiatives and centralising power in Downing Street.

Which all raises an intriguing question: what policies will the Policy Unit produce if Mr Johnson gets to stay in office for the longer term? The easiest way to answer this question is to study Policy Exchange, a centre-right think-tank whose alumni, including Ms Mirza and Messrs Booth-Smith and Bew, dominate the Policy Unit and are scattered throughout government. The think-tank has a library of papers on everything from the Irish backstop to social care. At the moment it is particularly interested in using infrastructure spending to bind the United Kingdom together. It is a measure of Policy Exchange's influence that Mr Johnson referred to its recent paper on creating a British space programme in his first speech on the steps of Downing Street.

A second way is to study Mr Cummings's voluminous blog postings. Mr Cummings is an inveterate champion of reforming Whitehall and taking on vested interests (which he calls "the blob"). But perhaps his most interesting recent musings focus on how Britain is falling behind in the race to apply science and technology to solving practical problems—for example, using big data to tackle crime and agri-tech to boost productivity on farms.

Defining Johnsonism

A third way is to study Mr Johnson himself. This is harder than you think. Though he has basked in the public eye for decades, Mr Johnson is a consummate shape-shifter. But a couple of things strike Bagehot about the prime minister in his current incarnation. One is that he sees himself as a liberal Tory who is fulfilling the party's historical function of adjusting to the arrival of a new force in British life—in this case nationalist populism. Mr Johnson is likely to embrace a peculiar mixture of liberal causes (such as environmentalism) and populist ones (such as stiffer prison sentences). The second is that Mr Johnson sees politics through the prism of City Hall, his former base as mayor, just as Mrs May saw it through the prism of the Home Office, which she ran before Downing Street. His main focus other than Brexit is on basic public services such as policing and transport. He has a (sometimes fatal) fascination with big infrastructure projects. Leaving aside Europe—admittedly a big aside—Mr Johnson is intellectually closer to Michael Heseltine, with his enthusiasm for fixing the problems of the left-behind with state activism, than he is to Thatcher.

All this suggests that, if Mr Johnson survives the next few months, Britain will be bombarded with a strange mix of policies. A bit of liberalism here and a bit of populism there, a flurry of initiatives for left-behind Britain one moment and a flurry for high-tech Britain the next. The challenge for the Policy Unit will not be remaining at the heart of government. It will be trying to produce some coherence out of this mish-mash—and trying to turn hot air into concrete policies that have some impact on the real world. ■



Insurance and the poor

Under cover

JALALPUR AND LUSAKA

Insurance is most useful for the very poor. How can they be persuaded to buy it?

LIKE MANY Zambian farmers, Stephen Chomba suffered badly from a prolonged drought that started just after last year's planting season in October. The maize seeds he had used in his little 12-hectare farm in Chilanga, on the outskirts of the capital, Lusaka, failed to germinate. He risked losing his entire crop. Then, to his astonishment, he received a phone-call from the seed company. He was told he was entitled to pick up replacement seeds at no cost. He was, it turned out, insured.

His story shows how technology and new ideas can bring insurance to poor people around the world—but also how difficult that task is. Moves to expand “financial inclusion” are being extended to bring the poor insurance as well as mobile-money accounts and access to credit.

It is the very poor who need insurance most of all, and as climate change makes extreme weather more common, poor farmers are likely to find themselves ever more vulnerable. Mr Chomba has seven children to support, five of them still at school. For such families a loss like the one he faced is much more than a temporary

setback. It can tip them into crippling debt or utter destitution. But most poor people around the world assume that insurance is not for them. Indeed, if they think about it at all, many wonder why they would pay money now, a premium, for something they hope never to need, a claim for some unforeseen loss.

Since 2011 the World Bank, with funding from the Bill and Melinda Gates Foundation, has produced a financial-inclusion index, or “Findex”, an attempt to measure access to financial services. Included in the most recent Findex, covering 2017, was a survey of farmers across a range of poorer countries. About half had experienced at least one very bad year in the past five. The vast majority had borne the entire financial risk of the loss, receiving nothing from either an insurance payout or government assistance (see chart on next page).

In India, for example, many poor farmers have no insurance, says Shree Kant Kumar, of Vimosewa, the insurance arm of SEWA, a women's union and microfinance provider. “Most insurance is either subsidised or forced,” he says. Based in Ahmed-

abad, in the state of Gujarat, Mr Kant says that in the 1980s SEWA noticed that some of the women to whom it had lent money were unable to repay because a calamity had befallen them. So in 1992 it started offering life insurance, adding health insurance in 2000.

The government also offers a crop-insurance scheme, which is subsidised. But this is available only to farmers who take out loans through co-operatives, and tend to be relatively well-off. Mr Kant says Indian small farmers cover their risks as their ancestors did—by hoarding produce and having more children, to look after them, they hope, when they are old.

A lose-lose policy

Among a group of rice-farmers in the village of Jalalpur are some who have dabbled with insurance, thanks to the government-subsidised scheme. Some complain it did not pay out despite terrible harvests in 2015-16. Others have had no claims, and resent paying premiums and getting nothing back. Indeed, SEWA has now begun to pay no-claims bonuses to people who do not submit a claim for several years.

In Zambia Mr Chomba did recall that, when he bought his seeds, the salesman had mentioned insurance. But he had assumed it was just part of his patter. In fact, in giving his mobile-phone number he had registered for insurance. It covered only non-germination, and paid out only in seeds. The extended drought left him with a crop about one-fifth of a normal year's. ►

► But that was a lot better than nothing.

Mobile-phone adoption has outpaced both financial inclusion and insurance coverage. According to GSMA, an organisation of mobile operators, 5.1bn people—two-thirds of the world—had mobile phones in 2018. It expects the number to rise to 5.8bn, or 71% by 2025. According to the Findex, 78% of the world's unbanked adults receiving wages in cash had a mobile phone. Even Zambia, a poor country, has a mobile-penetration rate of over 80%.

Seeds of distrust

This makes it easier to reach the unbanked, both to market insurance services to them and to manage and even pay claims. It is still, however, a tough sell. An agricultural fair in Zambia's Mumbwa district is a three-hour drive from Lusaka, much of it through maize fields desiccated by drought. A farmer at the fair says the year has been so bad, "it will send all but the very strong to the wall." But he and others there find the idea of crop insurance tricky to grasp. Trying to explain are representatives of Pula, the "insurtech" firm that designed the coverage, and the Zambian subsidiary of Bayer, an agribusiness giant, that sells it with its maize seeds. The idea is unfamiliar. And sometimes farmers buying seed do not go through the minimal registration procedure needed for insurance—the seed shop may not explain it to them, or they are in too much of a hurry.

In selling insurance to the poor, three things seem most important: trust, price and ease. The most important way of establishing trust is the demonstration effect. One of the seed-marketers in Mumbwa laments that more fuss is not made about payouts like the one Mr Chomba received. Kamlaben Dayabhai Parmar, a midwife and an insurance agent for SEWA in Gujarat, would agree. In her village, 35 families are insured through SEWA; she receives a small cut of the premiums. Her main sales tactic is to make payments public—large claims, for example, are paid at village meetings.

Correspondingly, where claims are not paid, or met in full, insurance can soon get a bad name, often unjustifiably. So Ms Parmar is interrupted while advertising the benefits of insurance by an assertive woman in a pink sari, who complains that she made a health claim, and received 2,000 rupees when her total costs were 10,000 rupees. She terminated her policy when the premiums rose.

Similar problems have dogged some "index-insurance" schemes. A number of firms in east Africa offer farmers crop-insurance that will pay out automatically to a mobile-phone account, without the need to put in a claim, if, say, a rainfall index drops below a certain threshold. This is ingenious. Following an index is cheaper than assessing farmers' lost crops, or

counting how many of his cows have survived a drought. And since the index is out of the farmer's control, "moral hazard" is reduced—he cannot do anything to make a payout more likely. But the enthusiasm for index insurance has waned somewhat. It has to make some general assumptions. Some policyholders might lose their crops but receive no payout, discouraging others.

The other important elements in increasing take-up of insurance—price and ease—are often linked. MicroEnsure, a British-based "insurtech", signed up millions of customers by offering life-insurance policies given away with mobile-phone top-ups, as an incentive to loyal customers. It provides cover to 8.6m people in Africa and Asia. But its boss, Richard Leftley, says that asking customers to answer even three simple questions (name, age and next of kin) could be enough to deter them from taking up a free offer.

Or insurance may be bundled with a product, making the price invisible and buying it as straightforward as possible. People, says Ndavi Muia of Bayer, will not pay for insurance unless it is a statutory requirement, like motor insurance. So Pula's premium is paid by the seed company, which absorbs the cost and bundles the insurance with its product to boost sales. It can afford this because the payout is in seed and the risk period relatively short.

The idea of buying insurance against the failure of a product you are purchasing seems obvious to many people in developed markets, but not to many poor people. Lumkani, a Johannesburg-based firm, sells fire-detection equipment (Lumkani means "beware" in Xhosa). South African townships suffer lots of fires. Lumkani's devices are networked, so that an alarm triggers those nearby, and users get an SMS alert of a fire in their district, or indeed their own

home. They also come with fire insurance, with coverage for total losses up to 40,000 rand (\$2,600). For smaller losses, says David Gluckman, Lumkani's boss, policy-holders often have to be chivvied into claiming.

An Indian insurer, called Toffee (as in "as easy as...") offers a range of products, such as theft and damage cover for bicycles, "commuting" insurance (for accidents riders might have); and insurance against mosquito-borne diseases such as dengue (which it hopes pharmacies will promote to people buying insect-repellent). It boasts that it takes less than 200 seconds to buy a policy on its app or website and less than three days to pay claims.

Such insurtech firms can win business by serving the poor, venturing into parts of the market long neglected by insurers, and through digital processes, exploiting the chronic inefficiency of well-established competitors. But it is hard for them to make large margins. They are intermediaries between customers and the insurance companies that actually underwrite the policies. Many also find it hard to achieve the volume of business that would bring economies of scale.

Insurance as a service

Many working on insurance for the poor believe that, to make a real difference, insurers need to do two things. The first is to think of their role rather differently, "to move beyond providing merely an indemnity for losses", in the words of Hugh Terry, founder of the *Digital Insurer*, an online trade journal. Rather they should be helping clients reduce and manage risk, using the new technologies to advise and incentivise them into better practices: farmers into planting the right seeds at the right time; health-policy holders to manage medical conditions online and so on.

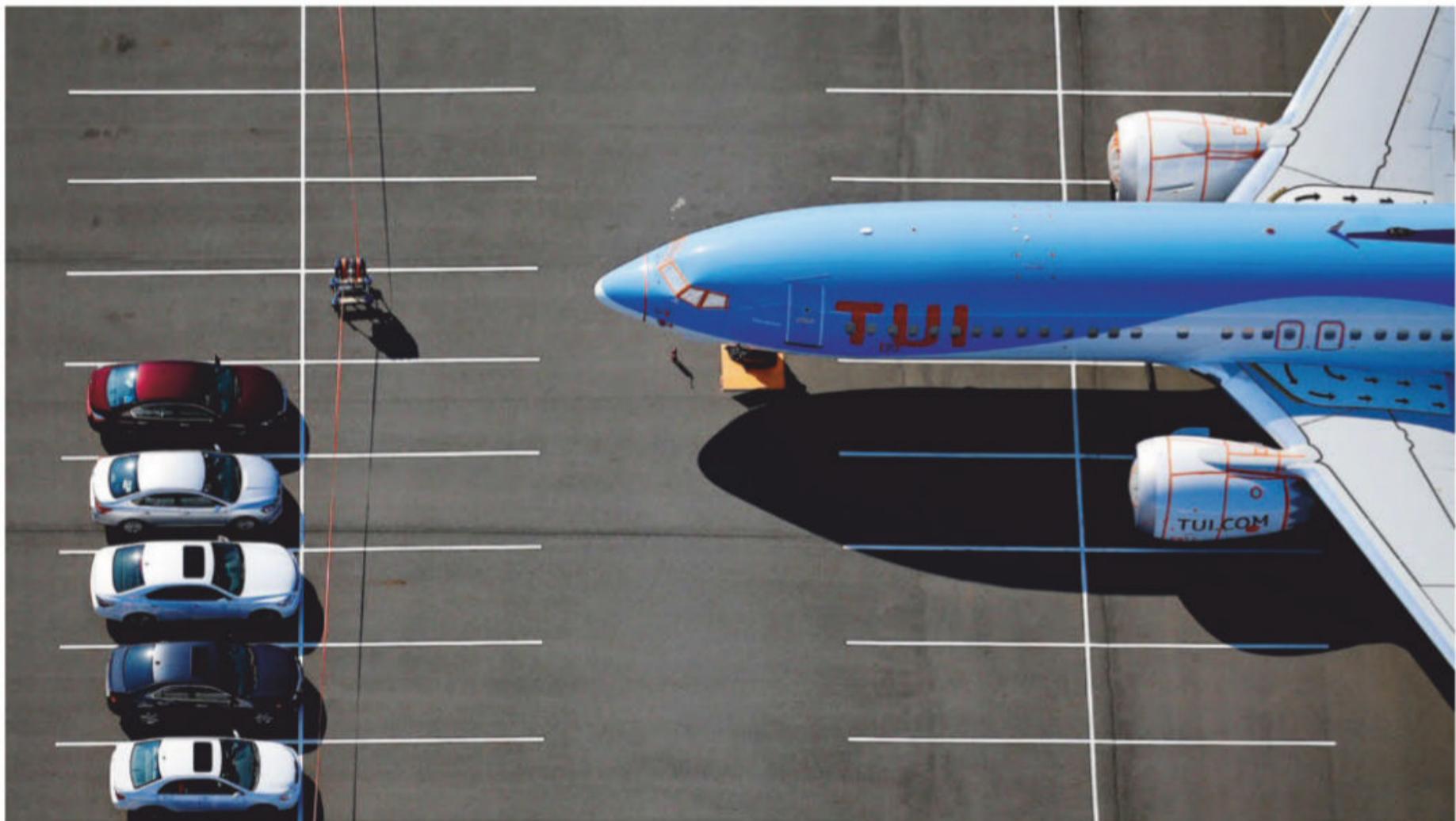
Second, in poor countries, they probably need to work with governments, and governments will need to use some of the money they spend on their poorest citizens to promote insurance. Pula, for example, is on a pilot scheme in Zambia, involving 150,000 farmers. They will be offered crop-yield insurance, sold with seeds and fertiliser, under the government's Farmer Input Support Programme, which subsidises the cost of inputs to small-scale maize-producers. This will be the first time the government has used a "yield index", covering a wide range of risks affecting the harvest, as opposed to a simple weather index. Pula already has a similar collaboration with Nigeria's government.

The upshot should be that more farmers will benefit from the comfort Mr Chomba received from having something of a safety-net. And, as insurance becomes more commonplace, fewer, presumably, will be so taken by surprise. ■

At their own risk

Adults living in a household where growing crops or raising livestock is a main source of household income, selected countries, 2017, %





The aerospace industry

Tick tock

As newly built 737s pile up in factories and car parks, the aerospace industry waits for Boeing's bestselling plane to return to the skies. Fingers crossed

BOEING HAS long been a central cog of America's industrial machine. Each year it sells \$100bn-worth of aerospace equipment and services around the world and pays \$45bn to other American firms. It is the world's largest aircraft-maker and America's largest manufacturing exporter. Its commercial jets, which account for 60% of revenues, ferry millions of passengers. One in 100 American workers toils either directly for Boeing, whose workforce numbers 137,000 in its home country, or one of its 13,600 domestic suppliers, which employ a further 1.3m people in mostly well-paid jobs. In short, what is good for Boeing is good for corporate America.

The flipside is also true, as has become obvious in the wake of two crashes of Boeing's 737 MAX aircraft, in October and March, which have been linked to a malfunctioning flight-software system, and which killed 346 people. The human cost is immeasurable. The financial blow to Boeing itself, its suppliers and its airline customers is more tangible—and mounting.

The company has continued to churn out the troubled aircraft since its ground-

ing by regulators in March. But it has not been able to deliver them to customers. As a result Boeing's inventories have grown by \$6bn so far this year. The flightless planes fill all free space at its facilities, including car parks. Add the knock-on cost for airlines and for the supply chain and a rough estimate is that every quarter that the best-selling airliner remains on the ground costs \$4bn. As the bill spirals an entire industry is now willing the plane to be back in the air by the end of the year.

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— Bartleby is on holiday

Start with the airlines. Pressure on carriers to cut costs made the fuel-efficient MAX Boeing's fastest-selling model ever. Around 5,000 have been ordered since its launch in 2011 and nearly 390 delivered. Southwest, an American carrier with 34 such planes, has cancelled thousands of flights. In July it revealed a \$175m hit to pre-tax profits in the second quarter. American Airlines, which has scrapped 115 or so flights a day, reckons that full-year profits will be \$350m lower as a result. OAG, an airline-data firm, estimates that, globally, the grounding will cost airlines \$4bn in sales by November. Many airline bosses would agree with Michael O'Leary, chief executive of Ryanair, Europe's second-biggest carrier with 135 MAXes on order, who has told Boeing to "get their shit together".

Some airlines have put the plane back in their schedules for November, on the assumption that once Boeing submits fixes to the faulty software in September, America's Federal Aviation Administration (FAA) and its counterparts in other countries will allow a return to service before the end of the year. This looks optimistic. Even if regulators approved the new software, it would take six to eight weeks to get planes out of storage and in the air. And as Jose Caiado of Credit Suisse, a bank, points out, it is unclear if pilots require retraining in flight simulators, adding more delays. Southwest, which aims to get the MAX in the air by January, seems to admit as much.

In the meantime, airlines are plugging gaps with other planes. Southwest is retir-

►ing seven fewer older, thirstier 737s from its fleet this year than it originally planned. United Airlines is pressing into service wide-bodied jets, which are costlier to run than single-aisle jets like the 737 and so generally reserved for long-haul routes.

Affected airlines can expect compensation in kind from Boeing, in the form of bigger discounts and better deals on other services. The same cannot be said of Boeing's suppliers. It has relentlessly squeezed their profit margins in recent years in search of efficiency. Many have invested in extra capacity to supply parts for 57 MAX planes a month, Boeing's original production target for this year. Instead, Boeing cut monthly output back from 52 to 42.

Low spirits

Spirit AeroSystems, which gets around half its revenues from supplying fuselages for the 737 MAX, saw margins slip and is cutting overtime and putting workers on unpaid leave to cut costs after "disruption in a complex production system", says its boss, Tom Gentile. It has lost 28% of its market capitalisation, or around \$3bn, since March. Allegheny Technologies, which makes composite materials used in the aircraft, has been similarly clobbered. General Electric, America's troubled engineering giant which supplies MAX engines in a joint venture with Safran, a French aerospace company, faces a bigger bill. It is paid only when planes are delivered. It estimates that its cashflow could be reduced by as much \$1.4bn in 2019, adding to its woes (see next story). Safran's results for the first half of 2019, due on September 5th, will be pored over for signs of trouble.

Most aerospace firms do not live by Boe-

ing alone. That, and Boeing's decision to maintain production, has insulated them from a bigger fallout. UTC, an American conglomerate which makes electronics, seats, wheels and brakes for the MAX, reckons the delays will have only a small impact on profits. The situation for suppliers is summed up neatly by David Squires, boss of Senior, a British firm that makes high-tech components not only for Boeing but also for GE and Spirit. The grounding has not been devastating, he insists. That said, his firm will now be where it hoped to be in April 2019 only by the start of 2021.

Then there is Boeing itself. The 737, the first of which took to the air half a century ago, has been a huge seller for the company—the 10,000th rolled off the production line in 2018. In March Goldman Sachs, a bank, estimated that the MAX may account for a third of Boeing's overall revenues (including its defence business) in the next five years. Although no MAX orders have been cancelled so far, Boeing has not booked any new ones either. Further delays, Boeing has admitted, may force it to cut production further—or even shut it down altogether.

The fiasco has already led the plane-maker to postpone plans to develop a new twin-aisle plane to replace the ageing 757. Its share price has dropped by 25% in the past five months, wiping \$62bn from its stockmarket value. It reported a record quarterly loss of \$2.9bn in the three months to June, after it set aside \$4.9bn for compensation for angry airlines. It may need to allocate more towards other contingencies. Southwest's pilots have already sued Boeing for lost wages resulting from cancelled flights. Crash victims' families

are also preparing lawsuits.

Boeing can endure the financial pain for a while longer. Its duopoly with Airbus means that, in the short run, airlines and suppliers have little choice but to bear the costs stoically. Boeing's chief executive, Dennis Muilenburg, appears confident that the MAX will be flying again before its commercial partners and investors run out of patience.

Many in the industry seem to share this conviction—regulators will not, the thinking goes, jeopardise Boeing's future because the company is too big to fail. Perhaps. But the FAA, roundly criticised for being slower than other regulators to ground the plane, and earlier granting Boeing wide-ranging powers of self-certification, is in no mood to prove them right. ■

General Electric

Back on the Street

NEW YORK

A troubled industrial giant gets a boost from an unexpected quarter

ON AUGUST 20th credit-raters at Fitch warned of insufficient financial reserves against the costs of long-term care for buyers of insurance products at General Electric. Days earlier Harry Markopolos, an accounting investigator, alleged inadequate provisioning of reserves in GE's insurance division and improper accounting of its Baker Hughes petroleum holdings. This, claimed the corporate sleuth, who shot to fame by uncovering Bernard Madoff's Ponzi scheme, may dig a \$38bn hole in the industrial conglomerate's books. Its share price fell by 11% in response.

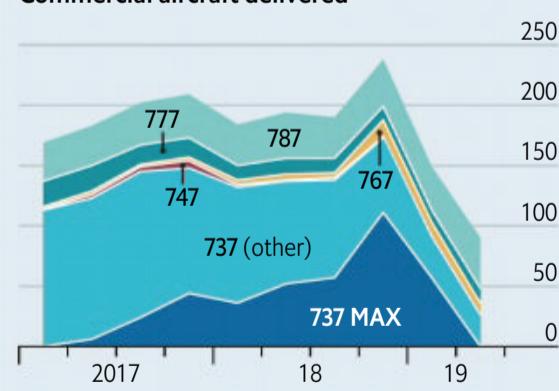
So far, so familiar. Management missteps and other stumbles have erased 70%, or \$200bn, of GE's market capitalisation since 2016. Nor did the full-throated defence of GE by its executives come as a surprise, though it took a particularly macho form when Larry Culp, its third boss in as many years, bought \$3m in GE shares to show his confidence in the company. What was really surprising was the chorus of support for the struggling giant from experts, investors and analysts.

Harvey Pitt, a former chairman of America's Securities and Exchange Commission (SEC), criticised Mr Markopolos for going public without giving his target the chance to respond to his concerns. Stanley Druckenmiller, a respected billionaire investor, praised Mr Culp's efforts to turn around the firm and added to his GE holdings. Goldman Sachs, which does not rate GE's shares, sent clients a private analysis which concluded that its long-term-care reserve lev-

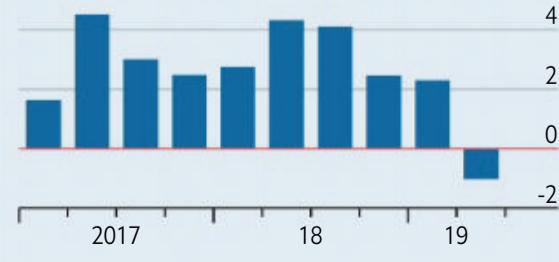
The MAX factor

Boeing

Commercial aircraft delivered



Free cashflow, \$bn



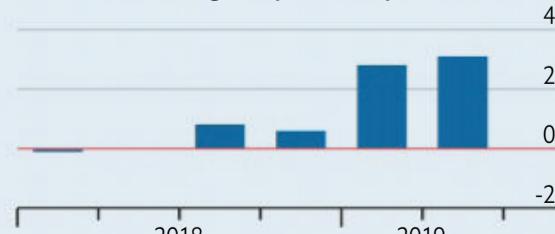
Sources: Company reports; Bloomberg

737 MAX orders

Top buyers, July 2019



Inventories, change on previous quarter, \$bn



► els "compare favourably to peers".

Even some short-sellers backed GE—and chastised Mr Markopolos for giving them a bad name by writing his report for an investor in exchange for a cut of any profits made if GE's share price declined. One prominent short-seller called Mr Markopolos "reckless, dishonest, and most importantly secretive".

This sudden flurry of support does not mean that GE is in the clear. Joshua Ronen, an accounting professor at New York University's Stern School of Business, has reviewed GE's official filings about its holdings in Baker Hughes and found them "confusing". The SEC and the Justice Department are investigating it for accounting irregularities at its insurance and power-generation divisions. GE vehemently denies any wrongdoing. As for the risks embedded in its long-term-care portfolio, the diverging opinions from Goldman Sachs and Fitch suggest that reasonable people can disagree about the size of the liabilities. But they are large.

And Mr Markopolos, too, has his defenders. Carson Block of Muddy Waters, a prominent short-seller, points out the investigator's fee is not improper as long as he disclosed his economic interest, which he did. "Nobody does research for charity," Mr Block says. Still, the fact that so many people jumped to GE's defence betrays a renewed optimism about America Inc's erstwhile darling. With Mr Culp, recruited after a successful stint running Danaher, a smaller conglomerate, at the helm, GE may at last be finding friends on Wall Street. ■

Business in China

Wings clipped

SHANGHAI

A mainland assault on Cathay Pacific rattles multinationals in Hong Kong

MULTINATIONAL COMPANIES in Hong Kong operated under the convenient illusion, nurtured by China's Communist Party, that the mainland would not meddle (too much) in the territory's business affairs. That faith, already shaken during weeks of political protests against the entrepot's pro-Beijing government, is in tatters following China's treatment of Cathay Pacific, an airline based in Hong Kong. Earlier this month China's aviation regulator barred cabin crew found to have participated in or supported the demonstrations, which many Cathay staff openly had, from flying over the mainland. The carrier yielded to the pressure and even fired four staff, including two pilots. On August 16th it announced the departure of Rupert Hogg,



chief executive since 2017. Though Mr Hogg said he was taking responsibility for what had been "challenging weeks" for the airline, China left little doubt as to the circumstances of his exit.

Businesses have a right to be rattled. The assault on Cathay is unprecedented in its speed and scope. Chinese state media shrilly denounced the company, and social media brimmed with indignant calls to boycott it. CCTV, China's state broadcaster, reported Mr Hogg's departure half an hour before Hong Kong's bourse, where Cathay is listed. CCTV paired it with a Chinese internet meme that roughly translates to "You would not be in trouble if you had not asked for it." Even after the firings, *Global Times*, a party mouthpiece, accused Cathay of a "lukewarm attitude" in disciplining "radical employees".

More troubling than the jingoistic outbursts was the concerted economic pressure piled on the company. ICBC, a big state-run bank, put a "strong sell" recommendation on its stock. Other state-owned enterprises, including CITIC Bank International and China Resources, have instructed workers not to take Cathay flights.

Cathay's ordeal has sharpened the conflicting pressures on multinationals in Hong Kong with business in the mainland: pleasing both authoritarian China and their democracy-loving staff in Hong Kong. Merlin Swire, the chairman of Swire Pacific, Cathay's parent company, whose interests on the mainland range from bottling to property, travelled to Beijing on August 12th. A foreign private-equity manager in Hong Kong says that companies are "walking on eggshells". A former employee at a big Western law firm says that protests are not to be discussed at work for fear of irking mainland colleagues and clients. Last week Finnair's local recruiter warned the Finnish airline's crew that they could be barred from flights if they linked the company's name with the protests on social media. The mainland bosses of a large state-owned enterprise recently told colleagues

in their Hong Kong subsidiary that it wanted to hire more staff there—but that all would have to be vetted to ensure none had participated in the demonstrations.

Many in Hong Kong balk at such subservience. David Webb, a respected activist investor, called Cathay's concessions "the most appalling kowtow to Peking" and said that its "shameful appeasement" had done great damage to its brand. On August 20th Jeremy Tam, a Cathay pilot who is also a pro-democracy lawmaker, said he had quit the airline. Days earlier a crowdfunding newspaper ad by local employees of the Big Four accounting firms—Deloitte, Ernst & Young, KPMG and PwC—blamed their Hong Kong branches for turning a deaf ear to the protests. *Global Times* duly demanded that the firms investigate who was behind the ad and sack them. (So far the Chinese authorities have not made such demands.)

Interesting times

Some business types believe things may go back to normal. Hong Kong remains a gateway to China's gargantuan market. Few know this better than Cathay: close to a quarter of its destinations are in the mainland. Cathay was, in the words of one senior Western banker, "the pound of flesh that was necessary, but it was a clean cut".

China, for its part, has an interest in returning to the days when businesspeople believed its promise of "one country, two systems". As for Cathay, Air China holds a 30% stake in the airline. Old rumours of the flag carrier's intention to buy Cathay outright have resurfaced. Luya You of Bocom International, a broker, says an acquisition would transfer Cathay's global expertise to Air China and "quell China's concerns about its foreign background" (ie, Swire). Given all the turbulence, few expect such a high-stakes deal to happen soon. Still, in the meantime, Ms You has a simple message for investors: "Do not underestimate China's resolve to punish Cathay as a symbol for others." Many will have heard that disturbing message loud and clear. ■

Semiconductors

Growing smartly

PALO ALTO

Will the chunkiest AI chip on the planet find buyers?

COMPUTER BRAINS are tiny rectangles, becoming tinier with each new generation. Or so it used to be. These days Andrew Feldman, the boss of Cerebras, a startup, pulls a block of Plexiglas out of his backpack. Baked into it is a microprocessor the size of letter paper. "It's the world's biggest," he says proudly, rattling off its technical specs: 400,000 cores (sub-brains), 18 gigabytes of memory and 1.2trn transistors. That is, respectively, about 78, 3,000 and 57 times more than the largest existing processor from Nvidia, a chipmaker.

Cerebras is leading a shift in semiconductors that was on display at Hot Chips, an industry gathering at Stanford University, where startups like Mr Feldman's and giants such as Nvidia and Intel showed off their new silicon wares on August 19th.

Cramming ever more transistors on standard chips—twice as many every 18 months, according to Moore's Law, which has turned from an empirical observation to an industry benchmark—used to be the way to go. But with transistors now the size of dozens of atoms, improvements have become less predictable. And with the spread of artificial intelligence (AI), demand for computing power has grown by more than 300,000 times for certain applications between 2012 and 2018, according to some estimates, much faster than the 16 times or so ordained by Moore's Law.

As a result, chipmakers are now dialling up performance by, among other things, increasing the size of processors that inhale data to train AI services, from facial recognition to drug discovery. Cerebras has pushed this approach to the limit: its chip is the biggest that can be cut from the largest available wafers, the round sheets of silicon onto which transistors are etched.

To get there, the firm had to overcome more than one technical hurdle. One is defects: every wafer has some, so Mr Feldman's team had to find a way to bypass faulty cores. Another is cooling: water pumped through tiny pipes carries away the great heat that cores generate. Cerebras has also built a specialised computer for its new chip which it claims will deliver 150 times more number-crunching power than the best server based on graphics-processing units, today's AI workhorses.

Those attending Hot Chips were passably impressed when Cerebras presented its new processor. But the biggest hurdle for Cerebras may be economic, not techni-

Productivity

Can get some satisfaction

How to keep your customers happy

AHAPPY CUSTOMER is a repeat customer, or so the saying goes. But how can a business keep clients satisfied? The answer, according to a recent study, is to treat employees well. Glassdoor, a website which let workers assess employers, looked back over the records of 293 companies across 13 industries between 2008 and 2018. It then studied the link between employee satisfaction, based on its own ratings, and the American Customer Satisfaction Index, a benchmark gauge of shoppers' sentiment.

A one-point improvement in Glassdoor's rating (on a five-point scale) translated into a statistically significant 1.3-point increase in customer satisfaction (rated from zero to 100). As might be

expected, the link was strongest in industries where workers have the most direct contact with customers, such as retail, restaurants and tourism. In such trades, a one-point gain in employee satisfaction rating raised that of customers by 3.2 points (see charts). Companies with high scores for both employee and customer satisfaction include Southwest Airlines, Trader Joe's, a grocer, and Hilton Hotels. The link is less strong among manufacturing and energy firms.

More pertinent to bosses, Glassdoor also cites a study showing that higher customer satisfaction leads to higher market value. So here is a tip for chief executives: be nice to the front-line staff and your bonus might be bigger.

Please please me

United States, company satisfaction ratings, 2008-18



Source: Glassdoor

*American Customer Satisfaction Index, maximum=100 †Glassdoor rating, maximum=5

cal, says Linley Gwennap of *Microprocessor Report*, an industry newsletter.

One question is whether other firms that have a huge demand for computing power, including banks and oil giants, will buy such AI supercomputers, instead of having their data crunched in a cloud. And Mr Feldman has yet to convince big providers of cloud computing, such as Amazon Web Services, Microsoft Azure and Google Cloud, that Cerebras's superior performance relative to machines packed with

Nvidia chips outweighs the extra costs, for instance in higher power consumption.

Though the name Cerebras is meant to echo cerebrum, the largest part of the human brain, it also bears a resemblance to Cerberus, the giant three-headed dog guarding the entrance to Hades. The industry's more fearsome beasts, whether chipmakers or computer manufacturers, may need little convincing to gobble it up while it is still a puppy, as they have done with other AI-chip pioneers before it. ■

Confessions of a tycoon

Mea culpa

BERLIN

A fallen corporate star reflects on failure in German business

GUILTY IS THE title of a book presented on August 20th by Thomas Middelhoff, the former boss of Bertelsmann, a media conglomerate, once feted from Berlin to Hollywood. It is not an admission of legal guilt, for Mr Middelhoff still feels his three-year prison sentence for tax evasion and breach of trust was overly harsh. But he committed the seven deadly sins in a biblical sense, he says, which is why he feels he deserved time behind bars and the loss of his fortune, reputation, health and marriage. He wants the account of his failures to serve as a cautionary tale for businesspeople in Germany and beyond.

Mr Middelhoff's stellar rise was unusual in staid Teutonic business culture. He climbed to the top of Bertelsmann through a combination of hard work, unwavering belief in his instincts, showmanship and an Anglo-Saxon appetite for risk. Perhaps his biggest coup was a partnership with Steve Case, who at the time was the virtually unknown boss of a struggling startup called America Online. Then known as "Big T", Mr Middelhoff made a fortune for Bertelsmann when he sold its stake in AOL for close to €7bn (\$6.7bn) in 2000, just before the dotcom bubble burst.

His reward—a bonus of €45m—was the start of the undoing of his personal finances. Greed, he says, led him to invest in dodgy real-estate funds and tax-avoidance schemes. In 2002 he was forced out of Bertelsmann after clashing with the Mohn family, who own the company, over his plans to take the firm public. Eager for a second act as a German business tycoon, in 2005 he took the helm of KarstadtQuelle, which later became Arcandor, then Germany's biggest retailer. His efforts to turn around that ailing company led to his humiliating decline. He sold Arcandor's property portfolio for €4.5bn but saddled its department stores with high rents. In February 2009 it was the Arcandor board's turn to force him out. By June the retailer had collapsed.

That is when prosecutors began investigating Mr Middelhoff's conduct at the company. They uncovered his use of Arcandor aircraft for private purposes and company cash to part-finance a book honouring his mentor at Bertelsmann. In 2014 a court in Essen found him guilty. He was arrested in the courtroom in front of his family. A year later he declared personal bankruptcy.

Mr Middelhoff's tale of hubris resonat-

ed beyond the corporate world. He served as the model of the title character in "Johann Holtrop", a novel by Rainald Goetz. At the end of the novel Holtrop commits suicide. "For Germans there is no rise after the fall," says Mr Middelhoff.

The repentant mogul has already published one book in 2017 about his time in the nick and his autoimmune disease. Jarringly, he prefaced several chapters with quotes from Dietrich Bonhoeffer, a pastor imprisoned and executed by the Nazis, seemingly equating their respective fates. He is now working on his third book, a novel about the rise and fall of a business tycoon. Mr Middelhoff may be humbled. But his favourite topic is still Mr Middelhoff. ■

Corporate behaviour

Funny business

CHICAGO

What companies learn from comedians

THE SECOND CITY is the La Scala of laughs. In its 60-year history the vast comedy club on Chicago's North Side has, by night, hosted acts by Joan Rivers, John Candy, Bill Murray and other giants of the genre. By day it offers wannabe funny folk workshops on how to make others giggle. Contemporary greats like Steve Carell and Tina Fey are alumni. So, increasingly, are managers, marketers and a host of other corporate types.

Firms have used comedy as a way to hone their employees' soft skills for some time. Their number is growing, reports Kelly Leonard, the club's boss of "applied improvisation". Its comics have worked with Twitter, Google and Facebook to find ways for brainy but tongue-tied software engi-

neers to interact more easily with less tech-minded colleagues in sales or strategy. Companies from Motorola and McDonald's to Nike and Nissan believe that sending executives to comedy classes can help them get better at their day jobs. In response to clients' complaints about its able but arrogant employees, one management consultancy asked comedians to teach its clever clogs how to be less obnoxious (or at least come across as such).

Hundreds of corporate customers think jokery can encourage serious lateral thinking among workers, and get them into the habit of welcoming others' ideas. An improv exercise called "Yes, and" obliges participants to accept—and develop—any suggestion from a colleague, however bizarre. Improv classes are supposed to be safe spaces for frank, even awkward conversations, where people feel fewer inhibitions to say stupid things that may just yield something useful.

Marketers and advertisers, for their part, are tapping comics for fresh ideas. The Second City's corporate arm worked on a marketing campaign with Legget & Pratt, a Missouri-based maker of mattress springs. Farmers Insurance, a big underwriter, enlisted the club's comedians to help produce a training video that staff would willingly watch. At one afternoon workshop various Chicago-based firms met at the club for a sample improv workshop in what amounted to a focus group, where members of the public discussed their brands and products. Not all of this was funny. But frequent laughter helped to loosen tongues.

Other comedy clubs across America, such as IO in Chicago and the Upright Citizens Brigade theatre in New York, also offer professional services. The Second City says that its corporate activities already make up nearly a third of its revenues, which total over \$50m a year. No laughing matter, in other words. ■



Candy and Murray, management consultants

Schumpeter | Vodafone's search for the G-spot

Why telecoms firms view 5G with trepidation



THE GLOBAL telecoms boom that reached its zenith almost two decades ago was made for satire. It united two of the most intoxicating technologies of all time, the mobile phone and the internet. It generated the biggest wave of value-destroying takeovers the world had ever seen. Its apex, the £22.5bn (\$35bn) sale of third-generation (3G) wireless spectrum in Britain in 2000, was such a humdinger that the boffins who devised it described it, with a Pythonesque flourish, as the most successful auction since the Praetorian Guard sold the Roman Empire to Didius Julianus in 193AD.

Vodafone, a British mobile operator active across Europe, epitomised the madness of the time. Its £112bn hostile takeover launched in 1999 of Mannesmann, a German rival, was a gripping epic that went on for months—partly against the backdrop of the Savoy Grill, a posh London eatery where both sides mercilessly skewered each other. Vodafone bid almost £6bn over 150 rounds for its British 3G licence, more than any other firm. Then came the telecoms bust of 2001, almost as abrupt as the end of Didius Julianus, whose reign lasted all of nine weeks. It still haunts Vodafone today. The company's return on assets, in lofty double digits until 2000, has been negligible or negative every year since but one.

Vodafone's protracted dark ages stem from a problem common throughout Europe. Telecoms firms have built the networks over which social media, emails, cat videos and other marvels of communication flow, but the sums customers pay to use them has shrunk relentlessly. Understandably, that makes the companies wary of splashing out fortunes on the next mobile lottery, building fifth-generation (5G) wireless networks. Yet they face a prisoner's dilemma. If none of them takes part, they could all avoid a huge bill. If only one does, it will clean up. If all of them do, they all suffer. Once again Vodafone is in the thick of the action. This time its strategy gives an inkling of how to avoid the worst of the pitfalls.

To put the promise and perils of 5G into perspective, go back a few generations—to 2G, which turned the world into an interconnected talking shop. That technology generated huge profits for mobile pioneers like Vodafone. It could not, however, support enough data to enable video calls, photo-sharing and other mobile internet use that customers wanted. That gave rise to 3G.

As Ferry Grijpink of McKinsey, a consultancy, puts it, the tele-

coms firms were on the right track with their bets on 3G. But they got two things wrong: the timing, and their ability to make money from it. It took Canada's BlackBerry, and Apple, maker of the iPhone, to bring mobile internet browsing to the masses. Instead of benefiting companies like Vodafone that built the networks, Apple reaped most of the rewards, as did search engines like Google and social networks such as Facebook. During the current decade, 4G (and LTE) have provided enhanced versions of 3G, with much faster data speeds and loading times. But in rich countries fierce competition between telecoms firms has caused them to offer bigger, often unlimited data plans at low cost, hammering profitability. This is especially true in Europe, where Mr Grijpink counts 26 big mobile operators, covering a similar-sized territory as America's four big providers (soon to become three). Average monthly revenue per customer has fallen from \$35 in 2006 to around \$20.

There are patterns in this potted history. In his book, "The 5G Myth", William Webb, a consultant, writes that a new generation of mobile connectivity has emerged every decade. As a rough guide, he says each one provides a tenfold increase in data speeds, say from two kilobits a second with 2G, to two megabits a second with 3G to 20 megabits a second with early 4G. And telecoms folklore has it that the even numbers (2G and 4G) do better than odd ones.

The hype is that the arrival of 5G will break the pattern. It is coming less than a decade after 4G was widely adopted. It promises to bring a 50-fold improvement in data speeds (say, one gigabit a second). And the hope is that it will be revolutionary, bringing benefits such as immersive gaming, augmented-reality glasses, factories of the future and even remote surgery. Already, the global industry is spending nearly \$160bn a year upgrading towards 5G, and 22 5G networks are up and running.

Still, scepticism is in order. People are not clamouring for faster data, because 4G gives them enough already. After studying the internet usage of reporters at the *Wall Street Journal*, academics found that they use only a fraction of their available bandwidth, even while watching several videos at once. Much of the industrial logic of faster connectivity, such as greater use of sensors in factories, can be supplied by 4G networks. No device exists that makes a compelling business case for 5G. Mr Webb invokes the aerospace industry to warn of the perils of betting on ever-faster speeds. "5G could end up being like Concorde—a superb feat of engineering but of limited value to all but a small minority."

Awaiting renaissance

5G has already come at a cost to Vodafone. This year it slashed its dividend, partly to pay for a pricey spectrum auction in Germany. But like many of its peers, it sees 5G as a way to revitalise revenue growth. It says the new technology will support many more devices at home and at work than 4G does, will lower the cost to Vodafone of handling a lot of data, and improve the reliability of communications in everything from cars to hospitals. Its newish boss, Nick Read, is hoping to form a closer relationship with customers, who increasingly see wireless connectivity as a commodity, by offering tailor-made 5G services. He is also lobbying governments to spur investment (rather than competition) to avoid a 3G-style fiasco. He is cutting his own infrastructure costs by striking network-sharing deals with mobile operators in Britain, Spain and Italy.

Those are good ideas that may ease the 5G strain. But until the equivalent of a "killer app" comes along to bring the benefits of 5G to billions, it is not clear who will make much money from it. It is up to the telecoms firms to show that they can defy history. ■



Credit Suisse

L'étranger

Four years after Tidjane Thiam joined Switzerland's second-biggest bank, his agonising overhaul is at last paying off

TIDJANE THIAM is not the first non-Swiss chief executive of Credit Suisse. His American predecessor, Brady Dougan, held the job for eight years. But Mr Dougan was an insider, having been at the firm for ages. Mr Thiam was anything but. A citizen of France and Ivory Coast, where he was a government minister in the late 1990s, he had been a consultant at McKinsey and had overseen the European arm of Aviva and the whole of Prudential, two British insurers. Before taking the top job at Credit Suisse in 2015, he had never even worked for a bank. Charming in person and intimidating and forceful by reputation, Mr Thiam walked straight into a tempest.

From the start he knew that Credit Suisse's defences against disaster were uncomfortably thin. Its common equity tier 1 capital covered just 10.3% of risk-weighted assets (RWAs), less than at any of its peers. To bolster them Mr Thiam quickly raised SFr6bn (\$6.3bn) in equity. Unleashing his inner consultant, he set about reorganising the bank's structure, steering it towards wealth management and away from the riskier whirlpools of investment banking.

Mr Thiam promised deep cost cuts from the start, when, he now says, "there is the greatest willingness to change and no 'restructuring fatigue'".

But within months a nightmare had unfolded. In the last quarter of 2015 Credit Suisse made a stonking net loss of SFr6.4bn, as it wrote down the value of its investment bank and was buffeted by trading losses. More cash glugged away when the bank settled American charges that it had mis-sold residential mortgage-backed securities a decade before. Another share sale, raising SFr4bn, ensued in 2017. With a mild whiff of desperation, Mr Thiam even proposed floating Credit Suisse's sturdy domestic bank, an idea he later ditched.

The firm's shares—and presumably Mr Thiam—still bear the imprint of those rights issues and write-downs. Their price is half what it was when Mr Thiam took over, and about 70% of tangible book value. The bank is still not free of legal and ethical shadows: it is being sued over loans in Mozambique before his time (see Middle East and Africa section).

Nevertheless, Mr Thiam has survived

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and now argues the worst is over. The restructuring programme was completed last year. The "strategic resolution unit" (SRU) housing dud assets, which once held a quarter of RWAs, has been closed. In the latest quarter the firm's return on tangible equity (ROTE) climbed to 9.7%, roughly what investors regard as par for banks. Many European banks struggle to do as well (although Credit Suisse's bigger neighbour, UBS, which shifted its weight from investment banking to wealth management a few years earlier, rang up 11.9%). The question now is whether the restyled Credit Suisse can progress from mere stability towards higher profitability and growth.

L'ingénieur

Mr Thiam may have studied engineering in Paris, but instead of elegant simplicity he opted for an unusual, complex and asymmetrical structure for the firm, based around five divisions. One houses a Swiss universal bank. Another contains all the Asian businesses. Three functional divisions cover the rest of the world—wealth management, investment banking and global markets (trading).

In total, markets-related activities accounted for half of RWAs in 2015. Now their share is just one-third. Reckoning that banks' sales and trading revenues would stagnate, thanks to overcapacity and technological advance, Mr Thiam chose "not to be all things to all people and to have very low costs". Growth would come instead from managing the assets of rich people—►

► especially the very rich indeed. The trading platform would still be needed, but at a size to serve those clients.

He borrows a parallel from his former trade. Insurers prefer policies with repeated premiums to one-offs. Revenues from managing the assets of the wealthy, Mr Thiam says, recur like the former, because once clients place money with you, then, if you look after them, they tend to stay; trading revenues come and go like single premiums. Net new assets in wealth management in all territories have been growing at about 5% a year, and profits at 15%.

Mr Thiam's aim to be "the bank for entrepreneurs"—both while they are making money and once they have made it—is the rationale for the dedicated division for Asia, which is minting billionaires fast. If you are a tycoon whose personal and business finances are intertwined, you might want to sell shares in your firm and invest the proceeds: why should you face the hassle of dealing with different parts of the firm? Being joined up works: about half of wealth-management inflows in Asia, Mr Thiam says, come from referrals by local investment bankers.

He had also bet on Asia at Prudential, trying to buy AIA, a big regional life insurer. But that was predicated on the growing mass of the region's middle class. At Credit Suisse, he is after the truly rich. In Asia's fragmented wealth-management market, Credit Suisse's SFr219bn of assets, or a 12% share, ranks a healthy second, according to

Magdalena Stoklosa of Morgan Stanley. UBS leads the pack.

Asia still accounts for just one-sixth of revenue and pre-tax profits. After decades of globetrotting, the anchor of the firm remains reliable Switzerland, which yields fully half of profits. The integrated Swiss bank reflects the same reasoning about entrepreneurs as in Asia, but in an economy with several generations' start. Two-thirds of total growth in assets under management in the past three years, Mr Thiam says, has come from existing clients, which are also more profitable than new ones.

Yet with wealth on the up and trading in retreat, revenue growth has been sluggish. Profits have risen mainly because costs have been cut. Operating costs have been slashed by 18% in four years. Rather than shave budgets across the board, Mr Thiam canned whole activities, such as private banking in America. "Cost cuts have to be binary," he says. Then fixed expenses, such as floor space and computer systems, can be got rid of. He has also become stricter about spending on contractors and consultants, bringing some in-house. Rather than worry about the ratio of cost to income, a standard gauge of efficiency, he sets absolute targets, so that increases in revenue go to profit rather than being spent. Budgets are still scrutinised in weekly meetings.

Though an outsider, Mr Thiam has relied mainly on insiders. He brought in Pierre-Olivier Bouée, the chief operating officer, a colleague at McKinsey and Aviva

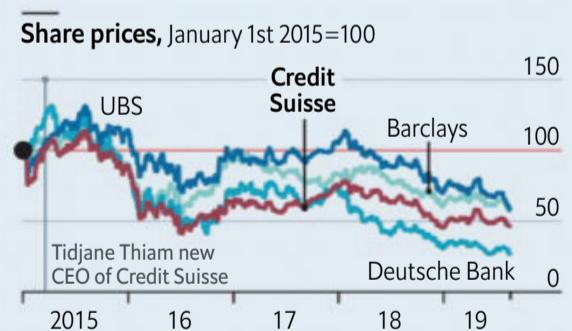
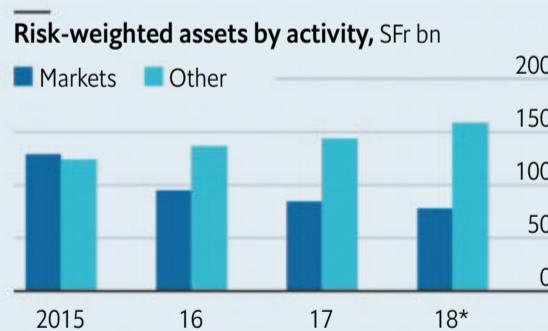
and his chief risk officer at Prudential, and Adam Gishen, the head of investor relations and communications, who advised him at the Pru. But he has mainly promoted from within, having decided that Credit Suisse already contained the right people, even if they were a rung or two from the top. The chief financial officer, David Mathers, has been in his job since 2010. That is unusual; incoming bosses at other troubled banks have swept away more senior people. One internal success, however, has turned sour: Iqbal Khan, the head of international wealth-management, left abruptly in July.

With its time in purgatory seemingly over, Credit Suisse is aiming to push its ROE into double figures. Market conditions permitting, it aimed to breach 10% this year, but that now looks a stretch. With global interest rates falling, trade wars raging and markets jittery, the months ahead may be tricky for banks and wealth managers everywhere.

After four years, Mr Thiam is an outsider no more. Running one of Europe's banks is a hazardous occupation: ask John Cryan, sacked after less than three years at Deutsche Bank in 2018, or John Flint, ousted from HSBC this month, after 30 years at the bank but a mere year and a half in the hot seat. Mr Thiam says he wants to become a Swiss citizen in due course. He was recently elected to the International Olympic Committee, based in Lausanne. Perhaps he will stay a while yet. ■

Thiam's tally

Credit Suisse



International tax

Trading blows

WASHINGTON, DC

France has borrowed a tactic from America's president. Expect fireworks

DON'T TAX you, don't tax me, tax that fellow behind the tree." Historically, this rhyme has poked fun at the tax-shy American public. Today it reflects complaints against the French government, which on July 25th introduced a tax on digital services. American companies such as Amazon, Facebook and Google are protesting that they are being treated like the fellow behind the tree. President Donald Trump is itching to hit back. Unilateralism is a language he can understand.

At the heart of the dispute lies a mismatch between where companies make their profits and where those profits are booked for tax purposes. Governments wail that as data and ideas can zip across borders, taxable profits can slip between their tax-collectors' fingers. The solution requires international co-ordination, to avoid everyone trying to tax the same stuff at once. But negotiations overseen by the OECD, a club of mostly rich countries, are taking too long for the French.

Hence their levy of 3% on the revenues generated from French users of online platforms and digital advertising. The tax is blunt, but that is part of the point. It is meant as an interim measure, to be ditched once an international agreement is reached. It could even make a deal more likely. Affected companies may prefer that to unilateral taxes, and lobby for it.

Not surprisingly, the Trump administration has taken umbrage. It has begun an investigation into the French tax under Section 301 of the Trade Act of 1974 (the same law by which it justifies tariffs on China). On August 19th eight officials heard the companies' formal complaints. "We cannot absorb this expense," claimed Amazon's representative.

No one likes new taxes, of course. But the companies do have a point. International trade rules are supposed to stop governments treating foreign companies differently from their own. And the French seem to have singled out America's big technology firms. The tax will only hit companies with at least €750m (\$830m) in global revenue from the relevant digital services and at least €25m derived from French users. Those thresholds conveniently exclude most French companies. Further clues lie in the French nickname for the levy, "the GAFA tax"—a reference to Google, Apple, Facebook and Amazon.

The French appear to have defined the



taxed services selectively too. Subscription-based digital services are spared, along with crowdfunding websites and digital payment services. More broadly, Hosuk Lee Makiyama of the European Centre for International Political Economy, a think-tank in Brussels, notes the inconsistency of the French position. France is keen to grab a slice of America's digitally derived corporate profits, but is loth to agree to new rules that would allow the Chinese tax authorities to share in the spoils from French-owned luxury brands.

The administration seems almost certain to end up finding fault with the French. America could then complain to the World Trade Organisation. But Mr Trump is more likely to fight unilateralism with unilateralism, by raising taxes on French individuals or firms, or by imposing tariffs. The president appears particularly keen to raise duties on French wine.

If this happens, free-traders will surely grumble that Mr Trump has again chosen commercial conflict over co-operation. But the irony is that behind closed doors, his officials had been acting constructively in the multilateral talks at the OECD. Whereas Barack Obama's administration had resisted further reforms, particularly those that could affect America's technology companies, Steven Mnuchin, Mr Trump's treasury secretary, was much more open to them.

It may seem that the French are giving Mr Trump a taste of his own medicine—using unilateral action to put pressure on a negotiating partner. But they may have made tricky discussions more difficult. Admittedly, Mr Mnuchin might not have been able to get Mr Trump's approval for any OECD reform. But now the dispute is playing out on the presidential Twitter feed. And for once, Mr Trump will be able to deny that he started it. ■

Chinese monetary policy

At any rate

SHANGHAI

China revamps its interest-rate system but also adds to its muddle

FOR A CASE study in the complexity of transitions from central planning, consider the knotty mess that is China's interest-rate system. More than 40 years after Mao Zedong died, the country is an economic superpower, yet it still struggles to manage bank lending using interest rates, rather than through heavy-handed interventions such as credit quotas. To make this shift, the central bank has created a dizzying array of instruments. S&P Global, a rating agency, counts 20 separate monetary-policy tools in China, from newfangled liquidity-injection facilities to old-fashioned instructions to banks; America, by contrast, has just six main instruments.

Now China has modernised its arsenal with a new benchmark interest rate, unveiled on August 16th. The Loan Prime Rate (LPR), as it is known, will become the reference rate for banks pricing corporate loans. Announced monthly, it will be the average of what 18 designated commercial banks charge their best corporate clients, expressed as a spread over the banks' own cost of borrowing from the central bank.

In theory this should make Chinese lending rates more responsive to financial conditions. Under the previous system, banks priced loans from a one-year lending rate set by the central bank. It has refrained from changing that rate since 2015, concerned, in part, that investors would overreact. It does, however, regularly tweak liquidity levels, and has bemoaned the fact that its cautious easing in recent months has not translated into lower borrowing costs in the private sector.

For industrial firms real (ie, inflation-adjusted) interest rates have instead ►

Shifting base
China, one-year lending rates, %



Sources: The People's Bank of China;
National Bureau of Statistics

*Deflated by PPI

climbed from an average of less than 1% last year to more than 4% this year (see chart on previous page). Officials say the LPR will lessen the strain on companies. On August 20th, the day it went into effect, the rate was set a tenth of a percentage point below the previous benchmark, a marginal cut.

Nevertheless, it would be a mistake to view the LPR as a silver bullet, either for monetary easing or for China's longer-term project of interest-rate reform. When banks are concerned about the economic outlook, as many increasingly are, they can simply demand higher risk premiums over

the benchmark from their borrowers.

There is no getting round the fact that China must do more if it wants to embolden its lenders. The central bank would need to cut their funding costs sharply, but it is reluctant to do so, worried about whipping investors into a speculative frenzy. The government would need to expand its fiscal stimulus, but it is worried about adding fuel to China's debt problem.

As for the redesign of Chinese monetary policy, there is still much to do. The central bank formally answers to the State Council. Any big changes in interest rates are

thus political decisions, not purely economic ones (although a cynic might say the same is true in America, Yi Gang, governor of the People's Bank of China, faces umpteen more constraints than Jerome Powell of the Federal Reserve). Moreover, the LPR makes China's monetary-policy toolkit more cluttered. Banks have been told that for the time being the new benchmark will not apply to mortgages. It will thus be possible for China to cut rates for companies but not for homebuyers. After all these years, Chinese planners remain reluctant to cede too much power to the market. ■

Buttonwood The eternal moment

Is the Japanification of bond markets a passing phase or permanent state?

IN THE 1920S E.M. Forster, an English novelist, set out the difference between a story and a plot. "The king died and then the queen died" is a story, he wrote. But a sense of causality is needed to make a plot more than just a sequence of events. "The king died and then the queen died of grief" is a plot.

Investors like stories as much as anyone. They like plots even more. A durable narrative, and one that is on everybody's lips once again, is "Japanification". A Forsterian summary might read: "The bubble burst, people became cautious and the economy got stuck in too low a gear to stop prices and interest rates from falling." In its strongest form Japanification is a pure tragedy, in which rich, debt-ridden economies are destined to follow the path set by Japan. In another, softer version only countries with rapidly ageing workforces, such as Germany, are thus fated.

Germany's bond market is now priced for endless stagnation. Its interest rates are negative on everything from overnight deposits to 30-year bonds. But it is striking how depressed bond yields are in countries with only a passing resemblance to Japan. A 30-year American Treasury yields just 2%, for instance. As currently scripted, Japanification is narrowly defined but broadly applied. It is the fear that policymakers have lost for good their ability to gin up the economy. A big question is whether the current situation is just one act in an unfolding drama, or where the story ends.

Japan's experience was the trailer for all this. When its ten-year bond yields fell below 2% in 1998, there was a lot of head-scratching, says Peter Tasker, a seasoned analyst of Japan's economy. At the time, Japan's government had a huge budget deficit. For its long-term interest

rates to fall made little sense. Hedge funds began to short Japanese government bonds (a lossmaking trade that became known as the "widowmaker"). But the country's consumer prices kept drifting lower. And so did its interest rates.

Ever since, Japanification has been a fear that is alternately raised and dismissed. In November 2002 Ben Bernanke, then a governor of the Federal Reserve, gave a famous it-can't-happen-here speech about Japan. The lessons drawn from Japan's failures were: own up to bad debts; fix the banks; use policy tools to spur the economy; don't let asset prices collapse. After the 2008 crisis, some of these lessons were applied, if unevenly. A decade on, Japanification is back. People continue to be astonished by how far long-term interest rates can fall, just as they were earlier in Japan. And the declines have been broadly felt. In Australia, which has a young population and has not suffered a recession in a quarter-century, ten-year bond yields are below 1%.

The cause of all this is renewed concern about global stagnation. A synchronised

pickup in the world economy in 2017 has turned to synchronised slowdown. Central banks, including the Fed, are cutting interest rates. But there is more to it than that. With short-term interest rates already so low, there are grave doubts that central banks have the power to get the economy back on track. You see this pessimism in forecasts of medium-term inflation derived from the swaps market, which are markedly lower than they were earlier this year. "The problem with being Japan is that if you get an economic shock, monetary policy has nowhere to go," says Steve Englander of Standard Chartered, a bank. Europe has already reached this point.

There is an alternative script. In this version today's Japanification spurs a response that leads to its defeat. If monetary policy has run out of road, there is always fiscal policy. If the economy lacks demand, governments can help to fill it by borrowing cheaply to cut taxes and raise spending. The politics are not there yet, but the Japanification of bond markets will move things along. "Before there is a consensus on a shift in policy, you need to see the downside risks [to the economy] clearly," says Mr Englander. Once that shift takes place, the fear of stagnation recedes.

The political response to the threat of stagnation is likely to be more radical than it was in Japan, says Mr Tasker. The tricky part for bond investors is guessing how long this takes. There are already stirrings of a rethink in Germany, a country hostile to fiscal stimulus. For now, these are only stirrings. Bond yields may languish for a while, before they rise in anticipation of fiscal stimulus. But the queen need not die of grief. After a period of mourning, she may find happiness again. The plot thickens.



Credit cards

Love at first byte

NEW YORK

Apple and Goldman Sachs launch a seductive credit card

FINDING THE One is never easy. Plenty of candidates are attractive at first, but their charms are deceptive, or simply fade. Others for whom you pine spurn you. As with love, so it is with credit cards. Bonus offers are tempting, but also fleeting. Reward points pile up, yet linger unused. Unexpected fees sting.

But now there is a sexy new stranger for Americans to eye up. On August 20th Apple launched its long-awaited credit card, in partnership with Goldman Sachs, a Wall Street firm pushing into digital consumer banking. Signing up takes about a minute. Approval (or rejection) is often instant. The card, delivered to the iPhone's wallet app, may be used at once. (A physical titanium version will arrive in the post.) There are no fees for using the card, or even for missed payments. Instead of making you wait until the end of the month for rewards, Apple pays cash daily.

The allure goes on. What starts off as a blank white oblong in the app is slowly shaded in rainbow colours as you spend: blue for transport; orange for food; pink for entertainment. Bills are paid by sliding a circular dial, which turns a friendly green if you pay in full, an uneasy yellow for less and an alarming red for the bare minimum. Any interest you will owe, shown in the centre of the dial, changes with the payment. When you clear your bill, the card wipes itself white again.

This is all lovely. But the card's financial attractions may not match its technological beauty. The lack of fees for missed payments and the transparency of its billing and interest due should appeal to people on lower incomes, who are most likely to carry credit-card debt. (Half of Americans fail to pay their credit-card bills in full each month.) Goldman is willing to approve subprime borrowers. But such folk are less likely than richer people to own an iPhone—and without an iPhone, you cannot get the card.

At the same time, the card may not appeal to the better off as much as established competitors. It pays 2% in daily cash on all purchases made using Apple Pay, a contactless mobile payment made through the wallet app, and just 1% when using the titanium card. These rebates are hardly market-leading. Citibank, for instance, offers 2% cash back on all purchases. And only two-thirds of merchants accept Apple Pay.

The card does pay 3% cash when used to

Foreign investment and wages

Unequal partnerships

WASHINGTON, DC

Who wins when multinational companies move in?

SHAWNEA ROSSER earned upwards of \$29 an hour when she worked for General Motors in Dayton, Ohio. But in 2008 the factory closed. Years later the building was bought by Fuyao Group, a Chinese multinational company that makes glass. The new American managers promised that the "historic" project would "give people jobs, and give a future to your kids and my kids". Sounds great. But Ms Rosser's new job paid just \$12.84.

The plight of Ms Rosser and her co-workers is captured in "American Factory", a documentary released on August 21st by Netflix that explores the tensions that arise from the factory's foreign ownership. There is discontent among American workers, but the source is unclear. Could it simply reflect the post-crisis reality of American manufacturing work? Or are the different Chinese employment practices to blame?

A new study offers part of an answer, by asking who benefits when foreign investors open up shop. On average,

foreign companies in fact pay workers around 25% more than American ones. But that could be because they employ relatively skilled workers. Bradley Setzler and Felix Tintelnot of the University of Chicago match anonymised employee and company tax records to estimate the true wage premium.

The economists look to see what happens when American workers move between companies. They find that when someone hops between two American-owned firms, their wages barely budge. But when they skip from a domestically owned one to a foreign one, their wages go up by around 7%. And when they jump from a foreign-owned firm to a domestic one, their wages sag.

Messrs Setzler and Tintelnot also find that the boost to wages from working at a foreign-owned firm is skewed in favour of the highly skilled. They derive a measure of skills by adjusting pay for age, firm, industry and location. Based on that measure, people in the bottom 10% of the skills distribution saw no pay premium at all for working at a foreign-owned company.

The researchers also ask whether a firm's country of origin might matter for the wage premium on offer. Unsurprisingly, richer home countries tend to mean fatter American pay packets. Companies from Norway and New Zealand pay best; those from Mexico and Taiwan give barely any premium. Only one country seems to offer a pay penalty (see chart). On average, they calculate that between 2010 and 2015, Chinese-owned firms paid around 4% less than American ones for similar jobs. That is not a huge gap—certainly compared with the drop in Ms Rosser's hourly pay between GM and Fuyao Group. But when you are not paid a lot, it is big enough to hurt.

Foreign relations

United States, wage premium associated with working at a foreign-owned firm, 2010-15, %



Source: "The effects of foreign multinationals on workers and firms in the United States" by B. Setzler and F. Tintelnot, NBER

buy Apple products, but compared with other retail store cards this is a little stingy. Amazon, another technology titan, offers 5% back on its store card (including purchases at Whole Foods, its trendy supermarket chain), which is issued by JPMorgan Chase. Other retailers, such as Crate and Barrel, a homewares store, offer as much as 10%.

These perks may improve. On launch day Apple announced that spending on Uber, a ride-hailing app, and Uber Eats, its food-delivery service, would also qualify for 3% cash. More may be added, the tech

company has said. But the Apple card has some catching-up to do.

For Apple fans, this may not matter much. But it may be that Apple, by trying to please everyone, will end up pleasing too few Americans to break into the fiercely competitive credit-card market, in which there are already 1bn active cards. The gorgeous design, and the cachet of Apple and Goldman, will surely seduce many customers into trying the card. But when it comes to cold cash calculations, the geeks and the Wall Streeters may not have done enough to secure their lasting devotion. ■

Free exchange | A crisis of faith

The onset of a downturn is as much a matter of mood as of money



IN RECENT WEEKS the human and silicon brains at Google have registered an alarming rise in searches related to "recession". It is easily explained. As markets gyrate, talk in the press (including this very column) turns to the risk of a slump. Even so, the stories must leave some Googlers baffled. In July, after all, the American economy added 164,000 jobs and retail sales kept climbing. President Donald Trump, too, is bemused. He has taken to warning darkly that conspirators are attacking his presidency by frightening the economy into an unnecessary downturn. The claim of conspiracy is absurd, but the threat of recession is not. Recessions can indeed appear as if out of the blue.

Today's confusion owes something to the world's odd recent economic history. The last global slump occurred amid an epic financial crisis. The one before that began nearly two decades ago, accompanied, again, by a stockmarket crash. (Between August 2000 and September 2001 the S&P 500 index fell by more than 30% and the NASDAQ by more than 60%. Now, by contrast, those indices are pretty much where they were a year ago.) Most people working today cannot remember a recession not linked to financial chaos. But downturns can occur without market meltdowns. Indeed, many economists think recessions need not occur at all.

A recession is commonly taken to mean two or more consecutive quarters of falling output. More broadly, recessions happen when many economic variables—GDP, industrial production, employment and so on—flip from expansion to contraction. In their models, macroeconomists get such episodes going by introducing a "shock": a random perturbation which knocks an economy off kilter. A sharp rise in oil prices might do the trick, or a financial panic, or a change in policy like a jump in interest rates or an austerity budget. Shocks can impose new constraints on firms and households by cutting off sources of credit or sales. Or they may force people to reconsider their plans—nudging them to shelve proposed investments until the dust raised by a shock settles. Shock-based explanations of recessions make intuitive sense. They allow people to say that x caused y: that unemployment rose because share prices fell, for instance.

But economic causation is rarely so clear-cut. Higher interest rates hurt some people but leave others better off or unaffected.

The failure of a large manufacturer creates pain for workers and shareholders but opportunities for rivals, who can hoover up displaced labour and capital. Not all shocks lead to recessions. When they do, it is often because something goes wrong with an economy's ability to roll with the punches: spending falls somewhere but is not offset by increases elsewhere. Perhaps the creditors who benefit from higher interest rates park their windfalls in the safe haven of government bonds, rather than recycling them into job-creating expenditure. Housing investment in America began to subtract from GDP growth in the fourth quarter of 2005. But the economy did not fall into recession for two more years, when other sources of spending ceased to outweigh the housing drag.

Recessions, then, are not just the after-effects of shocks, but periods when people and firms fail to use valuable resources as they become available. As demand slackens, bargains bloom in the form of cut-rate goods, willing and available workers, and appealingly priced assets. In the depths of a catastrophic financial crisis no one but Warren Buffett may have the guts and the means to spend more as others cut back. But most recessions are not associated with such calamities. The downturn of the early 1990s was an example of what Paul Krugman, a Nobel economics laureate, has called a "smorgasbord recession", the product of a mix of troubles in modest portions. In these garden-variety slumps, people and firms with the capacity to spend more, who might normally leap at the chance to buy discounted goods or hire overqualified workers, instead allow their cash to pile up.

At its heart this behaviour is a matter of mass psychology, or "animal spirits", as John Maynard Keynes put it. Economies are great chains of earning and spending, held together by shared expectations that all will continue as normal. People spend their incomes freely, on everything from homes to haircuts, in the belief that their jobs will not disappear and their incomes wither. Consequently, builders and stylists have jobs and incomes from which they too can spend. Faith in economic expansion is self-fulfilling. But it is not invulnerable. Contagious pessimism can flip an economy from one equilibrium to another, in which cautious consumers spend less and hiring and investment fall accordingly, validating the initial outbreak of pessimism. Shocks can precipitate a switch in sentiment by weakening links in the great chain. But if the public is confident enough of the durability of an expansion then even a big shock may not halt it. Conversely, if the mood in markets and on Main Street is sour enough, even a modest nudge may push an economy into a slump.

Confidence men

Over the past century, as governments assumed responsibility for preventing downturns, economic expansions grew longer and recessions became milder and less frequent. When drooping demand threatens an economy, governments and central banks use fiscal and monetary policy to deliver an offsetting rise in spending. But their commitment to fighting recessions also plays a psychological role. The credible promise to resist downturns gives markets confidence that the economy will keep up its strength.

Confidence, though, is slippery. It may wane as interest rates fall, leaving central banks less room to jolt economies out of their pessimism, and as government policymakers fumble their fiscal tools. It may wilt in the face of leaders' erratic and self-defeating behaviour. Recessions, to no small degree, are a state of mind. You don't need a conspiracy theory to see that just now the world's mood is troubled. ■

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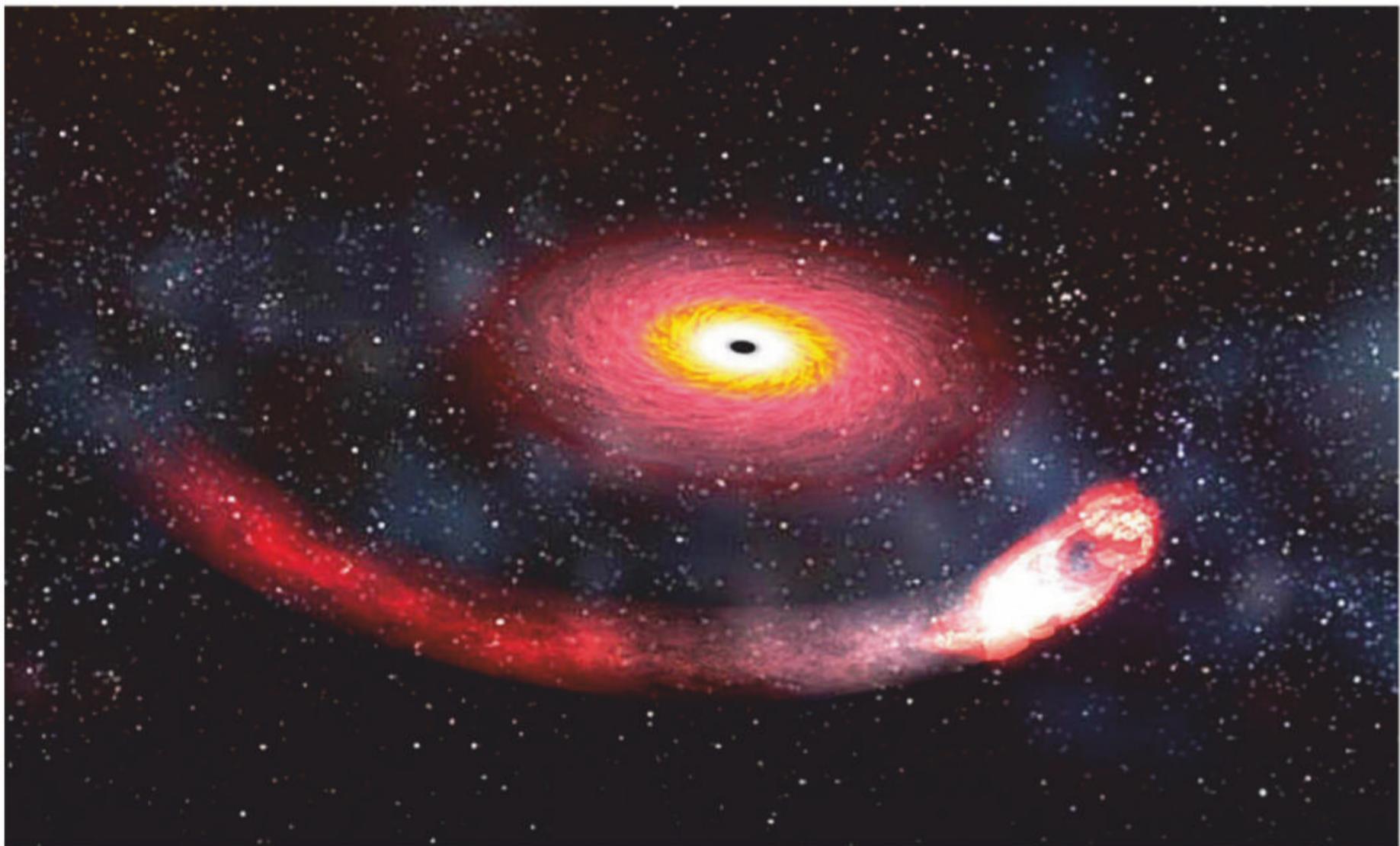
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Astronomy

Matters of great gravity

With the observation of a merger between a black hole and a neutron star, gravitational astronomy has proved its maturity

ON AUGUST 14TH, just after 9pm Universal Time, a ripple of gravitational waves reached Earth. Until a few years ago no one would have noticed such an event. But 2015 saw the reopening, after an upgrade, of the Laser Interferometer Gravitational-wave Observatory (LIGO), a pair of detectors in Washington state and Louisiana. These were joined in 2017 by Virgo, an upgraded instrument in Italy. Together, the three instruments not only recorded the wave's passage, they also worked out where in the sky it had come from and then texted that information to the world's astronomers.

This stimulated the deployment of a host of other devices, to look at the wave's point of origin near the border between the constellations of Cetus and Sculptor. Telescopes capable of examining all parts of the spectrum, from gamma rays to radio waves, were brought into play. And, courtesy of IceCube, an instrument at the South Pole, the sky was also scanned for tiny particles known as neutrinos that might have been released by whatever humungous

event it was that had disturbed the fabric of the space-time continuum to create such a gravitational ripple.

The provisional conclusion of all this "multimessenger" activity is that the detectors were witness to the merger, 900m light-years away, of a neutron star and a black hole—an event prosaically dubbed S190814bv by LIGO's masters. If confirmed, S190814bv will be the first such merger discovered (previous gravitational-wave observations were of two black holes or two neutron stars colliding). As in many other walks of life, three may be taken as a trend, and the detection of this third type of event thus marks the coming of age of the new field of gravitational astronomy.

Relative value

Gravitational waves are distortions of space-time that transmit the force of gravity from one place to another. They were predicted by Albert Einstein in 1916 as part of his general theory of relativity (which, despite its name, is really a theory of gravity).

However, in the context of astronomical objects then known, the waves' expected size was so small that Einstein himself doubted they would be measurable.

That changed with the discovery of dense, massive objects such as neutron stars (the remnants of supernova explosions) and black holes (objects of various origin in which mass is so concentrated that even light cannot escape their gravity fields). Calculations showed that mergers between these sorts of objects would produce gravitational waves that might be detectable by big enough, sensitive enough instruments. Meanwhile, a century of economic growth and technical progress since Einstein's day has provided both the money and the prowess for those instruments to be constructed.

Gravitational-wave detectors work (see diagram overleaf) by splitting a laser beam in twain. The two halves of the beam are then sent down separate arms, several kilometres long, that are oriented at right angles to one another (see satellite photograph overleaf). Each arm has a mirror at the end to reflect its half-beam back whence it came, and the reflected half-beams are then recombined. Normally, this recombination causes peaks in one half-beam's waves to overlie troughs in the other's, and vice versa, resulting in darkness. But if the lengths of the arms are distorted by a passing gravitational wave then the beams will not match in this way. In-

► stead, they generate an interference pattern which gives away the characteristics of the passing gravitational blip. Even when the objects generating a gravitational wave are as massive as neutron stars or large black holes, the blip's effects are tiny—a distortion a thousandth of the width of a proton over the course of a 4km-long detector arm. But laser interferometry, as this technique is known, is sensitive enough to pick up such tiny differences.

LIGO bagged its first quarry, a signal from the merger of two black holes, in September 2015. Since then, it and Virgo have recorded and confirmed another nine such events, and also noted the merger of two neutron stars. If S190814bv does prove to have been a neutron star/black hole merger, that will make it easier to compare and contrast these different types of event.

Striking gold

Gravitational waves are, as the text messages following the detection of S190814bv show, now part of a bigger endeavour involving the collation of data from many different sources. This was first done successfully after the detection, in August 2017, of the first neutron-star merger. The cosmic fireworks set off by that merger started with a burst of gravitational waves 100 seconds long. Less than two seconds after this burst had begun, a pair of space-based observatories, NASA's Fermi Telescope and the European Space Agency's International Gamma-ray Astrophysics Laboratory, detected a burst of gamma rays coming from a galaxy known as NGC 4993, 130m light-years from Earth in a constellation called Hydra. Nor did events end with the gamma rays. They were followed by a kilonova—a burst of optical and ultraviolet radiation powered by the radioactive decay of heavy elements newly formed in the ex-

plosion. For a year afterwards, the debris left behind glowed with radiation ranging from x-rays to radio waves.

GW170817, as this neutron-star merger was dubbed, was a gold mine for astronomers—literally. The kilonova's spectrum suggests gold and platinum were among the elements generated by the event, confirming that such explosions are a source of these metals, which are too heavy to be created, as lighter elements are, by ordinary nuclear processes inside stars. The near-simultaneous arrival of GW170817's gravitational waves and gamma rays also confirmed the prediction made by Einstein that gravitational waves would travel at the speed of light.

What GW170817 did not bring, which S190814bv might, is a chance to see inside a neutron star itself, if the black hole ripped it apart before the two merged. There are plenty of ideas about what might be going on inside neutron stars, but because it is impossible to replicate the conditions found there in a laboratory on Earth, no one knows for sure. Theory suggests that matter more than a kilometre below a neutron star's surface will be compressed into blobs, tubes and sheets—a state of being referred to as “nuclear pasta” because of its resemblance to gnocchi, spaghetti and lasagne. If nuclear pasta exists, it is probably the strongest material in the universe. One calculation suggests it would be 10bn times stronger than steel.

Whether S190814bv will reveal that neutron stars are cosmic *primi piatti* remains to be seen. The closer that the two objects involved turn out to have been in mass, the longer it would have taken the black hole to tear the neutron star apart, and the more time that object's glowing innards would have been on display to the universe (and watching astronomers) before the black



hole consumed them. If, however, the black hole was a lot bigger than its partner, the neutron star would probably have fallen into it with little fanfare.

Black holes and neutron stars form when large stars run out of fuel and collapse. Though both are heavy and dense, their physical natures are strikingly different. Neutron stars, as their name suggests, are made largely of neutrons. These are constituents of ordinary matter, found in the nuclei of all atoms except the lightest isotope of hydrogen, which is a lone proton. Black holes, by contrast, are “singularities”. This means they have no internal structure, only mass.

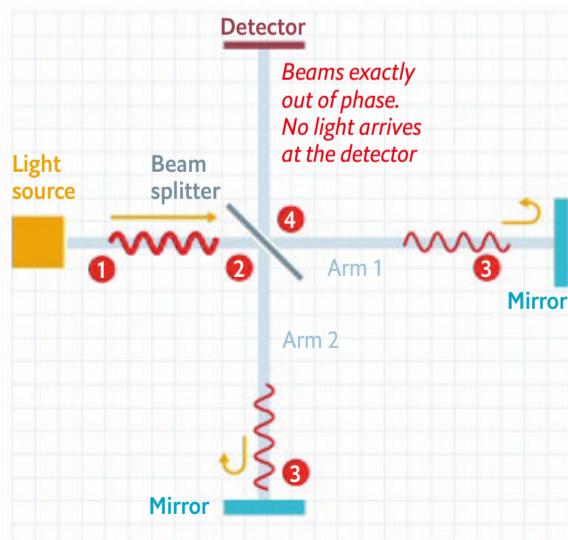
One consequence of this difference is, as Christopher Berry, an astronomer at Northwestern University and a member of the LIGO Scientific Collaboration, puts it, that “neutron stars, being made of stuff, can get distorted, whereas black holes do not.” It is from the imprint those distortions make on the gravitational waves which a collision generates that information about things like nuclear pasta can be deduced.

In the case of S190814bv the crucial mass ratio that might expose the pasta has yet to be determined. The reason astronomers believe they have witnessed a neutron star/black hole merger is the masses of the objects involved. The larger had more than five times the mass of the sun, and physics dictates that something this massive which is generating no starlight to counteract the pull of its gravity must be a black hole. The smaller object, by contrast, was below three solar masses. That is too light to have collapsed into a black hole and so it was presumably a neutron star. But the objects' precise relative masses—and thus the likelihood of the neutron star having spilled its guts—remain to be determined.

Collisions involving neutron stars give astronomers an insight into the properties of these bodies. But LIGO and Virgo should also be able to detect non-colliding neu-

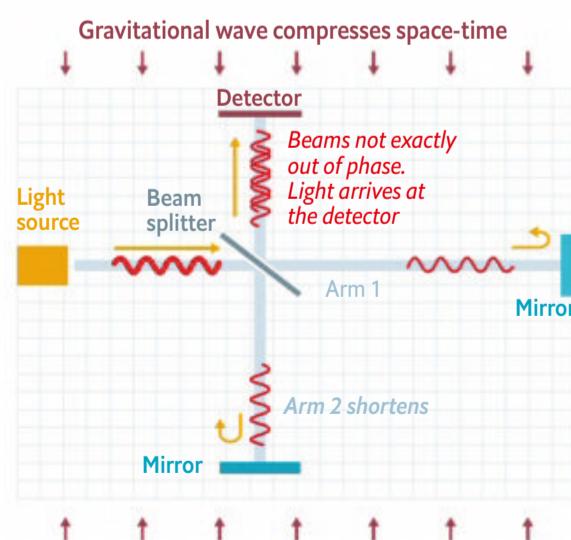
How a Laser-Interferometer Gravitational-wave Observatory works

Before the wave



The light source sends out a beam 1 that is divided by a beam splitter 2. The beams produced follow paths of identical length 3, reflecting off mirrors to recombine exactly out of phase 4, cancelling each other out.

During the wave



When a gravitational wave arrives, it disturbs space-time, changing the length of the path along one or both arms (here, arm 2). When the beams recombine and arrive at the detector, they are no longer out of phase.

tron stars, as long as they are spinning rapidly. Rapidly spinning neutron stars are called pulsars. They produce a beam of electromagnetic waves that can be seen only if it points directly at an observer, in the manner of a lighthouse. They may also produce detectable gravitational waves. Any imperfection on a pulsar's surface—even a bump just a millimetre high—would do the trick. It would broadcast gravitational waves that would likewise be beamed in a lighthouse pattern. Given the intense gravity at a neutron star's surface, the height of any millimetric mountains, measured by the strength of the gravitational waves arriving at Earth, would provide astronomers with a way to measure how stiff the neutron star's internal nuclear pasta really is.

Another eagerly awaited source of gravitational waves is a supernova, an explosion marking the death throes of a massive star. Watching such an explosion with modern instruments, including LIGO, Virgo and neutrino detectors such as IceCube, would not be easy. Gravitational waves from a supernova explosion are predicted to be weak, so the source would have to be close by (ie, within Earth's home galaxy, the Milky Way) for LIGO and Virgo to be able to detect them. The estimated rate of such events in the Milky Way is one to three per century and the last known example, concealed from human eyes at the time by dust and gas but discovered subsequently by radio astronomy, occurred near the beginning of the 20th century.

Unlike electromagnetic radiation or neutrinos, gravitational waves from a supernova could tell astronomers how the dense matter within a star was swirling around as it exploded. They could also help determine whether an exploding star collapsed symmetrically or not. And, after a supernova explosion has blown off much of the stellar material, what remains often becomes a neutron star or a black hole. By observing the evolution of a supernova, astronomers would be able to watch in real time as the material inside the original star settled and those most extreme cosmic objects were born out of it.

A fair crack of the whip

While some astronomers seek to use gravitational waves to understand the structure of cosmic objects, others want to employ this new era of astronomy to test the limits of the general theory of relativity. So far, every prediction made by this theory has been borne out, yet physicists know that relativity cannot be the last word on matters gravitational because it stubbornly refuses to mesh with quantum theory, which is the best available explanation for everything else in the universe. Szabolcs Marka, a physicist at Columbia University in New York, and one of those who pioneered the

collaborative ideas behind multimessenger astronomy, thinks that gravitational astronomy might square this circle. He reckons the best bet would be to look for deviations from relativity's predictions in the waves given out by two black holes orbiting each other.

A longer-term goal for gravitational-wave astronomers is to see further back in time than has been possible with electromagnetic radiation. Until the universe was around 400,000 years old, it was so hot and dense that any light generated was instantly absorbed, and so no electromagnetic signal remains. The early universe would, however, have been transparent to gravitational waves. Detecting these so-called cosmological waves could provide a picture of the moment when the singularity from which the universe was born began its Big Bang expansion.

After 13.8bn years of the expansion of space since the Big Bang happened, cosmological gravitational waves would now be tenuous things indeed. They would be hidden under layers of background hum composed of gravitational waves from random astrophysical processes going on all over the sky. If astronomers did manage to detect them, however, they would be able to study the earliest seconds of the universe, answering long-asked questions about how quickly it expanded to start with and how uniform that expansion was.

After that they will seek to check some highly theoretical ideas. Gravitational waves could help with the search for cosmic strings—putative enormous, super-dense filamentary structures in space. "If they do exist, those cosmic strings can kind of wriggle and wiggle around, and every so often, the wiggling leads to a cracking, like cracking a whip," says Patrick Brady, an astronomer at the University of Wisconsin-Milwaukee who is the LIGO Scientific Col-

laboration's spokesman. "And," he continues, "the whipcrack generates gravitational waves that could be detectable by us."

The true excitement, says Dr Brady, would be if astronomers saw a blip inexplicable by neutron stars, black holes, supernovae or even cosmic strings. "We're constantly looking for such things—we refer to them as unmodelled bursts of gravitational waves because, as yet, we don't have physical theoretical models for them. If we ever did find a blip that was a confident gravitational-wave detection, but was not explained as a compact binary, then it would be incredibly exciting."

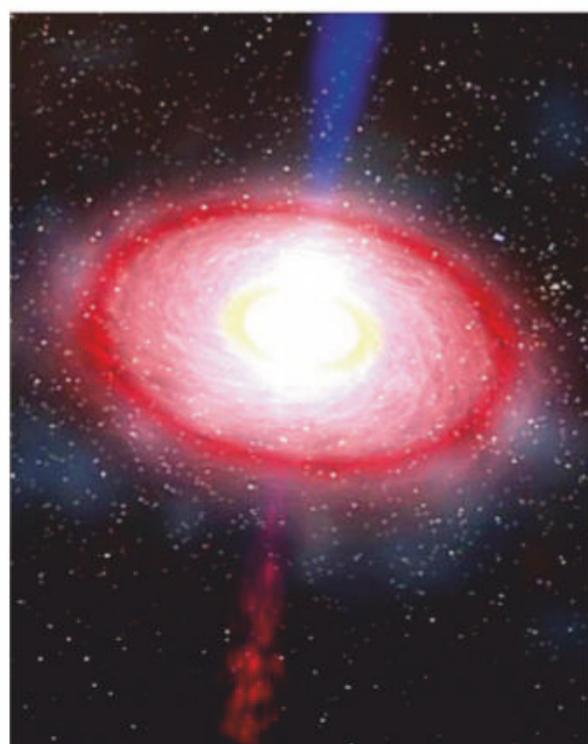
The once and future subject

If all goes well, the current generation of gravitational-wave observatories will be joined at the end of the year by the Kagra interferometer in Japan and, by 2024, by LIGO-India, which is under construction at a site 450km east of Mumbai. Detectors placed all around the world like this will allow astronomers to improve their ability to locate which part of the sky future gravitational-wave discoveries come from, as well as providing independent verification of individual detections.

LIGO itself is due for another upgrade within the next few years. This will almost double its sensitivity, permitting it to observe with the same rigour a volume of space seven times larger than now. Beyond that, the European Space Agency's Laser Interferometer Space Antenna (LISA), scheduled for 2034, will be the first orbiting gravitational-wave instrument. Its detectors will be arranged in an equilateral triangle with sides 2.5m kilometres long. LISA will be sensitive to low-frequency waves that currently get lost in the noise.

Looking still further ahead, another generation of ground-based observatories is competing to take over once LIGO's useful life is at an end. Europe is offering the Einstein Telescope, a proposed interferometer with three arms arranged in an equilateral triangle buried underground and cooled to within ten degrees of absolute zero, to improve its sensitivity. America proposes the Cosmic Explorer, a version of LIGO with arms 40km long. Either would be able to spot black-hole mergers almost anywhere in the universe.

The promise of gravitational astronomy is, then, enormous. It will show better how heavy elements are created. It could answer questions about the early universe that have nagged physicists for decades. It might even reconcile general relativity with quantum theory. From Copernicus to Kepler to Newton, understanding gravity and how it binds objects in the universe together was the project that launched physics as an intellectual discipline. The latest results from LIGO and Virgo show that there is life in the old dog yet. ■



A humungous event



Art and prison

The Rock and a hard place

SAN FRANCISCO

As America rethinks incarceration, art is helping prisoners adapt to life outside

ALCATRAZ, KNOWN as the Rock, was once among America's most fearsome prisons, cut off from the free world on a wind-swept island in San Francisco Bay. Today it is a national park, visited by 1.4m tourists a year, who amble around the famous cell-blocks and take selfies against the bars. Until October, if they venture to a derelict building on the island's north side, they will also encounter giant images of serving and former prisoners. They are not the faces of notorious criminals such as the "Birdman", "Machine Gun" Kelly or Al Capone; rather they are current and released inmates of Californian institutions who aspire to something more than infamy.

At a recent gala for the unusual exhibition in this gritty space, several contributors stood before self-portraits, each framed as an oversize identity card and depicting a new self they have imagined—a "Future ID" to replace their prison incarnation. Guss Lumumba Edwards, aged 61 and softly spoken, sketched a golden trail around his head, left by a shooting star that has the shape of the African continent (pictured). Alongside he has rendered his tools—paintbrushes and spray cans—and a

city skyline. After serving 40 years for murder, Mr Edwards was released six months ago from San Quentin state prison. The painting, he says, "brings me back to where I came from," and also points in a new direction: "trying to heal and stop the violence in the community."

In Lily Gonzalez's card, she thrusts a red rose toward the viewer. "It's about shifting how I view my relationship to the world," says the 36-year-old, who served two and a half years for lesser crimes she would rather not discuss. She sees her future not just in terms of employment, "but a way of being, flowers and colours and healing." The rose is "a nod to [the rapper] Tupac's poem about the rose growing from the concrete."

The show is the result of a five-year effort led by Gregory Sale, an artist based in Arizona who focuses on prison in America. Mr Sale works in the growing field of "social-practice" art, in which artists collaborate with citizens on aesthetic responses to problems. In this case, the goal was to build a bridge between prison and life outside. Working initially with the Anti-Recidivism Coalition, a support network in Los Angeles, Mr Sale and his other partners honed

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the idea for "Future IDs at Alcatraz".

Those leaving prison face daunting obstacles, from barriers to employment to stigma and isolation. It became evident, Mr Sale says, that achieving acceptance in society is "a cultural problem. So the question became, how can we find cultural solutions to that?" With his help, more than 100 people have done so by illustrating their own transformations—and their determination to make the most of their second chance.

Art "makes you come to your own realisation," observes Kirn Kim. "It's not about someone telling you what to think. It opens up different parts of your brain." As a juvenile, he was convicted for aiding and abetting a murder and served 20 years. He took part in the workshop two years after he got out, while "really struggling" in an Asian-American culture in which he felt shamed. Deciding what to draw helped him see that he no longer had to hide, he says. The image on his new ID shows him holding a microphone and addressing a prison yard—a version of the community organiser that, at 43, he has now become.

The art of freedom

Using art to rehabilitate prisoners is not new. But the way policymakers think about the transition to life beyond bars is changing, as is the number of people making that leap. America's penal system is at a turning point. Across the country, reforms have begun to halt and reverse the effects of decades of mass incarceration. As sentencing and bail laws become less draconian, more ➤

► people are being released; the disproportionate punishment of ethnic minorities is now widely recognised. California has been in the vanguard of these reforms, after the federal Supreme Court ordered it to reduce prison overcrowding. A quarter of the state's prison population has been transferred to local jails or parole over the past decade.

Arts organisations are responding to this shift. Players from the Street Symphony in Los Angeles help set former inmates' poetry to music. In the nearby San Fernando Valley, the Tia Chucha Centro Cultural includes them in its open-mic and theatre performances. Across the country in Chicago, meanwhile, in a programme called Changing Voices, young people who have left the justice system are recasting their experiences as musical theatre for students, judges and legislators.

Many of these projects are supported by the Art for Justice Fund, a philanthropic effort which itself illustrates the power of art. In 2016 Agnes Gund, a New York art collector, was shocked by "13th", a documentary by Ava DuVernay that traced the links between mass incarceration and the history of racism in America. She sold one of her prized works and put \$100m into the new fund. It has since collaborated with scores of artists and groups advocating criminal-justice reform. "There's an urgency to begin to see incarcerated people as they really are, as human beings, as husbands and fathers and mothers and daughters," reckons Helena Huang, the fund's project director. "At the most fundamental level, art gives people a voice."

Beyond bars

Individuals who have discharged their debt to society are not the only ones using the arts for transformation. Alcatraz, too, is reconsidering its mission. It is now part of an international coalition of "sites of conscience", which includes the Nuremberg trials memorial and aims to use difficult memories to inspire action. Art exhibitions—such as "Future IDs" and a show by Ai Weiwei in 2014 that focused on the Chinese artist's own prison experience—have helped turn this grim facility into a place to think as well as gawk.

"We have a giant prison system, the largest in the world, and we are in a unique position to have conversations around incarceration," says Emily Levine, a park ranger. The habit of asking hard questions has spread across the Rock. Visitors disembarking from the ferry were recently confronted with some unusual messages from the rangers. One whiteboard reads: "2,300,000 us adults are currently incarcerated. What do you know about the prison, jail or immigration centre nearest to your home?" Another simply asked, "Do prisons make you feel safer?" ■

Irish fiction

Nobody's child

Girl. By Edna O'Brien. *Farrar, Straus and Giroux*; 240 pages; \$26. *Faber & Faber*; £16.99

EDNA O'BRIEN launched her illustrious career in 1960 with "The Country Girls", an incendiary, trailblazing novel that charted the fortunes and sexual awakening of two young women in the Ireland of the 1950s. Two equally controversial follow-ups, "The Lonely Girl" (1962) and "Girls in their Married Bliss" (1964), again depicted female desires and aspirations with compassionate candour. Almost 60 years after her debut, Ms O'Brien's new book, "Girl", evinces an enduring interest in girlhood. Despite the stark title's suggestion of anonymity, the protagonist has a name. But she loses everything else when she is abducted and brutalised by Boko Haram.

"I was a girl once, but not any more." So begins Maryam's harrowing tale. Seized from her school, she is brought to a terrorist camp and inducted into "the Sect". She and her friends are made to wear hijabs and worship a different God. She witnesses extreme violence and experiences it, during ordeals designed to send men away "sated and battle-maddened". One militant chooses her to be his trophy wife and she is no longer "plundered" nightly. But she loses her status when her husband falls from grace and she gives birth—not to a future fighter but to a daughter.

Maryam's luck turns after an aerial assault on the camp. She flees with her baby but faces further hardship and danger in the forests of north-eastern Nigeria, then hostility and prejudice in the country's capital. Strangers view her with fear and suspicion; some relatives treat this "bush wife" and her "tainted" child with disdain. She seeks salvation elsewhere.

In "Terrorist" (2006), his novel about a radicalised teenager, John Updike, another venerable writer, fell short of his high standards. Ms O'Brien, now 88, took a risk in giving voice to a Nigerian girl who suffers horrific cruelty, especially in an age when "cultural appropriation" is often frowned upon. But like her previous novel "The Little Red Chairs" (2015), which dealt with Balkan war crimes, "Girl" is a product of rigorous research and great artistry. Maryam and her plight are tragically authentic.

At times, darkness almost overwhelms the reader. Yet it is hard to turn away, just as it is impossible not to back a heroine who, though bowed, refuses to be broken. "Girl" is Ms O'Brien's most ambitious novel—and among her most powerful. ■



A life in Zionism

The price of power

A State at Any Cost: The Life of David Ben-Gurion

Ben-Gurion. By Tom Segev. Translated by Haim Watzman. *Farrar, Straus and Giroux*; 816 pages; \$40. *Head of Zeus*; £30

HE CUT AN unprepossessing figure: short, with a large head and a squeaky voice. Self-centred and humourless, he used people, including women, then discarded them. He was dogged by self-doubt.

How David Ben-Gurion, a flawed and in many ways unattractive man, created the state of Israel is the theme of Tom Segev's fascinating biography. Ben-Gurion's career began unpromisingly. Born in 1886, he grew up in a Yiddish-speaking family in tsarist Poland; his mother died when he was 11, leaving him introverted and aimless. Zionism, then in its infancy, rescued him, giving him a purpose—and an escape from a stiflingly dull provincial town.

The story takes off when, not yet 20, Ben-Gurion arrives in Palestine in 1906. Life for the early Zionist settlers was hard, and he was not cut out for it. His route to power was as a brilliant labour leader. The trade-union federation that he helped establish, the Histadrut, became an essential building-block of the future Jewish state.

Mr Segev is one of Israel's "new historians", who have stripped away the mythology around its birth. One legend that he skewers is that Ben-Gurion believed in the possibility of peace with the Arabs. "There is no solution," he declared as early as 1919; the Arabs wanted Palestine as their state, the Zionists wanted it as theirs. The answer to Arab hostility lay not in compromise but military strength. Though he paid lip-service to peace initiatives, he never changed his mind. When war came in 1948, he ►

► hoped for a state containing as few Arabs as possible. If they fled, fine; if they had to be expelled, so be it. In public he sought to justify Israel's actions (and his own) during the fighting. Privately, says Mr Segev, the Arab exodus haunted him: it was the moral ambiguity at the heart of Israel's existence.

Ben-Gurion dominated the new country's politics into old age; his two stints as prime minister amounted to over 13 years. Mr Segev describes the fierce opposition to two of his most important policies—securing German reparations for the Holocaust and launching a nuclear-weapons pro-

gramme. His achievements and energy were undeniable—but so were his failings. He had an authoritarian streak, wanting, in Mr Segev's words, to be a "Zionist Lenin". Politics took precedence over everything. He treated Paula, his wife, shabbily; so distant was he from his family that he repeatedly asked his son how old he was. He had a chip on his shoulder because, unlike the rest of the Zionist elite, he lacked a university degree. A restless autodidact, he collected diverse books in several languages.

The dilemma of every biographer is what to put in and what to leave out. Mr Se-

gev's focus is on Zionism and its politics; the Arabs are mostly present as a problem, the British hardly at all. (His earlier book, "One Palestine, Complete", superbly evokes the years of British rule.) Even at more than 800 pages, the author has evidently found it hard to squeeze everything that matters into "A State at Any Cost". The result, though, is a masterly portrait of a titanic yet unfulfilled man. If others paid a price for Zionism's success—the Arabs, his family, the rivals he crushed—Ben-Gurion did, too. This is a gripping study of power, and the loneliness of power. ■

Johnson Everyday superheroes

A new book spells out the magic of language

IN "AVENGERS: ENDGAME", a superhero blockbuster, the baddy's Infinity Gauntlet gives him the power to snuff out the universe with the snap of a finger. This may sound impressive, but—although few realise it—ordinary people possess an infinite power, too: language.

Write a new sentence and Google it. The chances are good that it appears nowhere among the billions on the internet. Steven Pinker, a professor of linguistics, reckons a conservative estimate of the number of grammatical, 20-word sentences a human might produce is at least a hundred million trillion—far more than the number of grains of sand on Earth. Most can easily be made longer (try adding "She said that..." to the beginning of any declarative sentence). In theory, the only thing preventing this power from being literally infinite is the human lifespan: some possible sentences would be too long to say even in threescore years and ten.

This awesome talent is the subject of a new book, "Language Unlimited" by David Adger of Queen Mary University, the president of the Linguistics Association of Great Britain. Mr Adger does not just celebrate language's infinity. He maintains that it is the distinct result of a unique capacity, advancing a series of arguments whose best-known exponent is Noam Chomsky.

The book's first, and strongest, claim is that human language is different from animal communication not just in scope, but in kind. Most important, it is hierarchical and nested in structure. A highly trained bonobo called Kanzi can obey commands such as "Give water [to] Rose". But Kanzi does no better than random chance when told to "Give water and lighter to Rose." Meanwhile, a two-year-old child tested alongside Kanzi

quickly intuits that two nouns can make up a noun phrase, tucked as a direct object into a verb phrase, which in turn is part of a sentence. This "recursive" structure is key to syntax.

The second claim is that language is innate, not merely an extension of general human intelligence. Fascinating evidence comes from children who are deprived of it. Deaf pupils at a school in Nicaragua, having never shared a language with anyone before, created a grammatically ornate sign language on their own. A few deaf children in a Mexican family devised a rich sign system with complex grammatical features found in spoken tongues: in their "homesign", nouns are preceded by a "classifier", a sign indicating their type, just as they sometimes are in Chinese. It seems the human mind simply cannot help but deal in grammar.

A more controversial claim is that all human languages share what Mr Chomsky calls "universal grammar". This proposition has taken some hard knocks. Whether recursion is universal, for example, is contested. In 2009 two linguists published

a widely cited paper called "The myth of language universals", which seemed to find exceptions to other putatively universal rules. The paper said it was not even clear that all the world's languages observed a noun-verb distinction; Mr Adger counters with evidence that even the supposed outliers pay some attention to this split.

Many of the universals that hold up best are negative. There are many sensible things languages could do, but don't. Notably, their grammars do not make use of "continuous" features, such as the length of vowels. For instance, a past-tense verb could be pronounced for a longer time to indicate how long ago the action occurred—perfectly logical, but no language does this. Syntax uses discrete units, not continuous ones. Whether this is proof of universality is a matter of opinion.

Lastly, Mr Adger embraces the latest of Mr Chomsky's theories, "Merge", a mental function in which two units may be joined to a larger one that can then be operated on by the mind's grammar-processor. The two-year-old who beat Kanzi could Merge "water and lighter" and apply the verb to both; Kanzi seemed to treat words like beads on a string, rather than mentally grouping them into bigger units in a structure.

Mr Chomsky thinks a single human developed the ability to perform Merge tens of thousands of years ago, and that this is the only feature unique to human language. Mr Adger does not explicitly defend either of these claims. But his tour of Chomskyan linguistics is entertaining and accessible—in contrast to Mr Chomsky's own notoriously baffling prose. His book is a handy introduction to a vexed debate on the infinite power of the finite mortal mind.



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	% change on year ago latest	quarter*	2019†	% change on year ago latest	2019†	%		% of GDP, 2019†		% of GDP, 2019†		10-yr gov't bonds latest,%	change on year ago, bp	per \$ Aug 21st	% change on year ago
United States	2.3	Q2	2.1	2.2	1.8	Jul	2.0	3.7	Jul	-2.2	-4.7	1.6	-130	-	-
China	6.2	Q2	6.6	6.2	2.8	Jul	2.8	3.6	Q2§	0.7	-4.5	2.9	§§	-54.0	7.06
Japan	1.2	Q2	1.8	1.0	0.7	Jun	1.0	2.3	Jun	3.6	-3.0	-0.3	-33.0	106	3.8
Britain	1.2	Q2	-0.8	1.3	2.1	Jul	1.8	3.9	May††	-4.1	-1.6	0.6	-75.0	0.82	-4.9
Canada	1.3	Q1	0.4	1.6	2.0	Jul	2.0	5.7	Jul	-2.5	-0.9	1.2	-104	1.33	-2.3
Euro area	1.1	Q2	0.8	1.2	1.0	Jul	1.3	7.5	Jun	2.9	-1.1	-0.7	-101	0.90	-3.3
Austria	1.4	Q1	3.8	1.3	1.4	Jul	1.7	4.5	Jun	1.9	0.1	-0.4	-100	0.90	-3.3
Belgium	1.2	Q2	0.8	1.2	1.4	Jul	1.8	5.6	Jun	0.1	-0.9	-0.3	-103	0.90	-3.3
France	1.3	Q2	1.0	1.2	1.1	Jul	1.2	8.7	Jun	-0.9	-3.3	-0.4	-104	0.90	-3.3
Germany	0.4	Q2	-0.3	0.8	1.7	Jul	1.6	3.1	Jun	6.5	0.7	-0.7	-101	0.90	-3.3
Greece	0.9	Q1	0.9	1.8	nil	Jul	0.8	17.6	Apr	-3.0	0.1	2.0	-228	0.90	-3.3
Italy	nil	Q2	0.1	0.1	0.4	Jul	0.9	9.7	Jun	1.9	-2.5	1.3	-163	0.90	-3.3
Netherlands	2.0	Q2	2.1	1.7	2.5	Jul	2.6	4.2	Jul	9.7	0.6	-0.6	-97.0	0.90	-3.3
Spain	2.3	Q2	1.9	2.2	0.5	Jul	0.9	14.0	Jun	0.6	-2.3	0.1	-132	0.90	-3.3
Czech Republic	2.8	Q1	2.4	2.6	2.9	Jul	2.5	2.0	Jun‡	0.2	0.2	1.0	-118	23.3	-3.9
Denmark	2.4	Q1	3.2	1.8	0.4	Jul	0.9	3.8	Jun	6.8	1.0	-0.6	-94.0	6.72	-3.6
Norway	2.5	Q1	-0.3	1.8	1.9	Jul	2.3	3.6	Jun‡‡	7.1	6.6	1.1	-64.0	8.96	-5.9
Poland	4.7	Q1	3.2	4.0	2.9	Jul	2.0	5.2	Jul§	-0.7	-2.0	2.0	-120	3.92	-4.8
Russia	0.9	Q2	na	1.3	4.6	Jul	4.8	4.5	Jul§	7.2	2.1	7.3	-139	65.9	2.3
Sweden	1.4	Q2	-0.3	1.6	1.7	Jul	1.9	7.6	Jun§	4.5	0.4	-0.3	-82.0	9.62	-5.1
Switzerland	1.7	Q1	2.3	1.6	0.3	Jul	0.5	2.3	Jul	9.6	0.5	-1.0	-94.0	0.98	1.0
Turkey	-2.6	Q1	na	-1.7	16.6	Jul	16.1	12.8	May§	-0.7	-2.3	16.4	-554	5.73	5.9
Australia	1.8	Q1	1.6	2.2	1.6	Q2	1.7	5.2	Jul	-0.4	0.1	0.9	-159	1.47	-7.5
Hong Kong	0.5	Q2	-1.7	1.7	3.3	Jul	2.6	2.9	Jul‡‡	4.0	0.4	1.1	-107	7.84	0.1
India	5.8	Q1	4.1	6.7	3.1	Jul	3.6	7.5	Jul	-1.7	-3.5	6.6	-127	71.5	-2.4
Indonesia	5.0	Q2	na	5.1	3.3	Jul	3.1	5.0	Q1§	-2.6	-1.9	7.3	-52.0	14,240	2.4
Malaysia	4.9	Q2	na	4.4	1.4	Jul	0.8	3.3	Jun§	2.5	-3.5	3.4	-67.0	4.18	-1.9
Pakistan	3.3	2019**	na	3.3	10.3	Jul	9.1	5.8	2018	-3.4	-7.1	13.7	†††	367	-22.0
Philippines	5.5	Q2	5.7	6.0	2.4	Jul	3.6	5.1	Q2§	-2.1	-2.3	4.5	-199	52.3	2.1
Singapore	0.1	Q2	-3.3	0.9	0.6	Jun	0.6	2.2	Q2	15.8	-0.6	1.8	-60.0	1.38	-0.7
South Korea	2.1	Q2	4.4	1.9	0.6	Jul	0.7	3.9	Jul§	4.0	0.6	1.3	-110	1,202	-7.0
Taiwan	2.4	Q2	2.7	1.7	0.4	Jul	0.5	3.7	Jun	13.0	-1.0	0.7	-17.0	31.4	-2.1
Thailand	2.3	Q2	2.4	3.3	1.0	Jul	1.2	0.9	Jun§	7.9	-2.9	1.4	-119	30.8	6.3
Argentina	-5.8	Q1	-0.9	-1.3	54.4	Jul‡	48.7	10.1	Q1§	-2.2	-3.4	11.3	562	55.0	-45.5
Brazil	0.5	Q1	-0.6	0.8	3.2	Jul	3.8	12.0	Jun§	-0.9	-5.8	5.4	-428	4.03	-1.0
Chile	1.9	Q2	3.4	2.6	2.2	Jul	2.3	7.1	Jun‡‡	-2.5	-1.3	2.7	-178	711	-6.5
Colombia	3.4	Q2	5.6	3.1	3.8	Jul	3.4	9.4	Jun§	-4.2	-2.5	5.8	-107	3,393	-11.9
Mexico	-0.7	Q2	0.4	0.4	3.8	Jul	3.7	3.5	Jun	-1.6	-2.5	7.0	-83.0	19.7	-4.3
Peru	2.3	Q1	-2.0	3.0	2.1	Jul	2.2	6.3	Jun§	-1.8	-2.0	5.6	64.0	3.38	-2.4
Egypt	5.7	Q2	na	5.5	8.7	Jul	11.8	7.5	Q2§	-1.2	-7.2	na	nil	16.6	7.7
Israel	2.3	Q2	1.0	3.3	0.5	Jul	1.2	4.1	Jun	2.5	-4.0	0.9	-99.0	3.52	3.4
Saudi Arabia	2.4	2018	na	1.9	-1.4	Jun	-1.1	5.7	Q1	3.8	-5.6	na	nil	3.75	nil
South Africa	nil	Q1	-3.2	0.8	4.0	Jul	4.6	29.0	Q2§	-4.1	-4.7	8.3	-72.0	15.2	-5.8

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.

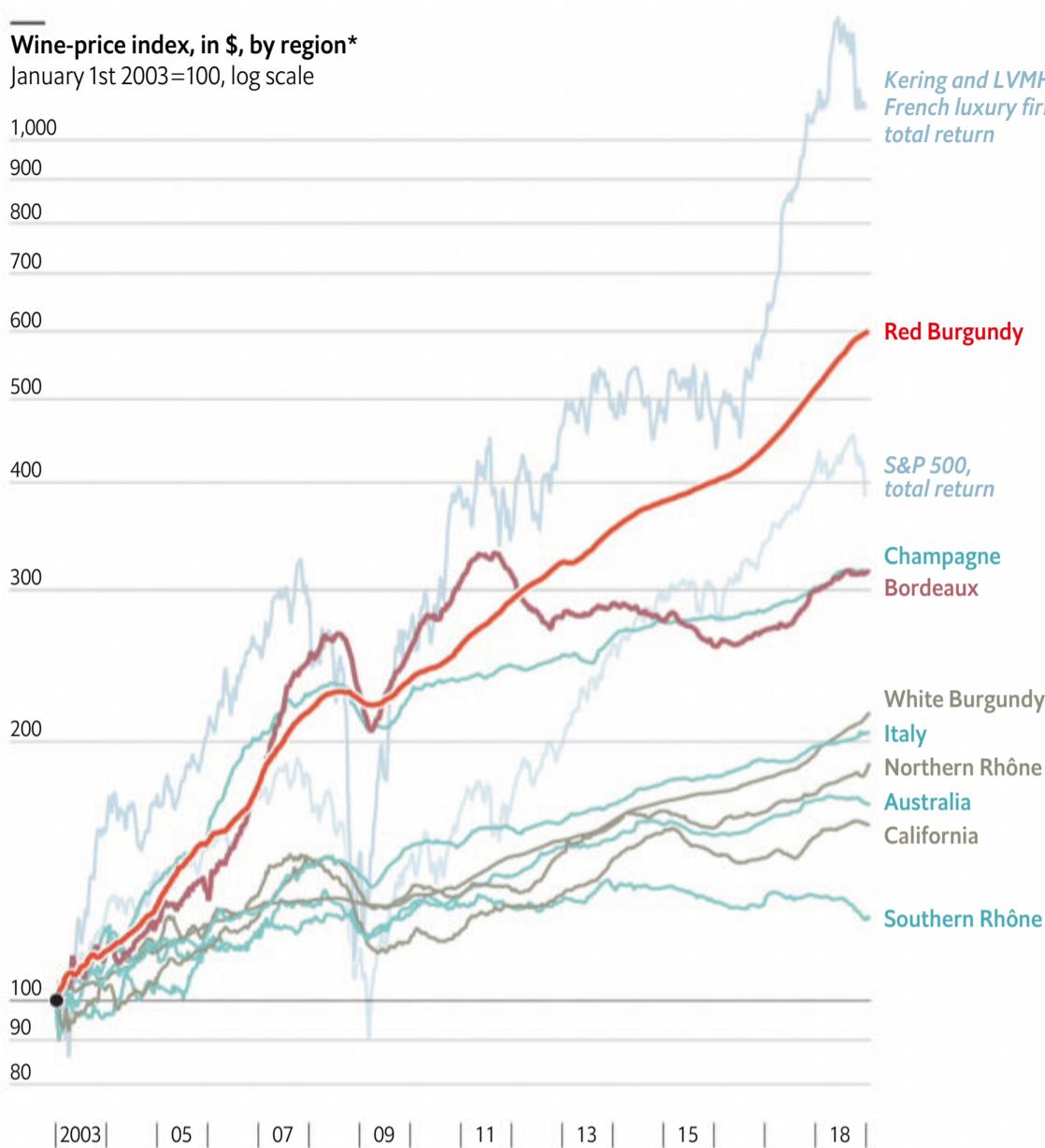
Markets

In local currency	% change on:			% change on:		
	Index Aug 21st	one week	Dec 31st 2018	index Aug 21st	one week	Dec 31st 2018
United States S&P 500	2,924.4	3.0	16.7	30,972.8	5.2	-16.4
United States NAScomp	8,020.2	3.2	20.9	3,122.6	-0.8	1.8
China Shanghai Comp	2,880.3	2.5	15.5	1,964.7	1.4	-3.7
China Shenzhen Comp	1,572.6	4.2	24.0	10,525.8	0.9	8.2
Japan Nikkei 225	20,618.6	-0.2	3.0	1,638.2	1.2	4.8
Japan Topix	1,497.5	-0.1	0.2	27,977.7	-6.5	-7.6
Britain FTSE 100	7,204.0	0.8	7.1	101,201.9	0.9	15.1
Canada S&P TSX	16,309.2	1.6	13.9	40,076.0	3.7	-3.8
Euro area EURO STOXX 50	3,394.9	3.2	13.1	14,357.2	-1.3	10.1
France CAC 40	5,435.5	3.5	14.9	1,501.1	2.0	12.6
Germany DAX*	11,802.9	2.7	11.8	8,508.9	-0.5	8.7
Italy FTSE/MIB	20,847.1	4.1	13.8	54,638.0	1.1	3.6
Netherlands AEX	550.4	2.6	12.8	2,135.5	2.4	13.4
Spain IBEX 35	8,701.5	2.1	1.9	983.1	1.9	1.8
Poland WIG	56,121.8	0.9	-2.7			
Russia RTS, \$ terms	1,280.2	1.6	20.1			
Switzerland SMI	9,848.1	2.3	16.8			
Turkey BIST	95,522.1	-3.9	4.7			
Australia All Ord.	6,572.6	-1.6	15.1			
Hong Kong Hang Seng	26,270.0	3.8	1.6	</td		

Red Burgundy is the only wine category whose returns have beaten the stockmarket since 2003

Wine-price index, in \$, by region*

January 1st 2003=100, log scale



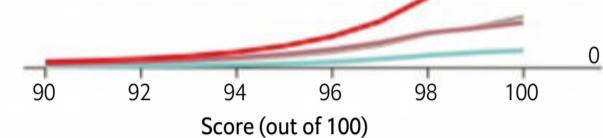
Predicted price† per 750ml bottle, by critics' scores‡

January 2003

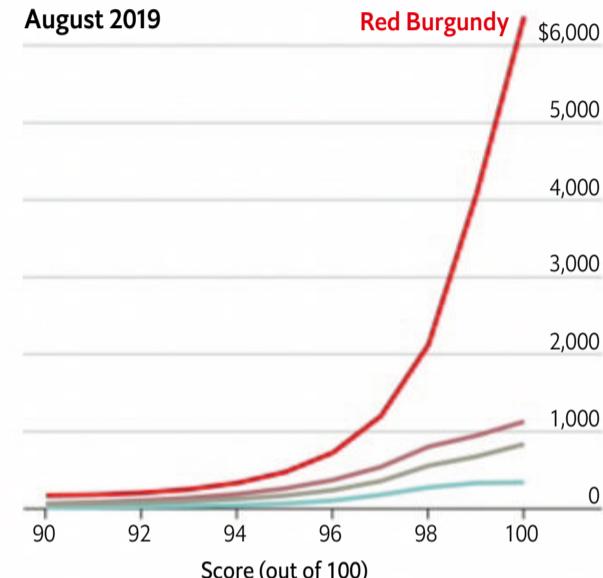
Bordeaux

California

Australia



August 2019



*Red only, except Burgundy and Champagne †Calculated using a statistical model ‡Burgundy: Burghound and Stephen Tanzer (all scores raised by one point); Bordeaux and California: Wine Advocate (WA), Wine Spectator (WS) and Tanzer; Australia: WA and WS
Sources: WineBid, The Economist

A cellar's market

Want a top-performing liquid asset?
Try Pinot Noir

WINE COLLECTORS like to proclaim that "all roads lead to Burgundy." They often wince at the plonk they drank when starting their hobby. In America and Australia, a common entry point is local "fruit bombs": heavy, alcoholic wines that taste of plum or blackberry; bear the vanilla or mocha imprint of oak barrels; and should be drunk within a few years of bottling.

As oenophiles gain experience, they start seeking reds to have with, say, chicken as well as steak. That leads to lower-octane French options: Cabernet Sauvignon from Bordeaux rather than Napa; Rhône Syrah instead of Barossa Shiraz. But once you value complexity and finesse over power, your vinous destination is pre-ordained.

Encyclopaedic wine knowledge is most precious in Burgundy. The French region is split into hundreds of named vineyards. In turn, myriad producers own specific rows within each vineyard, from which they all

make unique wines. This yields thousands of distinct pairings, each consisting of a few thousand bottles at most.

Moreover, red Burgundy is made from Pinot Noir, a grape with a maddening ageing pattern. After a few years of storage, it tends to "shut down" and lose flavour. The best wines blossom after a few decades, but many never "wake up" from their slumber.

In the past, Burgundy's complexity and small output relegated it to a market niche. A decade ago, Bordeaux—which makes fewer distinct wines in larger batches—became popular in Asia, and prices soared. But the bubble burst in 2012, when China's government began to frown on lavish gifts.

As tastes moved on from commoditised Bordeaux, mastery of Burgundy became seen as the test of connoisseurship, both in Asia and the West. But the region's vast array of wines—including trophies as scarce as 300 bottles a year—makes reliable pricing data hard to find. Among the hundreds of fine red Burgundies, Liv-ex, a marketplace, includes just 11 in its regional index.

To create a sturdier measure, WineBid, the biggest online wine auctioneer, kindly gave us a full sales record for every wine sold at least ten times on its site since 2003. The data contain 1.6m lots, covering 33,000 wines. We built portfolios of 50-500 of the

most expensive unique labels (one vintage of one wine) from each region. We then estimated the returns for each portfolio, before storage and transaction costs.

Collectors who have drunk most of their Pinot already may need another glass after seeing the results. By the end of 2018, red Burgundy had returned 497%, versus 279% for the S&P 500. (Our index does not extend to 2019, since many of the wines it contains have not been traded this year.) The index has also been less volatile than stocks are, though this may be an artefact of how it is calculated: no one knows what each wine would have sold for in the crash of 2008-09. Bordeaux and Champagne rose by 214% in 2003-18; everywhere else did worse.

It is hard to fathom how Burgundy can maintain such appreciation. Many people can buy a \$300 bottle. But at \$3,000, the market depends on the whims of the rich.

Even if prices keep rising, the best-performing stocks tend to beat their vinous peers. For example, Kering and LVMH—luxury conglomerates whose owners have bought Burgundy vineyards—returned 958% in 2003-18. And with dividend yields over 2% in recent years, they have paid enough income for a *grand cru* bottle, too. The best way to make money in Burgundy is probably making wine, not buying it. ■



Hoisting the sails

Steve Sawyer, leader of Greenpeace for 30 years, died on July 31st, aged 63

THE YOUNG MAN Steve Sawyer briefly met on July 10th 1985 on the deck of the Greenpeace boat *Rainbow Warrior*, as it sat in dock at Auckland in New Zealand, had nothing remarkable about him. Short, slim, clean-shaven and with light blond hair, he looked like just another student visitor. He wished Mr Sawyer a happy birthday—as it was, with the full works of ice cream and cake—and good luck with his current campaign, to stop French nuclear testing in Mururoa. Then he left. At 1am, after a meeting onshore of the skippers of all the protest boats, Mr Sawyer got the call that the *Rainbow Warrior* had been sunk. Two limpet bombs placed on the hull had exploded, driving a huge hole through the engine room, and the boat's photographer had drowned while trying to rescue his gear.

The “student”, it turned out, belonged to the French secret service. Mr Sawyer had long suspected that the French would try something. His campaign in Polynesia had been deliberately designed to annoy the hell out of them, so that they would take their radioactive poison and their vile weapons away from where people were trying to live. The *Rainbow Warrior* had already been rammed by French vessels and the crew beaten up, non-violence met with violence, so the gritty old re-purposed trawler was used to confrontation. This, however, was a whole new level.

And the repercussions shocked him. As he was trying to get to grips with the situation, people began turning up with bucketfuls of money. When he went to find a taxi, he was ushered to the front of the queue. In the baked-potato shop, the man at the cash register would not charge him. Across the world, people made donations and joined Greenpeace to protest against oil-drilling, mining, seal-hunting, whaling and dumping of toxic waste, as well as nuclear testing—anything which, in the words of Aldo Leopold, on which he had hung since college, destroyed “the integrity, stability and beauty” of the biosphere. Long before mobile phones, the bombing of the *Rainbow Warrior* created a media storm around

him. The next year he found himself director of Greenpeace USA, and two years later director of Greenpeace International.

The bombing had filled him, and through him Greenpeace, with even more defiant purpose. Since its founding in 1971 this had been a raggedy band, making its point with risky stunts that were denounced more than praised. It was this hippy-crazy aspect that had made him, a hippy himself back then, sign up immediately when a canvasser came to the door. But he found, as a lifelong devotee of Tolkien, a strong Hobbit element too. When battered little boats put themselves between illegal whaling vessels and the whales, daring them to fire their harpoons, or their crews sprayed seal pups with green dye to make their fur worthless; when activists, so tiny against those monsters, scaled oil-rigs in the North Atlantic to unfurl banners reading “Climate Emergency”, or blocked pipelines belching toxic waste into the sea, he was reminded of the brave little group of Bilbo, Frodo, Sam and the rest, who left the quiet Shire “to shake the towers and counsels of the Great”. They were small, shaggy-haired and barefoot, usually unarmed and often frightened. But they lived, and eventually triumphed, by their wits. Every problem had a solution, and every battle could be won, if you thought hard and fast enough.

He taught himself that, deliberately wandering off barefoot in the woods to have to puzzle his way home. He taught his children that (giving his son Sam a good Hobbit name). And he taught Greenpeace, fiercely applying his red pen to press releases and, when necessary, demanding sharp thinking as loudly as he liked to play his blues guitar. He became, and was inevitably called, Gandalf, not merely for his grizzled beard, lean sportsman’s height and philosophy degree, but also for the wise way he managed his ever-growing crowd of anti-authoritarians. Under him the organisation gained weight in every sense. Therefore it won battles. The French abandoned their nuclear testing in Polynesia, besides losing the damages suit that Greenpeace had filed against their government. Bugged by small-boat irritation, the United States ceased its testing off Alaska. In 1987 the Montreal protocol curbed CFC depletion of the ozone layer, and in 1991 the Antarctic protocol, which people thought unachievable, barred drilling there for 50 years. By the time he stepped down, in 2007, he had put Greenpeace at the centre of attempts to counter climate change.

Under him it also expanded its humanitarian side, sending its boats to help after typhoons and tsunamis. This was a role which it, and he, had stumbled into almost by accident in 1985, when he made a detour on *Rainbow Warrior*’s voyage to Polynesia to evacuate 300 people, their livestock and parts of their buildings from Rongelap atoll to another island. Fallout from American nuclear testing had made the atoll uninhabitable, but the Americans had declared it clear, despite a horrifically high rate of stillbirths, deformities and cancers. Nothing he did afterwards meant more to him than that rescue, and few things moved him more than seeing the livid thyroidectomy scars of the women who greeted him. But one was the thought of what Greenpeace was engaged in: “nothing less than a fight to the death for the future of the planet”.

His progress in that fight could be traced through the Greenpeace boats. The seaborne aspect of most protests was partly why he had joined, as someone who had loved to sail from childhood on the lakes near his home in New Hampshire. In 1981 he masterminded the refit of the first *Rainbow Warrior*, putting in bus engines because, appropriately, they had been used in landing craft on D-Day, and later installing a ketch rig for the Pacific voyage. Its successor, *Rainbow Warrior II*, launched in 1989, was a refitted three-mast schooner; the next, *Rainbow Warrior III*, was a purpose-built yacht with no less than 1,255 square metres of sail. By then, as director of the Global Wind Energy Council, he was working full-time and worldwide to promote wind power. It was promoted too through the ever-increasing strength, utility and beauty of the *Rainbow Warriors*, risen from the harbour floor in Auckland to take on the guarding of the Earth. ■

18⁴₃



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