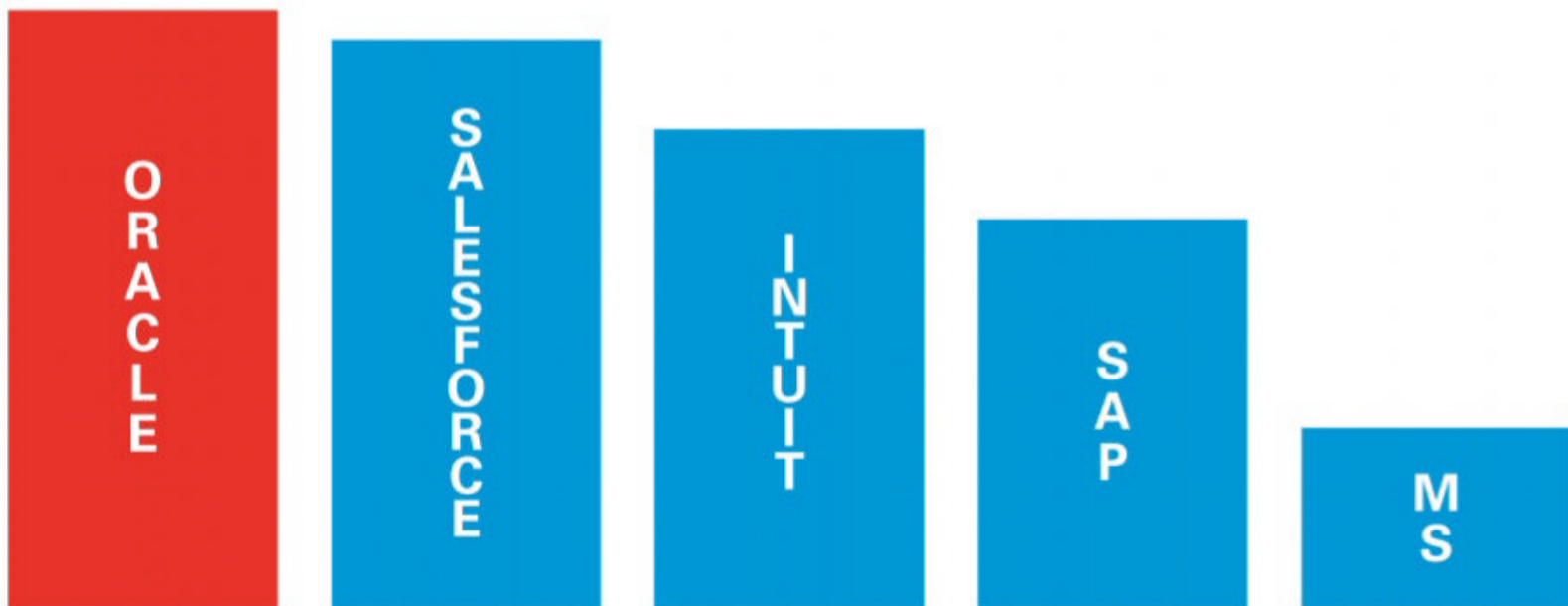


**Per IDC's
latest annual market share results,**

**Oracle is the #1
Enterprise Applications vendor in**

**North America
Based on market share and revenue.**



IDC Worldwide Semiannual Software Tracker, April 2019, results for CY2018. North America is the USA and Canada. Enterprise Applications refer to the IDC markets CRM, Engineering, Enterprise Resource Management (including HCM, Financial, Enterprise Performance Management, Payroll, Procurement, Order Management, PPM, EAM), SCM, and Production and Operations Applications.

ORACLE®

oracle.com/applications

The Economist

Why Bernie could yet save Trump

Indian business cools on Modi

How to prepare for rising sea levels

Fooling facial recognition

AUGUST 17TH-23RD 2019

Markets in an Age of Anxiety



We **BRING** *and* **CUSTOMERS**
COMPANIES **TOGETHER**



Hi, we're Salesforce. We help companies unify marketing, sales, service, commerce, and IT on the #1 CRM platform, so you can give every customer the personal experiences they love. Visit salesforce.com/eu/learnmore.

salesforce



On the cover

A dozen years ago investors were complacent about the risk of recession. Today they are overwhelmed by anxiety: leader, page 9. The effect of the trade war on America is frustratingly hard to pin down, page 53. The world's monetary system is breaking: Free exchange, page 59

- **Why Bernie could yet save Trump** America's leading democratic socialist is unlikely to gain the Democratic ticket. But he could stop a moderate from winning the presidency: Lexington, page 35

- **Indian business cools on Modi** Bosses and investors are growing disenchanted with their champion, page 47

- **How to prepare for rising sea levels** Today's plans are inadequate: leader, page 11. The water is coming, page 15

- **Fooling facial recognition** As the technology spreads, so do ideas for subverting it, page 60

The world this week

6 A summary of political and business news

Leaders

- 9 **Financial markets**
The Age of Anxiety
- 10 **Nuclear doctrine**
Finger on the button
- 10 **Civil liberties**
Speak up
- 11 **Rising seas**
A world without beaches
- 12 **Zimbabwe**
Land of hope and worry

Letters

14 On the teaching of history

Briefing

15 **The rising seas**
The world is not ready



Chaguan Why Communist officials imagine that America is behind the unrest in Hong Kong, page 43

Europe

- 19 Jihadists return home
- 20 Salvini stumbles
- 21 Protests in Russia
- 21 German GDP shrinks
- 22 Soviet blocks
- 24 **Charlemagne** How the EU sees Boris Johnson



Britain

- 25 Railway reform
- 26 High-speed rail



Middle East & Africa

- 27 Zimbabwe's crisis
- 28 A power vacuum in Gabon
- 29 Rwanda's odd statistics
- 29 Chaos in Yemen
- 30 Speaking French in Morocco



United States

- 31 Nuclear weapons
- 32 Democratic no-hopers
- 33 Drug markets
- 33 Trading water
- 34 Co-pay charities
- 35 **Lexington** Bernie Sanders



The Americas

- 36 Argentina's election
- 37 Guatemala's new president



Asia

- 38 Afghan peace talks
- 39 Kashmir's clampdown
- 40 Drama in Kyrgyzstan
- 40 A sultana in Java?

**China**

- 41 Hong Kong in turmoil
- 42 When tourists perform
- 43 **Chaguan** Black hands in Hong Kong

**International**

- 44 The new censors

**Business**

- 47 India Inc's Modi blues
- 49 Saudi Aramco's awkward earnings debut
- 49 Chinese tech resilience
- 50 Viacom and CBS reunited
- 51 WeWork sets out its stall
- 52 **Schumpeter** FredEx

**Finance & economics**

- 53 The trade war's costs
- 55 Making sense of markets
- 55 The chill from Brexit
- 56 Goldman in Malaysia
- 56 Bond insurers' woes
- 57 Costing climate change
- 58 Debt and despair in Sri Lanka
- 59 **Free exchange** The end of Bretton Woods II

**Science & technology**

- 60 Fooling face recognition
- 61 A nuclear accident
- 62 Two treatments for Ebola
- 62 P-P-Pick up a penguin

**Books & arts**

- 64 Mick Herron's spies
- 65 Reagan and Gorbachev
- 66 Music and morals
- 66 A magical Western

**Economic & financial indicators**

- 68 Statistics on 42 economies

Graphic detail

- 69 Violence in Afghanistan last year was worse than in Syria

Obituary

- 70 Toni Morrison, chronicler of black America

The Economist

Volume 432 Number 9156

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

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

Subscription service

For our full range of subscription offers, including digital only or print and digital combined, visit: Economist.com/offers

You can also subscribe by post, telephone or email:

Post: The Economist Subscription Services, PO Box 471, Haywards Heath, RH16 3GY, United Kingdom

Telephone: +44 (0) 333 230 9200 or +44 (0) 207 576 8448

Email: customerservices@subscriptions.economist.com

One-year print-only subscription (51 issues):

Euro-zone countries.....	€275
Denmark.....	DKr 2,035
Hungary.....	HUF 88,932
Norway.....	NKr 2,165
Poland.....	PLN 1,183
Sweden.....	SKr 2,469
Switzerland.....	SFr 349
Turkey.....	TRY 1,705
Other Europe (ex UK)	€275
Middle East-GCC.....	US \$415
South Africa.....	ZAR 4,690, US \$335
Middle East and Africa	US \$335

Please recycle



PEFC certified
This copy of *The Economist* is printed on paper sourced from sustainably managed forests certified by PEFC
www.pefc.org

JD
JAQUET DROZ
SWISS WATCHMAKER SINCE 1738



«Some watches
tell time.

**Some tell
a story»**

*Black high-tech ceramic case
Silicon balance spring and pallet horns
Double barrel, 18K white gold rotor
Sapphire dial, 18K white gold indexes*

Grande Seconde Skelet-One

JAQUET DROZ BOUTIQUES

GENEVA - PARIS - MOSCOW - DUBAI - TOKYO - HONG KONG - MACAU - SHANGHAI - BEIJING - XI'AN - SINGAPORE - NEW YORK

Discover our official point of sales on www.jaquet-droz.com



An indicative vote in **Argentina's** presidential election suggested that the opposition, led by Alberto Fernández with the country's previous president, Cristina Fernández de Kirchner (no relation), as his running-mate, would handily win the actual election in October. The Argentine peso shed a quarter of its value against the dollar and its main stockmarket fell by 37%. Investors fear the return of Ms Fernández, whose policies between 2007 and 2015 ruined the economy.

The result was a blow to the incumbent Argentine president, **Mauricio Macri**. After the poll he announced a number of giveaways to win over voters, including tax cuts, more welfare subsidies and a three-month freeze in petrol prices.

The election of Alejandro Giammattei as **Guatemala's** president threw doubt on the safe-third-country agreement signed by the outgoing president, Jimmy Morales, with the United States. Under the deal some migrants would seek asylum in Guatemala rather than travelling through Mexico to the American border. Mr Giammattei thinks Guatemala might not be able to honour that commitment.

The nomination by **Brazil's** president, Jair Bolsonaro, of his son, Eduardo, as ambassador to the United States prompted the public prosecutor's office to ask a federal court to rule on the formal qualifications required to be a diplomat. Eduardo Bolsonaro's appointment must still be confirmed by the senate in Brasília, but that hasn't

stopped the opposition from crying foul, saying his only diplomatic credentials seem to be that he is a friend of the Trump family.

Canada's ethics commissioner criticised Justin Trudeau, the prime minister, for pressing a former attorney-general to drop charges against a firm accused of bribery in Libya. The commissioner said Mr Trudeau and his office acted outside the bounds of convention, and that their behaviour was "tantamount to political direction". His report complicates Mr Trudeau's bid for re-election in October.

Hope at last

Two treatments for **Ebola** proved to be effective in tests conducted in the Democratic Republic of Congo, where the latest outbreak has killed 1,900 people. The survival rate jumps to 90% if the treatments, which employ special antibodies, are given soon after infection. If untreated, most people who catch Ebola die.

Southern separatists in **Yemen** seized the city of Aden from forces loyal to the internationally recognised government. The separatists and the government are part of a Saudi-led coalition fighting the Iranian-backed Houthi rebels, who control much of the country. Many in the south dislike the government, as well as the Houthis, and hope to secede.

Failing a test

Mystery surrounded an explosion in **Russia's** far north, which led to a spike in radiation in nearby towns. The Russians said only that a rocket had exploded, killing five scientists. Analysts think it may have been a Skyfall, a cruise missile powered by a tiny nuclear reactor that the Russians are developing.

Another huge weekend protest, this one the biggest yet, was held in **Moscow** in opposition to the authorities' decision to bar certain candidates

from contesting elections to the city council. The demonstration had been authorised, but police still beat up many of those taking part.

John Bolton, Donald Trump's national security adviser, visited Boris Johnson, the new **British** prime minister, in London. Mr Bolton held out the prospect of a quick trade deal, negotiated sector by sector (to placate those worried by American designs on Britain's health service) in the case of a no-deal Brexit. But a few days later Nancy Pelosi, the Democratic Speaker of Congress, again scotched any hope of a deal if Britain reinstates border controls with Ireland post-Brexit.

Hardening the rhetoric



Chinese state media adopted a harsher tone against the protesters in **Hong Kong**, warning that they were "asking for self-destruction". Video footage was released purporting to show manoeuvres by Chinese troops near the border with Hong Kong. China described the demonstrations as "behaviour that is close to terrorism". Hundreds of flights in and out of Hong Kong were again cancelled when protesters occupied its airport.

America's envoy to **Afghanistan** described the latest round of peace talks with the Taliban as "productive". The talks, held in Qatar, ended without a deal by which American troops would leave Afghanistan. America is hoping to secure an agreement soon, ahead of a postponed presidential election in Afghanistan that is scheduled for September 28th. Ashraf Ghani, the Afghan president, this week rejected

what he described as foreign interference in his country.

A communications blackout was still in force in most of Indian-administered **Kashmir** following the government's decision to strip the region of its autonomy and split it into two territories that will in effect be controlled from Delhi. Sporadic protests broke out. The biggest took place in Srinagar, Kashmir's main city, where thousands of Muslims took to the streets after Friday prayers.

A former president of **Kyrgyzstan**, Almazbek Atambayev, was charged with collusion in the early release of a mafia boss. Mr Atambayev has fallen out with his successor and former protégé, Sooronbay Jeyenbekov. Investigators say Mr Atambayev could face other charges, including of murder, after a dramatic siege of his home left a police officer dead.

Only the healthy and wealthy

The Trump administration published a rule that would stop **legal migrants** from becoming permanent residents in America if they use public-welfare programmes, such as food stamps. Migrants must already prove they will not rely on government assistance if they want to stay. The new rule specifies that receiving certain benefits will be a disqualifying factor. Ken Cuccinelli, who heads the immigration agency, said that America wants "self-sufficient" immigrants.

America's attorney-general, William Barr, ordered an inquiry into the suicide of **Jeffrey Epstein**. Mr Epstein, once a wealthy financier, was in jail awaiting trial for trafficking under-age girls for sex.

The release of a film reportedly premised on a global elite who shoot "deplorables" (ie, Trump supporters) for sport was postponed in the wake of recent **mass shootings**. "The Hunt" is described as a "satirical social thriller" by Universal Pictures. ▶▶

Spooked by concerns over trade, geopolitical tensions and the possibility of recession, **stockmarkets** had their worst day of the year so far. The S&P 500, Dow Jones Industrial Average and NASDAQ indices all fell by 3% in a day. In Europe the DAX was down by 2.2% and the FTSE 100 by 1.4%. Investors were particularly concerned by the yield on long-term American government bonds falling below that on short-term bonds for the first time since 2007. Such a **yield-curve inversion** is usually seen as a harbinger of a downturn.

Also weighing on markets was news that **Germany's GDP** shrank by 0.1% in the second quarter compared with the previous three months, underlining the recent fall in German exports and industrial output. **Britain's economy** also shrank in the second quarter, by 0.2%, the first contraction of British GDP since the end of 2012.

Meanwhile, the growth rate of **Chinese industrial output** slowed to 4.8% in July compared with the same month last year. That was the slowest pace in more than 17 years and more evidence of the chilling effects of the trade war on the Chinese economy.

Father Christmas

Earlier in the week, despondent markets had lifted when the Trump administration said it would postpone a 10% **tariff** on some Chinese imports until December 15th. The list of goods includes smartphones, laptops, video-game consoles and toys, which Donald Trump suggested would benefit shoppers in the run-up to Christmas. The delay applies to two-thirds of the products subjected to this particular levy. A 10% tariff will be collected on the other Chinese goods from September 1st.

South Korea removed Japan from its list of trusted trading partners, escalating a trade dispute between the pair (Japan dropped South Korea's

preferential trading status earlier this month). Trade between the two countries will now have to go through more red tape.

Saudi Aramco, Saudi Arabia's state oil company, is to take a 20% stake in the refining and chemicals assets owned by **Reliance Industries**, an Indian conglomerate. The deal, which is still being negotiated, deepens existing ties between the companies and will be one of the biggest foreign investments in India to date.

Boeing delivered just 19 planes in July, the least since the financial crisis. The company is holding more than 150 of its 737 MAX aircraft, which have been grounded after two fatal crashes. The ripples from the grounding continue to spread. **Norwegian** airline said it was ending flights from Ireland to America in part because of the "continued uncertainty" of the 737 MAX's return to service. It is Norwegian's first retreat from a transatlantic market it had entered assertively.

Cathay Pacific's share price regained the ground it lost amid protests at Hong Kong's airport. The territory's biggest airline was also ordered by China's aviation authority to

take crew off any plane bound for the mainland if they supported the protesters. Cathay said it would comply, leaving it vulnerable to claims of being pro-Chinese.

After years of on-off negotiations with a plot worthy of a soap opera, **Viacom** and **CBS** agreed to merge, reuniting two media companies that were split in 2006 and combining assets such as Paramount and MTV with one of America's big four networks. Shari Redstone, whose family controls both companies, will become chairwoman of ViacomCBS.

A minefield

Britain's advertising authority banned two TV ads under new rules on **gender stereotyping**. One ad, for Volkswagen, depicted men being more adventurous than women. The other, for Philadelphia cream cheese, showed two men distracted by lunch neglecting their babies. Mondelez, the maker of Philadelphia, said it chose two dads "to deliberately avoid the typical stereotype" of two mothers. The regulator disagreed, ruling that "the men were portrayed as somewhat hapless" and that the "humour in the ad derived from the use of the gender stereotype".

WeWork's parent company filed documents for its eagerly awaited IPO, which might happen next month. The office rental firm is the latest in a string of high-profile startups to float on the stockmarket this year. Like many of its contemporaries, WeWork's filing suggests it struggles to make a profit. In the first half of this year it recorded a \$905m loss.



Uber's share price fell by a fifth in the days after it revealed a \$5.2bn quarterly loss. Most of that was because of share-based compensation paid to workers after Uber's IPO, but even on its favoured measure of profitability it made a loss of \$656m, more than in the same quarter last year. Dara Khosrowshahi, the chief executive, accepted that investors were frustrated with mounting losses, conceding that "There's a meme around, which is, can Uber ever be profitable?"



When we do things differently, they're never the same again.

When it comes to sustainability in business, there's no going back. We believe in supporting the change to a sustainable future, for the benefit of everyone.



Explore more at
www.business.hsbc.com



Together we thrive

Markets in an Age of Anxiety

A dozen years ago, investors were complacent about the risk of recession. Not any more

LOOKING FOR meaning in financial markets is like looking for patterns in a violent sea. The information that emerges is the product of buying and selling by people, with all their contradictions. Prices reflect a mix of emotion, biases and cold-eyed calculation. Yet taken together markets express something about both the mood of investors and the temper of the times. The most commonly ascribed signal is complacency. Dangers are often ignored until too late. However, the dominant mood in markets today, as it has been for much of the past decade, is not complacency but anxiety. And it is deepening by the day.

It is most evident in the astounding appetite for the safest of assets: government bonds. In Germany, where figures this week showed that the economy is shrinking, interest rates are negative all the way from overnight deposits to 30-year bonds. Investors who buy and hold bonds to maturity will make a guaranteed cash loss. In Switzerland negative yields extend all the way to 50-year bonds. Even in indebted and crisis-prone Italy, a ten-year bond gets you only 1.5%. In America, meanwhile, the curve is inverted—interest rates on ten-year bonds are lower than on three-month bills—a peculiar situation that is a harbinger of recession. Angst is evident elsewhere, too. The safe-haven dollar is up against many other currencies. Gold is at a six-year high. Copper prices, a proxy for industrial health, are down sharply. Despite Iran's seizure of oil tankers in the Gulf, oil prices have sunk to \$60 a barrel.

Plenty of people fear that these strange signals portend a global recession. The storm clouds are certainly gathering. This week China said that industrial production is growing at its most sluggish pace since 2002. America's decade-long expansion is the oldest on record so, whatever economists say, a downturn feels overdue. With interest rates already so low, the capacity to fight one is depleted. Investors fear that the world is turning into Japan, with a torpid economy that struggles to vanquish deflation, and is hence prone to going backwards.

Yet a recession is so far a fear, not a reality. The world economy is still growing, albeit at a less healthy pace than in 2018. Its resilience rests on consumers, not least in America. Jobs are plentiful; wages are picking up; credit is still easy; and cheaper oil means there is more money to spend. What is more, there has been little sign of the heady exuberance that normally precedes a slump. The boards of public companies and the shareholders they ostensibly serve have played it safe. Businesses in aggregate are net savers. Investors have favoured firms that generate cash without needing to splurge on fixed assets. You see this in the vastly contrasting fortunes of America's high-flying stockmarket, dominated by capital-light internet and services firms that throw off profits, and Europe's, groaning under banks and under carmakers with factories that eat up capital. And within Europe's stockmarkets a defensive stock, such as Nestlé, is trading at a towering premium to an industrial one such as Daimler.

If there has been no boom and the world economy has not yet turned to bust, why then are markets so anxious? The best answer is that firms and markets are struggling to get to grips with

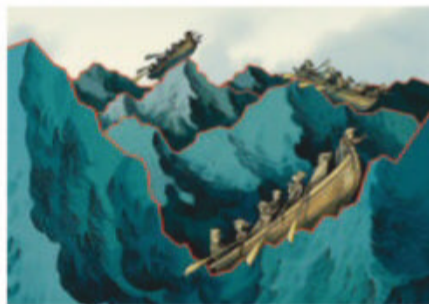
uncertainty. This, not tariffs, is the greatest harm from the trade war between America and China. The boundaries of the dispute have stretched from imports of some industrial metals to broader categories of finished goods (see Finance section). New fronts, including technology supply-chains and, this month, currencies, have opened up. As Japan and South Korea let their historical differences spill over into trade, it is unclear who or what might be drawn in next. Because big investments are hard to reverse, firms are disinclined to press ahead with them. A proxy measure from JPMorgan Chase suggests that global capital spending is now falling. Evidence that investment is being curtailed is reflected in surveys of plunging business sentiment, in stalling manufacturing output worldwide and in the stuttering performance of industry-led economies, not least Germany.

Central banks are anxious, too, and easing policy as a result. In July the Federal Reserve lowered interest rates for the first time in a decade as insurance against a downturn. It is likely to follow that with more cuts. Central banks in Brazil, India, New Zealand, Peru, the Philippines and Thailand have all reduced their benchmark interest rates since the Fed acted. The European Central Bank is likely to resume its bond-buying programme.

Despite these efforts, anxiety could turn to alarm, and sluggish growth descend into recession. Three warning signals are worth watching. First, the dollar, which is a barometer of risk appetite. The more investors reach for the safety of the greenback, the more they see danger ahead. Second come the trade negotiations between America and China. This week President Donald Trump unexpectedly delayed the tariffs announced on August 1st on some imports, raising hopes of a deal. That ought to be in his interests, as a strong economy is critical to his prospects of re-election next year. But he may nevertheless be misjudging the odds of a downturn. Mr Trump may also find that China decides to drag its feet, in the hope of scuppering his chances of a second term and of getting a better deal (or one likelier to stick) with his Democratic successor.

The third thing to watch is corporate-bond yields in America. Financing costs remain remarkably low. But the spread—or extra yield—that investors require to hold riskier corporate debt has begun to widen. If growing anxiety were to cause spreads to blow out, highly geared firms would find it costlier to roll over their debt. That could lead them to cut back on payrolls as well as investment in order to make their interest payments. The odds of a recession would then shorten.

When people look back, they will find plenty of inconsistencies in the configuration of today's asset prices. The extreme anxiety in bond markets may come to look like a form of recklessness: how could markets square the rise in populism with a fear of deflation, for instance? It is a strange thought that a sudden easing of today's anxiety might lead to violent price changes—a surge in bond yields; a sideways crash in which high-priced defensive stocks slump and beaten-up cyclicals rally. Eventually there might even be too much exuberance. But just now, who worries about that? ■



Nuclear doctrine

Finger on the button

If America ruled out using nuclear weapons first the world would not be any safer

IN 1973 Major Harold Hering, a veteran pilot and trainee missile-squadron commander, asked his superiors a question: if told to fire his nuclear-tipped rockets, how would he know that the orders were lawful, legitimate and from a sane president? Soon after, Major Hering was pulled from duty and later kicked out of the air force for his “mental and moral reservations”.

His question hit a nerve because there was, and remains, no check on a president’s authority to launch nuclear weapons. That includes launching them first, before America has been nuked itself. The United States has refused to rule out dropping a nuclear bomb on an enemy that has used only conventional weapons, since it first did so in 1945.

Many people think this calculated ambiguity is a bad idea. It is unnecessary, because America is strong enough to repel conventional attacks with conventional arms. And it increases the risk of accidents and misunderstandings. If, when the tide of a conventional war turns, Russia or China fears that America may unexpectedly use nukes, they will put their own arsenals on high alert, to preserve them. If America calculates that its rivals could thus be tempted to strike early, it may feel under pressure to go first—and so on, nudging the world towards the brink.

Elizabeth Warren, a Democratic contender for the presidency, is one of many who want to remedy this by committing America, by law, to a policy of No First Use (NFU) (see United States section). India and China have already declared NFU, or something close, despite having smaller, more vulnerable arsenals.

Ms Warren’s impulse to constrain nuclear policy is right. However, her proposal could well have perverse effects that make the world less stable. Many of America’s allies, such as South Korea and the Baltic states, face large and intimidating rivals at a time when they worry about the global balance of power. They think uncertainty about America’s first use helps deter con-

ventional attacks that might threaten their very existence, such as a Russian assault on Estonia or a Chinese invasion of Taiwan. Were America to rule out first use, some of its Asian allies might pursue nuclear weapons of their own. Any such proliferation risks being destabilising and dangerous, multiplying the risks of nuclear war.

The aim should be to maximise the deterrence from nuclear weapons while minimising the risk that they themselves become the cause of an escalation. The place to start is the question posed by Major Hering 46 years ago. No individual ought to be entrusted with the unchecked power to initiate annihilation, even if he or she has been elected to the White House. One way to check the president’s launch authority would be to allow first use, but only with collective agreement, from congressional leaders, say, or the cabinet.

There are other ways for a first-use policy to be safer. America should make clear that the survival of nations must be at stake. Alas, the Trump administration has moved in the opposite direction, warning that “significant non-nuclear strategic attack”, including cyberstrikes, might meet with a nuclear response.

America can also make its systems safer. About a third of American and Russian nuclear forces are designed to be launched within a few minutes, without the possibility of recall, merely on warning of enemy attack. Yet in recent decades, missile launches have been ambiguous enough to trigger the most serious alarms. If both sides agreed to take their weapons off this hair-trigger, their leaders could make decisions with cooler heads.

Most of all, America can put more effort into arms control. The collapse of the Intermediate-range Nuclear Forces Treaty on August 2nd and a deadly radioactive accident in Russia involving a nuclear-powered missile on August 8th (see Science section) were the latest reminders that nuclear risks are growing just as the world’s ability to manage them seems to be diminishing. ■



Civil liberties

Speak up

As societies polarise, free speech is under threat. It needs defenders

WHO IS THE greater threat to free speech: President Donald Trump or campus radicals? Left and right disagree furiously about this. But it is the wrong question, akin to asking which of the two muggers currently assaulting you is leaving more bruises. What matters is that big chunks of both left and right are assaulting the most fundamental of liberties—the ability to say what you think. This is bad both for America and the world.

The outrages come so fast that it is easy to grow inured to them (see International section). The president of the United States calls truthful journalism “fake news” and reporters “enemies of the people”. In June, when a reporter from *Time* pressed

him about the Mueller inquiry, he snapped, “You can go to prison,” justifying his threat by speculating that *Time* might publish a picture of a letter from Kim Jong Un he had just displayed. Mr Trump cannot actually lock up reporters, because America’s robust constitution prevents him. But his constantly reiterated contempt for media freedom reassures autocrats in other countries that he will not stop them from locking up their own critics. On the contrary, when Saudi Arabia blatantly murdered Jamal Khashoggi, a *Washington Post* contributor, in its consulate in Istanbul last year, Mr Trump was quick to reassure the Saudi crown prince that this would not affect any oil or arms deals. ▶

▶ Campus radicals are less powerful than the president. But he will be gone by 2021 or 2025. By contrast, the 37% of American college students who told Gallup that it was fine to shout down speakers of whom they disapprove will be entering the adult world in their millions. So will the 10% who think it acceptable to use violence to silence speech they deem offensive. Such views are troubling, to put it mildly. It does not take many threats of violence to warn people off sensitive topics. And although the left usually insist that the only speech they wish to suppress is the hateful sort, they define this rather broadly. “Hateful” views may include opposing affirmative action, supporting a Republican or suggesting that America is a land of opportunity. Mansfield University of Pennsylvania bans students from sending any message that might be “annoying”. In some Republican states, meanwhile, public universities face pressure to keep climate change off the curriculum. Small wonder most American students think their classmates are afraid to say what they think.

As societies have grown more politically polarised, many people have come to believe that the other side is not merely misguided but evil. Their real goal is to oppress minorities (if they are on the right) or betray the United States (if they are on the left). To this Manichean view, campus radicals have added a second assertion: that words are in themselves often a form of violence, and that hearing unwelcome ideas is so traumatic, especially for disadvantaged groups, that the first job of a university is to protect its faculty and students from any such encounter. Some add that any campus official who disputes this dogma, or who inadvertently violates the ever-expanding catalogue of ta-

boos, should be hounded out of their job.

These ideas are as harmful as they are wrongheaded. Free speech is the cornerstone not only of democracy but also of progress. Human beings are not free unless they can express themselves. Minds remain narrow unless exposed to different viewpoints. Ideas are more likely to be refined and improved if vigorously questioned and tested. Protecting students from unwelcome ideas is like refusing to vaccinate them against measles. When they go out into the world, they will be unprepared for its glorious but sometimes challenging diversity.

The notion that people have a right not to be offended is also pernicious. Offence is subjective. When states try to police it, they encourage people to take offence, aggravating social divisions. One of the reasons the debate about transgender rights in the West has become so poisonous is that some people are genuinely transphobic. Another is that some transgender activists accuse people who simply disagree with them of hate speech and call the cops on them. Laws criminalising “hate speech” are inevitably vague and open to abuse. This is why authoritarian regimes are adopting them so eagerly. A new Venezuelan law, for example, threatens those who promote hatred with 20 years in prison—and prosecutors use it against those who accuse ruling-party officials of corruption.

Governments should regulate speech minimally. Incitement to violence, narrowly defined, should be illegal. So should persistent harassment. Most other speech should be free. And it is up to individuals to try harder both to avoid causing needless offence, and to avoid taking it. ■

Rising seas

A world without beaches

How to prepare for the deluge

THE OCEAN covers 70.8% of the Earth’s surface. That share is creeping up. Averaged across the globe, sea levels are 20cm higher today than they were before people began suffusing the atmosphere with greenhouse gases in the late 1800s. They are expected to rise by a further half-metre or so in the next 80 years; in some places, they could go up by twice as much—and more when amplified by storm surges like the one that Hurricane Sandy propelled into New York in 2012. Coastal flood plains are expected to grow by 12-20%, or 70,000-100,000 square kilometres, this century. That area, roughly the size of Austria or Maine, is home to masses of people and capital in booming sea-facing metropolises. One in seven of Earth’s 7.5bn people already lives less than ten metres above sea level; by 2050, 1.4bn will. Low-lying atolls like Kiribati may be permanently submerged. Assets worth trillions of dollars—including China’s vast manufacturing cluster in the Pearl river delta and innumerable military bases—have been built in places that could often find themselves underwater.

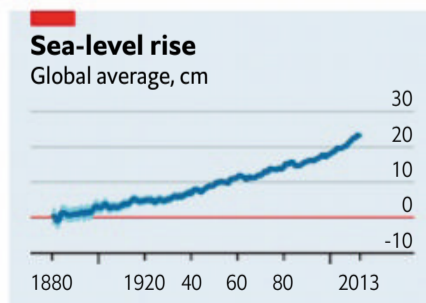
The physics of the sea level is not mysterious. Seawater expands when heated and rises more when topped up by meltwater from sweating glaciers and ice caps. True, scientists debate just how high the seas can rise and how quickly (see Briefing) and politicians and economists are at odds over how best to deal with

the consequences—flooding, erosion, the poisoning of farmland by brine. Yet argument is no excuse for inaction. The need to adapt to higher seas is now a fact of life.

Owing to the inexorable nature of sea-swelling, its effects will be felt even if carbon emissions fall. In 30 years the damage to coastal cities could reach \$1trn a year. By 2100, if the Paris agreement’s preferred target to keep warming below 1.5°C relative to preindustrial levels were met, sea levels would rise by 50cm

from today, causing worldwide damage to property equivalent to 1.8% of global GDP a year. Failure to enact meaningful emissions reductions would push the seas up by another 30-40cm, and cause extra damage worth 2.5% of GDP.

In theory minimising the damage should be simple: construct the hardware (floodwalls), install the software (governance and public awareness) and, when all else fails, retreat out of harm’s way. This does not happen. The menace falls beyond most people’s time horizons. For investors and the firms they finance, whose physical assets seldom last longer than 20 years, that is probably inevitable—though even businesses should acquaint themselves with their holdings’ nearer-term risks (which few in fact do). For local and national governments, inaction is a dereliction of duty to future generations. When they do recognise the problem, they tend to favour multibillion-dollar struc- ▶



► tures that take years to plan, longer to erect, and often prove inadequate because the science and warming have moved on.

As with all climate-related risks, governments and businesses have little incentive to work out how susceptible they are. Some highly exposed firms are worried that, if they disclose their vulnerabilities, they will be punished by investors. Governments, notably America's, make things worse by encouraging vulnerable households to stay in harm's way by offering cheap flood insurance. More foolish still, some only reimburse rebuilding to old standards, not new flood-proof ones.

However, there are ways to hold back the deluge. Simple things include building codes that reserve ground levels of flood-prone buildings for car parks and encourage "wet-proofing" of walls and floors with tiles so as to limit the clean-up once floodwaters recede. Mains water, which is desirable in its own right, may stop people without access to it from draining aquifers, which causes land to subside; parts of Jakarta are sinking by 25cm a year, much faster than its sea is swelling. If more ambitious projects are needed to protect dense urban centres, they ought to be built not for the likeliest scenario but for the worst case, and engineered to be capable of being scaled up as needed. The New York region has funnelled \$1bn out of a reconstruction

budget of \$60bn to such experiments in Sandy's wake.

Authorities must also stop pretending that entire coastlines can be defended. Unless you are Monaco or Singapore, they cannot. Elsewhere, people may need to move to higher ground. Bangladesh, for instance, is displacing 250,000 households.

All this requires co-ordination between different levels of government, individuals and companies, not least to prevent one man's levee from diverting water to a defenceless neighbour. Market signals need strengthening. Credit-raters, lenders and insurers are only beginning to take stock of climate risks. Making the disclosure of risks mandatory would hasten the process. And poor, vulnerable places need support. Just \$70bn a year of the \$100bn in pledged climate aid to help them tackle the causes and impact of global warming has materialised. Less than one-tenth of it goes to adaptation. This must change.

Open the floodgates

Actuaries calculate that governments investing \$1 in climate resilience today will save \$5 in losses tomorrow. That is a good return on public investment. Rich countries would be foolhardy to forgo it, but can probably afford to. Many developing countries, by contrast, cannot. All the while, the water is coming. ■

Zimbabwe

Land of hope and worry

Zimbabwe's economy is crashing and its people are hungry

AFTER DECADES of mismanagement and corruption, Zimbabwe is a wreck. Its people are poor and hungry (see Middle East & Africa section). By early next year about half of them will need help to get enough food, says the UN's World Food Programme. In a country that was once among Africa's most industrialised, electricity flickers for only a few hours a day, often at night. Factories and bakeries stand idle while the sun shines. Workers arrive after dark, hoping that if they are patient they will be able to switch on their machines or ovens. In homes people wake up in the middle of the night to cook or iron their shirts. Freshwater taps work for a few hours once a week. Tendai Biti, an opposition MP and former finance minister, complains that life has gone back to colonial times: "I'm washing in a bucket, my friend, as if it is Southern Rhodesia in 1923."

The crisis is Zimbabwe's worst since the bad days of 2008-09, when President Robert Mugabe's money-printing sparked hyperinflation so intense that prices doubled several times a week. That crisis was tamed only when Zimbabwe ditched its own currency and started using American dollars. This time, the government blames drought for the nation's woes. Rains have, indeed, been poor. But the real problem is bad government. The same ruling party, ZANU-PF, has been in charge since 1980. Mr Mugabe's successor, Emmerson Mnangagwa, who seized power from his mentor in 2017, is equally thuggish. His regime has kept grabbing dollars from people's bank accounts and replacing them with electronic funny money, which has now lost most of its value. In June, without enough hard cash to pay the soldiers who defend it, the government decreed that shops must accept

only funny money. Annual inflation has reached 500%.

Zimbabweans have learned to expect only trouble from the people in charge. They hustle creatively to get by. Salaried workers have side gigs. Families subsist on remittances from relatives working abroad. However, they do not see why they should endure oppression and dysfunction indefinitely.

Zimbabwe is poor because its rulers are predatory. But some blame must be shared by neighbouring governments, donors and lenders who, time and again, have looked the other way as the ruling party has rigged elections, tortured dissidents and



looted the nation's wealth. In 1987, when Mr Mugabe tried to create a de facto one-party state, Western diplomats crooned that a firm hand was probably what the country needed. In 2000, when Mr Mugabe sent thugs to seize white-owned commercial farms, some African leaders cheered the righting of a colonial wrong, ignoring the fact that much of the land was redistributed to cabinet ministers who barely bothered

to farm it. After Mr Mugabe's kleptocracy crashed the economy, the IMF handed over \$510m in 2009, saying it welcomed his promises of reform. They proved empty.

Now Mr Mnangagwa wants another bail-out from the IMF and loans from the World Bank. To secure it, he is making grand pledges to repeal oppressive laws and compensate farmers whose land was stolen. Yet after 21 months in power, he has shown few signs of doing either. Until he proves through actions that he is sincere, his regime should not get a cent. Provide food and medical aid to the hungry; but do not prop up the government that made them so. ■



Where perspectives meet

Head of BIS Innovation Hub

Basel, Switzerland

The BIS seeks to appoint the Head to lead its new unit, the BIS Innovation Hub. As a senior official of the BIS at the rank of head of department, and as a member of the Bank's Executive Committee, you will be responsible for identifying and developing insights into financial technology (fintech) trends that are critically relevant to central banking. The Innovation Hub will also develop public goods based on financial technology with the aim of improving the efficiency and security of the global financial system.

In this key strategic role, you will head multidisciplinary teams located in Hong Kong SAR, Singapore and Switzerland, fostering international collaboration on innovations in financial technology at the highest levels within the central banking and regulatory community. You will also manage the selection and execution of key fintech projects across multiple locations.

You will be an inspiring and forward-thinking senior executive in a highly visible role in a central bank, an economic research institute or in the technology industry. You will have in-depth financial technology knowledge coupled with a strong public policy perspective. You are likely to be experienced in interacting with the governors of central banks or with private sector CEOs.

To find out more, visit www.bis.org/careers

The Bank for International Settlements is a global forum for monetary and financial cooperation and a bank for central banks

Promoting global monetary and financial stability

Deadline for applications:
8 September 2019



Jane Leighton
BEFORE CREATIVE INDUSTRIES
NOW MATHS TEACHER

ARE YOU READY FOR A CHANGE?

Come back to school
nowteach.org.uk

NOWTEACH

A MISSION LIKE NO OTHER

The Central Intelligence Agency

The Central Intelligence Agency seeks high-performing, patriotic professionals with a diverse range of backgrounds, skill sets and life experiences to serve the United States by advancing the Agency's mission as the nation's first line of defense. We are interested in candidates available for full-time, part-time and consulting opportunities both at home and overseas.

For the intellectually curious adventurer looking for an unparalleled, high-impact international opportunity, we offer a way of life that challenges the deepest resources of an individual's intellect, resilience and judgment. While no specific work background is required, candidates with experience in business, entrepreneurship, sales, marketing, real estate and project management are highly desirable.

Competitive candidates should possess the following:

- US citizenship, dual US citizenship or US Lawful Permanent Resident (LPR) status
- 3+ years of international experience
- The desire to live, travel and work abroad
- Foreign language skills
- The ability to successfully complete medical and security processing

Individuals must be physically located in the US to apply.

Take the next step. Mail your résumé with a cover letter to:

Recruitment Center
Box 26
Dept. D-45
Washington, DC 20505



THE WORK OF A NATION.
THE CENTER OF INTELLIGENCE.

The CIA is an equal opportunity employer and a drug-free workforce.

History lessons

Given Bagehot's disdain for those who fiddle with footnotes, it is hardly surprising that he gives no evidence for his claim that academic historians have neglected the study of politics, power and nation states in favour of the marginal, the poor and everyday life (July 20th). Today's course offerings and publishers' lists suggest that political and military history are alive and well in Britain. The websites of the university presses of Oxford and Cambridge include recent books by historians on the Peterloo massacre, Hitler, administration and war in colonial India, American foreign relations, medieval Anglo-papal relations, the German nation-state and 21st-century generalship, to name just a few. A search of British university websites reveals an array of history courses on politics, war and power.

I am baffled by the assertion that academic scholars are isolated in professional cocoons. Many historians, besides the three mentioned by Bagehot, appear on or consult with the BBC, tweet on current issues and write pieces in mass-market publications.

It is true that history enrolments are falling, and that the level of historical knowledge among Americans and Britons is disappointing. But reversing these trends requires analysis of their causes, not evidence-free straw men.

SARA LIPTON
Professor of history
State University of New York at Stony Brook

Never have so many attendees at history festivals, book-buyers, students and school-teachers benefited from the efforts of academic historians. The global success of Radio 4's "In Our Time" depends on the contributions of experts.

History in Britain is rightly viewed as a sensible education; training for careers in museums, charities, the law, journalism, design, theatre, the civil service and more. Young

people tell us they choose to study history at university not only out of interest, but because they understand that history will prepare them well for a world of change, complexity and diversity.

All forms of expertise have been denigrated and lampooned of late. The popular history Bagehot celebrates, especially on television, is often forced by the medium to be formulaic and sensational. Our public conversations have become sites of emotive outbursts, rather than reasoned exchanges where historical understanding can be marshalled. History is alive and well in our universities, but do we deserve it?

MIRI RUBIN
Professor of medieval and early modern history
Queen Mary University of London

Bagehot correctly laments the absurd bureaucracy of modern academia, then blames historians for the result. Grand books of the sort he likes now carry heavy penalties for author and university if they cannot be fitted into the time frame of the research assessment exercise. He may lament the days of A.J.P. Taylor, but few newspapers are interested in informed comment, and television prefers to take the work of academics and put it into the mouths of more scenic presenters. There is not much historians can do about that.

He yearns for more books on great men and battles, and more constitutional history of the old sort. But if you want a good biography of Gladstone or a sound account of parliamentary procedure after the Great Reform (and few do) there are excellent ones already. Why should historians spend their time, and other peoples' money, repeating what has been done so well before? When a non-academic fulfils Bagehot's requirement for men and battles, the results are sometimes excellent (Antony Beevor), but are equally often unreliable vanity projects. Does he seriously want academics to emulate Jacob Rees-

Mogg on the Victorians, or Boris Johnson on Churchill?

Historians are producing more interesting books than they have done for years, largely because they are no longer shackled by an Anglocentric perspective. Peter Frankopan's book on the Silk Roads and global histories by Chris Bayly or John Darwin are only a few examples. Moreover, Lyndal Roper is unknown only to those with a very parochial range of interests. Her biography of Luther was widely reviewed, commercially published and sold exceptionally well in many countries.

IAIN PEARS
Oxford

As founding members of the new Society for the History of War, we were surprised by Bagehot's comment that "constitutional and military affairs are all but ignored" in British universities. Far from it. The history of warfare is an exceptionally lively field. Academic historians played key roles in the recent commemorations of the first world war and D-Day. We would, moreover, contest the distinction Bagehot draws between military affairs and "marginal" topics. The well-known adage that an army marches on its stomach makes the point that no competent military strategist should dismiss everyday life experience, still less the gendered question of who cooks.

PETER WILSON
Professor of the history of war
University of Oxford

Recently retired after 48 years of teaching history, I concur with Bagehot's lament. In 1995 James McPherson, an eminent historian on the American civil war, wrote an essay, "What's the Matter With History?" Although his "Battle Cry of Freedom" won the Pulitzer prize, it didn't receive an award from any of the professional historian associations. Mr McPherson recounted how a colleague told him that he was in danger of becoming a popular historian, rather than a historian's historian. When he asked why he could not be

both, his colleague only "smiled sadly" at his naivety.

STEVE KRAMER
Dallas

The problem with teaching history in Britain starts in the school curriculum. There is no British narrative. British students pass history exams without understanding anything about this country's history, such as the evolution of Parliament. They know more about the American civil-rights movement than they do the partition of India, the Commonwealth or Windrush.

CAROL GROSE
London

The learning of history is changing with the times. History tours are among the most popular tourist activities in European cities. Archaeological sites such as Pompeii, Machu Picchu and Petra are some of the most visited places in the world. CrashCourse, a series of quirky history videos on YouTube enjoyed by teenagers and adults, gets millions of views. At the Radical Tea Towel Company (where I work) our weekly history newsletter reaches more than 40,000 people in Britain and America.

MATTHEW BUCCELLI
Berlin

Bagehot's ruminations about the state of history as an academic discipline brought me back to a time when I faced similar concerns, as I considered whether or not to pursue a doctorate in history. In the end, I followed my mentor's advice: "If you want to truly study history nowadays, you should concentrate on international relations or economics."

ORE KOREN
Assistant professor
Department of Political Science
Indiana University
Bloomington, Indiana

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



Higher tide

DHAKA, MUMBAI, NEW YORK, ROTTERDAM AND VENICE

The water is coming. The world is not ready

IMAGINE A HUGE horizontal A-frame: a recumbent, two-dimensional Eiffel Tower. Pin a pivot through its tip, so it can swivel around 90 degrees. Then add to its splayed feet something like the rocker of a rocking chair, but 210 metres long, 22 metres high and 15 metres wide. Now double it: picture, across a 360-metre-wide canal, its mirror image. Paint all their 13,500 tonnes of steel glistening white.

What you have imagined, the Dutch have built. When the Maeslant barrier (pictured on a subsequent page) is open, it allows ships as large as any ever built to pass along the canal to Rotterdam, Europe's biggest port. When closed, it protects that city—80% of which sits below sea level—from the worst storm surges the North Sea can throw at it.

In 1953 such a surge, driven by hurricane-force winds and coinciding with a spring high tide, broke through the dykes that protect much of the Netherlands from the sea in dozens of places, killing almost 2,000 people and inundating 9% of its

farmland. Over the following 50 years the Dutch modernised their sea defences in one of the most ambitious infrastructure projects ever undertaken; the Maeslant barrier, inaugurated in 1997, was its crowning glory. It is to be swung shut whenever the sea surges above three metres (the 1953 surge was 4.5 metres). So far it has yet to be used in an emergency. But with the motor of a regional economy of €150bn (\$167bn) at stake, better to be safe than sorry. In January the city's mayor, Ahmed Aboutaleb, told *The Economist* he now expects the barrier to have to close more frequently than the once-a-decade its makers planned for. It had come within 20cm just the day before.

As Mr Aboutaleb makes clear, the rising threat is a result of climate change. Few places are as vulnerable as the Netherlands, 27% of which is below sea level. But many other places also face substantial risk, and almost all of them are far less able to waterproof themselves than the Dutch. It is not just a matter of being able to afford the hardware (the Netherlands has

40,000km of dykes, levees and seawalls, plus innumerable sluices and barriers less mighty than the Maeslant). It is also a matter of social software: a culture of water governance developed over centuries of defending against the waves. The rest of the world cannot afford the centuries it took the Dutch to build that up.

There are some 1.6m kilometres of coastline shared between the 140 countries that face the sea. Along this they have strung two-thirds of the world's large cities. A billion people now live no more than ten metres above sea level. And it is coming to get them. Global mean sea level (GMSL) ticked up by between 2.7mm and 3.5mm a year between 1993, when reliable satellite measurements began, and 2017 (see chart on next page). That may not sound like much; but to raise GSML a centimetre means melting over 3trn tonnes of ice. And though forecasts of sea-level rise are vexed with uncertainties and divergences, there is a strong consensus that the rate is accelerating as the world warms up. The Intergovernmental Panel on Climate Change (IPCC), which assesses climate change for the UN, says sea level rose by around 19cm in the 20th century. It expects it to rise by at least twice that much this century, and probably a good bit more. It is worth noting that last year the authors of a study looking at 40 years of sea-level-rise forecasts concluded that the IPCC's experts consistently "err on the side of least drama".

▶ Sea-level rises on the order of one metre—a bit above the IPCC range for 2100—will cost the world a lot. Leaving aside fatalities owing to storms and storm surges, whose effects are worse in higher seas, one estimate made in 2014 found that by 2100 the value of property at risk from marine flooding would be worth between \$20trn and \$200trn. The Union of Concerned Scientists, an American NGO, estimates that by that time 2.5m existing coastal properties in America, today worth \$1.1trn, could be at risk of flooding every two weeks.

A massive problem for some; an existential risk for others. Atoll nations like Kiribati—average elevation less than two metres—risk losing almost all their territory to floods like that pictured on the previous page. In 2015 the president of Micronesia, another Pacific island state, described the fate of such nations in the global greenhouse as “potential genocide”. This, one hopes, goes too far; refugees could surely be resettled. Still, the extirpation of entire territorial states would be without any modern precedent.

We need to talk about calving

Some of this is unavoidable. About two-fifths of the increase so far comes not from water being added to the oceans, but from the water already in the oceans warming up and thus expanding. Scientists estimate the sea-level rise for a one-degree warming—which is what the world is currently experiencing, measured against the pre-industrial climate—at between 20cm and 60cm. They also note that, because it takes time for the oceans to warm up, that increase takes its time. This means the seas would continue rising for some time even if warming stopped tomorrow.

Not that it will. Today’s mitigation measures are not enough to keep warming “well below” 2°C, the target enshrined in the Paris agreement of 2015; in the absence of more radical action, 3°C looks more likely. That would suggest a sea-level rise of between 60cm and 180cm from thermal expansion alone.

Though thermal expansion has dominated the rise to date, as things get hotter the

melting of ice on land will matter much more. The shrinking of mountain glaciers, the water from which all eventually runs to the sea, is thought to have contributed a bit more than a third of the human-induced GMSL rise to date. The great ice sheets of Greenland and Antarctica have not yet done as much. But their time seems nigh.

In bathtub water-level terms, the melting of continental ice sheets is to thermal expansion as a rubber duck is to a person. When the most recent ice age ended, the melting of the ice sheets sitting atop western Eurasia and much of North America increased GMSL by around 120 metres.

Today’s residual ice sheets are smaller—the equivalent of less than 70 metres of sea-level rise. And most of that is in the East Antarctic ice sheet, widely seen as very stable. The Greenland ice sheet, the second largest, is shrinking both because its glaciers are flowing more quickly to the sea and because the surface is melting at an unprecedented rate, but its loss of mass is not yet huge. It is the West Antarctic ice sheet which scares scientists most. Many think it will become unstable in a warmer world—or that it may already be unstable in this one.

The West Antarctic ice sheet looks, in profile, like a flying saucer that has landed on the sea-floor. A thin rim—an ice shelf—floats on the sea. A thicker main body sits on solid rock well below sea level. As long as the saucer is heavy enough, this arrangement is stable. If the ice thins, though—either through surface melting or through a faster flow of glaciers—buoyancy will cause the now-less-burdened saucer to start lifting itself off the rock. The boundary between the grounded ice sheet and its protruding ice shelf will retreat.

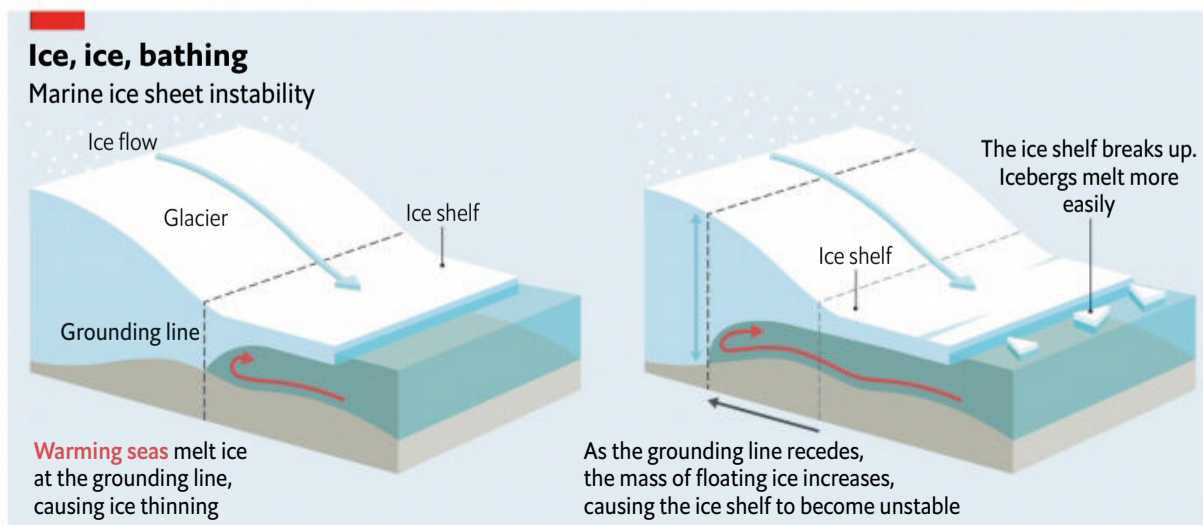
As this grounding line recedes, bits of the ice shelf break off. The presence of an ice shelf normally checks the tendency of ice at the top of the ice sheet’s saucer to flow down glaciers into the sea. As the shelf fragments, those glaciers speed up. At the same time the receding grounding line allows water to undermine the ice sheet proper, turning more of the sheet into shelf and accelerating its demise (see diagram).



First suggested in the 1970s, marine-ice-sheet instability of this sort was long considered largely theoretical. In 1995, though, the Larsen A ice shelf on the Antarctic Peninsula, which is adjacent to the West Antarctic ice sheet, collapsed. Its cousin, Larsen B, suffered a similar fate in 2002. By 2017 there was a 160km crack in Larsen C. The glaciers on the peninsula are accelerating; so is the rate at which the sheet itself is melting. Marine-ice-sheet instability feels much more than theoretical. And though the West Antarctic ice sheet is a tiddler compared with its eastern neighbour, its collapse would mean a GMSL rise of about 3.5 metres. Even spread out over a few centuries, that is a lot.

Some fear that collapse could be quicker. In 2016 Robert DeConto, from the University of Massachusetts, and David Pollard, of Pennsylvania State University, noted that the ice cliffs found at the edge of ice sheets are never more than 100 metres tall. They concluded that ice cliffs taller than that topple over under their own weight. If bigger ice shelves breaking away from ice sheets—a process called calving—leave behind cliffs higher than 100 metres, those cliffs will collapse, exposing cliffs higher still that will collapse in their turn, all speeding the rate at which ice flows to the sea. The rapid retreat of the Jakobshavn glacier in Greenland offers some evidence to back this up.

Such cascades, the researchers calculat- ▶▶



ed, could speed up the collapse in West Antarctica and bring one on in Greenland. That would not be unprecedented. For some of a 15,000-year lull between ice ages that began 130,000 years ago, GMSL was perhaps nine metres higher than it is today, suggesting that large parts of both the West Antarctic and Greenland ice sheets collapsed. Mr DeConto and Mr Pollard point to ice-cliff instability as the reason why. When the process was included in models of today, they found that if greenhouse-gas levels continued to rise at today's reckless rates, Antarctica alone could add a metre to GMSL by 2100 and three metres by 2200.

This conclusion is not unassailable. In February Tamsin Edwards, of King's College, London, and colleagues published more sophisticated computer simulations that replicate the ancient sea levels without large-scale ice-cliff collapse, and thus suggest a slower rate of GMSL rise. Where the earlier work found a one-metre rise due to Antarctic ice this century, they found 22cm. The total rise, though, was still a disturbing 1.5 metres. And the possibility that, over further centuries, levels will rise many metres more remains real.

A lot less flat than a millpond

Efforts to pin down the extent and speed of ice-sheet collapse are themselves accelerating. When Anders Levermann led the sea-level work for the IPCC's most recent climate assessment, published in 2014, marine-ice-sheet instability was just a footnote. There were four computer models of the process back then, Mr Levermann says; today he can count 16. In January a team of British and American scientists embarked on a five-year, \$25m field mission to study the Thwaites glacier in West Antarctica and its ice sheet from above and, using undersea drones, below, thus adding new data to proceedings.

However great the rise in GMSL ends up, not all seas will rise to the same extent. Peculiarly, sea levels near Antarctica and Greenland are expected to drop. At present, the mass of their ice sheets draws the seas to them in the same way the Moon's mass draws tides. As they lose weight, that attraction will wane. Other regional variations are caused by currents—which are expected to shift in response to climate change. A weakening Gulf Stream, widely expected in a warmer world, would cause sea level to rise on America's eastern seaboard even if GMSL did not change at all.

Then there is the rising and falling of terra not-quite firma. Some of this is natural; many northern land masses, long pressed down by the mass of ice-age ice sheets, have been rising up since their unburdening some 15,000 years ago. Some of it is human, and tends to be more local but also much more dramatic.

If you remove enough stuff from the

sediments below you, the surface on which you stand will settle. In the first half of the 20th century Tokyo sank by four metres as Tokyoites not yet hooked up to mains water drained aquifers. Parts of Jakarta are now sinking by 25cm a year, as residents and authorities of Indonesia's capital repeat Japan's mistakes. Last year a study of the San Francisco Bay area found that maps of 100-year-flood risk—the risk posed by the worst flood expected over 100 years—based on sea-level rise alone underestimate the area under threat by as much as 90% compared with maps that accounted for land that was getting lower because of subsidence.

As land sinks, the sea erodes it away. Komla Sarkar, who lives in the village of Chandpur in Bangladesh's flood-prone south, recalls childhood days when her parents grew crops and kept goats and chickens between their hut and the water. "When we leave our houses in the morning," she now says, "we don't feel confident they will still be there when we return."

People often worsen erosion. Satellite images show that stretches of Mumbai's coast have eroded by as much as 18 metres since 2000, in part because developers and slum-dwellers have paved over protective mangroves. Other aspects of climate change will have effects, too. Heavier bursts of rainfall upstream will mean that some low-lying coastlines will see the risks posed by the sea compounded by those from rivers. In 2012 a team of Japanese researchers predicted that by 2200 the Bay of Bengal would experience 31% fewer cyclones than today, but that 46% more will roil the Arabian Sea on the other side of the subcontinent.

The biggest extra effect of human activi-



How the Dutch hold back the sea

ty, though, may well be putting more property at risk as a more populous and richer world concentrates itself in cities by the sea. In the rich world, and increasingly in emerging economies too, the closer to the beach you can erect a condo or office block, the better. In New York alone 72,000 buildings sit in flood zones. Their combined worth is \$129bn.

In October 2012 Hurricane Sandy jolted the city into a new awareness of the threats it faces, given that geology, gravity and the Gulf Stream are conspiring to raise the seas lapping at its shores by half as much again as the global average. Other cities are worrying, too. Rotterdam now welcomes 70 delegations a year from fact-finders seeking to apply Dutch know-how to New Jersey, Jakarta and points in between.

Barrier methods

A lot of effort is devoted to engineering a way out of the problem. New York is paying almost \$800m for the Big U, a necklace of parks, walls and elevated roads to shield lower Manhattan from another Sandy. Mumbai wants to build four huge and costly seawalls. Bangladesh, a delta country ten times more populous and one-thirtieth as rich as the Netherlands, is doubling its coastal embankment system and repairing existing infrastructure. Indonesia intends a \$40bn wall in the shape of a giant mythical bird to seal Jakarta off from the seas.

Such schemes take decades to plan and execute, which means the conditions they end up facing are not necessarily those they were conceived for. When the Big U was first proposed, a year after Sandy, the worst-case scenario for sea-level rise on America's east coast was one metre. When its environmental assessment report was eventually published this April, that looked closer to the best case.

London's Thames Barrier—conceived, like the Dutch delta defences, after the floods of 1953—closed just eight times between its inauguration in 1982 and 1990. Since 2000 it has shut 144 times. In Venice MOSE, a system of flood barriers which cost a staggering €5.5bn, will be needed every day if the seas rise by 50cm. Such near-permanence will render moot the huge effort and expense that went into keeping it unobtrusively submerged when not in use. At one metre of sea-level rise it would be basically pointless. Even the resourceful Dutch only designed Maeslant with one metre of sea-level rise in mind.

Kate Orff, a landscape architect, dismisses walls as one-dimensional attempts to solve multidimensional problems. Her project, a string of offshore breakwaters on the western tip of Staten Island to prevent coastal erosion while preserving sea life, is one of various "softer infrastructure" projects to have been funded by Rebuild by Design, a \$1bn post-Sandy programme. Aru- ▶



► nabha Ghosh of the Council on Energy, Environment and Water, an Indian think-tank, favours approaches which can be scaled up over time as the threat increases. These include anything from restoring mangroves, patch by patch, to barriers built out of interlocking blocks that can be added to as needed. “Modularity lets you shorten the time horizon,” Mr Ghosh says.

As welcome as these ideas are, they remain niche. Rebuild by Design’s \$1bn is a drop in the bucket compared with the \$60bn which Congress earmarked for post-Sandy recovery efforts. Some of that money was spent sensibly, for example on hardening power stations and hospitals. A lot was used to replace storm-lost buildings with new ones built in the same way and much the same place.

If this were paid for by the owners, or their insurers, it might be unobjectionable. But insurers and banks are only slowly beginning to capture sea-level rise in policies and mortgages. In a world awash with capital eager to build, buy or develop, prices seldom reflect the long-term threat. Some price signals are emerging where the problems are most egregious. Controlling for views and other amenities that they offer, prices of Floridan properties at risk of flooding have underperformed unexposed ones by 10-15% over the past few years, says Christopher Mayer of Columbia Business School. But they have not exactly tanked.

Instead of rebuilding as is, better to put in place appropriate defences, soft as well as hard, and rebuild in styles better suited to the conditions. Alternatively, in some cases, encourage, help or even require people to walk away. In the rich world such “managed retreat” is anathema. People see the government’s job as protecting them, not moving them. Relocating a neighbourhood in New York requires the consent of

the residents; holdouts can block decisions for years. “Across the country, there is no appetite for eminent domain,” admits Dan Zarrilli, in charge of climate policy at New York’s city hall.

In Bangladesh, though, the Ashrayan project, run directly by the prime minister’s office, has relocated 160,000 families affected by cyclones, flooding and river erosion to higher ground at a total cost of \$570m. Each family is housed in an army-built barracks and receives a loan of \$360, plus 30kg of rice, to restart its life. It is expected to be extended for another three years, and cover another 90,000 households. Fiji has resettled a number of communities from low-lying islands, with dozens more earmarked for relocation. Meanwhile Kiribati, 2,000km away, has gained title to 20 square kilometres of Fiji as a bolthole against the day when its 117,000 citizens have to quit their homes.

Such schemes may require few civil engineers but they need plenty of social engineering. Bangladeshi officials familiar with the Ashrayan scheme have found converting fishermen into farmers far from straightforward. High ground wanted by some may also be coveted by others. When a Kiribati government delegation visited its plot in Fiji recently, it found some non-Kiribatis making themselves at home.

Permanent resettlement is not the only form of people moving that needs considering. In places where communications are good and storms frequent evacuation can be an effective life-saver. But what of places where the big storms are very rare? Drills to make people familiar with plans they have never yet had to enact are possible—but they are also massively inconvenient, and maybe worse. A few years ago Mr Aboutaleb cancelled a test evacuation of 12,000 Rotterdammers after computer models suggested a handful of elderly or infirm evacu-

ees might die in the process.

Even if people move, they cannot take with them everything that they value. This is not just a matter of private property. Last October Lena Reimann of Kiel University published a warning that 37 of the 49 UNESCO world-heritage sites located on the Mediterranean’s coasts can now expect to flood at least once a century. All but seven risk being damaged by erosion in the coming decades. Sites do not need world-heritage status to matter. The headman of the first flood-prone Fijian community resettled by the government bemoans the burial grounds abandoned to the sea.

No we Canute

The inertia in the climate system means that not even the most radical cuts in emissions—nor, indeed, a dimming of sunlight brought about by means of solar geoengineering—will stop sea levels dead in their tracks. Adaptation will be necessary. But there is little appetite to pay for it. A rise that seems precipitous to Earth scientists remains well beyond the planning horizons of most businesses: even utilities rarely take a century-long perspective. Governments can always find more pressing concerns, both at home and when helping others abroad. Less than one-tenth of \$70bn in annual global climate aid goes to helping poor places cope with all effects of climate change, not just sea-level rise.

The lack of action reflects a lack of drama—for almost everyone, the worst floods of the year or decade happen somewhere else. The oceans will not suddenly crush all the world’s coasts like some biblical retribution or Hollywood tsunami. It will rise slowly, like a tide, its encroachment as imperceptible from moment to moment as it is inexorable. But unlike a tide, it will not turn. Once the oceans rise, they will not fall back. ■



Post Sandy, near Asbury Park



Turkey

When a caliphate collapses

ISTANBUL

Many people who tried to build an Islamic State in Syria are coming to Turkey

SUHEYLA REMEMBERS the day clearly. She had invited her children for dinner and was preparing her youngest son's favourite stew. He never showed up. Neither did her four daughters. When none of them picked up the phone, she and her husband Lutfu understood what was happening. They rushed to a police station to ask the authorities to track down their children: they were headed south. A month later one of Suheyyla's daughters called. She and her siblings, the youngest 18 and the eldest 27, along with her brother's wife and their infant son, had smuggled themselves into Syria and joined Islamic State (IS).

That was in late 2015. Today, three of the daughters are behind bars in Baghdad, having been captured by Iraqi forces two years ago. The fourth died in jail, two months after giving birth to a boy. Their brother, Yasin, has not been heard from in two years. Earlier this summer, Suheyyla and Lutfu (not their real names) were united with two of their grandchildren, aged one and two, who were repatriated from Iraq. The toddlers were ill when they arrived. One was covered with sores, having caught scabies

in the squalid prison in which he was born. He survived on his aunt's milk.

At their apartment in Esenler, a conservative district in Istanbul, Suheyyla fights back tears as she flicks through photos of her daughters on her phone. Like their parents, they were good, devout Muslims, she recalls, but they were not zealots. Their parents do not know how they were radicalised, but in a month they had transformed beyond recognition. Her daughters swapped their headscarves for shapeless black niqabs. Her son grew a beard. They began to praise the murderous caliphate that IS had founded in parts of Iraq and Syr-

ia. "You could not reason with them," says Lutfu. "It was like a disease."

Since the war in Syria began, at least 2,000 Turks are said to have joined the thousands of foreign jihadists who poured across Turkey's southern border to fight alongside IS or al-Qaeda. Hundreds died on the battlefield. Some carried out suicide bombings at home. During a terrifying spell between 2015 and early 2017, at least 300 people died in a dozen IS attacks across Turkey. Most of the bombers were Turks. According to officials, about 500 home-grown IS supporters are in prison in Turkey, in addition to some 700 foreigners. Hundreds of Turkish women who joined the group, including Suheyyla's daughters, are held in Baghdad. Some fighters sneaked into Turkey as the caliphate began to collapse. Turkey must now come to grips with those militants, both domestic and foreign, who have returned from Iraq and Syria, and those planning to do so.

Belatedly, the country has begun to focus on prevention and rehabilitation. The government has organised seminars for Turkish and refugee children, to inoculate them against IS propaganda. The religious affairs directorate, which oversees the teaching of Islam, has trained 70 prison chaplains to work with religious extremists. The programme has enjoyed a measure of success. A pair of young sisters who pledged allegiance to IS, and then refused to be tried by a Turkish court, recanted after sessions with a female chaplain. They were released. Prison officials say they make a ▶▶

→ Also in this section

20 Salvini stumbles

21 Protests in Russia

21 Germany's economy shrinks

22 Soviet blocks

24 Charlemagne: What the EU makes of Boris Johnson

▶ point of keeping IS supporters away from each other, and from other inmates. That is easier said than done. A massive and often indiscriminate crackdown following a violent coup attempt in 2016 has left the prisons more overcrowded than ever, leaving some 30,000 people behind bars. And some of those who came back from Syria were never picked up in the first place.

Turkey is getting some things right. Since the terror campaign of 2015-2017, the bombings have stopped. Officials credit improved co-ordination between agencies, as well as a sweeping purge of state institutions directed against members of the Gulen movement, an Islamic fraternity accused of spearheading the 2016 coup. Analysts say it took time for police and intelligence forces to infiltrate IS networks.

A wall constructed over stretches of the border and a military operation against IS strongholds in northern Syria have helped, making it harder for bombers to slip into Turkey. It is not for want of trying. Turkish police say they have foiled at least 28 large attacks since 2014, including a planned massacre at a shopping mall in Istanbul.

The threat the authorities now have to contend with is the exodus from Syria. Their caliphate smashed to pieces by Kurdish fighters and American air strikes, scores of IS fighters have escaped to Iraq. But the group also seems keen to expand its underground network in Turkey. "Three years ago, we were chasing terrorists who were about to blow themselves up," says a counter-terrorism official. "Now we're doing operations to disrupt their logistics and prevent IS financing from entering."

Turkey once accused Western governments of neglecting to share intelligence about militants, making it hard to stop them at Turkish airports. Now it says they are trying to dump them on Turkey. According to officials, 775 suspected foreign fighters are being held at deportation centres, waiting to be sent home. Most have destroyed their old passports. Their consulates, however, are often slow to provide them with new travel documents, which delays or prevents deportation. Four have been stripped of citizenship, making repatriation impossible. Because they can only be held without charge for 12 months, they can expect to be set free. "If there's no hard evidence against them, you cannot detain them or open a case," says an official. "It's a recipe for complete chaos."

Turkey insists IS members must face trial in their own countries. Suheyla and Lutfu hope President Recep Tayyip Erdogan's government will apply the same logic to its own citizens, namely their daughters. "They left after you opened the borders," she says, as her grandson crawls onto her lap, his legs dotted with scars. "Now bring them back. Sentence them to life or to death if you like, but do so in Turkey." ■

Italy

Matteo Salvini makes his move

ROME

But then seems to backtrack

HUBRIS IS AN occupational hazard for political leaders. Two of Italy's recent prime ministers, Silvio Berlusconi and Matteo Renzi, stumbled just when it seemed they could do whatever they wanted. (Mr Renzi wanted to change the constitution; Mr Berlusconi wanted to hold "bunga bunga" sex parties. In both cases, voters objected.)

Now Matteo Salvini, the leader of the populist Northern League, wants to ditch his coalition partners in the anti-establishment Five Star Movement (M5S), bring down the government that is led by Giuseppe Conte, an independent, and hustle the country into a snap election so as to give himself what he has termed "full powers". This would enable him to impose, among other things, a radically expansionist budget for 2020. Mr Salvini claims that a "fiscal shock" is needed to jolt the moribund Italian economy back to life. Critics fear it could instead pitch the country, which has debts of over 130% of GDP, into a new financial crisis, along with the rest of the euro zone.

So the stakes were high when, on August 9th, the League tabled a Senate motion of no confidence in Mr Conte. Mr Salvini, a deputy prime minister, did not, however, withdraw either himself or his ministers from the cabinet—a move that would have made the fall of the government inevitable.



What's the plan?

And on August 13th, a hastily reconvened upper house rejected the League's demand for a confidence debate to be held the very next day.

The luckless Mr Conte will still have to go to parliament to explain a crisis that is not of his making. But he will start his visit to the two chambers on August 20th, this date having been set by a majority that for the first time united the M5S with the opposition, centre-left Democratic Party (PD) and a handful of regionalists and independents. That raised the possibility that Mr Conte, who belongs to neither party in his coalition, might not get the thumbs-down, or that, if he resigned, a new government could even be formed, backed by the Five Stars and the PD.

Nothing can be taken for granted. An Italian government crisis has more twists and dizzying turns than a cliff-top drive along the Riviera. After years of reciprocal abuse, most of it levelled by the M5S at the PD, mistrust between the two parties runs deep. Though M5S activists lean mostly to the left, they disagree with the PD on many issues, from infrastructure to immigration. Mr Renzi, who still enjoys the backing of most of the PD's parliamentarians, wants an entente. But the PD's new leader, Nicola Zingaretti, does not (though some of his closest aides are open to the idea).

Mr Salvini told the *Corriere della Sera*, a daily paper, that preventing a deal between the Five Stars and the PD had become his priority. To that end, in the Senate, he made a proposal apparently intended to drive a wedge between them. The M5S's most cherished, and electorally popular, item of legislation is one that would slash the number of elected lawmakers to 600 from 945. The M5S's bill, which the PD opposes, needs to be approved just one more time, in the Senate. Mr Salvini said the League would support it, if the Five Stars agreed to an immediate election.

But his offer raised more questions than it answered. It is not the M5S, but the president, who decides if an election is to be called after a government falls. And since Mr Conte may have resigned or been ousted before the final debate on the parliamentary reform bill, due on August 22nd, it may never be put to a vote. Even if it is, and the League ensures its approval, most experts agree the effect would be to make it impossible to hold an election until well into next year: a referendum might be needed and parliamentary boundaries would have to be redrawn. Mr Salvini insisted the reform could be put on hold until after the next legislature. But aides to the president, Sergio Mattarella, dismissed that idea out of hand. So what is the League leader up to?

His offer did allow him to rebut claims by the M5S that he wants a return to the polls solely to pre-empt the reform of parliament and enable his lawmakers to keep ▶▶

▶ their seats. But his surprise move could also be seen as a first step towards building a ladder down which he can retreat from the chaos he has prompted. The vote on August 13th was not the only setback Mr Salvini has endured recently.

Expecting an election, he has taken bare-chested to the beaches to consolidate his lead in the polls. Mobbed by adoring fans in the north, Mr Salvini has run into heckling and demonstrations since taking his campaign to the south, where people still remember the snooty contempt for southerners that he and his party once openly expressed.

Recent polls give the League 36-37% of the vote. To control parliament, however, Mr Salvini needs around 40%. He can probably count on a small party of former neo-fascists for the extra votes. But to be surer of victory he also needs a deal with Mr Berlusconi's much-depleted Forza Italia movement. The two leaders were to have met before the Senate vote. But then it emerged that Mr Salvini's plan was, in effect, to take over Forza Italia, and the meeting did not take place. For a politician often depicted as Italy's strongman-in-waiting, Mr Salvini suddenly looks vulnerable. ■

Russia

Not going away

MOSCOW

Vladimir Putin's critics are getting stronger, despite the repression

IT IS 20 years this month since then-President Boris Yeltsin appointed a shadowy security chief called Vladimir Putin as Russia's prime minister. The next New Year's Eve, the ailing Mr Yeltsin would install the ex-KGB man as his successor. On the anniversary of his ascent to power, Mr Putin has little reason to celebrate.

On August 10th, as they have for the past five weekends, Russians took to the streets of Moscow to demand that opposition politicians unfairly barred from next month's city-council polls should be allowed to run after all. Waving white, red and blue Russian flags, an estimated 50,000-60,000 protesters flooded a broad avenue. "Russia will be free!" they chanted. It was the biggest opposition rally since 2012—after Mr Putin's pals again bamboozled a ballot.

The city council has little power. But the blatant interference has transformed what should have been mundane elections into a political crisis for the Kremlin. Although often derided as fringe figures, many of the aspiring opposition candidates were poised to win seats. Mr Putin seems determined to deny his critics even a foothold



Democracy in Russia

on Russia's electoral ladder.

The mounting protests come at a dangerous time for Mr Putin, whose ratings have been sliding since his government introduced a five-year increase in the national pension age last summer. An invigorated opposition movement is focused squarely on the city-council election. But the protests are rapidly turning into a broader expression of anger over high-level corruption and widespread poverty. The government's own statistics agency, Rosstat, admitted this month that over a quarter of Russian children are poor.

The opposition movement is being endorsed by a growing number of music stars and celebrities. Yevgeny Kafelnikov, a former world-number-one tennis player, is backing the protests, as is Yury Dud, a YouTube blogger with millions of followers. Ivan Dremin, a popular rapper better known by his stage name, Face, performed at Saturday's rally. "Taking to the streets has become prestigious," writes Abbas Gallyamov, a former Kremlin speechwriter turned political analyst.

The opposition's show of strength came after a crackdown aimed at stifling dissent—a tactic that worked in 2011-12. Since the protests began on July 14th, baton-wielding riot police have arrested more than 2,500 people, often violently. Although many of the protesters were quickly released, 14 people are facing up to eight years in prison on dubious charges of "mass unrest". Among them is a man who is accused of throwing an empty plastic bottle at police.

The protests are also providing the opposition with new figureheads. Most prominent is Lyubov Sobol, a 31-year-old lawyer who works with the anti-corruption organisation run by Alexei Navalny, a prominent critic of the Kremlin. Ms Sobol, who went on hunger strike in a bid to force

her way onto the city-council ballot, was dragged out of her office and arrested by police ahead of last weekend's rally.

The danger for Mr Putin now is that the protests will trigger a chain reaction throughout Russia. At a state-organised forum in southern Russia this weekend, participants, including members of the ruling party's own youth wing, voiced grievances over corruption and inequality that would not have sounded out of place at a Moscow opposition rally. "We have only one solution—revolution," said one young woman. "We are like an explosive cocktail. We are ready to go off." ■

Germany's economy

Ground to a halt

BERLIN

The economy has shrunk. Could the government open the spending taps?

THE MOOD music had grown so ominous that the shock was somewhat muted. After weeks of dismal survey and industrial-output numbers, it was little surprise to learn on August 14th that Germany's GDP had contracted by 0.1% in the second quarter of 2019 compared with the previous three months. The economy has been essentially flat over the past year. Household spending, bolstered by wage growth in a tight labour market, has held up but the slump in manufacturing, which represents over one-fifth of output, is deepening. Companies are cutting work hours and issuing profit warnings. Many analysts think Germany is heading for outright recession.

This has triggered two debates. First, are Germany's woes home-made or imported? ▶▶

▶ A year-on-year 8% slump in exports appears to be the main driver of the slow-down. The uncertainty spawned by the US-China trade spat and the prospect of a no-deal Brexit are largely out of the hands of Angela Merkel's government. Demand for German products in China is slowing. Germany will be badly hurt if Donald Trump follows through on his threat to whack tariffs on car imports later this year.

Yet this is only half the story. Analysts have long urged Germany to wean itself off its export-dependence. Despite a mild re-balancing, the current-account surplus still stands at a whopping 7.4% of GDP in the world's fourth-largest economy. Coddled by government, the automotive industry, which runs a larger trade surplus than any other export sector, has been slow to adjust to the rise of electric and autonomous cars. Politicians, from Mrs Merkel down, have done too little to ready an ageing society for challenges like digitisation. Every euro-zone economy is buffeted by headwinds, but so far Germany's is the only one to have contracted in the past quarter.

A second discussion is raging over the German government's steadfast aversion to borrowing. The "debt brake", enshrined in the constitution since 2009, rules out borrowing to finance the structural deficit beyond 0.35% of GDP. A related political commitment, the *schwarze Null* ("black zero"), pledges a balanced budget for current spending. This has ensured low debt and, since 2014, a surplus that last year stood at 1.7% of GDP, or €58bn (\$66bn). Germany has thus been able to raise spending on infrastructure, social security and defence without extra borrowing. Yet as the euro zone's largest economy grinds to a halt, the debate over whether to open the spigots further is gathering pace.

So far the government remains unmoved. But Sebastian Dullien, director of the IMK research institute in Düsseldorf, says the pressure will increase. Reuters recently reported that a climate-change package due next month might include a pledge to issue fresh debt. This week Mrs Merkel said her commitment to a balanced budget remains intact, but added: "We will react depending on the situation." Inside the finance ministry a lively debate has begun over how and whether to raise investment—although the minister himself, Olaf Scholz, remains cautious, to the disappointment of many in his Social Democratic Party (the junior coalition partner to Mrs Merkel's Christian Democrats). Outside government the Greens are urging a massive boost to investment in climate protection. The government's budgetary rules are "voodoo fiscal policy", said Robert Habeck, the party's co-leader, this week.

A short-term bump in spending, as Mrs Merkel argues, would rub up against bottlenecks in areas like construction. Nor

Housing in the Baltics

Soviet blocks

How do you solve a problem like khrushchyovka?

IN THE BALTIC STATES, Soviet-era apartments have taken on a gritty glamour. In Lithuania, Instagrammers hunt down Fabijoniskes, the neighbourhood where a recent television series about the Chernobyl nuclear disaster was filmed (see picture). In Estonia and Latvia, they form a backdrop to art shows and hip-hop videos. Nicknamed *khrushchyovka* (after Nikita Khrushchev), these uniform blocks of prefabricated panels were built to house workers across the Soviet Union from the 1960s onwards.

Many were meant to last no more than 30 years. Yet in the Baltic states—where 68% of people live in apartments, the highest level in Europe—many people still call them home. Living inside history is less appealing than looking at it, alas. For, like the Soviet Union itself, they are drab, joyless places.

For one thing, they are poorly insulated and expensive to heat. In Lithuania,

for example, heating a two-bedroom apartment in the coldest months can cost 20% of the average salary. Soviet districts are generally occupied by the elderly and the hard-up, who are least able to bear the cost. Most also depend on centralised district heating, with no option to disconnect or change providers. In the winter, bitter inter-apartment battles are fought over the thermostat.

It's not just chilly residents who need better insulation. The EU aims to be carbon-neutral by 2050. Housing, which consumes 40% of all the EU's energy and belches out 36% of its carbon, requires the biggest overhaul. Europe has decreed that, by 2020, all new buildings must use almost no energy. It is even harder to figure out what to do with old ones. Mass demolitions are expensive and unpopular. (Residents resisted when, in 2017, Moscow announced that it would tear down 8,000 of its own Khrushchev-era apartments.) Retrofitting, too, is problematic: in apartment blocks, individual owners can rarely reach consensus on something so expensive. All three Baltic countries offer government-backed financial instruments, but their success has been limited. Residents often don't understand the need for change and, because the poorest receive heating subsidies, many have little direct incentive to do so.

A more hands-on approach is needed. SmartEnCity, an initiative supported by EU funding, recently succeeded in turning three *khrushchyovka* blocks into energy-efficient "smart homes" in Tartu, Estonia. With someone else managing the project, and explaining the process, residents were more willing to take out loans and hand over their keys. Groups from Latvia and Lithuania are interested in copying the experiment.



Concrete for comrades

would it help remove the pall of uncertainty facing German firms. So some analysts want a credible, possibly cross-party, commitment to establish a fund that would disburse several hundred billion euros over the next decade. Possible targets include transport infrastructure, broadband networks, house building and help for local governments struggling under debt loads. Other ideas include cutting taxes on Germany's army of low-paid workers or its corporations, or introducing incentives for climate-friendly policies like retrofitting buildings and clean fuel.

There could hardly be a better time. Yields on 30-year government bonds are negative, meaning in effect that investors pay the government for the privilege of lending it money. Even if the European Central Bank cuts rates further next month, the monetary toolbox is nearly exhausted. Tax cuts and, in time, investment in infrastructure would help rebalance the German economy from its exports-first approach. Mrs Merkel, now in the twilight of her chancellorship, has U-turned before, notes Mr Dullien. But the headwinds may need to blow a little harder first. ■



A day of ideas, insights and inspiration

Join *Economist* journalists on Saturday October 5th for the second annual Open Future Festival. Held in three cities—Hong Kong, Manchester and Chicago—this is a chance for people from across the ideological spectrum to debate vital issues on the future of open societies.

The festival will cover free speech and free trade; the environment and inequality; the rise of populism and anxiety over the algorithmic society; and much more.

Come along for a day of discussions, debates and exhibitions, immersive experiences and the chance to make connections with hundreds of festival-goers.

For more information visit [Economist.com/festival](https://economist.com/festival)



Hong Kong

On trade, technology
and China's ambitions



Manchester

On populism, the environment
and tackling inequality



Chicago

On tolerance, free speech
and fairer capitalism

Charlemagne | The book of BoJo

Why Boris Johnson's familiarity to continentals makes a no-deal Brexit more likely



THE LAST time continental Europeans felt they were dealing with an easily readable, straightforward British prime minister was in the late 1990s. Tony Blair charmed his continental colleagues. He wooed the French in their own language, led fellow heads of government on a bike ride through Amsterdam during a Dutch-led summit and made common cause with fellow “third way” social democrats like Gerhard Schröder, Germany’s then chancellor. Set against the backdrop of the “Cool Britannia” popularity of British music and fashion, this all suggested that Britain had finally cast off its conflicted post-imperial garb and was embracing a modern, European identity.

The glow faded when the Iraq war sundered Mr Blair from the French and the Germans. Then came Gordon Brown, David Cameron and Theresa May, who were all harder to place. All three made nice at European summits but flirted with the Eurosceptic tabloids at home. Mrs May took office in July 2016 after the country had voted for Brexit. But who was she? She ruled out a second referendum—then considered the most likely outcome in some continental capitals—but did not seem to be “of” the Brexiteers. At times she posed as a Thatcher-style Iron Lady; at others as a sensible Christian democrat. Buffeted by events, she was hard to define and left little lasting impression.

Boris Johnson is a different matter. Unlike his predecessors, Britain’s new prime minister is a familiar personality on the continent. Many in Brussels know him, by reputation or in person, from his time as a reporter there in the 1990s, when he spun highly exaggerated stories about the EU and helped pioneer the outraged Eurosceptic style in the British press. Continentals also know him from the London Olympics in 2012, when his performances as the capital’s buffoonish, zip-wire-riding cheerleader-in-chief caught the attention of the foreign press. Most of all they know him as the villain of the Brexit campaign; the man with a lie about the cost of EU membership on the side of his big red campaign bus who achieved the sort of victory of which nationalist populists on the mainland could only dream.

Mr Johnson is familiar in other ways. Mr Cameron and Mrs May, the previous two Tory prime ministers, bumbled respectively into the Brexit referendum and through the Brexit negotiations,

both treating the subject as fundamentally technocratic. By contrast the new prime minister deals in stories and emotions, styling Brexit as a test of the country’s mettle, an Odyssean quest, a heroic battle against the monsters of bureaucratic overreach, federalism and national stagnation. Continental commentators and policy-makers view him, it is true, in a different narrative role—as the dastardly embodiment of the post-imperial nostalgia and chauvinism that Mr Blair seemed to have vanquished—but both his self-presentation and the counter-tale make it possible to orient him. Unlike his predecessors Mr Johnson fits neatly into the story his would-be negotiating partners tell themselves about Britain.

Many Eurocrats were raised on British cultural staples such as Harry Potter, *Midsomer Murders*, *Downton Abbey*, James Bond and Monty Python. Mr Johnson would not look out of place in any of these imaginary worlds. He is a gift to those continentals who love the familiar clichés; who imagine Britain as an old-fashioned, quasi-Victorian society of rigid class differences, lip-curling toffs and shabby proletarians, absurd social rituals, public-school humour and eccentric colonial adventurers. Mr Blair was simple, initially at least, in that he seemed to show that Britain had changed. Mr Brown, Mr Cameron and Mrs May did not map neatly onto the clichés. But Mr Johnson fits them as snugly as a bearskin hat on a guard outside Buckingham Palace.

All of which bodes poorly for the looming confrontation. Mr Johnson has refused to travel to meet continental leaders unless they change the terms of the Brexit deal negotiated by Mrs May. He wants to remove the “backstop” that would keep Britain close to the EU, and Northern Ireland even closer, unless an alternative technological solution can be found to prevent a hard border on the island of Ireland. The EU’s leaders consider the matter closed. So no meeting has taken place. Mr Johnson will have his first prime ministerial encounters with Angela Merkel and Emmanuel Macron at the G7 summit from August 24th, and again at an EU summit in mid-October ahead of October 31st, when Britain is currently bound to leave the club. Mr Johnson is increasing preparations for a no-deal departure, hoping to force the EU into compromises to avoid the cost and chaos of such a disorderly exit.

He is miscalculating. The EU is better prepared for a no-deal than Britain and would suffer much less. National leaders are sick of the subject. They consider the current deal generous to Britain—the backstop would grant Britain many of the benefits of belonging to the EU without some of the usual conditions—and are loth to reopen it to make concessions that might further undermine the marginal value of membership. Some, especially in Paris and Brussels, believe that no-deal may be a price worth paying.

Uncool Britannia

Mr Johnson’s familiarity significantly boosts this tendency—for three reasons. First, to know him is to know that he is unreliable, unscrupulous and inconsistent. Second, his story (as leader of a heroic quest) and the story his critics tell (as the villain of a tragedy) both breed fatalism; they shrink the space for the technological fudge of a compromise and make the emotional conflagration of a no-deal more likely. And third, Mr Johnson conforms closely enough to the clichés about Britain that his negotiating partners can fall back on these as explanations for a rupture; this post-imperial, class-ridden, unreconstructed country, they will be able to say, is simply different and might even benefit from the revealing, purgative chaos of a no-deal. Familiarity, at least where Britain’s prime minister is concerned, breeds contempt. ■



Railways

Getting back on track

Rising fares and falling punctuality are undermining confidence in the rail-franchise system. What should replace it?

MANY OFFICE serfs like to slip away early on Friday afternoons in the quiet summer months. So anger boiled over on August 9th when several rail lines were shut down following a power cut. Delays were so bad on lines going north from London that it was quicker for some commuters to trudge home on foot. The snafu was the fault of the electricity industry rather than the train companies. But it added to the railways' growing reputation for unreliability. With dreadful timing, it was announced a few days later that fares would go up again next year, by 2.8%.

Boris Johnson's government is consumed by the task of getting Britain out of the European Union by October 31st. But before then it must also make two big decisions about the railways. The first is whether to go ahead with HS2, a high-speed line between London and the north (see box on next page). The second is how to fix the rest of the network. This autumn an official review by Keith Williams, a former British Airways boss, will consider how to reform the franchising system under which most lines operate. Mr Williams has already said

the current set-up has "had its day" and talked of "revolution, not evolution".

The Williams report was commissioned after a catastrophically botched timetable change last summer led to nearly half the trains in northern England being delayed or cancelled. The incident exemplified how the railways, which made much progress after being privatised in the early 1990s, have gone off-track. Last year delays and cancellations reached their worst level in nearly a decade. At the same time passenger numbers fell by 1.4%, the first dip

→ **Also in this section**

26 The future of High Speed 2

— **Bagehot is away**

Read more from this week's Britain section:
[Economist.com/Britain](https://www.economist.com/Britain)

since privatisation. Amid all this, passengers are paying more. Ticket prices have risen twice as fast as wages since 2010.

When Britain broke up and sold British Rail, the state-run monopoly, it hoped to spur competition and cut costs. With this aim it embarked on a radical experiment, tried before only in Sweden, of separating the management of the tracks from that of the trains. Politicians feared that chaos could ensue, and some politically sensitive lines could close, if the system went from rigid state monopoly to free-market free-for-all overnight. So they introduced a system of franchises, in which companies could bid for the right to operate specified services, to ensure continuity and allow for the subsidising of loss-making services.

The opposition Labour Party, which came to back privatisation in the 1990s, wants to renationalise the network. Andy McDonald, the shadow transport secretary, argues that privatisation has left "a fragmented and inefficient network that drives up costs", and says the answer is for a single state-owned firm to run both trains and track. Most voters seem to agree. A poll last year by BMG Research found that 64% support nationalisation. (The same is not necessarily true of rail-users, notes Anthony Smith of Transport Focus, a watchdog. It finds that passengers care more about having a reliable service than who runs it.)

Supporters of nationalisation compare Britain's railways unfavourably with those in other European countries, where the state plays a more active role. Yet, perhaps ▶▶

▶ surprisingly, many countries on the continent see the British model as one to copy. EU rules that came into force in June require state-owned rail firms to open their tracks to rivals and legally separate the management of track and train, as in Britain. And although British rail-users are fed up, those elsewhere are crosser still. Only five EU countries have happier passengers (and most of them are in countries without many railway lines).

Britons may scoff at the idea that they have anything to teach the world about railways. But they do (see chart). Passenger numbers have risen by almost 120% since privatisation, twice the increase in the next-best big country, Spain. This may be because other forms of transport have become more wretched: driving has got pricier, for instance. Yet anti-car policies have gone further in other countries, without an equivalent rail boom. Meanwhile, Britain has gone from having one of the most accident-prone railways in Europe to running its safest.

Average British fares are by some way the highest in Europe. But European passengers pay less for their tickets mainly because they pay more through taxation. In France and Germany, taxpayers cover almost half the cost of train tickets, whereas the fares Britons pay fully cover the trains' operating costs. Any argument for increasing subsidies must reckon with the fact that rail-users are, on average, a richer bunch than those who use other forms of transport, such as buses.

Where Britain does badly is in the crucial area of reliability. Although its long-distance trains are pretty punctual by European standards, its short-haul ones run late. Britain comes 19th out of 26 European countries for punctuality on local routes—and these are the ones that cause most anguish, as commuters rely on them to get to work on time.

The franchising business has also sometimes proved chaotic. The East Coast

mainline franchise has gone bust three times—in 2007, 2009 and 2018—as operators overpromised how much they could pay in track-access charges. Even Eamonn Butler of the Adam Smith Institute, a libertarian think-tank which pioneered the idea of separating the management of track and trains, admits that franchises “didn’t work out as we intended”.

Faced with these problems, the government is thinking about new approaches. On some long-distance routes it is running an “open-access” system, under which different companies are allowed to run services along the same route in competition with each other. The idea is to offer passengers a choice, driving down prices and encouraging innovation—something that is discouraged by franchising, in which rail companies are tied to contracts so detailed that some even specify how often train carpets should be shampooed.

The results are encouraging. On the East Coast mainline, open-access operators such as Hull trains and Grand Central now compete for passengers. Average fares are lower than on the West Coast mainline, where the West Midlands trains franchise for stopping services and the Virgin trains franchise for express ones hold near-monopolies. Three of the four train companies with the highest passenger-satisfaction ratings last year were open-access operators, not franchisees.

On shorter lines, the open-access approach is harder to pull off. Busy commuter routes have such tightly packed services that arranging a timetable around several companies would be a recipe for chaos. So an alternative approach is to grant concessions in which a single operator signs a contract to run all services on a line, and sometimes to maintain the track as well. London’s Docklands Light Railway, which has the happiest rail passengers in the capital, is run like this by Keolis, a French firm. Three of Britain’s four most punctual rail firms are concessions.

Granting concessions doesn’t give passengers a choice about how they travel. Yet an element of competition can be introduced by re-opening alternative lines that were closed half a century ago. In 2016 Chiltern Railways opened a London-Oxford line that had been closed by British Rail in the 1960s, when rail use was in decline. Within a few months the incumbent on a rival line, GWR, cut ticket prices and introduced free Wi-Fi. Some have proposed re-opening a 40-mile stretch of the Great Central Railway between Aylesbury and Rugby to provide competition for the West Coast mainline between London and the north.

There may be little case for turning back the clock to the 1980s, before privatisation. But going back even further, to the days when passengers had a real choice of which line to take, is a promising alternative. ■

High Speed 2

A speed bump

Euston, we have a problem

TAKING A CAB from Euston station in central London used to be a grim experience. In the 1960s the taxi rank was put in a poorly ventilated underground garage known as “the gas chamber”. In January cabbies were cheered when the rank was moved above ground to make way for HS2, a planned high-speed railway between London and the north of England. Yet fears are growing that Boris Johnson’s government could derail the project.

HS2 is not a done deal. Some £4bn (\$5bn) of work has been completed, including exhuming 45,000 bodies from a graveyard at Euston to make way for new platforms. The rest of the cash was to be released this autumn if the project was on track to stay within its £56bn budget. But that looks unlikely. In December HS2’s chairman resigned over rising costs. Last month his replacement warned that the bill could overrun by £30bn.

Boris Johnson is sceptical. The new prime minister has previously described HS2’s costs as “spiralling out of control”. He has ordered a review by Douglas Oakervee, another former HS2 chairman, who will report within six weeks on whether the project should be slimmed down or even scrapped. At the same time he has promised to build new railways between northern cities, dubbed HS3, at a cost of £39bn.

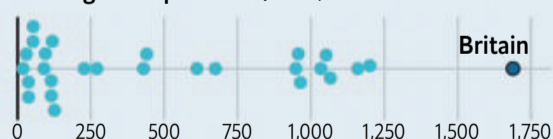
Opponents of HS2—from the nerdy Campaign for Better Transport to the right-wing TaxPayers’ Alliance—worry that its huge budget will mean less money for improving local links. They say the cash should be spent on re-opening smaller lines closed in the 1960s, which would have greater economic benefit per pound spent, according to the government’s own analysis.

Yet for all the doubts, HS2 is likely to survive in some form. Mr Johnson recently told the *Birmingham Mail*: “I’m going to hesitate for a long time before scrapping any major infrastructure project.” One option is to slow the trains down, to avoid the cost of reinforcing weak ground in the Midlands that cannot support a 225mph (362kph) train. A further £8bn could be saved by ending the line in Old Oak Common, in west London, rather than Euston. That might inconvenience passengers but would boost the area, one of Mr Johnson’s pet projects when he was mayor.

First class

European countries, rail travel

Passenger-km per death, 2017, million



Change in passenger-km travelled, 1996-2017, %



Average fare per passenger-km, €, 2016



Sources: Eurostat; World Bank; OECD

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

All languages

Brand new content

One site



AVXLIVE **ICU**

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>



Zimbabwe's crisis

Parched and pillaged

HARARE

A lack of food, water and power is pushing Zimbabwe to the brink, again

AT HIS PENTECOSTAL church in Harare, Zimbabwe's capital, Bishop Never Muparutsa sighs at the empty pews. In recent weeks, as the economy has deteriorated, his congregation has shrunk from 400 to 120. Mr Muparutsa sends Bible verses via WhatsApp to those too poor to travel. He tries to keep sermons upbeat. But he is worried about his formerly ebullient flock. "The joy I used to see is gone," he says. "They might as well be Anglicans."

Zimbabwe is facing its worst economic crisis in a decade. Electricity is available for just six hours a day. Clean tap water runs once a week. Petrol stations either have no fuel or long queues. About 7.5m people, roughly half the country, will struggle to eat one meal a day by early next year, says the World Food Programme, a UN agency. Annual inflation is running at about 500%, reckons Msasa Capital, a local advisory firm. "I can't see the light at the end of the tunnel," says one businessman. "Just the light from an incoming train."

The government blames the weather.

Cyclone Idai, which hit southern Africa in March, and a regional drought have contributed to a poor harvest. Scant rainfall has cut the supply of water to Lake Kariba, on the border of Zambia and Zimbabwe, and thus to an adjacent hydropower plant. Though the climate has been cruel to Zimbabwe, the mess is mostly man-made.

Power shortages were avoidable. Low water levels at Kariba have been predicted for almost a year. A coal-fired power station in the west of the country ought to help fill the gap, but it is plagued by faults. Extra power could be bought from Eskom, but Zimbabwe has struggled to pay its debts to South Africa's state-run utility.

→ Also in this section

28 A power vacuum in Gabon

29 Rwanda's odd statistics

29 The war within the war in Yemen

30 A row over language in Morocco

A lack of power is crippling what is left of Zimbabwean industry. Many factories open only for a brief night shift. The informal economy is struggling, too. Obey Mapupa, who makes tombstones in Mbare, a poor suburb of Harare, says that business should be good: more people are dying. But without power he cannot etch epitaphs.

The shortage of water also stems from inept governance. Harare's reservoirs are leaky. The chemicals used to clean them have not been imported because of a lack of foreign currency. Zimbabweans must instead queue at wells. At one in Chitungwiza, a dormitory town outside Harare, Gaudencia Maputi, 66, says she has been waiting for more than a day. She needs to wash and feed her 83-year-old brother, who has cancer. "I cannot do anything because there is no water," she says.

Looming hunger reflects state failings as well. The Grain Marketing Board (GMB), the pillar of Zimbabwe's command economy in agriculture, once kept plentiful stores of maize. But today there may be just six weeks' worth, reckons Eddie Cross, an opposition MP. He blames corruption. The board is racking up huge losses. It sells maize at \$240 per tonne and buys it at \$390, so it is easy for crooked insiders to drive from one depot to another, making \$150 a time. (Assuming they can find petrol.)

The food, water and power crises are part of a broader economic catastrophe. This can be traced back to the end of Robert

► Mugabe's kleptocracy. In the years before he was toppled in a coup in November 2017, Mr Mugabe's regime created money out of thin air to finance graft and profligacy.

Unlike in 2008-09, when Zimbabwe printed bank notes with ever more zeroes on them, this time the government used a keyboard. It credited banks' books with electronic "Real-Time Gross Settlement" (RTGS) dollars, which it said were equivalent to real dollars. But these electronic notes, or "zollars", had no backing. It became hard, then impossible, to withdraw cash. On the black market zollars traded at various fractions of a greenback.

After Emmerson Mnangagwa replaced Mr Mugabe, the regime initially kept claiming that a zollar was worth a dollar. But from October 2018, as black-market prices spiked, it seemed to give up the fiction. It first ring-fenced real dollar deposits, an admission that zollars were, in fact, a new currency. In February it went a step further, allowing banks to trade between the two. Mthuli Ncube, the finance minister, has also taken steps to balance the budget by cutting spending and raising taxes.

In theory this all made sense. Zimbabwe was living beyond its means. In practice the reforms clashed with the instincts of the ruling Zanu-PF party: command, control, steal. Despite the government's efforts to prop up the zollar, it lost 90% of its value versus the dollar from February to June. Civil servants and soldiers, who are paid in zollars, saw their earnings evaporate.

Fearing protests from state employees who wanted to be paid in dollars, the government announced on June 24th that foreign currencies "shall no longer be legal tender". As ever, though, it soon undermined its own policy. Exceptions to the ban have been granted to some businesses.

Zimbabwe is locked in a downward spiral, fears Derek Matyszak of the Institute for Security Studies, a think-tank. The regime relies on exporters for its supply of dollars. But there will be few exports without raw materials and power. Tobacco

farmers, for example, are already planning on planting fewer seeds next year.

Helping countries hit with balance-of-payments crises is the job of the International Monetary Fund (IMF). But the IMF cannot lend to Zimbabwe until it clears its arrears to other international institutions, such as the World Bank. Zimbabwe will struggle to do that without another loan.

Yet Western governments, led by America, are clear that political reform must precede economic assistance. Here Mr Mnangagwa has dragged his feet. The West has suggested that he remove two repressive laws as a starting point. Mr Mnangagwa has repeatedly promised to repeal them, but has not done so. His security services, meanwhile, keep shooting, abducting and beating his opponents with impunity.

This terror has cowed civil society. But such is the anger among ordinary Zimbabweans that calls for further protests have grown. The opposition MDC Alliance will stage a rally in Harare on August 16th.

Some Zimbabweans are protesting in a different way. By leaving. A decade ago economic crisis forced hundreds of thousands to flee. So far the new outflow is much smaller. But it has begun, reckons Bishop Muparutsa. He brings up the latest Bible verse he has distributed on WhatsApp. It is a passage from the Book of Exodus. ■



Ali, not the greatest

unsuccessfully, to mount a coup. Since then the state has shut down most news outlets and repeatedly blocked the internet. The economy is stagnant, largely thanks to growing corruption.

A big new scam has targeted foreign businesses in Libreville, the capital. It relies on a law inherited from France, the former colonial power, that allows courts to order companies to pay their debts. That might make sense when the debts are genuine. But oil companies, banks and supermarkets have been targeted by firms that appear from nowhere, demanding payment of fictitious debts. Some businessmen think the courts are in on the scam: they make it difficult for companies to pay their debts, then hit them with large penalties when they do not.

"It is a complete farce," says Johanna Houdrouge of Mercure International, a firm based in Monaco that runs shopping malls in Gabon. The authorities seized 164m CFA francs (\$280,000) from a subsidiary of Mercure based on the complaint of a company with an address, but little else. Ms Houdrouge says the court ordered the subsidiary to provide proof that it did not owe anything to the complainant—which was difficult, as firms tend not to keep records of non-existent debts.

Other firms have been hit harder. An international oil company says it is being targeted at least four times a week, with seizures of as much as \$10m.

Gabon was never free of corruption, but it has reached levels that threaten the viability of foreign businesses. Some say they will leave soon. The deterioration seems linked to Mr Bongo's stroke. Many Gabonese suspect that the president, who is 60 years old, will never be well enough to resume full-time work. Officials are trying to ►►

Gabon

A scam too far

With the president out of commission, corruption is flourishing

IT IS OFTEN said of countries that their real wealth lies in their people. Few say this about Gabon. With 2m people and twice the land mass of England, it is among Africa's richest countries, with a GDP per person of \$8,300. Almost all of this comes from natural resources. Gabon exports oil, timber and palm oil. It is also the world's third biggest producer of manganese, a metal used in producing stainless steel.

The wealth masks the fact that Gabon is one of Africa's worst-run countries. It has had only two presidents since 1967. The first, Omar Bongo, was a flamboyant despot. He kept a pet tiger, hobnobbed with French presidents and turned the country into a one-party state. After he died in 2009 his son, Ali, took over. He won an election in 2016 that many believe was rigged (turnout in his home province was 99.93%, with 95% voting for the president).

Last year Ali (pictured) suffered a stroke and spent months in Morocco recovering. In January a few junior army officers tried,



▶ extort cash while they can, out of fear that they may eventually lose their jobs.

Gabon's neighbours, Congo-Brazzaville and Cameroon, are also former French colonies with plenty of oil. And both have ageing leaders who are rarely seen in public. Paul Biya, Cameroon's 86-year-old president, spends much of his time in a suite at the InterContinental Hotel in Geneva. In his absence, protests in the English-speaking north of the country have turned into a civil war. Denis Sassou Nguesso, 76, has ruled Congo-Brazzaville for all but five of the past 40 years. On August 6th his son was accused by Global Witness, a watchdog, of stealing \$50m of state funds.

Since independence in 1960, Gabon has avoided civil war and coups. It maintains close relations with France. Yet it is becoming inhospitable for foreign businesses. Mr Bongo, for all his flaws, knew not to kill the golden goose. Some of his officials seem not to have learned the lesson. ■

Poverty in Rwanda

The devil in the details

KIGALI

Has a country viewed by many as a model been fudging its numbers?

AT THE HEART of Rwanda's capital sits the Kigali Convention Centre, a \$300m monument that lights up the night with the national colours of blue, yellow and green. It symbolises modernity and prosperity in a country that has bounced back from a genocide in 1994 when perhaps 500,000 people, mostly Tutsis, were killed.

As impressive as the skyline are Rwanda's economic statistics. In the past decade the economy has expanded by 8% a year. The share of people classified as poor has fallen by seven percentage points since 2011, to 38% in 2017.

Numbers such as these impress investors, donors and other African leaders. Many see Paul Kagame, the former general who ended the genocide and has called the shots in Rwanda ever since, as providing a model of development: that of an authoritarian who gets things done and helps the poor, even if he also tramples human rights. But what if the numbers are wrong?

Questions have hung over Rwanda's sta-

Corrections: Our article on Congo ("An epidemic of violence", August 3rd) said that its annual mineral exports were barely a quarter of a dollar per head. That is actually the daily amount. We also said that Congo needed 300 kilowatts of electricity per person to industrialise. It should have said 300kWh per person per year. Our article on Liberia ("On the edge", August 10th) said Ebola killed almost 11,000 people in Liberia. In fact it was in the region.

tistics since the government claimed in 2014 that poverty had declined to 39% from 45% in 2011. A closer examination of the data by Filip Reyntjens of the University of Antwerp found that the fall was largely due to a change in how it calculates the numbers. In 2011 Rwanda's poverty line reflected the cost of consuming a basket of the foods that poor Rwandans were buying. For its 2014 calculation the agency replaced some low-calorie items the poor tend to buy with higher-calorie foods they could have bought instead. By changing the basket the agency reduced the income level that defines poverty by 19%.

Had Rwanda used the same basket in both periods, the academics argued, the poverty rate would have increased by five to seven percentage points (depending on the basket). Rwanda's statistics agency denies this, saying that poverty declined even if comparable poverty lines are used.

But its rebuttal relied on an estimate of inflation that has invited new questions. One academic who has dissected the price figures is Sam Desiere of the University of Leuven in Belgium. He thought the official rate of food inflation was curiously low at 5.3% a year. After recalculating the figure using the statistics agency's own survey data on how much households were spending, Mr Desiere found that food prices had increased by 9.4% a year. Other academics looking at the same data reckon that rising prices alone may have increased poverty by seven percentage points.

These jumps in poverty, if indeed they took place, are surprising, given Rwanda's rapid GDP growth of 8% a year. But some academics are questioning whether growth has been overstated, too. As evidence they point to a sharp divergence between two different official measures of consumption per person. In the national accounts, consumption is totted up across the economy and divided by the population. Then there are household surveys, in which people are asked how much they spend and consume. Both measures usually move together. In Rwanda they did until 2005. But since then the national accounts have shown consumption rising even as survey data showed it stagnating. By 2013 the gap between the two had widened to 50%, according to some economists.

One reason for this could be that the benefits of economic growth went to a small elite, whose spending is poorly captured by household surveys. Other countries, such as India, have also seen a widening gap between the two measures. Another explanation is that robust economic growth in the national accounts has been overstated.

The latter does not seem far-fetched if one looks at farming, which accounts for about 30% of GDP. It has been an important contributor to economic growth. Yet when



How bright is the future?

Mr Deseire looked at the official figures claiming a 55% increase in crop yields between 2006 and 2013, he concluded that they were probably inflated. Other data sources suggest that the increase may have been only 20% or so.

Questioning Rwanda's statistics may seem to be no more than quibbling over numbers. But at stake is Mr Kagame's reputation, and that of the developmental model he embodies. ■

Yemen

The war within the war

It is becoming even harder to keep Yemen in one piece

SAUDI ARABIA'S air strikes in Yemen have often missed their mark, causing hundreds of civilian casualties. But when the kingdom bombed its own allies on August 11th it was no mistake. The target was southern separatists, who had seized the city of Aden from Yemen's internationally recognised government a day earlier. On paper, at least, the Saudis, the separatists and the government are all on the same side in Yemen's war—members of a fragile alliance battling Iranian-backed Shia rebels called the Houthis.

It has been more than four years since the Houthis pushed the government out of Sana'a, the capital, and captured most of the country. The Saudi-led coalition has since retaken the south, but it has failed to oust the Houthis from the north (see map on next page). The fighting has shattered what was already the region's poorest country. Tens of thousands of people have ▶▶

Education in Morocco

Quel est le problème?

A row over teaching in French has reopened old wounds in Morocco

FRANTZ FANON, a great theorist of colonialism, wrote that “every colonised people... finds itself face to face with the language of the civilising nation.” This confrontation can persist years after independence. Just ask Morocco. Some in the former French colony are up in arms over a law reintroducing French as a language of instruction in schools. It is a return “to the language of the coloniser”, said Abdelilah Benkirane, a former prime minister.

Most of the law in question, passed on August 2nd, is uncontroversial. It aims to reform Morocco’s dysfunctional education system. But article two allows for the teaching of science, maths and technical subjects in French (and other languages). Whereas most Moroccans speak Darija (or Moroccan Arabic), French is the language of business, government and higher education. The measure aims to

equip students for this reality.

The controversy is more about politics than pedagogy. Morocco’s two official languages are modern standard Arabic (MSA) and Tamazight (the Berber tongue). Many feel that only MSA is suitable for teaching. Even the inclusion of a few words of Darija in a textbook last year caused an uproar. Members of the Islamist Justice and Development Party, such as Mr Benkirane, now fear the “Frenchification” of education.

Plenty of Moroccans, though, see merit in the law. In 2016 King Mohammed VI blessed the idea of teaching in French. Around half of university students fail to complete their studies, in part because of trouble with the language. The risk is that the new measure will be implemented poorly, frustrating pupils. As it is, only 53% of middle-school pupils continue to high school.

Saïd Amzazi, the minister of education, says he wants schools to produce “citizens of the world”. In that case, though, he might be better off holding classes in English or Chinese, which are more prominent in academia and the global economy. Next-door Algeria has ordered its universities to teach in English rather than French.

Over 60 years after independence, Morocco is still working out its relationship with France. The two countries maintain close economic ties and the current government in Rabat is particularly Francophile. In a speech on Bastille Day, Saad Eddine El Othmani, the prime minister, waxed lyrical about the countries’ “exceptional relationship”. The anger provoked by article two shows that this view is far from universal.



► been killed. Hunger and cholera stalk the living. As if Yemen were not miserable enough, the war is growing more chaotic, making a lasting peace harder to imagine.

The coalition assembled by Saudi Arabia and its main international partner, the United Arab Emirates (UAE), was never very coherent. It is a patchwork of local armed groups, all with their own, often competing, agendas. In Taiz alone, which has been besieged by the Houthis since 2015, more than 20 groups have fought for the coalition. Loyalty is fickle, with fighters drawn to whichever side pays more. Most coalition members readily admit that they dislike the government, which is corrupt and ineffective. They snigger at the fact

that the president, Abd-Rabbu Mansour Hadi, has still not returned from his gilded exile in Riyadh.

One of the coalition’s most dangerous fault-lines runs between the normally northern-based government and southern separatists. Their dispute dates back decades. South Yemen, then a separate country, fought two wars with the north in the 1970s. Unification in 1990 did not heal old wounds. Fighting erupted again in 1994, with the north coming out on top. Since then many in the south, which is less tribal, have viewed the government with suspicion. “It has prevented the south from developing, fearing it will secede,” says Saleh Alnoud of the Southern Transitional



Council (STC), which speaks for many of the separatists. They are also divided.

Tensions between the government and the STC flared last year, but the latest fighting looks more serious. It began on August 7th with a funeral procession for dozens of southern soldiers killed in a Houthi missile strike the week before. As the mourners passed the presidential palace, chanting anti-government slogans, bullets were exchanged with the presidential guards. The violence quickly escalated and, three days later, forces aligned with the STC had taken the palace and several military barracks. Pressure from the Saudis might lead to a face-saving deal that allows the government to return in some form, but the STC will probably remain in control.

Publicly, at least, the leaders of Saudi Arabia and the UAE are speaking with one voice about the situation. But their call for talks belies tension in their own relationship. The UAE has focused on southern Yemen, where it has backed groups such as the STC in an effort to rout jihadists and Islamists. Some accuse it of creating a parallel state—on his way out of Aden, the interior minister blamed the UAE for the fighting. The Saudis, meanwhile, have focused on the north and restoring the government. They have worked with Islah, Yemen’s main Islamist group and a part of the administration, as well as others whom the UAE finds unsavoury.

Whereas the Saudis have stuck mostly to the air, the UAE has led the charge on the ground and can claim most of the credit for what progress has been made against the Houthis. But with no end in sight, and as fear of conflict with Iran grows, the UAE is abandoning the war. Big new offensives by the coalition therefore seem unlikely. Saudi Arabia has the support of America’s president, Donald Trump, who has resisted congressional efforts to press the kingdom to end the war. Still, the prospect of a coalition victory is growing dimmer. And an old question has returned: can Yemen ever be stitched back together? ■



Nuclear weapons

You first

Elizabeth Warren's proposal to renounce the first use of atomic weapons reflects a wider debate about America's nuclear policies

PRESIDENT BARACK OBAMA promised that he would reduce the role that nuclear weapons played in America's national security strategy. His successor has done the opposite. In a review of nuclear policy published in February 2018, Donald Trump seemed to expand the circumstances in which America might use nuclear weapons first, to include cyber-attacks on the networks that transmit presidential orders to silos, submarines and bombers. He also ordered the manufacture of new low-yield warheads (these are equivalent to about half a Hiroshima), which critics fear are more likely to be used. And he has issued hair-raising threats against North Korea, alarming those who worry about his impulsiveness. All this is fuelling a debate about nuclear risks.

Elizabeth Warren, a Democratic presidential contender, wants to start with American nuclear doctrine. Every president since Harry Truman has reserved the right to use nuclear weapons in a conflict even if an enemy has not unleashed them first. In January Ms Warren introduced a Senate bill that would mandate a policy of

what works call No First Use (NFU). Such pledges are common: China and India committed themselves to versions of NFU decades ago, as did the Soviet Union. But in America it would reverse over seven decades of nuclear thinking.

Proponents of NFU argue that launching nuclear weapons first in a conflict is neither necessary nor wise. It is not necessary because America's regular armed forces are strong enough to defeat enemies without recourse to weapons of mass destruction. It is not wise because an adversary that fears an American bolt from the blue is more likely to put its own arsenal on hair-trigger alert, increasing the risk of un-

authorised or accidental launch. An adversary might also be tempted to pre-empt America by going even faster, a dangerous dynamic that Thomas Schelling, an economist and nuclear theorist, called the "reciprocal fear of surprise attack".

That is all well and good, say critics of NFU. But America is in a different position from China and India. It not only defends itself, but also extends a protective nuclear umbrella over allies around the world. If North Korea were to invade South Korea with its ample army, it must reckon with the possibility of a nuclear response from America. The South Korean government would like to keep it that way.

Estonia and Taiwan would like Russia and China, respectively, to face similar uncertainty. Thus when Mr Obama toyed with the idea of pledging NFU during his administration, Britain, Japan, France and South Korea—all American allies facing more populous foes—lobbied successfully against such a move.

NFU-sceptics also point to the increasing potency of non-nuclear weapons. Like America, China and Russia are both developing hypersonic missiles capable of crossing oceans at over five times the speed of sound. Some might destroy targets with nothing more than their kinetic energy—no need for nuclear tips. Chemical and biological weapons could also wreak havoc without splitting atoms.

That would put an NFU-bound America in an invidious position. If such non-nuclear missiles were falling on Washington, ▶

→ Also in this section

32 The Democratic primary

33 Drug markets

33 Trading water

34 Co-pay charities

35 Lexington: Bernie Sanders

▶ should a nuclear response be off the table? And even if it was declared to be so, would adversaries believe it? After all, Pakistan is scornful of India's own NFU pledge, just as America is sceptical of China's. Talk is cheap, trust is in short supply and the stakes could not be higher.

Whereas Ms Warren's proposal would outlaw first use under any circumstances, others merely wish to place checks on this untrammelled presidential launch authority. America's nuclear chain of command was designed to concentrate decision-making in the White House and to keep it away from generals. James Mattis, Mr Trump's defence secretary until last year, reassured outsiders that he would serve as a check, telling Strategic Command "not to put on a pot of coffee without letting him know", according to the *Washington Post*. But he had no foolproof means to guarantee he could do this.

"The weight of the open evidence" suggests that "the Secretary of Defence is not just unnecessary, but not even in the nuclear chain of command," says Alex Wellerstein, an expert on nuclear history at the Stevens Institute of Technology. William Perry, a former defence secretary, agrees. The president is free to instruct the chairman of the joint chiefs of staff, the top military officer, as he wishes. "We built a system that depends on having a rational actor in the White House," says Alexandra Bell, a former State Department official now at the Centre for Arms Control and Non-Proliferation. "We now know the system is flawed."

America first

In January Congressman Ted Lieu and Senator Ed Markey, both Democrats, reintroduced a bill, originally proposed in 2016, that would force the president to seek a congressional declaration of war (last done in 1942) with express approval for nuclear first use. Nancy Pelosi, the Democratic leader of the House of Representatives, endorsed the idea in 2017.

There are also wider efforts to prune the arsenal. Adam Smith, the chairman of the House Armed Services Committee and co-sponsor of Ms Warren's NFU bill, has sought to cut funding for Mr Trump's mini-nuke and to limit its deployment on submarines. To the Pentagon's horror, he has also suggested scrapping America's silo-based missiles, leaving the job to submarines and bombers.

Politicians should not expect clear guidance from voters. A survey in 2010 found that 57% agreed with Ms Warren that "the US should only use nuclear weapons in response to a nuclear attack by another nation." Yet it turns out that Americans also quite like fire and fury. A paper by Scott Sagan of Stanford University and Benjamin Valentino of Dartmouth College, published in 2017, found that a clear majority ap-

proved of using nuclear weapons first if doing so would save the lives of 20,000 American soldiers—even if it killed 2m Iranian civilians. "The conventional wisdom around nuclear weapons remains strongly embedded," says Jon Wolfsthal, director of the Nuclear Crisis Group and a former official in Mr Obama's administration. "I am not sure there will be changes, but big changes are being discussed more openly now than in a long time." ■

The Democratic primary

Among the 1%

DES MOINES

Adventures at the bottom of the pack

NEARLY TWO dozen presidential candidates descended on Iowa's State Fair, which began on August 8th, each with a different style and number of supporters. Elizabeth Warren's were young, loud and pre-loaded with chants. Kamala Harris's formed a yellow-shirted, fresh-faced, hyper-enthusiastic wave that left stickered, dazed-looking Iowans in its wake. Jay Inslee's fan club comprised Channing Dutton, an amiable personal-injury lawyer from Des Moines, who held up a homemade sign that read, "Talk Climate!"—referring to Mr Inslee's signature issue.

Mr Inslee served eight terms in Congress and is in his second as Washington's governor, where he has enacted a Democratic wish-list of policies, including a moratorium on capital punishment, expanded parental leave and an impressively detailed path to clean energy by 2045. He is



Bill de Blasio, one percenter

tall, square-jawed, handsome and married to his high-school sweetheart. Yet he has struggled in a crowded field, and is polling below 1%, both nationally and in Iowa.

In fact, just three candidates—Ms Warren, Ms Harris and Joe Biden—are polling in double digits in the state. Nationally, Ms Harris drops to 9% in *The Economist's* average of polls, while Bernie Sanders is at 14% (a bit lower in Iowa). Sixteen candidates are bumbling along at 1%. Thus there were two contests playing out at the fair: four or five front-runners fought to be top dog, while the rest fought for a bit of attention.

For some that was hard to come by. Mike Schweiger, a lean, white-haired electrician wearing a T-shirt emblazoned with the name of his union, said he supports Ms Warren, because "she talks about the need for a union resurgence, and that's my issue. It's not abortion, not the influx of aliens. That will bring back the middle class." As he was explaining himself, Tim Ryan, a congressman from Youngstown, Ohio and a fervent union advocate, was on stage just a few feet away. Mr Schweiger said he had never heard of Mr Ryan; his wife asked if he was the one who ran with Hillary Clinton (that was Tim Kaine).

"Every time a poll comes out and I'm at 2%, I think, 'Oh my God, in the next one am I going to be at 4%?'" says John Hickenlooper, a former governor of Colorado, who is stuck on 1%. Mr Hickenlooper touts his record of bipartisan achievement. "I'm the only candidate who does what everyone talks about," he tells reporters after his speech, his omnipresent smile hardening into a rictus. "If I keep saying it often enough, it'll get through their heads."

There is still time to say it often enough. Iowa's caucuses in February are the primary season's first contest. Winners do not always capture their party's nomination, as Tom Harkin (1992), Mike Huckabee (2008) and Ted Cruz (2016) can attest, but a poor performance can end a campaign. Some Democrats grumble about the size of the field, but—short of running out of money—no candidate yet has a strong enough incentive to drop out.

The field is more open than it seems. Mr Biden holds a comfortable lead but he is gaffe-prone and would take office at 78, which would make him the oldest man to do so. His performances on the trail have been meandering and unimpressive; he seems to inspire more affection than genuine enthusiasm. If he begins leaking support, every other candidate wants to be there with a bucket.

Still, short of an incredible run of luck, none of the stragglers seems likely to break through as long as the field remains so crowded. Mr Dutton believes that Mr Inslee is "a wildfire just waiting for a spark". But asked what that spark might be, he is circumspect. "If I knew, I'd light it myself." ■

Drug markets

Legal and rarer

OAKLAND

The legal cannabis market shrank in California last year

HARBOURSIDE CANNABIS in Oakland is a modern-day temple to the delights and possibilities of the botanical marvel that is the plant *Cannabis sativa*. Around the airy shop move a well-heeled clientele. They browse among offerings ranging from cannabis-infused chocolate to sparkling water and vape pens. California was the first state to allow sales of medical cannabis in 1996, and Harbourside one of the first shops in America to sell pot legally. Since January last year, the firm has also been able to sell pot for purely recreational purposes. Thanks to its large number of “medical” users, California’s is the largest legal cannabis market in the world. But since the legalisation of adult sales, that market has been shrinking.

Allowing legal sales is supposed to increase the size of the market as they force illicit sellers out of business. That is the way it has happened in other states where cannabis is legal. But according to BDS Analytics and Arcview Market Research, legal sales in California were \$2.5bn in 2018, down from \$3bn in 2017. Josh Drayton, spokesman for the California Cannabis Industry Association, says that the state has gone from being the most loosely regulated market in the world to one of the most tightly regulated. Moreover, he says the regulations go above and beyond those for other products.

Bringing a messy market under control is likened by many in the industry to putting the toothpaste back in the tube. Many firms operating in the medical market find the new regulations challenging and the fees to get permits and licences too expensive. On top of regulations come taxes in great abundance. There is a retail excise tax of 15%, in addition to a sales tax that starts at 7.25%—rising according to the levels set by county and city governments. Taxes on cultivation are many and inventive, too.

On top of this federal taxes must still be paid, even though the product remains illegal under federal law. The federal government declines to allow firms to make deductions for running costs. Cannabis firms are thus taxed on gross profits. The upshot of is that legal weed is expensive. Andrew Berman, boss of Harbourside, says your correspondent (should she want to) could get an ounce of cannabis delivered outside his store for \$150. In his shop the same product, legally bought, would cost \$400.

These factors go a long way to explain-

ing California’s incredible shrinking legal cannabis market. Another hindrance is that most cities across the state have decided, initially, not to allow recreational sales. Some cities, like Los Angeles, have allowed shops but have been slow to issue licences.

Other states planning to legalise cannabis seem likely to learn from this experience. In June Illinois became the 11th state to legalise recreational use—the law comes into effect at the start of 2020. Despite the problems in the country’s largest legal cannabis market, pot continues to gain acceptance around the country. Lisa Hurwitz, of Grassroots Cannabis, a retailer, says purchases are increasing fastest among the boomer-and-older generations. “They are either rediscovering it or using it for a variety of ailments that they face in older age,” she says. The plant, she says, is useful for everything, from pain to poor sleep to anxiety. It seems that cannabis is moving from the black market to the grey one. ■



Trading water

A liquid market

LOS ANGELES

Caps on groundwater use could flood California with a new type of trade

A LONG STRETCH of highway running between Los Angeles and San Francisco separates the dry hills to the west from the green plains of the San Joaquin Valley to the east, where much of America’s fruit, nuts and vegetables are grown. Every couple of miles billboards hint at the looming threat to the valley. “Is growing food a waste of water?” one billboard asks. Another simply says, “No Water, no Jobs”.

In the San Joaquin Valley agriculture accounts for 18% of jobs and agriculture runs on water. Most of it comes from local rivers and rainfall, some is imported from the river deltas upstate, and the rest is pumped

out of groundwater basins. During the drought of 2012-16 landowners pumped more and more groundwater to compensate for the lack of rain. Thousands of wells ran dry. As a result, California passed a law requiring water users to organise themselves into local Groundwater Sustainability Agencies (GSAs), with the aim of bringing groundwater use to sustainable levels by the early 2040s. In the driest basins, GSAs must file plans on how to do so by the end of January 2020.

The Public Policy Institute of California (PPIC), a think-tank, estimates that this could result in as much as 15% of the valley’s 5.2m acres of irrigated cropland lying fallow. At first glance, each farmer seems to be faced with a choice: let land go fallow or grow crops which use less water. But if landowners in the San Joaquin Valley traded both groundwater and surface water, they could cut their revenue losses by half, according to the PPIC’s estimates.

“Water is an asset and markets would allow you to allocate it in the right way,” says Edgar Terry, a farmer in Ventura County, 50 miles south of the San Joaquin Valley. If landowners lease pumping rights to others for more than they would earn from using the water to grow additional crops, they benefit. Buyers may make larger profits from the additional crops they can grow than the water costs them. Towns or industrial users may pay landowners for additional pumping rights. The scarce resource would flow towards its most efficient use.

Given the potential benefits of a market-based approach, non-profits such as the Environmental Defence Fund, the Fresh Water Trust and the Nature Conservancy have stepped in to advise the GSAs on how to set up markets around California. Mr Terry’s well, like others in Ventura, are equipped with meters, which send data to an online platform. The local water manager can check that everyone has complied with their respective cap. Participants who want to buy additional water can place a bid online. Those who want to sell do the same. A system matches bids and offers.

Allocating pumping rights is the hardest part. Californian law allows landowners to use the groundwater under their property. But since a water basin connects all landowners underground, it suffers from the tragedy of the commons. When users cannot agree how to allocate quotas, courts will have to settle the dispute. Mr Terry and the market pioneers in Ventura County are trying to avoid this. “We tried to produce something that could plausibly be an adjudication,” says Matthew Fienup, an economist who helped set up the market in Ventura. “So if we end up in a courtroom we can just say, ‘Look, here’s our agreement, and get a stamp.’” If they can make it work, Mr Terry and friends may create a model for the rest of the state. ■

Co-pay charities

Generous to a fault

NEW YORK

Why are America's biggest charities owned by pharmaceutical companies?

WHEN A PATIENT in need of a drug in America goes to fulfil their prescription, the price they have to pay can vary wildly. For generic off-patent drugs, prices are usually low for the uninsured and free for those with insurance. But for newer, patent-protected therapies prices can be as high as several thousand dollars per month. Those without insurance may end up facing these lofty list prices. Even those with coverage will often have to fork out some of the cost, called a co-payment, while their insurance covers the rest.

These co-payments, which for the most expensive drugs can themselves be prohibitively high, can act as a deterrent to collecting a prescription. Into this gap a new type of charity has emerged, one that offers to make your co-payment for you. They come in two main types: independent ones, like the Patient Advocate Foundation, which spent \$380m on co-payments in 2016, and co-pay charities affiliated with drugmakers themselves.

According to public tax filings for 2016, the last year for which data are available, total spending across 13 of the largest pharmaceutical companies operating in America was \$7.4bn. The charity run by AbbVie, a drugmaker that manufactures Humira, a widely taken immuno-suppressant, is the third-largest charity in America. Its competitors are not far behind. Bristol-Myers Squibb, which makes cancer drugs, runs the fourth-largest. Johnson & Johnson, an American health conglomerate, runs the fifth-largest. Half of America's 20 largest charities are affiliated with pharmaceutical companies.

Not everyone qualifies for their help. Unsurprisingly, pharma-affiliated charities fund co-payments only on prescriptions for drugs that they manufacture. There is often an income threshold, too, which excludes the richest Americans—though it is usually set quite high, at around five times the household poverty line. They are prohibited from funding co-payments for those on Medicaid (which helps the poor) and Medicare (which helps the elderly) by the anti-kickback statute, which prevents private companies from inducing people to use government services. Those patients can accept co-pay support from independent charities, such as the Patient Advocate Foundation.

The impact of these charities is large and growing. Most of them are less than 15

years old. In 2001 just five drugmakers operated charities, spending a total of \$370m. That had risen 20-fold, to \$7.4bn, by 2016. According to Ronny Gal, an analyst at Bernstein, a research firm, the co-payment on the price of a drug is usually just 10% of the cost the pharmaceutical company ultimately charges to the insurance provider. This would mean that \$7.4bn, if it were all spent on co-payments, could earn drugmakers \$74bn in revenues—which would account for nearly a quarter of total drug spending in America.

Pharmaceutical companies will often claim that helping patients with their co-payments is a way of making costly drugs more accessible. But it has the fortunate consequence of making their customers price-insensitive, because insurance companies will often use high co-payments to nudge their customers into opting for generics over costlier branded drugs: no co-pay, no incentive to save money.

Say a patient is prescribed a statin, a type of drug to lower cholesterol which has proved useful in reducing heart disease. They could take Lipitor, a branded drug manufactured by Pfizer, with a list price of around \$165 per month. But a generic, Atorvastatin, has also recently become available for just \$10 per month. In the absence of help from a charity, a patient with private insurance would probably be able to get Atorvastatin free, but would have to pay



some of the cost for Lipitor. With help from Pfizer's co-pay charity, both are free. "It is entirely to their advantage because consumers only care about what it costs them," says Adriane Fugh-Berman of Georgetown University. "It's not charity, it's cheating."

There is also evidence that pharmaceutical companies bump up the scope of their co-payment programmes shortly after they increase drug prices. When Martin Shkreli, the former boss of Turing Pharmaceuticals (who has since been imprisoned for securities fraud), increased the price of Daraprim 50-fold in 2015, he also donated to a fund to cover co-pays for patients with toxoplasmosis, a disease treated using Daraprim. The ability of insurance companies to push these price increases back onto drugmakers, by raising co-payments, is limited.

American authorities are trying to curb the effects these charities may be having on prices. In California in 2017 a bill was passed banning companies from providing co-pay assistance in some situations, such as if a patient's insurance company offered a drug on a lower cost than the Food and Drug Administration, America's drug regulator, had deemed therapeutically identical, or when the active ingredient is available over-the-counter at a lower cost.

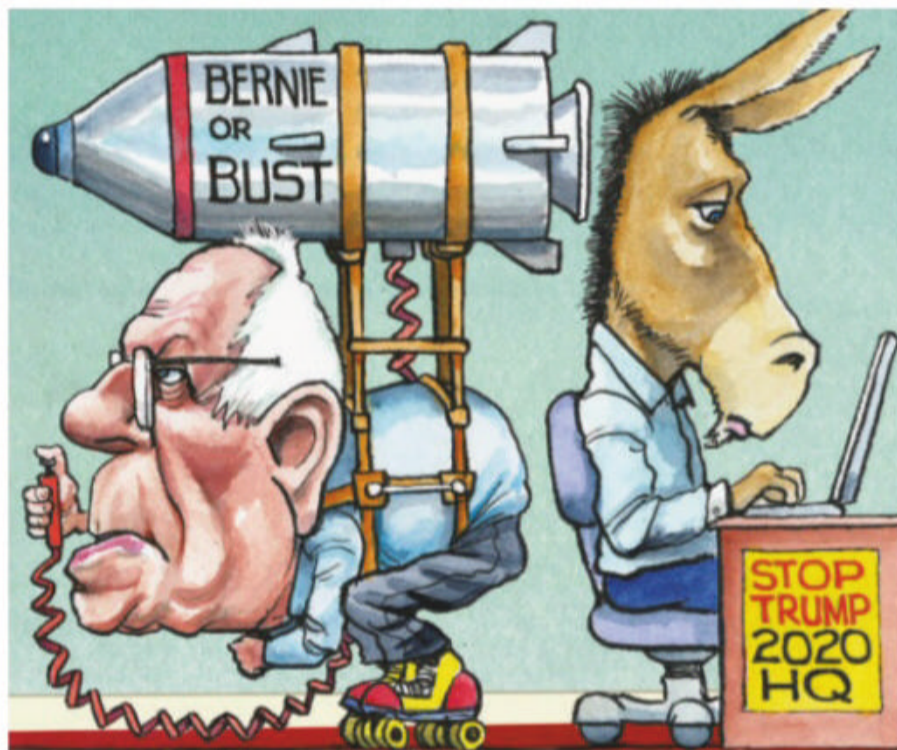
A patented formula for itchy backs

The Securities and Exchange Commission (SEC) is also looking more closely at independent charities that are sometimes sponsored by pharmaceutical firms. One independent charity offered co-pay support only for a specific type of "breakthrough pain" for cancer patients, a condition its sponsor had a 40% market share in treating. An SEC probe has already settled claims with some pharmaceutical firms, though none has admitted wrongdoing. United Therapeutics has settled the biggest claim, worth \$210m, with the Department of Justice. Lundbeck, a Danish drugmaker, and Pfizer have settled smaller claims. "Pfizer knew that the third-party foundation was using Pfizer's money to cover the co-pays of patients taking Pfizer drugs," according to Andrew Lelling, a US attorney, "masking the effect of Pfizer's price increases." Johnson & Johnson, Astellas, Gilead Sciences, Celgene, Biogen and others face investigations.

Using co-pay charities to support high prices is good for business, but charitable contributions foster healthy profits in another way, too: they are tax-deductible. The corporate tax codes of most countries allow companies to deduct the cost of any charitable giving from pre-tax profits. But in America the system is more generous, says Jason Factor, a tax lawyer at Cleary Gottlieb Steen and Hamilton. Companies that give products for the benefit of the "needy or ill" can deduct up to twice the cost of donated goods. How convenient! ■

Lexington | Bernie's permanent revolution

Bernie Sanders probably cannot win the Democratic ticket. But he could hand it to a moderate



THE BERNIE BARNSTORM held in Fort Collins, home of Colorado State University, started a few minutes late. “I know, ‘Bernie time’ right?” joshed an organiser sent from Washington, DC, to the crowd of 80 who had turned up to volunteer for Bernie Sanders’s nascent campaign in the state. Some were signed up to host a phone bank, which involves using a digital system known as “the Bernie dialler”. Others pledged to canvass and to put the results into a database called the BERN app. Meanwhile, the assembled Sandernistas were invited to come to the mic and say why they were “so excited about Bernie”, with a little steer from another campaign staffer: “You have the same feeling in your heart that I have and you are dedicated and loyal!”

The declarations this elicited said a lot about the senator from Vermont’s effect on his followers. Several described Mr Sanders as a sort of benevolent guru. “Bernie is a humanist and a visionary and a radical,” said one; “I’m for Bernie because he’s for me,” said another. All considered Mr Sanders to be more authentic than other politicians. “Donald Trump pretends to be a populist, Bernie’s the real thing,” said a 22-year-old transgender Sanders fan. Many stressed their suspicion of his rivals. “I’m doing my best not to dog on other candidates—but that Kamala Harris health-care plan...” said Joe Salazar, a failed (though Sanders-endorsed) candidate for Colorado’s attorney-general. By contrast, “Bernie’s plan’s been refined through fire,” he claimed. “He’s been working on it, getting all the numbers down, for years.”

Not since Eugene McCarthy in 1968 have Democrats faced such an anomaly. After the unexpected success of his 2016 presidential run, Mr Sanders has developed an almost cult-like hold on a small but meaningful minority of the Democratic electorate. By tapping it for cash, he appears also to have a durable campaign; he is among the first candidates on the ground in Colorado, a state he won easily in 2016, and last month had nearly \$30m in hand. Even if he looked unable to win the nomination, he would be able to stay in the contest—and, having pointedly refused to commit to supporting the winning candidate, he might well do so. That could matter a great deal, because the chances are Mr Sanders cannot win.

The 43% of the vote he won in 2016 (which makes that contest seem closer than it was) is a distant memory. Having performed

strongly in early polling this year, he has slid as Elizabeth Warren has risen. The senator from Massachusetts is not as left-wing as Mr Sanders; she presents herself as a disappointed capitalist, not a socialist, which is a more digestible position on the Democratic left. Contrary to what Mr Salazar thinks, she also has a much firmer grip on policy. Above all, she is a Democrat—not an aggrieved independent as Mr Sanders is—who would support any of her 23 rivals if she lost. The two left-wingers are each polling at around 15% of the vote—a strikingly poor result for Mr Sanders’s superior resources and name recognition. Earlier in the campaign it seemed possible that he could emulate Mr Trump, by sneaking through a crowded contest with a loyal minority. His minority now looks too small. This raises a fundamental question, about what Mr Sanders’s rise and fall says about the left, and several tactical ones.

Starting with the first, Mr Sanders’s erstwhile success appears to have owed less to his left-wing proposals than a vaguer appetite for disruption. The fact that 12% of his supporters in 2016 voted for Mr Trump illustrates that. Those who care mostly about health care or education policy appear since to have shifted to Ms Warren. The remaining diehards seem more energised by anti-establishment grievance. An Iranian-American Sanders fan in Fort Collins drew an approving cheer for hailing his hero as “the Mossadegh of America”. Only at a Sanders rally could an Iranian nationalist overthrown by a CIA-inspired plot count as a point of reference. Most of the volunteers said they expected the Democratic Party to rig the election against Mr Sanders. Many said they would not support any other winning candidate.

Democratic politicians still believe Mr Sanders’s 2016 insurgency showed the party had moved in a big way to the left—hence the alacrity with which many of his rivals have aped his free-college-style proposals. But the burn-it-down iconoclasm of his base does not seem so consistent or easily mollified as that would imply. “Elizabeth Warren can kiss my ass,” said Rose, a socialist office clerk. “Joe Biden is a moderate Republican—they’ve totally infiltrated the Democrats,” said Remy, a democratic-socialist acupuncturist (who offered free treatments to any volunteer who showed up to her phone bank).

In terms of tactics, Mr Sanders is most pressingly a problem for Ms Warren. After flirting with more moderate positions, notably on health care, she has essentially adopted a more informed and nuanced version of Mr Sanders’s policies. In other words, she is going after his supporters. Yet if Mr Sanders stayed in the race come what may, dividing the Democratic left, that could prove to be a fatal mistake. It might well hand the ticket to a moderate—most probably Mr Biden, still the front-runner.

Disco inferno

Thereafter, an unreconciled Mr Sanders would become a general-election problem for Democrats. His aggrieved minority is easily sufficient to deny their candidate victory in close-fought states such as Michigan or Wisconsin. Thus did McCarthy help ensure Hubert Humphrey’s defeat by Richard Nixon in 1968—and Mr Sanders help ensure Hillary Clinton’s to Donald Trump.

Almost all the Sandernistas in Fort Collins who admitted to having voted for Mrs Clinton said they were embarrassed to have done so. And, it must be said, the blithe status quo-ism of Mr Biden could be even more off-putting to Mr Sanders’s supporters than her wonkish pragmatism. Victory for Mr Biden, then for Mr Trump—that would be a poor return on Mr Sanders’s promise of political revolution. Yet it is far more imaginable. ■



→ Also in this section

37 Guatemala's new president

— Bello is away

Argentina's election

The bonds that tie

BUENOS AIRES AND NEW YORK

An opposition triumph raises the prospect of another default

THE ELECTION of Mauricio Macri in 2015 was supposed to usher in a new era in Argentina, a country with a reputation for toothsome steaks, rapid inflation and defaulting on its debts. Mr Macri promised to tame soaring prices with tight monetary policy, a problem Cristina Fernández de Kirchner, Argentina's previous president, had tried to obfuscate by publishing dodgy macroeconomic data and imposing currency controls. Mr Macri abolished these, allowing the peso to float freely, and removed export quotas and tariffs. Investors applauded. After resolving long-standing disputes with bond investors, Argentina was able to issue debt once more. In June 2017 Mr Macri even issued \$2.7bn worth of 100-year bonds at a yield of 8%. They were almost four times oversubscribed.

Good fortune did not last. Unexpected changes to inflation targets and rapid debt issuance alarmed investors in 2017. These qualms mushroomed into a currency crisis last year. As the peso plunged, the central bank raised interest rates to 40%. Mr Macri was forced to seek a \$57bn loan from the

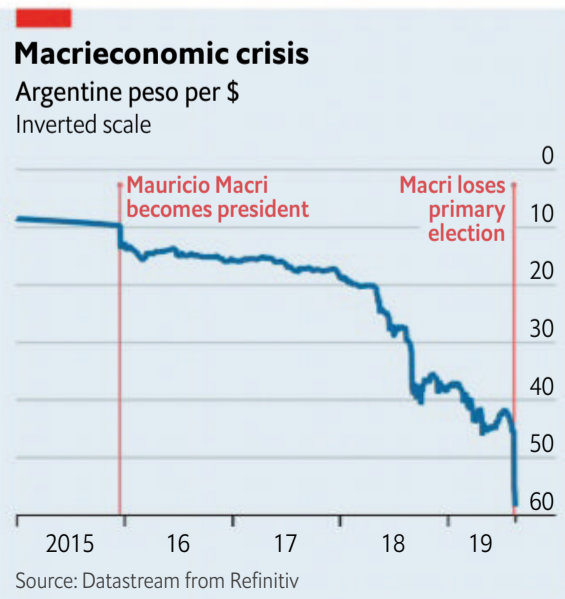
IMF. In order to satisfy the terms of the bailout, he has cut public spending and raised the prices of utilities, such as gas and electricity, and public transport. The crisis has taken a heavy toll on the economy. Argentina has been in recession for the past year; inflation is over 50%. The poverty rate, as measured by the Catholic University of Ar-

gentina, has climbed from 27% in 2017 to 35% now.

Economic hardship has not played well with voters. "We voted last time for the president because we wanted a better life, especially for our children," says Mercedes, a shop assistant in Buenos Aires. "But life was worse under him. We worked more to have less." On August 11th they voiced their discontent in primary elections for the presidency. The opposition, led by a veteran Peronist, Alberto Fernández, with the former president Ms Fernández (no relation) as his running mate, won 47% of the vote. Mr Macri's coalition won just 32%.

The reaction of investors was swift and vicious. On August 12th they rushed to dump Argentine assets. Mr Macri may not have been a panacea for all Argentina's ills, but his stewardship of the economy was far more sober than that of his predecessor, who now seems likely to be restored to high office. Argentina's stockmarket, the Merval, fell by 37%. At one point in the day the peso was down by 30% before the central bank intervened and raised interest rates to 74%. It still closed 15% lower. In dollar terms, the stockmarket's collapse is the second-biggest one-day drop recorded anywhere in the world since at least 1950. The 100-year bonds that investors had clamoured for when Mr Macri issued them are now worth just 54 cents on the dollar, implying a default risk of 57%.

The rout in asset prices was severe, first, because the hope that Mr Macri can recover ►►



is small. On August 11th nobody actually won or lost office: the vote was technically a primary and the main candidates were uncontested in their parties. But since all Argentines over the age of 16 were legally obliged to vote, it functioned as a full dress rehearsal for the real election, which will be held at the end of October. If the Fernándezes win more than 45% of the vote again in October, they will seize victory in the first round.

Second, investors are rightly fearful of the policies the pair may put in place. Ms Fernández's spendthrift reputation precedes her. Mr Fernández warned in the final days of the campaign that devaluation of the peso was coming. He also promised to renegotiate the \$57bn IMF loan, and said that he could in effect default on Argentine bonds.

In the aftermath of the vote, Mr Fernández tried to strike a more moderate tone. "We weren't crazy in government before," he declared. Reducing expectations, one of his advisers points out that if Mr Fernández wins, a weak peso will make the job of being president "that much tougher". But it may already be too late. As *The Economist* went to press, the peso had fallen by 25% against the dollar since the election.

A weaker currency will push up the prices of imported goods, causing inflation to rise even further. It also has adverse implications for the country's bonds. Argentina has defaulted on its sovereign debt eight times since independence in 1816, most recently in 2014 when Ms Fernández clashed with hedge funds. Government debt in Argentina is currently worth 88% of GDP. Three-quarters of it is denominated in foreign currency. A falling peso will push up the burden of servicing it. Economists at Bank of America now think the probability of a restructuring next year is high, and that the recovery value of Argentina's debt could be as low as 40%.

Could the markets' collapse persuade Argentines to change their minds by October? Some voters surely took the chance to punish Mr Macri in the primary vote, and will come back to him in the real thing. But few think it will be enough. Eduardo D'Alessio, of D'Alessio/Berensztein, a polling firm, says it would take "a huge, obvious mistake" by *los Fernández* before October to keep Mr Macri in office. Inside the president's camp, the mood was doom-laden. "This is a catastrophe," said one of his advisers. "It's almost impossible to come back from this."

Mr Macri has vowed to fight back. On August 14th he told voters: "I understand the anger." He has introduced a \$740m stimulus package of tax cuts, price freezes and higher benefit payments. Maybe it will help him claw back some votes. But whoever gets the job after the vote in October, it has just become much harder. ■

Guatemala's election

"Sufficient testosterone"

GUATEMALA CITY

A president-elect promises a ballsy new politics. Can he deliver?

"WE HAVE TWO very bad options. You have to choose the less bad one." So reckoned Heydee Berrascout, a physiotherapist in designer sunglasses outside a voting booth in a posh suburb of Guatemala City. "You have to pick someone. But I'm not convinced by either of them," said Oscar Marroquín, a shoe-factory worker across town in the poorer area of Bethania. Rich or poor, many in the capital disliked the candidates in the run-off of Guatemala's presidential election, on August 11th. Both Heydee and Oscar opted for Alejandro Giammattei, as did 84% of the city.

Mr Giammattei, a conservative who was on his fourth attempt at the presidency, collected 58% of the vote. His opponent, Sandra Torres, who served as first lady from 2008 to 2012, got 42%. Turnout, at 40%, was the lowest this century. The country must wait five months until the current president, Jimmy Morales, finishes his term in January. But the malaise that Mr Giammattei will inherit is already clear. On the trail the president-elect told voters he does not want to be remembered as "one more son of a bitch". That would be a novel achievement in a country where faith in politicians long ago melted away.

Mr Morales, a former comedian, had briefly inspired hope, raging against corruption. But he has spent much of his term obsessed with destroying the International Commission against Impunity (CICIG), a UN-backed anti-graft agency which has investigated not just Mr Morales but both Mr Giammattei and Ms Torres (who could yet end up in jail once her immunity as a presi-

dential candidate ends). The agency's mandate will expire next month, after Mr Morales refused to extend it.

His critics say Mr Giammattei represents the continuation of a shadowy coalition of businessmen, organised crime bosses and military men who have long ruled Guatemala. When campaigning, Mr Giammattei travelled in a helicopter whose licence-plate number is registered to a company co-owned by Luis Francisco Ortega Menaldo, a retired general.

His in-tray is unenviable. Malnutrition and stunting are rife in the countryside. A survey in 2011 of women in 54 poor countries found Guatemalans to be the shortest of all. Some 200,000 people enter the workforce annually, yet last year the private sector added just 3,000 formal positions. In Latin America only the dictatorships of Nicaragua and Venezuela score worse on Transparency International's index for perceptions of government corruption. A quarter of a million Guatemalans have been apprehended on the United States's southern border since October. Gangs terrorise those who stay.

Fear not, says Mr Giammattei. His government will have "the sufficient level of testosterone" to tackle organised crime. His *mano dura* approach extends to a ban on conjugal visits for prisoners (they will have to "settle among themselves", he says). To boost growth, Mr Giammattei promises to summon up a "wall of investment". He plans to build a high-speed train across the country's hinterlands to its cities and ports. He has promised more social programmes for rural women, a pledge once unthinkable from a Guatemalan right-winger. Special economic zones and tax reform are among the wheezes his wonks propose.

Yet the most immediate problem Mr Giammattei will face is how to manage the safe-third-country deal reached by Mr Morales and Donald Trump last month, which will force asylum-seekers passing through Guatemala to take refuge there rather than in the United States. It is unpopular and possibly unconstitutional. Mr Giammattei has hinted that he wants to tweak the deal. To accept it, he may need political cover from America in the form of renewed aid (Mr Trump cut it off this year) or assurances that Guatemalans will get more permits to do farm work in the United States.

One less headache will be the departure of CICIG and its top-notch lawyers next month, allowing Mr Giammattei to rest easier. The president-elect insists that the fight against corruption will continue. If CICIG has done its job equipping local institutions, says a future cabinet member, then Guatemala should be well placed to fight graft on its own. Whether it will depends on whether Mr Giammattei has the *cojones* to do it. ■



Point the way, boss



Security in Afghanistan

Exit strategy

America and the Taliban appear closer to a deal. Clinching one will still be hard

AS HE CONCLUDED his eighth round of negotiations with the Taliban on August 12th, Zalmay Khalilzad, America's envoy for Afghan peace talks, did not quite say that a deal allowing the extraction of American troops was done. But he came close. After "productive" discussions in the Qatari capital of Doha, the two sides were down to "technical details", he said. It has taken a year of formal meetings to arrive at this point (and years of quiet chats before that). But it is too soon to celebrate. Those details will be devilish.

The talks involve a relatively straightforward bargain. America will start pulling its 14,000 troops out of Afghanistan. In return the Taliban will promise that Afghan territory will not become a staging ground for international terrorist groups such as al-Qaeda and Islamic State. That would satisfy the main demand of Taliban insurgents, and address the problem that led America to invade 18 years ago. "I hope this is the last Eid where #Afghanistan is at war," Mr Khalilzad tweeted, referring to

this week's Muslim festival (Kabul residents marking it are pictured).

But those negotiations were "the easy part", says Laurel Miller, a former State Department official now with the International Crisis Group, a think-tank. Mr Khalilzad also wants the Taliban to agree to a ceasefire. And he expects the Taliban to talk to other Afghans about a political settlement and, by early September, agree on a loose "road-map" towards achieving one. That, the Americans hope, would obviate the need for presidential polls that are due to be held in Afghanistan on September 28th and that are likely to result in the usual bickering over alleged electoral fraud.

→ Also in this section

39 Civil rights in Kashmir

40 Drama in Kyrgyzstan

40 A sultana in Java?

— Banyan is away

Mr Khalilzad insists that all these elements must be part of the package. But it is far from clear what America's red lines are. Many Afghans, particularly those in power today, fear that America is likely to make big concessions in its rush for the door. It may, for example, settle for a lull in violence rather than a formal ceasefire.

The *Washington Post* has reported that America will initially reduce its force in Afghanistan by between 5,000 and 6,000 troops. "A substantial withdrawal starting before the end of the summer is already in the works," says one source. "Part of the urgency of getting the US-Taliban deal done is to maintain the pretence that the first stage of US withdrawal is a result of that agreement." If a deal is achieved, the remaining troops would probably be withdrawn gradually while intra-Afghan bargaining—over issues such as power-sharing and constitutional change—is still under way.

One problem is that the Taliban have refused to negotiate with other Afghans until America announces a timetable for a complete withdrawal. Even if America were to do so, it is unclear whether the Taliban would talk separately to the Afghan government, which it denounces as a puppet regime, or only as part of a group of Afghan political figures.

On July 7th and 8th such a group—including government officials and opposition leaders, as well as members of civil society and journalists—met 17 Taliban ►►

► members at an intra-Afghan conference in Doha organised by Germany and Qatar. The previous meeting to have included Afghan officials was seven years ago. Encouragingly, the delegation in July included 11 women, among them the deputy head of Afghanistan's national security council. All sides agreed to a vague formula of "Afghan all-inclusive negotiations", notes Thomas Ruttig of the Afghanistan Analysts Network, a research group. But they were attending only in their personal capacities.

That raises the question: who could officially represent the government? President Ashraf Ghani's legitimacy is disputed. It would not be reinforced if he were to be re-elected on September 28th, since charges of vote-rigging are likely. During parliamentary elections last October, almost one-third of polling stations did not open, mostly for security reasons, and turnout was poor. Mr Khalilzad has suggested delaying the ballot; Mr Ghani refuses. On August 7th Amrullah Saleh, the president's running-mate, tweeted: "There is no compromise over elections. None."

America's itchiness to withdraw would put Afghan government negotiators at a disadvantage in any talks with the Taliban. In 2017 President Donald Trump said that announcing a date for pulling out troops would be "counterproductive". Now he has reportedly told advisers that he wants them all out by America's own presidential elections in November 2020.

Such a deadline diminishes America's incentive to hold the Taliban to its word or to resist its calls for a "complete Islamic system" in Afghanistan. The result of talks between the Afghan government and the Taliban "could be more of a power-grabbing rather than power-sharing arrangement," says Sameer Lalwani of the Stimson Centre, a think-tank. That could lead to a full-blown civil war like the one that ravaged the country in the 1990s.

Mr Khalilzad is likely to need the support of regional powers. Pakistan has backed the Taliban from its earliest days and shelters its leaders. The country has played a vital role in pushing the group to negotiate. Some fear that India, by revoking the statehood of Jammu & Kashmir on August 6th (see next story), may have complicated matters. Pakistan has hinted that it might refuse to co-operate with the Afghan peace process unless America backs Pakistan's position on Kashmir.

It is unlikely to do so. Pakistan has every incentive to lubricate talks. A peace deal might ease Pakistan's strained relationship with America, and a return to power by the Taliban would be a blow to India, which has strong ties with Mr Ghani's government. Neighbours would worry about renewed instability that could spill over Afghanistan's borders. For Mr Trump, that would be someone else's problem. ■

Civil rights in Kashmir

An area of darkness

DELHI

In its struggle to subdue Kashmir, the government is stripping it of liberties

AN INFORMATION BLACKOUT has obscured the northernmost tip of India. Since it scrapped Jammu & Kashmir's largely nominal autonomy on August 5th and carved the state into two territories, the central government has maintained a curfew in the region. Internet and telephone services have been suspended. Travel has been restricted. A young academic in Delhi says the lockdown made it impossible for him to celebrate the Muslim festival of Eid with his family in rural Kashmir. The territory has "disappeared", he says, leaving people like him only able to guess what might be happening there.

Official statements from the central government do not shine much light. They assert that no violent protests have taken place since the change of Jammu & Kashmir's status. But that seems unlikely. On August 9th Al Jazeera and the BBC aired footage of a large angry crowd in the Muslim-dominated part that is known as the Kashmir valley. At first the home ministry insisted that no gatherings of more than 20 people had taken place. It also claimed that no shots were fired by police, despite the sound of gunfire in the videos. It was only after four days that it reversed course and acknowledged the protest (a separate one is pictured). A day later it admitted the police had used shotguns.

Police vans in the Kashmir valley have been cruising the streets with their loudspeakers blaring orders that people must

stay at home. But the government disputes that there is a curfew in place at all. "Curfew" is a technical term, it says. There has been no formal imposition of one.

The government has also failed to explain its legal basis for locking up many Kashmiri politicians, including ones who are relatively moderate, during the clampdown. Reports by Indian and foreign media say that between 200 and 500 people are being held in makeshift detention facilities in Srinagar, the main city in Kashmir. A senior official was asked by reporters whether there was a legal justification. "Yes," he said simply, "but I cannot say what." Shah Faesal, a civil servant-turned-politician, tweeted on August 12th that Kashmir needed a "non-violent political mass movement" to restore citizens' rights. On August 14th he was detained at Delhi's airport and put under house arrest.

Mr Faesal is being held under the Public Safety Act. This gives police the discretion to place almost anyone under administrative detention for up to two years. It is one of many such laws that have long been in force—the Armed Forces Special Powers Act being the most notorious. They give the authorities sweeping rights to imprison or even shoot people they regard as troublemakers. The Supreme Court has taken an indulgent line on the curfew. "When the situation is such, we must have a real picture before we take a call on this," said Arun Mishra, one of its judges.

The prime minister, Narendra Modi, is crowing. In an interview with IANS, an Indian news agency, he said revoking Kashmir's special status would "only empower democracy even more". That sounds implausible. For now, the academic in Delhi fears for his family's safety. He hopes to hear news from a friend who has just flown to Srinagar (if he can leave again). "Darkness is not a happy situation," he says. ■



Defiance in the valley

Kyrgyzstan

When presidents fall out

The Central Asian country touts its democracy, but its politics are murky

THE FORMER president of Kyrgyzstan did not go down without a fight. It took the storming of his fortified compound outside the capital, Bishkek, by thousands of security personnel (one of whom was shot dead), before Almazbek Atambayev surrendered on August 8th to face corruption charges. He swears they are political. Kyrgyzstan touts itself as authoritarian Central Asia's only democracy. The country has a pluralistic political system and competitive, albeit flawed, elections. But Mr Atambayev may have a point.

Investigators only began probing suspicions of his collusion in the early release from prison of a mafia don in 2013, after the ex-president became embroiled in a vendetta with his successor and one-time protégé, Sooronbay Jeyenbekov. In 2017 Mr Atambayev strongly endorsed Mr Jeyenbekov's presidential bid, expecting to act as the power behind the throne. However, the would-be partnership degenerated into a feud that Mr Jeyenbekov has won—for now. Mr Atambayev is in detention charged with corruption in connection with the crime boss's release. Investigators have suggested he could also be charged with corruption and murder. Officials verbally accuse him of planning a coup attempt.

During the night after his arrest, supporters of Mr Atambayev took to the streets of Bishkek. Riot police dispersed them in the early hours and arrested 40 people. The chaotic scenes evoked the unrest of Kyrgyzstan's recent history: two leaders have been toppled in revolutions, in 2005 and 2010. Citizens fed up with their factional, self-serving politicians appear to have little appetite for another: "#weareagainsta-third-revolution" read a hashtag in Russian, which is widely spoken in Kyrgyzstan, that went viral during the showdown.

Adding to the combustible mix is the return to Kyrgyzstan, the day after Mr Atambayev's arrest, of Omurbek Babanov. Mr Babanov was the main opposition challenger in the election of 2017, when Mr Jeyenbekov—in a harbinger of his hostility to political adversaries—personally threatened to lock him up. Small wonder that Mr Babanov had fled abroad after he was placed under investigation on charges of incitement and seeking to overthrow the state. He was not arrested when he flew into Bishkek from Moscow to a hero's welcome. But the security service warned that the incitement charge remained valid (the other in-

THE MORNING sun was fierce but the crowd pressed against the gates of the palace did not seem to mind. They were eagerly waiting for the ceremony to start. Three times a year, the sultan of Yogyakarta, an ancient Javanese city, blesses his people with offerings of food in a ritual that mixes Hindu symbolism with Islamic beliefs. Escorted by a military parade, servants shouldering gargantuan bouquets of beans, chillies and rice crackers process to the mosque, where the offerings are handed out. Just as the ceremony ended on August 12th, the throng attacked the mounds of food. Rituals like this are the lifeblood of Yogyakarta. But the customs of this city are under attack—by the sultan himself.

For centuries Yogyakarta has been the repository of Javanese culture, and the sultan its custodian. But Hamengkubuwono X has broken with tradition in one



Raisin a sultana

investigation is dormant).

Russia—which has a military base in Kyrgyzstan and considers the country, which borders on China, its geopolitical backyard—has entered the fray. Before Mr Atambayev's arrest, Vladimir Putin, Russia's president, made a show of support by receiving the former leader of Kyrgyzstan in the Kremlin, while urging that country to rally around Mr Jeyenbekov. After Mr Atambayev's surrender, Russia urged restraint. Dmitry Medvedev, its prime minister, suggested Kyrgyzstan had "reached its limit" of revolutions.

Javanese royalty

Sour about a sultana

YOGYAKARTA

A sultan wants his daughter to succeed him. His people think that's a bad idea

important way. Since the founding of the sultanate in 1755, the monarch has been a man. The sultan leads Muslims in prayer every Friday, and celebrates his marriage to the mystical Queen of the South Sea every year. Only a man can perform these duties. But the sultan has no sons. In 2015 the 73-year-old named his eldest daughter as his successor. That was hugely controversial. It had been expected that he would anoint a brother. Since then, debate over the issue has intensified.

The sultan's choice matters. He is no mere symbol. In 1945 Sukarno, Indonesia's first president, appointed Sultan Hamengkubuwono IX as Yogyakarta's governor for life in reward for fighting on the side of the new republic. In 2012 the national legislature passed a law permitting the sultan to "inherit" the governorship, and reclaim land that had traditionally belonged to the sultanate. Bayu Dardias Kurniadi of Australian National University reckons the sultan owns nearly 10% of Yogyakarta's land. Najib Azca of Universitas Gadjah Mada in Yogyakarta says the sultan is so powerful he is "almost like an absolute monarch".

The prospect of a sultana troubles many ordinary Yogyakartaans. Muslims say that she would sever the bond between the sultanate and the Muslim community because a woman cannot lead Friday prayers. Some believe that the sultan has been citing the need for sexual equality only as a pretext to maintain his nuclear family's power. Others simply worry that he is flouting tradition. Sitting by the mosque, Dion Elliot, a student, says he is torn. "The princess is a woman but she can still be a good leader. On the other hand, Javanese culture says it should be a man." His female friend Nevada Indriawati is more certain: "Tradition says it should be a man."

Mr Jeyenbekov undoubtedly agrees, as he jealously guards his power while mulling the unenviable fates of his predecessors. Kyrgyzstan's democratic credentials—which were seriously eroded under Mr Atambayev—have been weakened further under Mr Jeyenbekov's rule, as he jails opponents with almost as much abandon as Mr Atambayev did. Mr Jeyenbekov may be moving to consolidate his power and clear the field of rivals before parliamentary elections that are due to be held next year. Before then, there will be a lot more turbulence in Kyrgyzstan's politics. ■



Turmoil in Hong Kong

Airport mayhem

HONG KONG

Is Hong Kong moving closer to the abyss that its leaders warn about?

ATEN-WEEK-OLD political crisis in Hong Kong has taken a lurch for the worse. Flash-mob protests across the territory have led to a sharp increase in violence, with hardball tactics employed both by anti-government demonstrators and police. In an unprecedented move for Asia's pre-eminent financial centre, the authorities shut down Hong Kong's airport for two days in a row in response to large demonstrations there. The protests in the terminal culminated in ugly scenes that China was quick to describe as "terrorism".

The escalation has fuelled speculation about how China might respond. "If the situation gets worse, and turmoil occurs that the Hong Kong government is unable to control, the central government will not sit idly by," the head of China's Hong Kong affairs office, Zhang Xiaoming, had warned the previous week. The unrest does not yet appear impossible to contain using Hong Kong's police, but China's state media have broadcast footage of the mainland's anti-riot forces manoeuvring on the border with the territory. The threat is clear.

After three days of low-key protests at

the airport, the mood changed on August 12th. Huge numbers massed at the terminal following an alleged case of police brutality, when a young woman appeared to have been shot in the eye with a beanbag round during a separate demonstration. The airport responded by cancelling outgoing flights and telling airlines not to take off for Hong Kong. Fearing that police were about to move in, most protesters left.

The following day demonstrators returned, and flights were again cancelled. As the evening wore on, the mood grew nastier. Protesters cornered a man who they claimed was an undercover police officer from the mainland. The man fainted, yet protesters refused to give access to medics. Riot police eventually rescued him. During the operation one officer came under frenzied attack and drew his pistol. Demonstrators also assaulted another

man, claiming he too was a mainland agent. *Global Times*, a mainland newspaper, said he was one of its reporters.

During the second day of airport closure Carrie Lam, the territory's chief executive, said the unrest had taken Hong Kong to the edge of an "abyss". Yet she offered no guidance as to how she intends to walk the territory back, other than a reliance on police force to overawe the agitators.

Protesters too show no sign of willingness to compromise. Their demonstrations were at first about a bill that would have allowed suspects in Hong Kong to be extradited to China. Now they want a complete withdrawal of the bill, not just the shelving of it that Mrs Lam has announced. They also demand an independent inquiry into the whole affair, including the police response. But they have set their sights much higher: Mrs Lam's resignation and fully democratic elections—something China says it will not allow.

Activists have called for another large-scale rally in central Hong Kong on August 18th. This will be a test of whether the public is growing weary of the violence and fearful of the Communist Party's warnings. These have been growing ever more shrill. Party-controlled media have been churning out what they describe as evidence that the unrest has become a "colour revolution" and that foreign "black hands" are behind it (see Chaguan).

All this smacks of an attempt by the central government to make a case for intervention by the Chinese army, which Hong

→ Also in this section

42 Fifteen-second tourism

43 Chaguan: Hong Kong's "black hands"

Kong's constitution allows. The party is surely mindful of the approach of an important date: October 1st, the 70th anniversary of Communist rule. For months it has been reminding officials around the country of the supreme importance of maintaining social stability in the build-up to this occasion—the party has been clamping down on dissent harder than ever. China's leader, Xi Jinping, would be horrified by a massive protest in Hong Kong on that hallowed day. He may be wondering whether intervention sooner rather than later would be the best way of preventing one. In practice it has to be assumed that he is not itching to send in troops: doing so would have huge diplomatic and economic repercussions. For now, the threats are intended to intimidate. The order to loyal groups in Hong Kong is still to express confidence in Mrs Lam's ability to handle this.

One prong of China's approach has become clearer: stern demands for business to fall into line. Cathay Pacific, Hong Kong's home-grown airline, is the most obvious victim. Its parent, Swire Pacific, has roots in Hong Kong's early colonial history. Many of its ground staff and cabin crew have taken part enthusiastically in marches; one pilot was even arrested for rioting. Only last week Cathay's chairman said of the firm's employees: "We certainly wouldn't dream of telling them what they have to think about something."

The group's tune has changed following relentless attacks by the Chinese government and state media for allegedly supporting the protesters. An online boycotting campaign against Cathay has garnered over 17m views. China has banned Cathay planes flying into the mainland from taking crew members who have joined illegal protests or "overly radical activities". Since August 11th Cathay has had to submit the names of all crew before getting permission to fly. Now management says that any staff found to be participating in illegal protests will be fired (two pilots have been). A Swire statement condemning illegal actions and resolutely supporting Hong Kong's government reads like a Communist Party declamation. Poor Cathay, its shares buffeted, now faces a possible boycott from angry Hong Kong democrats too. It is yet one more example of a hardening of lines. People in Hong Kong are coming under pressure to take sides.

The hardening is evident on the front lines of the territory's young demonstrators. For weeks, a legislator and social worker, Fernando Cheung, has acted as a mediator, attempting to de-escalate confrontations between protesters and police. He has had some success. But at the airport this week, Mr Cheung admits, both sides, swearing and yelling, "wanted to get rid of me as soon as possible". The next steps in the crisis, he adds, "do not look pretty". ■

Social media

Daka destinations

CHONGQING

For some, the aim of travel is to create 15-second videos

PERCHED ON CLIFFS above a river, Hongyadong is a stilt-house complex in mock-traditional style in the city of Chongqing. Its bars, restaurants and golden neon lights (pictured) have been a popular draw since it was built in 2006. Last year the number of visitors surged.

The main reason, it seemed, was Hongyadong's sudden popularity on a social-media app, Douyin, which is used for sharing photographs and 15-second videos. By the end of the year the waiting time to get in was three hours. For a while Hongyadong—a jolly enough place but hitherto on few people's bucket lists—became the biggest attraction in China after the Forbidden City, says Mafengwo, a travel website.

Social media have transformed tourism worldwide. Instead of having fun, some people now flock to remote strawberry farms or Icelandic fjords to take photos to impress their friends on Instagram. Foreign-operated social-media sites, including Instagram, are blocked in China. But domestic ones are hugely popular. Douyin, launched in 2016, has 230m monthly active users (its owner, ByteDance, has an uncensored version of the app for users outside China, called TikTok). Unlike users of Instagram, who mainly browse feeds of pictures posted by people they follow, Douyin's fans commonly use the app to watch hot-trending videos posted by users they do not know under categories such as "food" and "scenic spots".

Uploading a picture or video from a

photogenic spot to sites such as Douyin and Kuaishou is known in China as *daka*, meaning "punching the card". The word is also used to refer to the practice of registering your presence at a location that has already become hot, such as Hongyadong. The aim is not to produce a well-crafted video or beautiful photograph, but simply to show that you have also been to the places that are popular. The beauty of the attraction is less important than the fact that people are flocking there to *daka*.

A subculture has developed of young people who embrace *daka* as a lifestyle. So-called *daka zu*—"daka tribes"—can be found roaming Chongqing and other cities, checking in at as many hot locations as possible within a single day. Guides can be found online, to show the most efficient ways to achieve this. Companies offer "*daka* tours". Douyin users can use the app to create "*daka* videos": super-speed slide-shows of themselves at *daka* sites.

Riding the tide

Just as shops and restaurants in other countries try to attract customers with decorations that might be a backdrop for Instagrammable pictures, those in China try to make themselves as *daka*-friendly as possible: a coffee shop in Beijing built inside a shipping container, for example. Having enjoyed a surge of Douyin-inspired custom for as little as a month or so, some businesses close up shop and move elsewhere to capture another wave.

The *daka* craze may have practical origins. China's young urban professionals have little vacation time. In their first year at a company, employees can expect at most one day of vacation (other than public holidays). They are routinely expected to work overtime for no pay. So workers need to make the most of their limited leisure time. Douyin captures the mood with its slogan: "Make every second count." ■



Now try getting a table

Chaguan | The “black hands” conspiracy

Why Communist officials imagine that America is behind unrest in Hong Kong



THERE IS SOMETHING depressing about the Chinese government's claim that foreign “black hands” are behind the protests in Hong Kong. For the claim is both nonsensical and, in mainland China, widely believed. It is a fresh lesson in the power of disinformation to see decent, patriotic Chinese sharing tales of the CIA paying gullible Hong Kongers to join marches or smuggling in foreign rioters on late-night flights (a rumour sourced to a driver at Hong Kong airport, in the version that Chaguan heard).

There is something positively alarming about signs that, at some level, Communist Party bosses believe the black-hands story. Neither evidence nor common sense supports the tale's central charge that outsiders tricked or provoked as many as 2m Hong Kongers into joining marches. The accusations began while the protesters were still overwhelmingly peaceful, focused on a planned law that would send suspects from their city's Western-style justice system into Communist-controlled mainland courts. To propagandists in Beijing, no free will has been marshalling those students and pensioners, doctors in hospital scrubs and black-suited lawyers, off-duty civil servants and parents with pushchairs. Instead the protesters are at best dupes, and at worst foreigner-loving race traitors, ashamed of being Chinese.

The drumbeat has intensified as the demonstrations have grown more violent. Police and at least one mainland reporter have endured beatings by young radicals gripped by nihilistic rage. To objective analysts, the causes include protesters' paranoia after days of police infiltration and brutality, and the lack of any further concessions by the government as rewards for pragmatism other than the shelving of the extradition bill. But grim-faced government spokesmen in Hong Kong and Beijing have another explanation. They accuse foreign forces, meaning America, of fomenting a Ukraine-style “colour revolution” to keep a rising China down.

In late July Tung Chee-hwa, a shipping magnate and Hong Kong's first chief executive under Chinese rule, called the “well-organised” protests evidence of “masterminds behind the storm”, with “various signs” pointing to America and Taiwan. Communist-controlled newspapers have made much of the handful of protesters who insist on carrying American and colonial-era Hong Kong flags on marches (which is arguably more foolish than sinis-

ter). They have shared images of a “foreign commander” directing protests by smartphone, who turned out to be a *New York Times* journalist texting colleagues. They have also published photographs of a meeting between pro-democracy leaders and Julie Eadeh, a diplomat at America's consulate whose job is to talk to local politicians. One such newspaper, *Takungpao*, called Ms Eadeh “a person of mysterious status and an expert in low-key acts of subversion”. Given that Ms Eadeh met Hong Kong's most famous democracy activists in a hotel lobby in broad daylight, either the tradecraft of American super-spies is slipping, or the party's media define the term “mysterious” pretty loosely.

Those accusing America of funding revolution in Hong Kong must also grapple with some logical objections. For one thing, the protests do not need much funding. Ordinary Hong Kongers have donated spare T-shirts to replace clothes soaked in pepper spray, and money to buy hard hats, face masks and McDonald's vouchers for hungry youngsters. For another, stability and the status quo in Hong Kong serve American interests profitably and well. More American businesses operate in Hong Kong today than in 1997, when British colonial rule ended. Some of America's largest corporations rely on the city's open markets, transparent legal system, uncensored internet, modern transport links and business-friendly governance as they access China's vast markets. It is true that congressional leaders have urged rulers in Beijing to avoid sending in troops to crush protests, and that senior American officials have recently hosted pro-democracy Hong Kongers. But America's long-standing policy has been to lobby China to preserve the territory's freedoms, not to seek a democratic revolution. As for President Donald Trump, he has dubbed the protests “riots”—the term used by Chinese officials—and said he has “ZERO doubt” that China's leader, Xi Jinping, can “humanely solve the Hong Kong problem.”

The world seen from Beijing: greedy, hypocritical and cruel

There are reasons why propagandists peddle the black-hands myth. For one thing, it works. After initially censoring news from Hong Kong, official outlets are full of videos showing protesters attacking police or hurling petrol bombs, over captions calling them splittists who want formal independence from China (in reality, a fringe position in Hong Kong). Many ordinary folk have heard little about the extradition law that sparked the protests. Chinese opinion is hardly monolithic, but it is not hard to find netizens impatient to see snooty, ungrateful Hong Kongers crushed.

Most worrying, China's rulers are betraying a bleak and cynical worldview in which might is right and the big always dominate the small. To them, it is not conceivable that 7.3m Hong Kongers could believe that their individual, universal rights trump the will of 1.4bn compatriots. If tiny Hong Kong is defying its mighty Motherland, another great power must be egging it on.

When the British government defends Hong Kong's freedoms, Chinese officials are sure that Britain is still sulking about its loss of empire—and will pipe down once Brexit renders it friendless. Other Western envoys in Beijing have been lectured that their support for Hong Kong must be part of a concerted push by American hawks to hurt China. Suggest that Western countries might occasionally be guided by principle and Chinese officials scoff.

Their cynicism is self-serving, of course, as it handily shifts blame for the mistrust the party inspires in Hong Kong. But it also clouds China's vision of the world at a perilous moment. Some propaganda is laughable and tragic at the same time. ■



Free speech

The new censors

ADDIS ABABA, BEIJING, BUDAPEST, DELHI AND MOSCOW

In both democracies and dictatorships, the global gag is tightening

ON JUNE 22ND there was an alleged coup attempt in Ethiopia. The army chief of staff was murdered, as was the president of Amhara, one of the country's nine regions. Ordinary Ethiopians were desperate to find out what was going on. And then the government shut down the internet. By midnight some 98% of Ethiopia was offline.

"People were getting distorted news and were getting very confused about what was happening...at that very moment there was no information at all," recalls Gashaw Fentahun, a journalist at the Amhara Mass Media Agency, a state-owned outlet. He and his colleagues were trying to file a report. Rather than uploading audio and video files digitally, they had to send them to head office by plane, causing a huge delay.

Last year 25 governments imposed internet blackouts. Choking off connectivity infuriates people and kneecaps economies. Yet autocrats think it worthwhile, usually to stop information from circulating during a crisis.

This month the Indian government shut down the internet in disputed Kashmir—for the 51st time this year. "There is no

news, nothing," says Aadil Ganie, a Kashmiri stuck in Delhi, adding that he does not even know where his family is because phones are blocked, too. In recent months Sudan shut down social media to prevent protesters from organising; Congo's regime switched off mobile networks so it could rig an election in the dark; and Chad nobbled social media to silence protests against the president's plan to stay in power until 2033.

Tongues, tied

Free speech is hard won and easily lost. Only a year ago it flowered in Ethiopia, under a supposedly liberal new prime minister, Abiy Ahmed. All the journalists in jail were released, and hundreds of websites, blogs and satellite TV channels were unblocked. But now the regime is having second thoughts. Without a dictatorship to suppress it, ethnic violence has flared. Bigots have incited ethnic cleansing on newly free social media. Nearly 3m Ethiopians have been driven from their homes.

Ethiopia faces a genuine emergency, and many Ethiopians think it reasonable

for the government to silence those who advocate violence. But during the alleged coup it did far more than that—in effect it silenced everyone. As Befekadu Haile, a journalist and activist, put it: "In the darkness, the government told all the stories."

Some now fear a return to the dark days of Abiy's predecessors, when dissident bloggers were tortured. The regime still has truckloads of electronic kit for snooping and censoring, much of it bought from China. It is also planning to criminalise "hate speech", under a law that may require mass surveillance and close monitoring of social media by police. Many fret that the law will be used to lock up peaceful dissidents.

According to Freedom House, a watchdog, free speech has declined globally over the past decade. The most repressive regimes have become more so: among those classed as "not free" by Freedom House, 28% have tightened the muzzle in the past five years; only 14% have loosened it. "Partly free" countries were as likely to improve as to get worse, but "free" countries regressed. Some 19% of them (16 countries) have grown less hospitable to free speech in the past five years, while only 14% have improved (see map).

There are two main reasons for this. First, ruling parties in many countries have found new tools for suppressing awkward facts and ideas. Second, they feel emboldened to use such tools, partly because global support for free speech has faltered. Neither of the world's superpowers is likely to stand up for it. China ruthlessly censors ►►

▶ dissent at home and exports the technology to censor it abroad. The United States, once a champion of free expression, is now led by a man who says things like this:

“We certainly don’t want to stifle free speech, but ... I don’t think that the mainstream media is free speech ... because it’s so crooked. So, to me, free speech is not when you see something good and then you purposely write bad. To me, that’s very dangerous speech and you become angry at it.”

Really? Seeing something that the government claims is good and pointing out why it is bad is an essential function of journalism. Indeed, it is one of democracy’s most crucial safeguards. President Donald Trump cannot censor the media in America, but his words contribute to a global climate of contempt for independent journalism. Censorious authoritarians elsewhere often cite Mr Trump’s catchphrases, calling critical reporting “fake news” and critical journalists “enemies of the people”.

The notion that certain views should be silenced is popular on the left, too. In Britain and America students shout down speakers they deem racist or transphobic, and Twitter mobs demand the sacking of anyone who violates an expanding list of taboos. Many western radicals contend that if they think something is offensive, no one should be allowed to say it.

Authoritarians elsewhere agree. What counts as offensive is subjective, so “hate speech” laws can be elastic tools for criminalising dissent. In March Kazakhstan arrested Serikzhan Bilash for “inciting ethnic hatred”. (He had complained about the mass incarceration of Uighurs in China, a big trading partner of Kazakhstan.) Rwanda’s government interprets almost any criticism of itself as support for another genocide. In India proposed new rules would require digital platforms to block all unlawful content—a tough task given that it is illegal in India to promote disharmony “on grounds of religion, race, place of birth, residence, language, caste or community or any other ground whatsoever”.

One way to silence speech is to murder the speaker. At least 53 journalists were killed on the job in 2018, slightly more than in the previous two years, according to the Committee to Protect Journalists (CPJ), a watchdog. Few of the killers were caught. The deadliest country for journalists was Afghanistan, where 13 were killed. In one case, a jihadist disguised himself as a journalist so as to mingle with, and slaughter, the first reporters and medics to arrive at the scene of an earlier suicide bombing.

Perhaps the most brazen murder in 2018 was of Jamal Khashoggi, a critic of the Saudi regime. A team of assassins landed in Turkey on easily identifiable private jets, drove in luxury cars to the Saudi consulate in Istanbul and cut Khashoggi to pieces on consular property. Whoever ordered this

presumably thought there would be no serious consequences for dismembering a *Washington Post* contributor. He was right. Although Germany, Denmark and Norway stopped arms sales to Saudi Arabia, Mr Trump stressed America would remain the kingdom’s “steadfast partner”.

On December 1st 2018 the CPJ counted more than 250 journalists in jail for their work: at least 68 in Turkey, 47 in China, 25 in Egypt and 16 in Eritrea. The true number is surely higher, since many journalists are held without charge or publicity. However, the number in Eritrea may be lower, since nearly all have been held in awful conditions since President Issaias Afwerki shut down the independent media in 2001, and some are probably dead.

Rather than risking the bother and bad publicity of putting journalists on trial, some regimes try to intimidate them into docility. In Pakistan, when military officers ring up editors to complain about coverage, the editors typically buckle. Ahmad Noorani, a reporter who dared to write about the army’s role in politics, was ambushed by unknown assailants on a busy street in the capital, Islamabad, and beaten almost to death with a crowbar.

In India journalists who criticise the ruling Bharatiya Janata Party receive torrents of threats on social media from Hindu nationalists. If female, those threats may include rape. Reporters are often “doxxed”—pictures of their families are circulated, inviting others to harm them. Barkha Dutt, a television pundit, filed a complaint against trolls who had sent her a death threat and published her personal telephone number as that of an escort service. Four suspects were arrested in March.

Occasionally, the worst threats against Indian journalists are carried out, lending chilling credibility to the rest. Gauri Lankesh, an editor who often lambasted Hindu nationalism, was gunned down outside her home in 2017. Pro-BJP commenters cel-

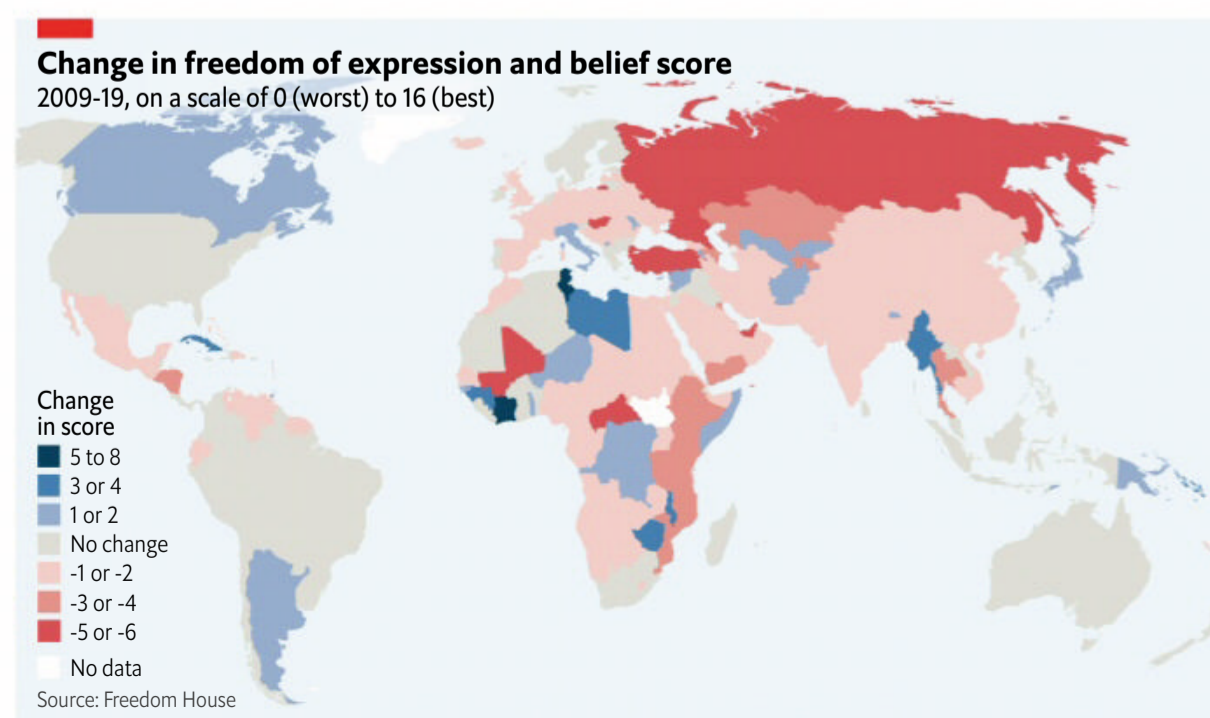
ebrated. The man arrested for pulling the trigger told police that his handlers told him he had to do it to “save” his religion.

Intimidation does not always work. Ivan Golunov, a Russian reporter, investigated Moscow city officials buying mansions with undeclared millions and security officers going into business with the mafia. His stories were little known, published on a small website called Meduza. On June 6th police grabbed Mr Golunov, bundled him into a car, took him to a government building, beat him up and claimed to have found drugs in his backpack. The ministry of interior posted nine photos of drugs allegedly found in his flat, but then removed eight of them, admitting that they were taken elsewhere and saying they had been published by mistake.

Mr Golunov’s supporters think the drugs were planted. To the authorities’ surprise, the story spread rapidly on Facebook and Twitter—Russia does not have anything like China’s capacity for suppressing unwelcome posts on social media. Street protesters demanded Mr Golunov’s release. Foreign media picked up the story, which overshadowed Mr Putin’s summit with Xi Jinping, China’s president, that week. An embarrassed Kremlin ordered Mr Golunov’s release. When his new investigation was published by Meduza a few weeks later, it was read by 1.5m people—several times its usual audience.

Breaking the news

As the advertising revenues that used to support independent journalism dwindle, many governments have found it easier to distort the news with taxpayers’ hard-earned cash. The simplest method is to pump it into state media that unctuously support the ruling party. Most authoritarian regimes do this. China and Russia go further, sponsoring global media outlets that seek to undermine democracy everywhere. However, the problem with state ▶▶



▶ media, from an autocrat's point of view, is that they tend to be boring.

So another method is to use government advertising to reward subservience and punish uppityness. In many countries the government is now by far the biggest advertiser, so newspapers and television stations are terrified of annoying it.

A subtler method is to cultivate tycoons who depend on the state for permits or contracts, and urge them to buy up media outlets. Unlike normal moguls, they don't need their media firms to make profits. The favours their construction firms receive far outweigh any losses they incur running obsequious television stations. Indeed, they can often undercut their independent media rivals, exacerbating the financial distress caused by the decline of advertising, aggressive tax audits, unreasonable fines and so forth. Cash-strapped independent media are of course cheaper for the president's cronies to buy and de-fang.

Several ruling parties use these techniques. India's uses most of them, as do Russia's and Turkey's. Israel's prime minister, Binyamin Netanyahu, is accused of promising favourable regulation to a telecoms firm in exchange for positive coverage on a news website it owns. In January, Nicaragua's most popular newspaper ran a blank front page to complain that its imported supplies of ink, paper and other materials had been mysteriously impounded at customs after it published critical reports about the ruling Sandinista party.

Such skulduggery has even crept into supposedly democratic parts of Europe. Hungary's ruling party, Fidesz, has used public money to dominate the national conversation. The state news agency has been stuffed with toadies and offers its bulletins free to cash-strapped outlets. "When you get a news flash on [an independent] rock radio station, [it's] totally government propaganda...because it's free," complains a local journalist.

The Hungarian government's advertising budget has swollen enormously since 2010, when Prime Minister Viktor Orban took power. His cronies have bought up previously feisty broadcasters and websites. "It's an unstoppable process," says an independent editor. "Hungarians are used to the idea that online news is free. So [media firms] become reliant on the money of their owners. And many of the businessmen in public life are linked to the government." Last year the proprietors of 476 media firms, including practically all the local newspapers in Hungary, gave them without charge to a new mega-foundation run by a pal of Mr Orban. Starved of cash, serious journalists find it hard to do their jobs. "It's practically impossible to investigate even the major corruption stories, because there are so many," says Agnes Urban of Merteck, a media watchdog.

Meanwhile, in mature democracies, support for free speech is ebbing, especially among the young, and outright hostility to it is growing. Nowhere is this more striking than in universities in the United States. In a Gallup poll published last year, 61% of American students said that their campus climate prevented people from saying what they believe, up from 54% the previous year. Other data from the same poll may explain why. Fully 37% said it was "acceptable" to shout down speakers they disapproved of to prevent them from being heard, and an incredible 10% approved of using violence to silence them.

Many students justify this by arguing that some speakers are racist, homophobic or hostile to other disadvantaged groups. This is sometimes true. But the targets of campus outrage have often been reputable, serious thinkers. Heather Mac Donald, for example, who argues that "Black Lives Mat-



ter" protests prompted police to pull back from high-crime neighbourhoods, and that this allowed the murder rate to spike, had to be evacuated from Claremont McKenna College in California in a police car. Furious protesters argued that letting her speak was an act of "violence" that denied "the right of black people to exist".

Such verbal contortions have become common on the left. Many radicals argue that words are "violence" if they denigrate disadvantaged groups. Some add that anyone who allows offensive speakers a platform is condoning their wicked ideas. Furthermore, as America has polarised politically, many people have started to divide the world simplistically into "good" people (who agree with them) and "evil" people (who don't). This has led to bizarre altercations. At Reed College in Portland, Oregon, Lucia Martinez Valdivia, a gay, mixed-race lecturer with post-traumatic

stress disorder, was accused of being "anti-black" because she complained about the aggressive students who stood next to her shouting down her lectures on ancient Greek lesbian poetry (to which the hecklers objected because the poet Sappho would today be considered white). As Greg Lukianoff and Jonathan Haidt argue in "The coddling of the American mind":

"If some students now think it's OK to punch a fascist or white supremacist, and if anyone who disagrees with them can be labelled a fascist or a white supremacist, well, you can see how this rhetorical move might make people hesitant to voice dissenting views on campus."

The habit of trying to silence opposing views, instead of rebutting them, has spread off campus. In Portland, Oregon, this weekend, far-right extremists are planning to rally, their "antifa" (anti-fascist) opponents are expected to try to stop them, and both sides are spoiling for a fight. When the same groups clashed in June, a conservative journalist, Andy Ngo, was so badly beaten that he was hospitalised with a brain haemorrhage.

Similar intolerance has spread to Europe, too. French "yellow jacket" protesters have repeatedly beaten up television crews. In Britain any discussion of transgender issues is explosive. In September, for example, Leeds City Council barred Woman's Place UK, a feminist group, from holding a meeting because activists had accused them of "transphobia". (The feminists do not think that simply saying "I am a woman" should confer on biological males the right to enter women's spaces, such as changing rooms and rape shelters.)

"It's nearly impossible to have a free debate [on this topic]. I've never seen anything like it," says Ruth Serwotka, a co-founder of Woman's Place UK. Today, the group only tells members where meetings will take place a couple of hours in advance, to avoid disruption. Feminists who question "gender self-identification" (the notion that if you say you are a woman, you should automatically be legally treated as one) are routinely threatened with rape or death. Some have faced organised campaigns to get them sacked from their jobs, barred from Twitter or arrested. In March, for instance, Caroline Farrow, a Catholic journalist, was interviewed by British police after someone complained that she had used the wrong pronoun to describe a transgender girl. Another feminist, 60-year-old Maria MacLachlan, was beaten up by a transgender activist at Speakers' Corner in London, where free speech is supposed to be sacrosanct. ■

open future

For more articles on free speech, visit [Economist.com/openfuture](https://www.economist.com/openfuture)



Business in India

Modi blues

MUMBAI

Bosses and investors are growing disenchanted with their erstwhile champion

IN MAY CHAMPAGNE corks popped as Mumbai's bankers, investors and industrialists feted the re-election of Narendra Modi as India's prime minister. His Hindu nationalist Bharatiya Janata Party's defeats in regional elections last autumn raised the possibility of a return to power of the left-leaning Congress party, which most of India Inc views (with some justification) as anti-business, corrupt and fiscally feckless. Mr Modi's landslide victory therefore set corporate pulses racing. The Mumbai stockmarket soared to a record high. So did expectations that he would follow first-term coups like a new bankruptcy code and a goods-and-services tax with fresh business-friendly measures. "Modi knows how to change the goalposts," gushed one respected tycoon on election night. His fellow moguls nodded in agreement.

Two months later, the elation is gone. Despite an uptick in August, Mumbai's Sensex stock index is about as close to October's lows as it is to June's highs. In July foreigners pulled more money out of Indian equities than they put in. India's cau-

tious business press has begun to criticise the government. So too, even more gingerly, have its cowed business leaders. "There is no demand and no private investment," grouched Rahul Bajaj, chairman of Bajaj Auto, a motorcycle-maker, at its annual meeting in late July. "So where will growth come from?" The remark, widely interpreted as a swipe at Mr Modi, encapsulates Indian business's disenchantment with the man they once regarded as their champion.

Nirvana no more

The immediate cause of the mood swing was the budget, presented on July 5th by Nirmala Sitharaman, the newly appointed finance minister. Business folk tuned in to the two-hour presentation expecting less red tape, fewer tariffs, more incentives for investment and lower taxes. They got the opposite.

At an international bank, analysts' feigned interest turned to mild bewilderment, then despair, as Ms Sitharaman recited the budget's 143 provisions. The top marginal tax rate for high-earners would

→ Also in this section

49 Saudi Aramco's earnings debut

49 Chinese tech resilience

50 Viacom and CBS reunite

51 WeWork's wonky finances

52 Schumpeter: The FedEx conundrum

— Bartleby is on holiday

increase from 35.9%, already above the level in most emerging economies, to 42.7%, roughly as much as the average in the OECD club of mostly rich countries. The corporate-tax rate for big companies stayed at 35% (compared with a global average of 23%, and 21% in America). Or at least it appeared to: a new levy of 20% on share buybacks, on top of existing charges, would bring the capital-gains rate above 40%, among the highest in the world. Add in a tax on dividends and a recently imposed charge on recipients and, all told, the government could skim off 60% of corporate profits. New tariffs would be slapped on products from cashews to newsprint to fibre-optic cables. One banker recounts listening to the speech from the shower, the last vestige of optimism washing down the drain.

As observers unpacked the budget's convoluted text over the subsequent weeks, unintended consequences became apparent. To close loopholes, the bill extended taxes to the kinds of trust used by foreign portfolio investors, whom the government hopes to court. This turned them from heavy buyers of Indian equities to net sellers. Some high-earners wonder if it is time to decamp to more functional, business-friendlier Dubai or Singapore—especially after India's parliament amended the Companies Act on July 30th to let the government jail executives at big firms that do not spend part of their post-tax profits on corporate social responsibility. ▶

▶ All this looks like an odd way to boost India's flagging animal spirits—the deeper reason for corporate India's malaise. Anomalies in the country's GDP numbers, not all of which can be blamed on Mr Modi, have raised suspicions that India's growth rate may have been significantly overstated. Indians are beginning to skimp on hair oil, toothpaste and other essentials, hitting retailers and consumer-goods firms. Collapsing car and tractor sales in the past couple of months are reverberating down the supply chain, from parts-makers to steel companies. Demand for building materials is so feeble that one industry bigwig says his workers mostly perform maintenance work. Exports are stagnant. Companies caught up in China's trade row with America are relocating their supply chains to Bangladesh and Vietnam, not India.

The budget—and the statist signal it sends—is unlikely to encourage new spending by either domestic firms or foreign ones. Business investment has been sluggish since 2015, a year after Mr Modi first took office, a state of affairs for which the government is, again, not solely to blame. Lots of firms borrowed heavily to invest earlier in the decade, when India's economy appeared to be on a roll. Its subsequent wobble exposed a Himalaya of bad loans, particularly at state-owned banks which dominate lending. More recently, liquidity and solvency crises hit shadow banks, which finance some businesses and many consumer purchases, including cars and motorbikes. Investments are the last thing on struggling bosses' minds.

Announcements of new capital spending tracked by the independent Centre for Monitoring Indian Economy (CMIE) fell from 10.3trn rupees (\$207bn) in the first quarter of 2009 to 2.4trn rupees from January to March this year. Instead, companies have returned a growing share of profits to shareholders. Combined, the two trends do not exactly amount to a vote of confidence in India Inc's prospects.

Powerful industries with lots of workers and lobbyists, such as vehicle manufac-

turers who want a cut in the 28% sales tax on their products, are seeking favour with the government. Everybody else has to cut costs, slash investments and cling on to cash, chief executives grumble. Both listed and unlisted firms' return on equity, which began Mr Modi's first term well below a peak in 2006-07, ended it lower still (see chart). Profits at 399 of India's biggest public companies have declined by 3.7% a year on average on his watch, according to Refinitiv, a data provider. The CMIE calculates that asset utilisation has dropped from 50% in the 2000s to below 40%.

Tranquillity and mindfulness

Asked on July 8th about the post-budget stockmarket rout, Ms Sitharaman replied that she did not let this sort of thing "affect my calms". If so, warned one financier at the time, "then the markets will fall until her calms are affected".

Whether or not the subsequent falls rattled the minister herself, they appear to have jolted the government. Its initial response was to drag bosses in for confidential consultations, including at least one attended by Mr Modi himself. The officials' conclusion, says a person close to the events, was that messaging was the problem, not the message. Ms Sitharaman was dispatched to pose for photos, listening to the concerns of bankers and captains of industry. This was a welcome change from the Modi government's previous insularity. So was its promise, in response to panicked pleas from companies, not to lock up executives for stinting on social projects. The central bank's 35-basis-point cut in interest rates on August 7th raised spirits. But neither removes the desert of sand that still silts up the wheels of Indian commerce.

Businesspeople who have spoken with Mr Modi say he is clever and focused. In private, they insist, he gets the need for a less overweening officialdom. They praise the bankruptcy code (though it was partially stymied by the courts) and excuse missteps, such as a disruptive withdrawal from circulation of certain banknotes. (They do

not talk about his sometimes ugly Hindu nationalism.) Some speculate, longingly, that the business-bashing is part of a cunning strategy to distance himself from the wealthy in order, when the time comes, to reform India's stifling labour laws.

Yet they also confide that the prime minister often asks not what the government can do for companies, but what they can do for the government. He is increasingly viewed not as broadly pro-market but selectively pro-business. His goodwill extends to companies whose goals align with his own: bankers who offer cheap loans to the poor, energy firms which furnish households with gas and electricity, corporations which improve sanitation in villages near their factories. Favoured firms are kept on life support with credit from state-controlled lenders, leaving less capital for everyone else.

Such complaints aren't widely heard, not because they are rare but because they are not made in public. *Sotto voce*, denizens of India Inc say they fear retribution from the authorities. Criticism can provoke a call from an official that carries the implied threat of lost contracts or withdrawn permits, they say. After the suicide in July of the founder of a coffee chain who claimed to have been harassed by the tax authorities, the term "tax terrorism", first coined in 2014, has gained new traction. Indian entrepreneurs share stories of protracted investigations that cripple businesses.

Most of these problems are endemic in India. Despite the liberalisation of the "Licence Raj" in the early 1990s the country has never quite let go of its deeply ingrained interventionism. But the prime minister, whose 13-year tenure as chief minister of the western state of Gujarat won him a reputation for sound economic management, was going to be different, members of the put-upon corporate class hoped. As he begins his sixth year as India's prime minister, some of them are beginning to wonder if the state's success owes more to go-getting Gujaratis than to their erstwhile leader. ■

Down and out in Mumbai

India

S&P BSE Sensex stockmarket index
1978-79=100

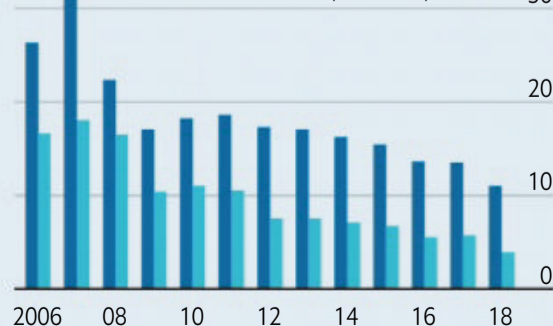


Sources: Datastream from Refinitiv; Bloomberg; Centre for Monitoring Indian Economy

Return on equity

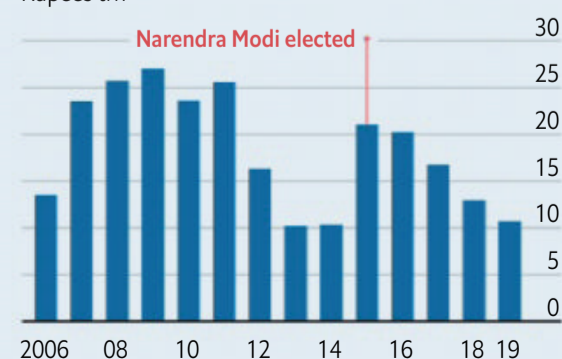
%

■ Sensex companies
■ All companies*
(20,000 public and private)



New investment projects announced*

Rupees trn



*Financial years ending March



Saudi Aramco

Tap dance

NEW YORK

Facing an uncertain future, Saudi Arabia's oil colossus tries new moves

THE EARNINGS call lasted about half an hour and was, by conventional measures, underwhelming. Saudi Aramco, the world's most profitable company, gave no guidance on capital spending. Its finance chief, Khalid al-Dabbagh, said (cryptically) that dividends must be "affordable". He did not disclose where or when it might list its shares. The oil giant's first such interaction with public investors on August 12th was still revealing. It showcased the firm's evolution—and the forces that may impede it.

National oil companies face a hazy future. American shale output is booming and long-term demand for fossil fuels looks less certain as concerns about climate change mount. Still, Aramco enjoys a privileged position, as its results for the first half of the year demonstrate. It produced an average of 10m barrels of crude a day, plus another 3m or so barrels of oil equivalent from natural gas. Its \$46.9bn in net income eclipsed that of its five biggest listed rivals—ExxonMobil, Shell, Chevron, BP and Total—combined (see chart).

The numbers add new detail to the formidable portrait painted by Aramco's first international bond prospectus in April. The \$12bn issue's success has revived plans to list 5% of Aramco's shares. Muhammad bin Salman, Saudi Arabia's crown prince, declared in 2016 that an initial public offering would value the company at more than \$2trn, raising \$100bn to invest in other sectors. It may come as soon as next year.

That is where the earnings call comes

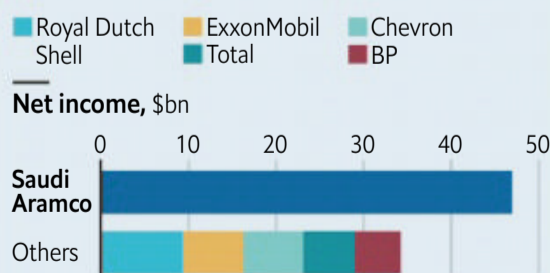
in. It was less an exchange of information than an awkward dress rehearsal—a chance for investors to familiarise themselves with Aramco and vice versa. Mr al-Dabbagh conjured an image of dominance today and outlined plans to extend it tomorrow. The firm is expanding its trading arm and striking deals to secure demand for its crude and diversify its revenue. Like others in the industry, it expects appetite for petrochemicals to jump. In March Aramco said it would buy 70% of SABIC, a petrochemical giant, from Saudi Arabia's public investment fund for \$69bn. On August 12th Reliance Industries, an Indian conglomerate, said that Aramco would pay \$15bn or so for a 20% stake in its refining-and-petrochemicals business. The Saudi firm will supply Reliance with up to 500,000 barrels a day of crude, helping to lock in a long-term customer. It has struck deals in China, Malaysia and South Korea.

Aramco could yet trip up. Some downstream projects may take years to materialise, notes Alan Gelder of Wood Mackenzie, an energy-research firm. It boasts of "99.9%" reliability of its supply, but tensions with Iran threaten exports through the Strait of Hormuz. Expanding a pipeline to the Red Sea will help only a bit. The Saudi kingdom is hungry for revenue; dividends in the first six months of 2019 were 22% larger than free cashflow because Aramco paid a "special dividend" of \$20bn on top of an ordinary one of \$26.4bn (the company invoked the "exceptionally strong financial performance" of 2018).

Most important, the oil price is sinking. It pulled Aramco's net income in the first half of 2019 down by 12% compared with last year. To support prices, Saudi Arabia has brokered production cuts by the OPEC cartel of oil-producers and slashed its output by 7% from December to June. If rising fears of a global economic slowdown keep oil markets depressed, a listing may be delayed. Again. ■

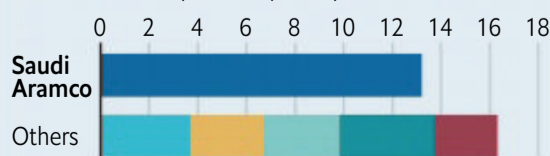
Princely sums

Oil companies, January-June 2019



Oil and gas production

m barrels of oil equivalent per day



Source: Company reports

Chinese technology firms

Stuck in the Middle Kingdom

HONG KONG

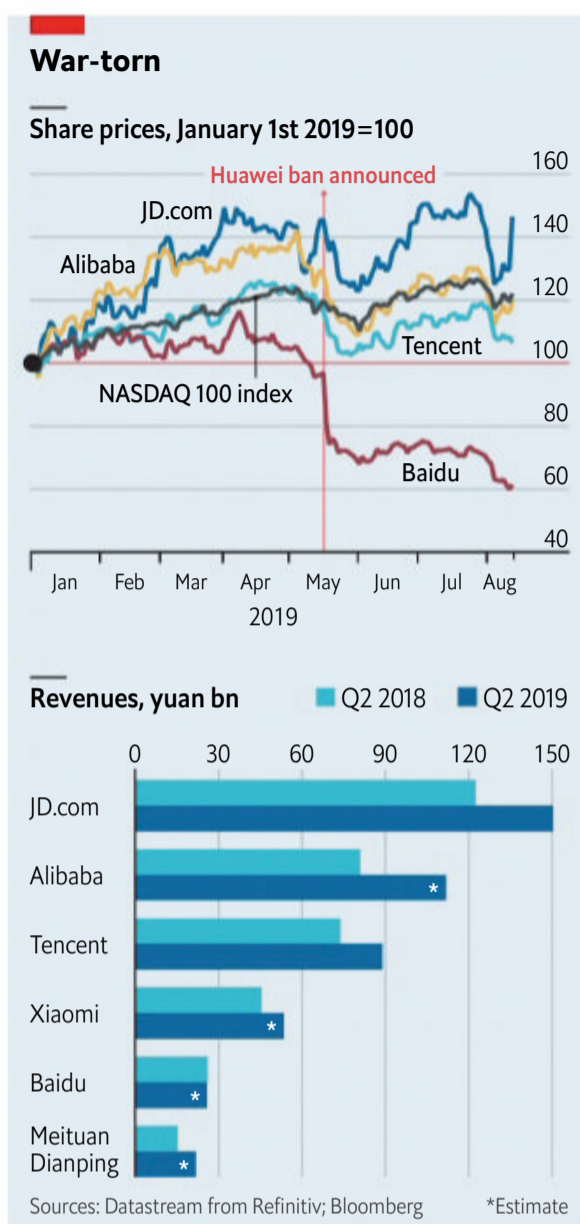
The trade war is making China's tech industry more inward-looking

THE LAST three months have been hard on China's most valuable public technology companies. Or, at least, on their share prices. In May Alibaba and Tencent lost more than a tenth of their value in the week after President Donald Trump restricted the export of American technology to Huawei, a privately held Chinese telecoms giant. Investors feared that knock-on effects from the ban might hurt other Chinese tech businesses by, for instance, making it hard for them to source cutting-edge components and software from America.

You would not have guessed, looking at the latest batch of quarterly results. Take Tencent, which owns WeChat, a ubiquitous all-in app, makes mobile games and much cyberstuff besides. On August 14th it reported that a new hit game—which lured users of its most popular title, banned by Chinese censors earlier in the year—propelled its profits to 21.4bn yuan (\$3.4bn), from 17.9bn yuan in the same period last year. Revenues rose by 21%, to 88.8bn yuan. Or JD.com, an e-merchant, whose healthy revenues, posted earlier in the week, revived a sagging share price. Analysts expect Alibaba, China's e-commerce titan, which was due to publish its second-quarter results on August 15th after *The Economist* went to press, to notch up sales of 111bn yuan and rake in a net profit of 10.3bn yuan, an increase of 35% and 26% year on year, respectively. Xiaomi, a device-maker, and Meituan, a food-delivery firm, which both announce second-quarter earnings next week, are also forecast to report rising revenues. Growthless Baidu, China's search giant, is an outlier.

Huawei itself shows that even the long and mercurial arm of American law can do little to hobble the stars of Chinese technology. Many of their employees feel energised by the tech tussle, seeing it as both a validation of Chinese prowess and an opportunity to increase the independence of China's burgeoning technology ecosystem from America's government. Finally, Chinese have something their American rivals do not: near-total control of their country's vast domestic market, second in size only to America's but growing much faster.

Still, Chinese tech is not invulnerable. Tencent's revenues came in lower than analysts had forecast, in part owing to disappointing advertising sales. In that business it faces new competition from ByteDance, a Beijing-based startup which also makes



► TikTok, a video-sharing app that, in a first for a Chinese social-media platform, is all the rage among Western teens. ByteDance is also challenging Baidu in search, which explains some of the latter's underwhelming performance. Alibaba still relies on its e-commerce business for 85% of revenue. A slowing domestic economy may hurt it, as it might JD.com. Alibaba's foray into designing chips for cloud-computing and the internet of things is at an early stage.

These higher-tech lines of business promise riches in the future. They are also more sensitive to geopolitics than are on-line marketplaces—and the technological conflict between America and China is not going to end anytime soon. The 90-day reprieve granted to Huawei expires soon. It might not be extended.

Another threat to China's companies may come from within. It could take the form of (healthy) competition from upstarts like ByteDance or (less healthily) a slowing economy. It could also manifest itself in Chinese tech's inward turn in response to the trade war. By focusing exclusively on their home market companies might fall into the trap of cutting themselves off from the wider world and the bigger ideas it contains.

For the time being, then, China's tech companies look well insulated. That virtue could one day come to haunt them. ■

Media mergers

Together again

NEW YORK

After years of bitter wrangling, Viacom and CBS agree to reunite

AMERICA'S MEDIA business once lionised boutique firms and their iconoclastic bosses. No longer. Like so many other industries, it has come to be dominated by a few huge companies focused squarely on achieving economies of scale. Besides Netflix, a pioneer of video-streaming with a market capitalisation of \$131bn, most of the giants were created through mergers. AT&T's acquisition of Time Warner produced a \$250bn behemoth. Disney's takeover of 21st Century Fox in March has created a juggernaut worth just under \$240bn. Verizon, another telecoms titan, which in 2015 snapped up AOL, an online portal, comes in at \$230bn. Just shy of \$200bn, Comcast, a cable company which last year bought Sky, a British satellite broadcaster, is the tiddler of the bunch.

Against this supersized backdrop Viacom, a content provider with a market value of nearly \$11bn, and CBS, a television network worth some \$17bn, look like flailing minnows. But they do control some prime media properties, including Paramount, a Hollywood film studio, and tv series such as "CSI" and "South Park". And this week, after years of wrangling, the two firms agreed to merge in an all-share deal engineered by Shari Redstone, daughter of Sumner Redstone, a legendary tycoon (who is aged 96 and ailing).

The two firms were once united but Mr Redstone broke them up in 2006. The Redstone family's investment vehicle still maintains control of both companies through its holdings of shares with en-

hanced voting rights. Ms Redstone overcame many foes, including Les Moonves, the formidable former boss of CBS who was forced to resign last September following allegations of sexual harassment, which he denies. She will chair the combined entity, which is to be called ViacomCBS. CBS shareholders will control roughly 61% of the combined enterprise. Bob Bakish, a Viacom veteran who is to lead the new firm, expects yearly revenues to exceed \$28bn and annual savings of \$500m within the next two years.

The deal undeniably enhances the market muscle of the two companies. The merged firm plans to push its own "direct-to-consumer" streaming services harder. And it is expected to spend some \$15bn on new content this year, about as much as Netflix. Added to an extensive library of popular shows, from cult television programmes like "Star Trek" and "Big Bang Theory" to blockbuster movie franchises such as "Mission Impossible", this will put ViacomCBS in a stronger position to negotiate with big distributors.

Energised by her latest success, Ms Redstone may in time try to make another acquisition. That is because, as Kerry Fields of the Marshall Business School at the University of Southern California argues, "the new firm is still sub-scale".

Disney is splashing out nearly twice as much on new shows this year. Despite the fact that many likely aggressors are still digesting recent acquisitions, there is already talk in industry circles of an impending second wave of media mergers.

If the speculations are correct, Ms Redstone's deal, which has long seemed inevitable, may also prove an inadequate defence against potential acquirers with a lot more financial firepower. Indeed, by fattening up CBS with Viacom she may even have manufactured a firm that will prove an irresistible prey for one of the industry's big guns. ■



WeWork's IPO

Risky business

NEW YORK

WeWork, a much-ballyhooed property firm, unveils its prospectus

FAR FROM the soulless corporate offices of midtown Manhattan is a door in Greenwich Village wedged between a rowdy saloon and a burrito joint. The steady stream of hipsters and fashionistas passing in front of it is punctuated by professionals in “business casual” outfits with computer tote bags. Inside are stylish workspaces offering fruit-infused water and nitro coffee on tap. In one animated meeting, participants are sitting on beanbags and the floor. That would never happen at his firm’s conservative headquarters, says an executive at the technology giant that has leased this co-working space: “Younger workers want a more casual place to work, and WeWork helps us with recruitment and retention.”

The We Company (WeWork’s parent), a nine-year-old privately held firm, is controversial. The company’s chic co-working spaces and its flamboyant boss, Adam Neumann, clearly inspire passion among many customers and workers. Japan’s SoftBank has invested over \$10bn in the firm, boosting its valuation to \$47bn. Equally passionate are its critics, who argue that the firm is worth nothing like that kind of money. They point to IWG, which offers shared offices under the Regus and Spaces brands worldwide and which has a market capitalisation of just \$4.5bn (see chart).

So what is WeWork really worth? At last, investors will get the chance to make up their own minds. On August 14th the company unveiled its financial prospectus, which is expected to lead to a public flotation next month. The disclosures paint a picture of a firm in transition from overhyped property startup to a maturing corporation with diverse clients.

There are four main areas of concern about WeWork’s viability. The first, and most glaring, is its lack of profits. The firm argues that this is explained by its huge investments needed to secure economies of scale. It says that mature locations are profitable. Revenues doubled during the first half of 2019 to \$1.5bn, from \$764m during the same period in 2018. Net losses rose more modestly to \$905m during the first

**Mirrors. And smoke?**

half of this year, up from \$723m (though one-off gains from related-party transactions partly explain this).

The second concern is its obscene valuation. Happily, the firm is diversifying its funding sources. WeWork has reportedly arranged for some \$6bn in credit facilities from ten banks, led by JPMorgan Chase, that are tied to the successful completion of its IPO. That gives Mr Neumann a strong incentive to swallow his pride and lower the asking price for its shares.

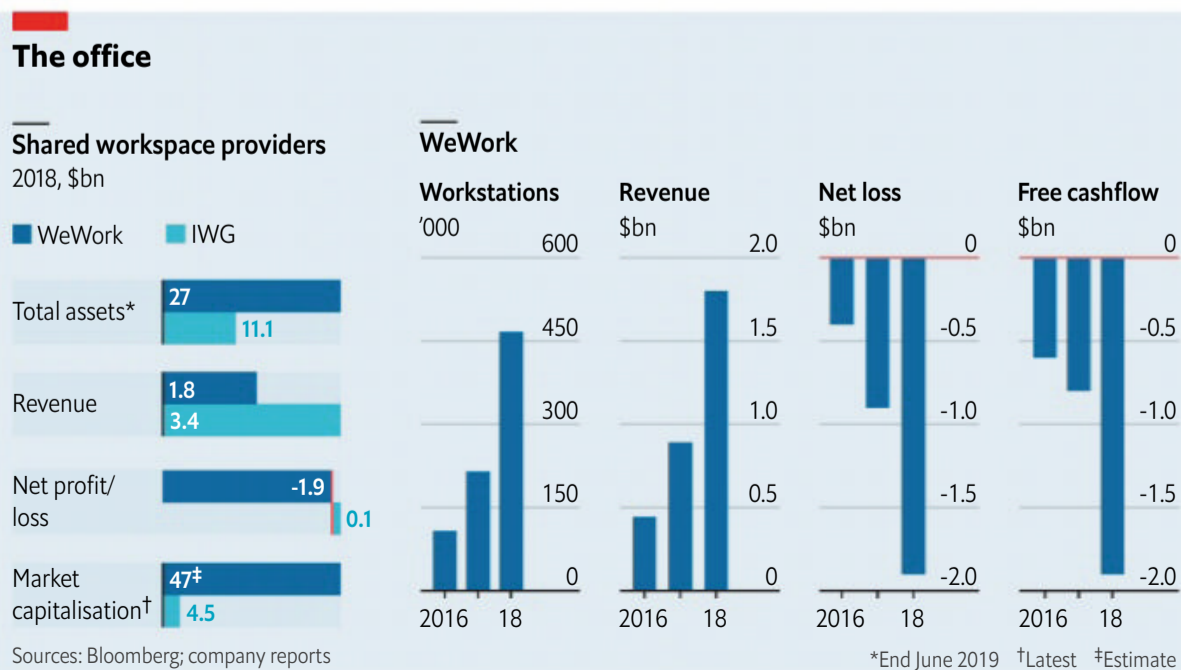
The third concern is whether a recession will push the company to bankruptcy. This remains a risk, as the firm has taken on \$47bn in lease payments but has only \$4bn in committed future revenues from

customers. Here, it has some hedges. Its leases are typically held in special-purpose entities specific to one property (so a blow-up insulates the parent firm). WeWork has entered into revenue-sharing leases with some landlords, which can offer countercyclical relief. Because it does its own construction, it can slow down the build-out of new offices as it did during London’s Brexit-induced downturn.

More important, some 40% of its memberships are now held by big corporations, up from 20% a couple of years ago. These firms, which range from Amazon to HSBC, have deeper pockets and typically take out multi-year deals. Jeffrey Rayport of Harvard Business School argues that the firm’s combination of low cost, flexibility and thoughtfully curated culture is attractive to big firms: “We have not reinvented office space in 50 years, so WeWork is moving into white space,” he says. “It does make workers happier and more productive.”

The final big worry is questionable corporate governance. WeWork will issue multiple classes of shares that give Mr Neumann control with a minority stake. He has a complex relationship with the firm because he leases space to it in buildings he owns, a practice it promises to end. His wife is a “strategic thought partner” and runs an unpromising education arm. Charles Elson, a governance expert at the University of Delaware, warns, “If you start with this culture, you can’t get rid of it.”

Mr Neumann’s claim that his firm will “elevate the world’s consciousness” is plainly silly. Even so, it is wrong to equate WeWork with Regus. CBRE, a property-management firm, estimates that the flexible-work niche has experienced “meteoric growth” of 25% in America’s top ten markets in 2018, with similar figures in big cities worldwide. Mr Rayport believes that the firm’s business-model innovations have dramatically enlarged the total addressable market. Still, investing in WeWork remains an act of faith. ■



Corrections: In “Windfall” (July 27th) we should have said that America generated 4.2bn megawatt-hours, not kilowatt-hours, of electricity in 2018. And KKR announced its takeover of heidelpay on August 4th, not July 4th (“Locust in Lederhosen”, August 10th). We apologise for mixing up magnitudes and months.

Schumpeter | The FedEx conundrum

FedEx's visionary founder is an old-style disrupter in danger of being disrupted



FOR OUTSIDERS, FedEx is synonymous with the business it pioneered: the overnight delivery of packages. For insiders, it might just as well be called FredEx. It is virtually indistinguishable from its founder, Fred Smith, who has been boss since 1971. The 75-year-old, who came up with his idea for air freighting packages at Yale University, is the stuff of folklore. Some of it is apocryphal, such as the story that he got a C at Yale for a paper outlining his idea (he can't recall the grade). But one tale is, if anything, too good to check. In its early days, as the firm flirted with bankruptcy, he saved it with a lucky wager at a blackjack table in Las Vegas.

Mr Smith is an entrepreneur of the old school. The ex-marine dispatched his first 14 planes in 1973—on the first day they carried 186 packages. FedEx is now the biggest cargo airline in the world, with 681 aircraft and an average volume of 15m packages a day. He has played politics as he plays cards, be that securing deregulation of the air-cargo industry in the 1970s, winning protection from American unions or schmoozing congressmen at the FedEx Field, home to the Washington Redskins. Among American firms, FedEx has long been one of the most recognisable, admired and popular to work for. In January the board in effect gave Mr Smith tenure for life, by waiving the firm's retirement age of 75 for executives. "Like a Supreme Court judge," chuckles one admirer.

Shareholders are less giddy. As one of the biggest parcel carriers in America, FedEx ought to benefit from uninterrupted GDP growth. Yet since 2009, when America began its longest economic expansion on record, the company has underperformed the S&P 500 by almost 100 percentage points. This year it has suffered from the Sino-American trade war, growing competition from Amazon and problems integrating Europe's TNT Express, which it bought in 2016 for \$4.4bn. Such squalls are not good for its financial health, yet FedEx has been investing more than \$5bn a year since 2017 to keep deep-pocketed rivals like Amazon and the e-commerce giant's Chinese counterpart, Alibaba, out of its delivery business. This is a game of chance that Mr Smith is not guaranteed to win.

The biggest stakes are at home. FedEx built its name as a high-end business-to-business firm, offering guaranteed time slots for delivering parcels and factory goods along the supply chain. But e-commerce is raising the importance of delivery to homes, at faster

speeds and lower costs. FedEx has responded by expanding its trucking service, which will soon reach most American homes seven days a week. But that clobbers margins. Meanwhile, Amazon is spending heavily on same-day delivery. It is also building an aircraft fleet that, though still a midget compared with FedEx's, will amount to 70 aircraft by 2021. According to Satish Jindel, a logistics consultant, Amazon has leapfrogged its rivals to become the biggest firm in the world at organising warehousing and transport for other companies' goods (as well as its own). Only a few years ago Mr Smith mocked the idea of competition from the likes of Amazon as "fantastical". But in the past two months FedEx has severed its (albeit tiny) remaining ties with Amazon to focus on building its relationship with retailers like Walmart and Target instead. Its main rival, UPS, is sticking with Amazon. This sets the stage for a potentially bruising price war that could further crimp profits.

Its second big challenge is overseas. Besides having to fix TNT, FedEx has found itself in the awkward position of being on the wrong side of both adversaries in the trans-Pacific trade war. In recent months it was forced to apologise to China for diverting packages belonging to Huawei. FedEx said that this was owing to an error. Nonetheless the Chinese government is reportedly threatening to put FedEx on its own blacklist. And the company has also sued its own government, saying it should not be deputised to "police the contents" of any packages it sends to check that they do not violate export bans.

Besides the ugly geopolitics, global competition is also rising for FedEx. One of the biggest threats comes from Cainiao, a Chinese rival backed by Alibaba that in 2017 pledged to invest \$15bn in cross-border logistics. FedEx claims that its own vast network, extending to 220 countries, safeguards it from such incursions. But it is not used to having tanks the size of Amazon's and Alibaba's on its lawn; their troves of data on customers may give them an edge in the delivery wars.

In response, both FedEx and UPS are investing large sums to modernise their fleets and expand their delivery hubs. But though FedEx's revenues of almost \$18bn in the last quarter have nearly caught up with UPS's, its profit margins are weaker and it is generating less cash. That worries investors. It could seek to reassure them by reducing purchases of costly items like aircraft, or combining two of its independent businesses in America, FedEx Express and FedEx Ground, to cut costs. But it has rejected both ideas, insisting it is best to invest in growth.

Stand down and deliver

It may be wise to double down this way. However much risk-averse investors may prefer share buy-backs to ambitious capital-spending plans, halting investment could be seen as a flag of surrender by the likes of Amazon. That said, FedEx's failures—to respond more quickly to the changing e-commerce landscape, to read the runes of geopolitics and to end its stubborn refusal to join its two businesses—reflect a company whose management is long in the tooth. Including Mr Smith, FedEx's ten top executives average more than three decades at the firm, which is extraordinary.

It is hard not to misread the changing rules of business when you once rewrote them—even harder when some of your oldest friends are your sounding board. It is clear that the directors have no stomach for replacing their chairman in the foreseeable future. But unless Mr Smith brings in fresh executives, and then listens to them, his days at the business blackjack table should be numbered. Think FredExit, in other words. ■



The trade war and America's economy

Under attack

WASHINGTON, DC

How is the trade war affecting corporate investment?

THERE'S TARIFFS on games and tariffs on toys—try explaining tariffs to your little boy. Santa's workshop is struggling, you'll find yourself saying. I think the reindeer are backed up with their sleighing." Wendy Lazar, who runs a company called I Heart Guts, submitted this peevish poem to the United States Trade Representative (USTR) in June. As an importer of children's toys from China, she was complaining about how the trade war could squeeze her firm.

She is not alone. In boardrooms across America, business people are scrambling to assess the impact of the latest escalation in the commercial confrontation between the two superpowers. For most firms the easy bit is calculating the immediate financial impact of more tariffs on demand, prices and costs. That can be done in a spreadsheet. Far harder is working out how to rejig your strategy and long-term investment plans to adapt to a new world of enduring trade tensions. Fund managers and

Wall Street traders have begun to reach their own conclusion—that investment may slump, possibly triggering a recession. Hence the violent moves in markets since the first week of August, with a rush towards safe bonds and a sell-off in equities (see the next article).

That sell-off picked up pace on August 1st when President Donald Trump's admin-

istration announced the imposition of tariffs on \$300bn of Chinese goods, at a rate of 10%, starting on September 1st. On August 13th the USTR announced a delay covering about two-thirds of the goods in question, including mobile phones, smart-watches and toys, which would be subject to duties starting on December 15th. As Mr Trump explained later that day, the move would allow American shoppers to splurge in the run-up to Christmas. The press release announcing the delay arrived at 9.43am; between 9.40 and 9.45 shares in Apple rose by 3%, and the S&P 500 share index jumped by 1%. But by the following day the stockmarket—and the iPhone-maker's share price—slumped again as investors fretted that a global downturn might soon be on the cards.

America's expansion may be cooling as it enters its second decade, but GDP still grew at a respectable pace of 2.1% in the second quarter of 2019, and the unemployment rate is a brag-worthy 3.7%. The direct effect of the tariffs should be small: in 2017, before hostilities began, goods trade with China amounted to just 3.2% of GDP. Even including the additional levies planned for December, they represent a tax rise offsetting only a fifth of the cuts introduced by the Tax Cuts and Jobs Act of 2017.

What really matters, though, is the wider effects of the uncertainty created by the trade war on corporate behaviour. Most ►►

→ Also in this section

55 Making sense of markets

55 Brexit's chilling effect

56 Goldman in Malaysia

56 Bond insurers' woes

57 Adapting to climate change

58 Debt and despair in Sri Lanka

59 Free exchange: Bretton Woods II

— Buttonwood is away

► companies make plans over a five- to ten-year horizon and invest in assets with a life of 10-20 years. But with each new tariff announcement, the rules for trading their products become less stable. And the scope of the trade war has expanded beyond goods to technology and currencies. Perhaps the international banking system, shipping companies or foreign joint ventures could be next. The most sophisticated firms try to gauge such risks.

The high level of uncertainty is measurable. A study from 2016 by Scott Baker of Northwestern University, Nick Bloom of Stanford University and Steven Davis of the University of Chicago quantified policy uncertainty in America using newspaper reports. Their index of trade-policy uncertainty has soared in recent months (see chart). And such increases in uncertainty tend to have real effects. The researchers found that increases in their index were associated with dampened investment and slower hiring. More recently, Ryan Sweet of Moody's Analytics, a financial firm, finds that changes in business confidence and economic-policy uncertainty appear to predict changes in managers' capital spending.

Given all this, how is investment in America holding up? In the second quarter non-residential business investment shrank at an annualised rate of 0.6%. The question is to what extent the trade war is the culprit, rather than industry-specific factors, domestic economic trends or the global manufacturing cycle. To get a sense of this *The Economist* has analysed around 2,400 listed American companies in 42 sectors, taking into account both their investment levels and how dependent their sector is on Chinese inputs.

Firms with a higher degree of Sino-reliance do seem to have scaled back investment. The 20 sectors most exposed to inputs from China accounted for a third of total investment by the 2,400 firms. In total these sectors saw aggregate capital spending drop by 1% in the past four quarters compared with the prior year. Mean-



while the other 22 sectors, which are less exposed to China, saw investment rise by 14%. The analysis is simple: other factors may well have played a role.

But business executives too report an effect on investment. A survey compiled by the Federal Reserve Bank of Atlanta in January found that trade tensions had crimped investment by 1.2%. Tariffs were mentioned in a quarter of all earnings calls among companies in the S&P 500 index in the second quarter of 2019, according to figures from FactSet, a data-analytics firm. One of the sectors most exposed to China is chemicals. In July Jim Fitterling, chief executive of Dow, a big producer, told investors on an earnings call that he would keep capital spending "tight" until he got "better visibility", adding that he thought a trade deal was needed to "get some confidence back in this market".

Wall Street economists are also crunching data on how trade-policy uncertainty is altering companies' behaviour. In June researchers at Goldman Sachs had been sceptical that the trade war was hampering investment, pointing out that overall policy uncertainty was low. But more recently they have altered their view, finding that, after adjusting for underlying trends, sectors that sell more to China (rather than those that buy from it) were seeing slower

investment growth than those that were less exposed.

Goldman's economists also found that tariff announcements were associated with worsening financial conditions (higher borrowing costs, lower equity prices or a stronger dollar). Expectations of interest-rate cuts by the Federal Reserve have only offset half of the shift in financial conditions. Overall the analysts reckon that, including indirect effects, the hit to GDP would be 0.6%—material, but not enough to tip America into recession.

The overall picture, therefore, is that there is now good evidence that the trade war is leading some firms to crimp investment. Pessimists worry that the knock-on effect from this capital-spending stumble could be far-reaching and more painful than the likes of Goldman expect. In the long run it could sap productivity. In the short run it could cause firms to scale back hiring. That could then damage consumers' confidence.

Much depends on whether hostilities between America and China intensify. On August 13th Mr Trump said that he had a "very, very productive call" with China's leaders. But few on the ground take seriously the prospect of a lasting reconciliation. Jake Parker of the US-China Business Council, a lobby group, reports that his members have realised that the threat of future levies would still lurk even if a deal were struck and tariffs lifted. Blows to China's economy could also spill back to America.

And Mr Trump has plenty more ways of injecting fear into the economy. He must decide whether to reinstate onerous restrictions on American companies that do business with Huawei, a Chinese telecommunications giant, by August 19th. His labelling of China as a currency manipulator could ignite a currency war. If the sickness that is now visible in most trade-exposed sectors spills over to the rest of the economy, that would set off a downward spiral that not even lifting tariffs, and allowing in Ms Lazar's stuffed toys, would reverse. ■

Getting real

United States

Policy-uncertainty index*, 1985-2010=100



Sources: policyuncertainty.com; FactSet; Goldman Sachs Global Investment Research *Based on policy terms mentioned in US newspapers

Average capital expenditure to sales ratio



Sources: policyuncertainty.com; FactSet; Goldman Sachs Global Investment Research *Based on policy terms mentioned in US newspapers

Financial markets

The new commonplace

Making sense of investors' mood

IN THE AUTUMN of 2008, strange and novel things happened in financial markets, such as the emergence of negative yields on Treasury bills. In times of fear, the safest assets are at a premium.

What was once strange is now ordinary. Negative yields are a familiar feature of European bond markets. But such is the anxiety about the world economy that they are spreading. In Germany, interest rates are negative all the way from cash to 30-year bonds (chart 1). In America yields are still positive. But the curve is inverted: interest rates on ten-year bonds are below those on three-month bills (chart 2). The last seven recessions in America have been preceded by an inverted yield curve.

Nervous investors are reaching for the safety of the dollar. The yen and Swiss franc, habitual sanctuaries, are

among the few currencies that have risen against it (chart 3). The price of gold, another haven, is at a six-year high. That of copper, a barometer of global industry, is down from its recent peak (chart 4).

Faced with uncertainty, the go-to market for equity investors is America's. It has left others in the dust (chart 5). MSCI's emerging-market share index leans heavily towards "Factory Asia" (China, South Korea and Taiwan), which is in the eye of the trade-war storm. Europe's markets lean towards banks and carmakers, which suffer in downturns.

Investors fret that the rich world is slowly becoming Japanese, with economies that are too feeble to generate inflation. Forecasts of inflation in the swaps market have fallen sharply (chart 6). A fear in 2008 was that deflation might take root. The fear remains.

Britain's economy

Deep freeze

The chilling economic effects of Brexit uncertainty are intensifying

SINCE BRITAIN voted to leave the European Union (EU) in June 2016, Leavers have been gloating. Despite the Remain camp's dire predictions, the economy seemed to trundle on well enough. But the crowing is dying down. Figures released on August 9th showed that Britain's GDP shrank in the second quarter. And a growing body of research suggests that Brexit-related uncertainty is doing subtle but serious economic damage.

A paper published early this year by Meredith Crowley, Oliver Exton and Lu Han of the University of Cambridge reckons that uncertainty over trade policy has dented export prospects. Had the vote not taken place, 5% more firms would have exported new products to the EU in 2016 alone.

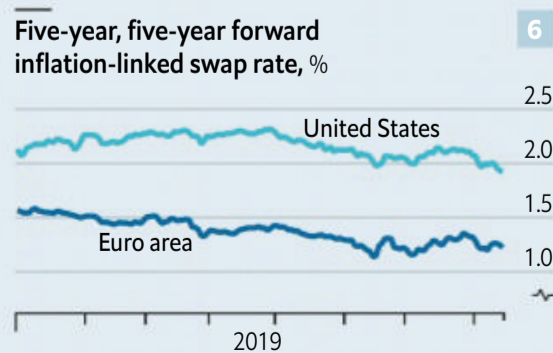
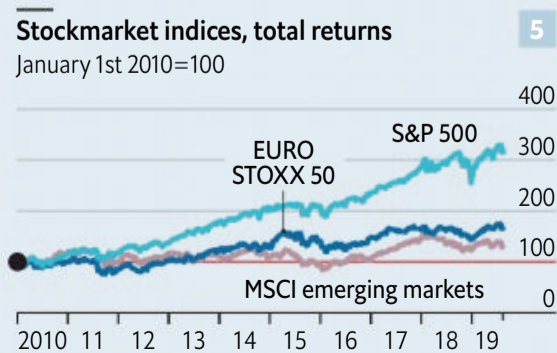
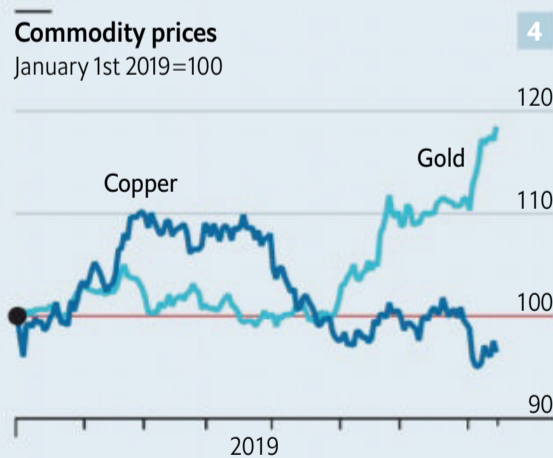
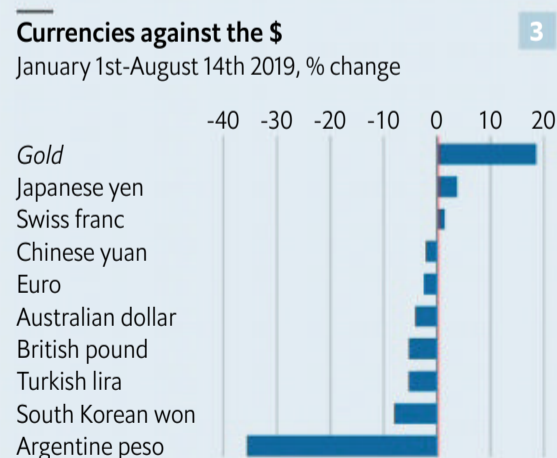
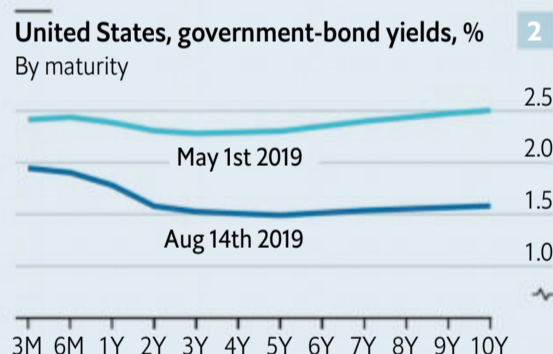
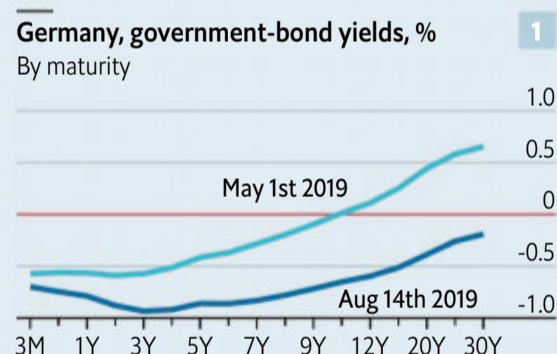
After the referendum economists from the Bank of England, the University of Nottingham and Stanford University set up the "Decision-maker panel", a survey that regularly polls executives across the country's industries and regions. In a new paper the researchers examine the responses of 5,900 firms, representing 14% of private-sector jobs, to gauge the effect of Brexit uncertainty on business.

The results are startling. The uncertainty that comes with a rise in oil prices or an unexpected bank failure can be costly, but typically abates as more information becomes available. Brexit uncertainty is unusually persistent—after all, three years after the vote, the terms of departure are still unclear. The authors track the share of bosses reporting that Brexit is one of the top three sources of uncertainty, if not the biggest, facing their business (see chart on next page). This remained elevated a full two years after the referendum, then rose further in 2018 as stalling talks with the EU raised the odds of a no-deal Brexit.

Bosses reporting greater uncertainty also appear to have scaled back investment more. But the depressing effect is not quite what forecasters had envisaged in 2016. They had pencilled in a steep drop in investment immediately after the vote that would ease as firms adjusted to the new world. But in fact the drag on investment has worsened over time. (The effect of uncertainty on hiring is more ambiguous.)

Importantly, the deceleration in investment has had significant knock-on effects on Britain's productivity, which even before the referendum was dismal. That is partly because managers have been forced

Six charts that explain the state of markets



Sources: Datastream from Refinitiv; Bloomberg

Certain doom

Britain, Brexit Uncertainty Index
% of executives saying Brexit is one of the top three sources of uncertainty facing their business



Source: "The impact of Brexit on UK firms" by N. Bloom, P. Bunn, S. Chen, P. Mizen, P. Smietanka and G. Thwaites, NBER 2019

▶ to spend valuable time planning. Between November 2018 and January 2019, nearly three-quarters of bosses put aside time each week to prepare for various outcomes. But uncertainty has also been a bigger burden on exporters, which tend to be more productive than firms catering to the home market. All told, productivity is 2-5% lower than it would have been without the uncertainty. Brexit still carries plenty of unknowns. The effect on Britain's economy, though, is becoming ever clearer. ■

1MDB

And then there were seventeen

SINGAPORE

Malaysia files criminal charges against a host of Goldman Sachs executives

THE SURPRISE stung. On August 9th Malaysia's attorney-general filed criminal charges against 17 current and former executives at Goldman Sachs, an investment bank. The move marks an escalation in Malaysia's efforts to deal with a scandal uncovered at 1MDB, a state investment vehicle set up more than a decade ago by Najib Razak, then Malaysia's prime minister. As much as \$4.5bn of public money vanished from the fund between 2009 and 2015, according to America's Department of Justice (DOJ). The cash was funnelled through shell companies around the world and frittered away on yachts, artworks, diamonds and other fripperies. Investigations have spanned America, Luxembourg, Malaysia, Singapore, Switzerland and the United Arab Emirates.

The 17 executives occupied senior positions at three subsidiaries of Goldman between May 2012 and March 2013. Five still work at the bank: among them is Richard Gnodde, the chief executive of its London-based subsidiary. During that time Goldman underwrote three bond offerings that

raised \$6.5bn for 1MDB, of which, according to the DOJ, \$2.7bn later disappeared. Even so, the bank earned a whopping \$600m in fees—a figure that Malaysia's authorities claim was above the market rate. In 2013 one of the bank's former executives, who has been charged, was paid a bonus exceeding that of its chief executive at the time. Malaysia's prime minister, Mahathir Mohamad, who booted Mr Najib out of office 15 months ago with a rallying cry against corruption, has called the fees "a huge killing". His finance minister wants \$7.5bn in reparations from Goldman.

The bank's former chairman for South-East Asia, Tim Leissner, helped win the work. He and Roger Ng, another former Goldman banker, already face charges in America and Malaysia. Mr Leissner, who last year pleaded guilty to the American charges of bribery and money-laundering, awaits sentencing. But Mr Ng protested his innocence in a court in New York in May after being extradited from Malaysia.

The alleged mastermind of the scheme, Jho Low, a Malaysian financier, remains at large. Mr Najib, meanwhile, must contend with four trials related to 1MDB in Malaysia, the first of which is under way. Both men deny wrongdoing.

Goldman has painted Mr Leissner as a rogue employee. The bank's chief executive has even apologised to Malaysians for Mr Leissner's role in the mess. But the former executive has said his cover-ups were in line with the bank's culture. The decision to charge another 17 executives under Malaysia's Capital Markets and Services Act (CMSA), which allows top employees to be held responsible for the offences of their organisations, suggests authorities take a broad view of the matter. In December, under another section of the CMSA, Malaysia filed criminal charges against the firm.

The bank denies wrongdoing. Edward Naylor, its head of corporate communications in the Asia-Pacific region, said that



the charges against the 17 are "misdirected". "Certain members of the former Malaysian government and 1MDB lied to Goldman Sachs," he added. As those accused had no opportunity to argue their case before the charges were filed, the attorney-general's move increases pressure on the bank in its dealings with the Malaysian authorities. It also signals Malaysia's determination to make an example of Goldman.

The big question is how America's crime-busters respond. Goldman is likely to be punished for the actions of Mr Leissner and others. But the size of a potential fine could depend on the extent to which they are judged to have acted in their employer's interest. One tricky legal issue is whether Goldman is liable for the \$2.7bn that was stolen from the bond-sale proceeds. The bank is thought to have set aside somewhere between \$1bn and \$2bn to cover legal costs related to 1MDB. Analysts reckon the size of any American fine could be based either on the fees Goldman earned on the bond issuance, or on the larger sum that disappeared from the fund. With \$76bn of core capital, the bank can absorb the potential hit to its balance-sheet. Its reputation for being both nimble and astute may take longer to recover. ■

Bond insurers

Bad wrap

Burned by mortgage debt, insurers turned back to muni bonds. Ouch

ON AUGUST 8TH two subsidiaries of OMBIA, an American insurer, sued nine Wall Street firms, alleging misconduct in underwriting bonds issued by Puerto Rico and "wrapped", or guaranteed, by MBIA. Lawsuits accusing banks of peddling iffy securities are not rare these days. However, this one is a reminder that "monoline" bond insurers, which briefly played a starring role in the financial crisis of 2008, are, though hardly full of life, still kicking.

Monoline insurers (so called because they focus solely on providing financial guarantees) charge a premium to cover interest and principal payments should bonds default. The industry sprang up in the 1970s, first focusing on municipal debt and later branching out into structured products like mortgage securities. That expansion backfired spectacularly when American house prices crashed. For a few weeks in 2008 the previously obscure monolines—the biggest of which were MBIA and New York-based Ambac—became front-page news as fears spread that they might be unable to pay claims on hundreds ▶▶

▶ of billions of dollars of securitised debt.

Rating agencies responded by downgrading monolines' own debt. That did for some of them, given that the business was largely about lending the insurer's AAA rating to the bonds. Ambac filed for bankruptcy and was placed in rehabilitation. MBIA avoided going bust but is a shadow of its former self. Both firms remain in run-off, meaning they cannot write new policies, but have big books of existing business. These days, most new policies are written by either Bermuda's Assured Guaranty or New York-based Build America Mutual.

The monolines had hoped that less-ravaged municipal bonds would shore them up. But there too volume tumbled as issuance dwindled and interest rates fell, eroding margins. Josh Esterov of CreditSights, a research firm, reckons the muni-insurance business is a tenth of its pre-crisis size.

Moreover, as the public-finance market shrank it also convulsed. Insurers have suffered bigger-than-expected losses on muni defaults, from Detroit to Puerto Rico. The latter's bankruptcy in 2017, designed to help it restructure \$120bn of debt and pension obligations, has hit them particularly hard. The \$170m net loss under US GAAP made by MBIA in the latest quarter was largely down to Puerto Rico.

The \$720m MBIA is seeking from Citigroup, UBS and seven other banks matches the value of claims it has paid out on Puerto Rican contracts. It accuses them of creating "a financial abyss of historic proportions" by urging Puerto Rico to issue "unsustainable" debt, and making false or misleading disclosures on which the insurer relied. The banks' defence is likely to focus on the fact that bond insurers are hardly unsophisticated; insurers have long advertised their credit-surveillance skills.

All of which suggests that post-crisis bond insurance is not for the faint-hearted. Last year David Einhorn became the latest in a long line of hedge funders to publicly short a bond insurer, calling Assured Guaranty "a melting ice cube". The firm pooh-poohed the critique, and many clearly think it has navigated the morass well: its share price is 50% above its pre-crisis peak (and 23% higher than when Mr Einhorn weighed in); MBIA's is down by 88%. This has allowed Assured to swoop in on some of the more attractive bits of rivals' books. It is also diversifying: on August 9th it acquired BlueMountain, a fund manager specialising in collateralised loan obligations—securities backed by leveraged loans, which fared better than mortgage-backed debt in the crisis and remain popular with yield-hungry investors. ■



Adapting to climate change

Costing the earth

High interest rates and climate change trap poor countries in a vicious cycle

IN EAST AFRICA millions of people are suffering from a prolonged drought. Deadly typhoons are wreaking havoc in Vietnam. Honduran coffee-farmers are seeing their crops wither in the heat. Poor countries have less capacity than rich ones to adapt to changing weather patterns, and tend to be closer to the equator, where weather patterns are becoming most volatile. As the world heats up, they will suffer most.

By 2030 poor countries will need to spend \$140bn-300bn each year on adaptive measures, such as coastal defences, if they want to avoid the harm caused by climate change. That estimate, from the UN Environment Programme, assumes that global temperatures will be only 2°C above pre-industrial levels by the end of the century, which seems unlikely. Adding to the costs, research suggests that these countries face higher interest rates than similar countries less exposed to climate risks. This raises the prospect of a vicious cycle, in which the most vulnerable countries pay more to borrow, making adaptation harder and them even more exposed.

The research focuses on the v20, a group founded by 20 vulnerable countries whose membership has since grown to 48. The members are mostly poor, together ac-

counting for less than 5% of global GDP. They include low-lying atolls, such as the Marshall Islands, and economies dominated by agriculture, such as Kenya. The researchers, led by Ulrich Volz of SOAS University of London and Bob Buhr of Imperial College Business School, examined sovereign-bond yields between 1996 and 2016 for 46 countries, 25 of them in the v20. After controlling for non-climate factors, such as income per person and levels of public debt, they estimate that v20 countries must pay interest rates 1.2 percentage points higher than comparable countries. That raises the v20's borrowing costs by about 10%, equivalent to an extra \$4bn each year in interest payments.

Companies may also be charged more for loans if they are perceived as more exposed to climate-related risks. In a new paper researchers at SOAS looked at the cost of corporate debt for more than 60,000 firms in 80 countries. A fifth of the companies, holding about 3% of the total debt, were in the countries most vulnerable to climate change. They were charged interest rates on average 0.83 percentage points higher—again roughly a 10% premium.

High interest rates largely reflect a greater risk of default. So credit-rating agencies are looking at climate risks, too. Undiversified economies that are reliant on agriculture are particularly susceptible, says Marie Diron of Moody's. In the 37 countries that the firm thinks are most vulnerable, farming accounts for 44% of employment on average. (Together they have issued \$2.8trn of sovereign debt, about 4% of the world's total.) Those relying on tourism could also be in trouble. And climate-exposed countries often have weak institutions, says Ms Diron. They struggle to plan for and respond to disasters.

Some of the smaller vulnerable countries have been attempting to build climate resilience by pooling insurance risk to make premiums more affordable. The first such attempt was the Caribbean Catastrophe Risk Insurance Facility, which has paid out \$139m since it was founded in 2007. The payouts help alleviate cashflow problems after disasters, reassuring investors and credit-rating agencies. In the past five years similar insurance schemes have popped up in sub-Saharan Africa, Central America and the Pacific.

Others are seeking to reduce the interest-rate premium with "blended finance", whereby multilateral institutions such as the World Bank and Asian Development Bank bear part of the risk for mitigation and climate-resilience projects. In April the v20 launched such a programme. Officials plan to apply to use \$500m from the UN's Green Climate Fund in the v20. Such schemes will help, but only a bit. In truth, climate-vulnerable countries can do little to offset the rise in the cost of capital. ■

Correction: In last week's story on faster payments ("Overdue", August 10th), we said that Chris Van Hollen was a Democratic congressman. He is in fact a senator.

Microfinance in Sri Lanka

Distress signals

COLOMBO AND NACHCHIKUDA

Microloans are driving borrowers, many of them women, to despair

IN PARTS OF Sri Lanka's north and east, some women keep track of their microloans by the day of the week the collectors come. Others identify the lenders by the colours of their collectors' shirts. Monday loan, Tuesday loan, blue shirt, yellow shirt: small, unsecured loans promoted by the government after the decades-long civil war ended in 2009 have enmeshed many women in hopeless debt. A central-bank official says his employees have talked desperate borrowers out of killing themselves. At least 170 committed suicide last year.

Nalani Wickremesinghe, from Baduraliya in the south, has taken loans from 11 companies, only two of which are registered with the central bank. The first was to pay for her husband's medical treatment. Then he fell at his workplace and is still bedridden. She has borrowed 500,000-600,000 rupees (\$2,800-3,400) in total—but has no idea of the interest rate. She has already pawned, and lost, her gold jewellery. Struggling to feed her family, she has little option but to borrow again.

In Nachchikuda, a coastal village, Sri Sundara Gowri sits in her front yard—not far from the satellite dish she bought on hire-purchase—and relates how she had five loans, three of which have been at last paid off. The first, of 25,000 rupees, was taken ten years ago after she returned from prolonged displacement to build a house. Unable to live on her husband's fishing income, they borrowed more. One loan went

on a fishing net that was soon damaged. Their property is now mortgaged to an informal lender who frequently sends agents to threaten them.

Researchers say these stories are typical. Borrowers know nothing about interest rates—effective rates may be as high as 220%—only the capital and weekly instalment. The finance ministry reckons big microfinance institutions have lent out 282bn rupees (\$1.6bn), but it has no data for the many smaller lenders that operate. No rules exist to prevent over-indebtedness. Most borrowers took out their first loan to consume rather than invest, and most new loans are taken out to service old ones.

Giving poor people small loans without collateral, albeit at higher interest rates than on conventional loans, was meant to spur entrepreneurship and allow people to bootstrap their way out of poverty. In Sri Lanka it seems to be burying many, particularly women, deeper in it.

Those areas in the north and the east where civil war once raged hold 160,000 households headed by women. When the war ended the government began a \$26m microloan programme called "Awakening North" for agriculture and business. The money was disbursed at 12% interest through state-owned and private banks.

Then commercial lenders swarmed in. These offered microloans at dearer interest, and hire-purchase and leasing. Placards nailed to shrapnel-ridden coconut

and palmyra trees advertised motorcycles, tuk-tuks and tractors on lease. Kilinochchi, the former rebel capital, bustles with banks and microfinance companies.

Most borrowers are women with no steady work. They buy consumer goods on hire purchase, and take loans for coming-of-age ceremonies or to cover family illnesses. Some borrow to send their husbands or sons abroad for work. If the job fails to work out, the man returns and the woman is saddled with debt.

Such problems seem more severe in Sri Lanka than elsewhere, says Hema Bansal of Accion, a global non-profit organisation. Leasing and housing-finance companies lend without assessing ability to repay. Few have links with international donors. Irresponsible lending carries no penalties. Last year Mangala Samaraweera, Sri Lanka's finance minister, accused microfinance companies of ruining Sri Lanka's financial sector and of creating a "sadistic situation" in which loan officers, when unable to extract repayment, solicit sexual favours.

There are strong echoes of the wave of farmer suicides linked to predatory lending in the Indian state of Andhra Pradesh in the 1990s and early 2000s. These caused India to pass laws preventing private microfinance institutions from "exploiting" borrowers through "usurious interest rates and coercive means of recovery". The measures led to borrowers becoming more aware of the terms attached to their loans, but they came at the cost of a sudden stop in lending and squeezed consumption.

Last year the Lanka Microfinance Practitioners' Association, a group of established lenders, published a code of conduct. This covers basics, such as checking how many loans a prospective borrower already has and stating the interest rate upfront. But the code is voluntary and covers only the group's 66 members; it thinks there are at least 5,000 unregulated firms. Worried about damage to its reputation from predatory lending, it wants the authorities to oversee all firms. A Microfinance Act, introduced in 2016 after ten years of lobbying, is weak, covering only deposit-taking lenders. Just three are registered under it. A Credit Regulatory Act is being written but could take two years to pass.

Last year the government wrote off business loans of up to 100,000 rupees given to women in drought-affected areas and capped interest rates at 35%. But the relief applied only to each person's biggest loan from a registered lender. Enforcing the cap fell to borrowers, few of whom knew about, let alone understood, the rule.

One-off measures will not do, says Ms Bansal: Sri Lanka needs properly enforced rules that prevent over-indebtedness and ensure fair treatment of borrowers. Until then, microfinance will be a cause not for hope but for despair. ■



Overburdened

Free exchange | Into the woods

The world's monetary system is breaking down. What comes next is unclear



“THERE IS NO longer any need for the United States to compete with one hand tied behind her back,” Richard Nixon, then America’s president, told his countrymen in August 1971. With that speech, he heralded the end of the post-war economic order, suspending the convertibility of the dollar into gold and putting up tariffs on imports. The survival of today’s order, which emerged from the chaos that followed, now also looks in doubt. In other circumstances, its demise might not have been mourned. But with each passing August day, the prospects for a happy shift from one global monetary regime to another look ever grimmer.

International trade is complicated by the fact that most countries have their own currencies, which move in idiosyncratic ways and can be held down to boost competitiveness. Governments’ efforts to manage currencies are constrained by certain trade-offs. Pegging them to an external anchor to stabilise their value means either ceding control of domestic economic policy or restricting access to foreign capital flows. Systems of monetary order, which resolve these trade-offs in one way as opposed to another, work until they do not. The context for America’s economic showdown with China is a system that worked once but no longer does.

Such things happen. The first great age of globalisation, which began in the late 19th century, was built atop the gold standard. Governments fixed the value of their currencies to gold, sacrificing some control over the domestic economy. This trade-off became untenable during the Great Depression, when governments renege on their monetary commitments. As one after another devalued, angry trading partners put up tariffs, and the world retreated into rival currency blocs. In 1944 Allied nations had another go at crafting a monetary order at a conference in Bretton Woods, New Hampshire. Participating countries fixed their currencies to the dollar (with some room for adjustment). The buck, in turn, was pegged to gold. The truce survived a mere quarter-century. As America’s trade balance sagged and inflation rose in the 1960s and 1970s, faith in the dollar’s peg to gold waned. Drastic fiscal and monetary belt-tightening might have restored its credibility abroad, but at great cost at home. Forced to choose between the domestic interest and the survival of the global monetary system, Nixon abandoned America’s Bretton Woods commitments.

The present system, often described as Bretton Woods II, slowly emerged from the ashes of the post-war order. The dollar’s dominance did not end. Much of the world’s commerce trades in greenbacks. Changes in America’s economic policy still echo around the world. A stronger dollar depresses global trade, research suggests, while tighter American monetary policy straitens global financial conditions. Through bitter experience, emerging economies learnt that protecting themselves against these gales meant accumulating large dollar reserves, which began to pile up in the 1990s and peaked in 2014. Emerging-market dollar purchases kept the greenback overvalued and boosted the competitiveness of emerging-market exporters. America began running large, persistent current-account deficits. In other words, its excessive consumption was funded by lending from the emerging world, which invested its dollars into American assets. This flow of money—from reserve-accumulating economies, China chief among them, to America, and from American consumers back to reserve-accumulating economies—defined Bretton Woods II.

The regime never looked particularly sustainable. America could not borrow from abroad for ever, and persistent current-account deficits ate away at its export industries. In the 2000s some economists worried that investors might lose faith in the greenback, precipitating a collapse in the dollar and a global crisis. Fewer observers predicted that America might tire of its role in the system, or that damage done to American communities by deindustrialisation might make politicians across the spectrum sceptical of the gains from globalisation.

For a time, though, a benign end to Bretton Woods II seemed possible. As Europe’s economies became more integrated and China grew, the prospect of a multipolar world, in which the dollar shared reserve-currency duties with the euro and the renminbi, loomed. European and Chinese consumers would play as important a role as American ones—and global imbalances would shrink. Alas, history has had other ideas. Amid the turmoil of the past decade, investors have clung to the safety of dollar assets, reinforcing America’s monetary hegemony. Debt crises have undercut faith in the euro. Confidence in the renminbi’s inevitable rise has been dimmed by China’s slowing growth, and its diminished enthusiasm for reform. Meanwhile, the present system looks more vulnerable than ever. President Donald Trump’s spiralling trade and currency wars threaten to topple Bretton Woods II, even as attractive alternatives to the system fade.

History repeats

A minimally disruptive end to Bretton Woods II remains within the realms of possibility. Its fate might resemble that of Bretton Woods I, especially if Mr Trump loses office in 2020. Democrats are more economically nationalistic than they used to be, but still mindful of the value of global co-operation. President Bernie Sanders or Elizabeth Warren might seek a one-off depreciation of the dollar while recommitting America to a rules-based system of global trade. A recession in China could scare its leadership into offering concessions on trade that America would accept.

But the experience of the 1930s may prove a more apt guide. In the absence of a co-ordinated adjustment to exchange rates and a peaceful end to trade hostilities, the world could stumble into a cycle of competitive devaluations and tariff rises. As trading relationships unravel, countries may organise themselves into rival economic blocs. It is hard to imagine the world repeating such an ugly era of history. But not as hard as it used to be. ■



Fooling Big Brother

Face off

As face-recognition technology spreads, so do ideas for subverting it

POWERED BY advances in artificial intelligence (AI), face-recognition systems are spreading like knotweed. Facebook, a social network, uses the technology to label people in uploaded photographs. Modern smartphones can be unlocked with it. Some banks employ it to verify transactions. Supermarkets watch for under-age drinkers. Advertising billboards assess consumers' reactions to their contents. America's Department of Homeland Security reckons face recognition will scrutinise 97% of outbound airline passengers by 2023. Networks of face-recognition cameras are part of the police state China has built in Xinjiang, in the country's far west. And a number of British police forces have tested the technology as a tool of mass surveillance in trials designed to spot criminals on the street.

A backlash, though, is brewing. The authorities in several American cities, including San Francisco and Oakland, have forbidden agencies such as the police from using the technology. In Britain, members of parliament have called, so far without

success, for a ban on police tests. Refuseniks can also take matters into their own hands by trying to hide their faces from the cameras or, as has happened recently during protests in Hong Kong, by pointing hand-held lasers at CCTV cameras to dazzle them (see picture). Meanwhile, a small but growing group of privacy campaigners and academics are looking at ways to subvert the underlying technology directly.

Put your best face forward

Face recognition relies on machine learning, a subfield of AI in which computers teach themselves to do tasks that their programmers are unable to explain to them explicitly. First, a system is trained on thousands of examples of human faces. By

rewarding it when it correctly identifies a face, and penalising it when it does not, it can be taught to distinguish images that contain faces from those that do not. Once it has an idea what a face looks like, the system can then begin to distinguish one face from another. The specifics vary, depending on the algorithm, but usually involve a mathematical representation of a number of crucial anatomical points, such as the location of the nose relative to other facial features, or the distance between the eyes.

In laboratory tests, such systems can be extremely accurate. One survey by the NIST, an America standards-setting body, found that, between 2014 and 2018, the ability of face-recognition software to match an image of a known person with the image of that person held in a database improved from 96% to 99.8%. But because the machines have taught themselves, the visual systems they have come up with are bespoke. Computer vision, in other words, is nothing like the human sort. And that can provide plenty of chinks in an algorithm's armour.

In 2010, for instance, as part of a thesis for a master's degree at New York University, an American researcher and artist named Adam Harvey created "cv [computer vision] Dazzle", a style of make-up designed to fool face recognisers. It uses bright colours, high contrast, graded shading and asymmetric stylings to confound an algorithm's assumptions about what a face looks like. To a human being, the result ►►

→ Also in this section

61 A "nuclear" missile explodes

62 Treatments for Ebola

62 Leopard seals share their supper

is still clearly a face. But a computer—or, at least, the specific algorithm Mr Harvey was aiming at—is baffled.

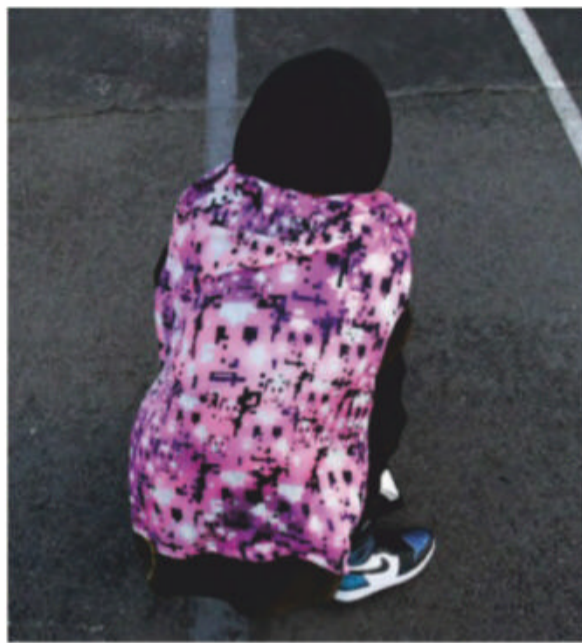
Dramatic make-up is likely to attract more attention from other people than it deflects from machines. HyperFace is a newer project of Mr Harvey's. Where cv Dazzle aims to alter faces, HyperFace aims to hide them among dozens of fakes. It uses blocky, semi-abstract and comparatively innocent-looking patterns that are designed to appeal as strongly as possible to face classifiers. The idea is to disguise the real thing among a sea of false positives. Clothes with the pattern, which features lines and sets of dark spots vaguely reminiscent of mouths and pairs of eyes (see photograph), are already available.

An even subtler idea was proposed by researchers at the Chinese University of Hong Kong, Indiana University Bloomington, and Alibaba, a big Chinese information-technology firm, in a paper published in 2018. It is a baseball cap fitted with tiny light-emitting diodes that project infra-red dots onto the wearer's face. Many of the cameras used in face-recognition systems are sensitive to parts of the infra-red spectrum. Since human eyes are not, infra-red light is ideal for covert trickery.

In tests against FaceNet, a face-recognition system developed by Google, the researchers found that the right amount of infra-red illumination could reliably prevent a computer from recognising that it was looking at a face at all. More sophisticated attacks were possible, too. By searching for faces which were mathematically similar to that of one of their colleagues, and applying fine control to the diodes, the researchers persuaded FaceNet, on 70% of attempts, that the colleague in question was actually someone else entirely.

Training one algorithm to fool another is known as adversarial machine learning. It is a productive approach, creating images that are misleading to a computer's vision while looking meaningless to a human being's. One paper, published in 2016 by researchers from Carnegie Mellon University, in Pittsburgh, and the University of North Carolina, showed how innocuous-looking abstract patterns, printed on paper and stuck onto the frame of a pair of glasses, could often convince a computer-vision system that a male AI researcher was in fact Milla Jovovich, an American actress.

In a similar paper, presented at a computer-vision conference in July, a group of researchers at the Catholic University of Leuven, in Belgium, fooled person-recognition systems rather than face-recognition ones. They described an algorithmically generated pattern that was 40cm square. In tests, merely holding up a piece of cardboard with this pattern on it was enough to make an individual—who would be eminently visible to a human security



Nothing to see here

guard—vanish from the sight of a computerised watchman.

As the researchers themselves admit, all these systems have constraints. In particular, most work only against specific recognition algorithms, limiting their deployability. Happily, says Mr Harvey, although face recognition is spreading, it is not yet ubiquitous—or perfect. A study by researchers at the University of Essex, published in July, found that although one police trial in London flagged up 42 potential matches, only eight proved accurate. Even in China, says Mr Harvey, only a fraction of CCTV cameras collect pictures sharp enough for face recognition to work. Low-tech approaches can help, too. “Even small things like wearing turtlenecks, wearing sunglasses, looking at your phone [and therefore not at the cameras]—together these have some protective effect”. ■

Nuclear propulsion

Chernobyl with wings

A nuclear accident in Russia points to the risks of atomic aviation

IN 1957 WORK began on Project Pluto, a treetop-skimming American missile loaded with hydrogen bombs. Nothing odd about that, except that the missile itself was also to be propelled by nuclear energy. A reactor on board would suck in air, heat and thus expand it, and then hurl it out of the back to provide thrust. Unfortunately, this also spewed out radioactive particles—which would hardly matter in war, but meant the missile could not be tested safely, and so the project was cancelled.

America's experience has not, however, deterred Vladimir Putin, Russia's president. In March 2018 he announced the de-

velopment of a Pluto-like missile called Burevestnik (“petrel”, a bird regarded by sailors of old as a harbinger of storms). This has since been tested in Novaya Zemlya, and has crashed several times.

On August 8th there was another accident ascribed by many observers to Burevestnik. Seven scientists perished in a rocket explosion on an offshore platform near Arkhangelsk. The damage was widespread. Some reports suggest that on August 13th Nyonoksa, a village 40km away, was almost evacuated after radiation there exceeded background levels.

As Michael Elleman, a missile expert at the International Institute for Strategic Studies, a think-tank, observes, nuclear propulsion can work in two ways. One is fission reaction—the sort used in power stations. But, as Project Pluto's designers found, that is tricky to fit in a missile.

The other option is radioisotope decay, which uses a substance such as polonium-218 to heat and evaporate a liquid. The gas generated might be employed to propel probes through the vacuum of space, but because it produces less thrust than fission the process has not been thought suitable for missiles. Mr Elleman hypothesises, however, that Russia may use it for another purpose: to create a long-lasting thermal battery which can provide unlimited electrical power for tasks such as missile guidance and warhead initiation.

Russia has admitted that an “isotope power source” was being tested, and Rosatom, the country's atomic-energy agency, has said a “nuclear battery” was involved. Some Russian sources suggest it was this—rather than a reactor—which failed, exploding when it was pulled from the water.

Why go to such trouble in the first place? Russia has ballistic missiles that can reach any part of the world, but it is worried that they may be vulnerable to current or future American defences. Cruise missiles can fly along low, erratic paths capable of skirting those defences. But Russia's longest-range cruise missile, Kalibr, can travel only a few thousand kilometres, so hitting America would require launching it from planes, ships or submarines. Burevestnik, by contrast, could be fired from deep inside Russian territory, and would thus be a more credible threat.

Pranay Vaddi, an arms-control expert at the Carnegie Endowment, a think-tank, suggests it might also serve as a bargaining chip. “This may be an effort to gain leverage in arms-control negotiations, to force the United States to the table,” he says. New Start, a treaty that limits American and Russian nuclear forces, covers only ballistic missiles. America does not seem keen on renewing it when it expires in 2021. The Russians may hope that Burevestnik will change America's attitude—if they can make it work. ■

Ebola

Hope

Two treatments for Ebola emerge from a clinical trial in Africa

NEWS ABOUT Ebola, a viral disease that kills up to 90% of those it infects, is usually grim. The latest Ebola outbreak, in the Democratic Republic of Congo, has thus far killed nearly 1,900 people and rages on. But on August 12th the grimness lifted somewhat with the announcement that two anti-Ebola treatments being tested in the country have proved effective. If administered when the first signs of infection appear, they boost survival rates to about 90%.

The treatments in question employ antibodies. These are special protein molecules made by the immune system in response to infection. They work by locking onto specific parts of invading pathogens, or of body cells infected by those pathogens—either gumming the target up and disabling it or marking it for destruction by other parts of the immune system. It is possible, however, to give the immune system a helping hand by identifying suitable antibodies in advance, manufacturing them in bulk, and then injecting them into those infected by the pathogenic target.

One of the successful treatments, code-named REGN-EB3, is a cocktail of three such antibodies, mixed by Regeneron, an American biotechnology firm. The other, mAb114, is a single antibody developed by America's National Institute for Allergies and Infectious Diseases. REGN-EB3 and mAb114 were among four experimental treatments tested in a randomised trial at clinics in Congo. Based on preliminary results from 500 patients, an oversight committee led by the World Health Organisation concluded that the trial should be stopped immediately, in order that the two successful treatments could be made available to everyone.

Prompt use after infection is vital. Overall, 29% of those receiving REGN-EB3 died. But of people treated when their viral loads were still low, only 6% succumbed. For mAb114 the numbers were 34% and 11% respectively—superficially less good, but actually indistinguishable statistically from the results for REGN-EB3. Two other candidate treatments had significantly worse figures than these, and were therefore rejected by the overseers.

Both REGN-EB3 and mAb114 have histories. Regeneron developed the former in 2016, in response to an Ebola epidemic in west Africa in which 11,000 people died. But that outbreak came to an end before the



Animal behaviour

P-P-Pick up a penguin

Antarctic predators share their supper

LEOPARD SEALS resemble their terrestrial namesakes in two ways. They have polka-dot pelts. And they are powerful, generally solitary carnivores that are quite capable of killing a human being if they so choose—as has indeed happened once, in 2003, when a British marine biologist was the victim.

Curiously, though, there have also been reports of leopard seals behaving in a friendly manner towards people—apparently trying to present gifts, in the form of prey, to divers. Until now, there has been no explanation for this philanthropy. But work just published in *Polar Biology* by James Robbins of Plymouth University, in Britain, suggests that what the seals are actually looking for is a dining partner.

Mr Robbins and his team were studying leopard seals in the waters around South Georgia, an island in the Southern Ocean 1,500km from the tip of the Antarctic peninsula. Instead of diving, or watching from ships, they used drones to carry out their observations. These drones recorded hitherto unobserved behaviour on the part of the animals.

First, belying their solitary reputation, the seals came together in groups to attack king penguins (twice the size of the gentoo penguin in the photograph) that were entering the sea from a rookery on the island. Second, when a seal did catch a penguin in these circumstances it would sometimes offer to share it with a neighbour in a way reminiscent of divers' tales of gift giving. What looked like an aberration might thus be a normal way of behaving. But why?

Mr Robbins's suggestion is that sharing a penguin with a neighbour makes it easier to eat. A close look at footage the drones recorded shows that seals in such partnerships take it in turns to feed. One holds the bird tight in its jaws while the other rips off a chunk of flesh and swallows it. Then they swap roles. By contrast, for a lone seal to reduce a penguin to bite-sized chunks means whipping the prey around in its jaws with as much force as it can muster, in order to tear lumps of flesh free from the carcass. This commonly happens, but is thought to be extremely tiring. Better, therefore, to find a buddy and enjoy a meal together.

treatment could make its way into clinics, and until this year there had been no opportunity to test it. The story of mAb114 goes back even further. Its pertinent antibody was isolated from a survivor of an epidemic of Ebola in Congo in 1995.

Both treatments will now be deployed in the field—but, given the smallish size of the trial that approved them, doctors will be looking closely at their relative efficacies to determine whether, in light of more data, one is actually better than the other.

Regardless of that, effective treatment will surely help break the epidemic directly, by stopping those cured from passing on the virus. It may help indirectly, too. At the moment, those who have become infected, seeing others go into clinics alive only to leave in coffins, are understandably reluctant to follow suit. That means they remain in their homes and spread the illness to others. The prospect of going to a clinic for a cure will change this, and thus also help to break the chain of transmission. ■



LUXE LIVING

W Residences Algarve
Home, with added perks.
Hotel-inspired Residences,
styled with oceanic allure.

walgarveresidences.com
sales@walgarveresidences.com
+ 44 (0) 20 7205 4307

©2019 Nozül Algarve and Marriott International, Inc. All Rights Reserved. W Algarve Hotel and W Algarve Residences are not owned, developed or sold by Marriott International, Inc. or its affiliates ("Marriott"). Nozül Algarve S.A. uses the W marks under a license from Marriott. Nozül Algarve S.A. is solely responsible to comply with all securities laws, including the Collective Investment Scheme under UK law (and selling through a licensed agent to UK residents if required by UK laws) and the US securities laws as regards the marketing and sale of the W Algarve Residences.

W
ALGARVE
THE RESIDENCES



Property. Investment. Lifestyle

LISBON

A GOLDEN OPPORTUNITY

- Sought-after & central area with rental yields of up to 7%
- Spacious terraces, car parking, some units with pools & gardens
- Golden Visa (GV) available, leading to European residency
- Start GV at once & receive 10% discount on the initial deposit
- Mortgages available with up to 70% LTV payable on completion*

1-3 bedroom apartments / €420,000 – €1.5M

*Subject to status. This is not an offer.

+44 (0) 20 7471 4500
athenaadvisers.com/ec-lisbon

A ATHENA ADVISERS



DON'T JUST OWN IT. LIVE IT.

In a land where time stands still.

Live your life at Castelfalfi, a jewel in the Tuscan crown. A private estate of almost 3000 acres of rolling countryside, vine-clad hills, shade-dappled olive groves and traditional farms. And, at its heart, the stunning medieval hilltop village of Il Borgo.

Now is your chance to create a life in the real Tuscany, in a land untouched by time. From new and restored apartments and restoration farmhouses to contemporary villas, designed, built and finished to your specifications, the choice is yours.

Where fine hotels, restaurants, golf courses and amenities blend into the surroundings and the cosmopolitan delights of Florence, Pisa and Siena are within easy reach.

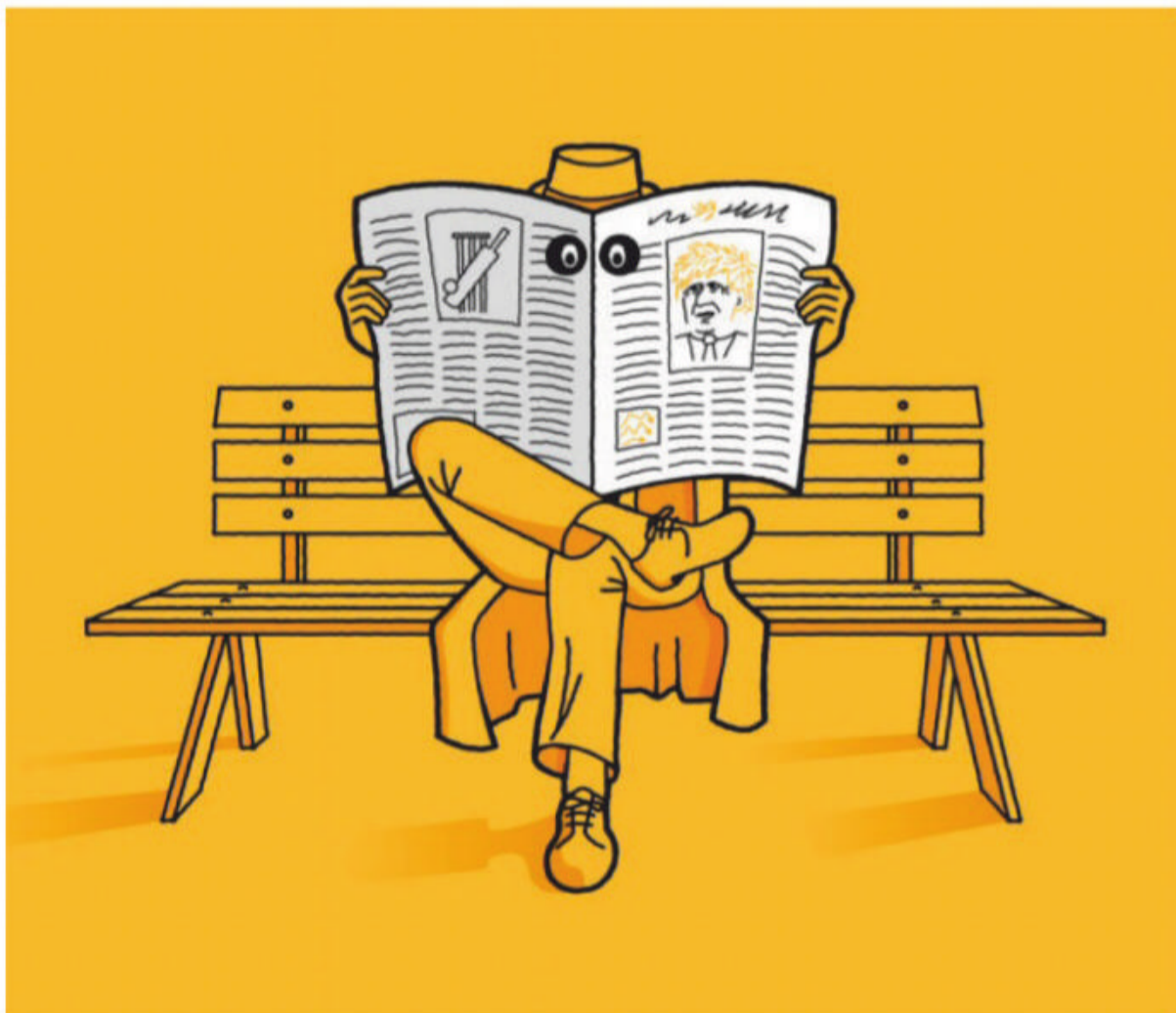
Prices from €390,000 – €11.5 million.



Toscana Resort Castelfalfi
REAL ESTATE DIVISION

For more information about our property portfolio:

+39 0571 890131 | realestate@castelfalfi.it | www.castelfalfirealestate.com



→ Also in this section

65 Cold-war summitry

66 Music and morals in America

66 Téa Obreht's magical Western

Espionage fiction

Spies like us

OXFORD

Mick Herron's novels are a satirical chronicle of a Britain ill at ease in the 2010s

A SERIES OF comic thrillers about failed spies may seem an unlikely source of insight into modern Britain. And, in fact, Mick Herron's six novels about a fictitious dumping-ground for errant British agents called Slough House do not aspire to documentary realism. "Authenticity is not what I'm seeking," the author says, in a museum café near his home in Oxford. "Plausibility and broad-stroke reality is what I'm after." Yet, in their gleefully shocking way, his books reflect the trajectory of the nation. Their jaundiced characters are the anti-heroes Brexit-era Britain deserves.

None of Mr Herron's growing band of devotees can, for instance, have failed to notice that this reality includes a portrait—sustained across the series—of a ruthlessly ambitious politician named Peter Judd. "Public buffoon and private velociraptor", the jovial, Latin-spouting Judd—"a loose cannon with a floppy haircut and a bicycle"—weaves through the vicissitudes of public life. "Straddling the gap between media-whore and political beast", he charms, bluffs and schemes his way towards the peaks of power. Meanwhile, "be-

Joe Country. By Mick Herron. *Soho Crime*; 360 pages; \$26.95. *John Murray*; £14.99

low the surface lay a temper that could scorch chrome".

In the first book, "Slow Horses" (published in 2010), a journalist sketches out a path to Downing Street for Judd that relies on nativism, since "the decent people of this country are sick to death of being held hostage by mad liberals in Brussels." Mr Herron insists that Judd "was created as a composite character made up of all the worst possible attributes that a politician could have." He does not write *romans à clef*, and, indeed, politicians are not his stories' focus. They barge in only to aggravate the lower-level debacles that punctuate routine in the "administrative oubliette" of squalid, shambolic Slough House.

Yet few contemporary British writers possess keener antennae for the background hum of public affairs. Drily, Mr Herron notes that "the political chaos we've entered is playing nicely into the books I've written." In the latest, the just-

published "Joe Country", Diana Taverner—the Machiavellian chief of Mr Herron's fictionalised version of MI5, Britain's domestic security service—considers: "If you want your enemy to fail, give him something important to do." This strategy, the reader learns, is known "for obscure historical reasons" as "The Boris".

From their origins a century ago, in the era of John Buchan and Somerset Maugham, British spy novels have held up a cracked and smudged mirror to their times. In fiction, the twilight intrigues of Her Majesty's secret services have tracked the course of imperial decline, the intelligence triumphs of the second world war and the ambiguous stalemate of the cold war. Since that struggle's end, an assorted cast of jihadists, rogue states and crooked multinationals have assumed the adversary's role in espionage fiction.

Gentlemen and players

In Mr Herron's work, by contrast, the most vicious enemies lurk within—among colleagues, bosses, former allies, even family. "Essentially, I'm writing office politics," he says. Manda Scott, author most recently of "A Treachery of Spies", notes that the inter-necine savagery of Mr Herron's security agencies finally buries the espionage-fiction myth of "decent gentlemen—public ▶▶

Correction: In "Thinking outside the box" (August 3rd) we said that the Bauhaus's second director was Adolf Meyer. In fact it was Hannes Meyer. And Marianne (not Maria) Brandt designed the tea-infuser pictured in the article.

▶ schoolboys all—upholding the values of imperial England by dint of superior intelligence”. Mr Herron, she says, broke the old boundaries by introducing a set-up in which the spies serve “venal politicians with no values other than the grabbing of power and survival”.

He leavens this sardonic disenchantment with a dark seam of comedy, in meticulously sculpted prose. He is “a master of timing, word by word, sentence by sentence,” says Andrew Taylor, a crime novelist. “His language creates its own world, with streaks of satire and loss.” In a solemn genre, “it’s refreshing to find a series that makes you regularly laugh out loud.” Mr Taylor reckons that spy fiction may at last have found an author who will move it beyond the formidable legacy of John le Carré, its master craftsman.

For his part, Mr Herron thinks of himself as an outsider in the world of espionage. After all, “so many writers of spy fiction are writing from a certain kind of knowledge”, either as former practitioners (like Mr le Carré) or as journalists. Born in Newcastle upon Tyne, he studied in Oxford and stayed there, working as an editor for a London legal publisher. After four Oxford-set mysteries, he devised *Slough House* and decided, “I like this world. I’m going to stay in it.” Some of the conflicts explored by Mr le Carré—a writer he reveres—endure among his downbeat rejects: “My characters are mired in the past. The big beasts among them are cold-war relics.” Permanent East-West tension is to them the natural state of affairs; history shapes their present. “Sudden events that blind us with their light”, thinks one elderly spymaster, “had roots in the slowly turning decades.”

Looming over each twisting plot is Jackson Lamb, the scruffy and flatulent Falstaff of the undercover world. This dinosaur spook, once based in Berlin, runs his “crew of misfits” with a heavy yet protective hand. An “overweight, greasy has-been”, Lamb is a grotesque and a flawed champion. Mr Herron stresses that “I’m not into wish-fulfilment. I don’t think a bunch of heroes will save society.” Lamb, though, will cross almost any line to save his own agents. Even they, sociopathic losers and charmless geeks alike, strive to do the decent thing. “There’s a level of romance operating there,” he admits. “Their frustrations and thwarted desires come from wanting to do good.” Cynicism and hypocrisy intensify the higher readers ascend on Mr Herron’s ladder of power.

External threats—far-right thugs, rogue veterans, even North Korean honeytraps—do impinge on Lamb’s shabby domain. When Brexit begins to loom over the clandestine affairs of an “increasingly isolated island state”, espionage by and against other European powers comes to the fore. Mostly, though, Mr Herron’s dys-

functional crew suffers from a sort of auto-immune condition. Their closed community generates toxic antibodies that devour it from within. The self-inflicted chaos, suspicion and inertia—and the brutal self-interest that lurks beneath—acidly capture the national mood.

Although their comic zest seldom falters, the topical bite of the books has sharpened. “Joe Country”, in which one of Lamb’s underlings imagines a country led by Judd as “a mash-up of ‘The Handmaid’s Tale’ and ‘It’s a Knockout’” (a notoriously puerile British game-show), feels like the bleakest volume yet. Its gags still sparkle. The stage, however, darkens. “As a human being, and a citizen of this country, I deplore almost everything that’s going on in public life,” Mr Herron says. “As a novelist with a bent towards the satirical, it’s a gift.” ■

Cold-war summitry

Dancing on ice

An Impossible Dream: Reagan, Gorbachev, and a World Without the Bomb. By Guillaume Serina. *Pegasus Books*; 256 pages; \$25.95. *Biteback Publishing*; £12.99

A WORLD WITHOUT nuclear weapons still seems far-fetched. But in October 1986 it was closer than many realised. In his book, Guillaume Serina tells the tantalising story of the Reykjavik summit between the Soviet and American leaders, Mikhail Gorbachev and Ronald Reagan, who came within a whisker of a ten-year deal to eliminate both countries’ arsenals.

Agreement was desirable yet impossible. Both sides were aware that they had far more nuclear warheads and missiles than they needed. The Soviet side also knew that

the cost of maintaining nuclear weapons was crippling the economy. Less fully appreciated was the fragility of the balance of terror, which was at risk less from war-mongering than from misunderstandings, glitches or accidents. On several occasions during the cold war, only thin threads of luck and good judgment averted the apocalypse. But agreement meant crossing ice-sheets of mistrust. And on the American side, Reagan’s fixation on the Strategic Defence Initiative, or Star Wars—space-based missile-busting lasers—proved an insuperable obstacle.

The Soviets offered the United States a big concession: to let it continue with “laboratory” testing of this new scheme. The definition of that proviso could have been stretched to meet all practical requirements (33 years later, the Star Wars technology is nowhere near useful deployment). But Reagan had set his heart on a futuristic system that would make his country safe for ever, and did not want to return home seeming to have given it away. As Roald Sagdeev, a Soviet nuclear expert, puts it: “The Americans oversold the Strategic Defence Initiative, and the Russians overbought it.”

Mr Serina’s account, first published in French three years ago, draws on declassified archives and interviews with witnesses to paint a vivid and valuable picture of the two-day meeting in the Icelandic capital, despite the occasional redundant flourish and some unfamiliarity with the technology he mentions. He is a leading French correspondent dealing with the United States, not the Soviet Union, which sometimes shows. Moreover he blithely assumes the anti-nuclear case is self-evident, and is prone to unthinking moral equivalence between the communist empire and the free world. Dialogue indeed helps clarify disagreements and build trust. All the same, Reagan’s views of a malevolent Kremlin were well-founded.

If, just if, the summit could have gone ▶▶



Reagan and Gorbachev, so near and yet so far

▶ on one more day...that might have given the two leaders time to build their burgeoning rapport and overrule sceptics in their delegations. Mr Gorbachev, accompanied by his wife Raisa, was willing to give the talks another 24 hours. Lonesome and exhausted, Reagan was not. "How might the world have changed if Nancy had come along for the ride?" asks Mr Serina.

Probably not a lot, in truth. The two big superpowers would hardly scrap their nuclear arsenals without the Chinese, Indians, Israelis and others doing the same—and how would that be verified? Still, despite the false start in Reykjavik, the negotiations continued, with the elimination of intermediate-range nuclear weapons in Europe and deep, verified cuts in the strategic arsenals on both sides. Happy days, by contemporary standards. ■

Music and morals in America

Boogie nights

Everybody's Doin' It: Sex, Music, and Dance in New York, 1840-1917.

By Dale Cockrell.
W.W. Norton; 288 pages; \$27.95 and £19.99

IN THE SPRING of 1899 a committee was convened in New York to investigate the city's police force—and the "protection" it might be offering to Gotham's saloons and brothels. Politicians and do-gooders were particularly interested in a new kind of music known as "rag-time", which William Devrey, the police chief, called "a filthy abomination".

He was not alone in that opinion. As Dale Cockrell writes in his terrifically entertaining book, this was only a part of the "public avalanche of criticism that questioned ragtime's character and the moral bearings of people who enjoyed it." Arthur Weld, a professor of music, pronounced the genre "evil" and "vulgar". It was nothing short of a "national calamity".

Mr Cockrell is professor of musicology at Vanderbilt University in Tennessee. In "Everybody's Doin' It" he makes a bracing case that New York was the hothouse in which American popular-music culture took root. He considers the intersection of musicianship and morality from the early days of "blackface minstrelsy"—in which white performers insultingly darkened their faces—through to the birth of ragtime and jazz. The lives he writes about were mostly lived below "the horizon of record"; he mines newspapers and police reports, as well as the testimonies of middle-class witnesses that drip with condescension for those "beneath their place".

Magical realism

Ghost train

Tragedy, camels and the supernatural in 19th-century Arizona

Inland. By Téa Obreht. *Random House*; 384 pages; \$27. *Weidenfeld & Nicolson*; £14.99

TÉA OBREHT, a prizewinning Serbian-American author, has a penchant for ghosts and exotic beasts. Her debut novel, "The Tiger's Wife", was an affecting meditation on war and survival in an unnamed Balkan country that circled around the titular tiger and a spectre known as "the deathless man". Her second novel takes this otherworldly sensibility into the Arizona Territory of the late 19th century. "Inland" is half magical, half historical fiction: the braided tale of two unusual characters scratching a life from a harsh landscape, whose destinies will surely collide.

The book belongs mainly to Nora, mother of three boys and a daughter who died of heatstroke in infancy but lives on as a voice in Nora's ear. Her husband and grown sons have now vanished; Nora is parched and at her wits' end. Her town is threatened by drought and economic ruin. Meanwhile, elsewhere in the desert territories, an orphan and outlaw named Lurie finds himself joined to an exotic—and historically accurate—parade: a procession of camels on their way to become pack animals for the cavalry.

This tall tale, like Ms Obreht's first, conjures a mythical, supernatural world.

It bears a resemblance to "Days Without End", a magnificent recent Western by Sebastian Barry, an Irish author. Both novels are lush and poetic; both nod to the West's bloody history, yet hover vaguely, and gorgeously, above it. "Inland" is most compelling in its study of the pioneer wife whose frustrations and fears lead to tragedy. Yet, disappointingly, it succumbs to a sort of dreamy inevitability about the settlement of the West that will add little to most readers' grasp of the period. Natives are seen only from the settlers' point of view; the whole is awash in the slanted light of fable.

Ms Obreht has a gift for vivid language and deft stories-within-stories. Descriptions of the camels, especially, are delightful: "Their eyelids are thatched with the finest lashes God ever loomed." She gives words fresh purposes, to great effect; verbs sizzle. In "Inland", Lurie fills the philosopher's role; he can see the dead, and mourns the fact that they cannot see one another and thus are doomed to roam eternity alone. "Who would speak of these things when we were gone?" he asks in a wistful key, ticking off things that seem irrevocably past: the native people, the first sighting of a steamship, the "old emptiness" of the West. The story quickens to its haunting end—if not to any new frontier.

The result is an energetic, colourful tour of the city's dens of iniquity. "Dives", as such spots are known to this day, were usually in cellars, so people "dived" into them. The bars, brothels and concert halls that Mr Cockrell describes were places of sexual



Steps towards calamity

liberation, where men and women danced the hoochie koochie, the bunny hug, the wiggle and the shiver; they spied, they hopped, they dipped. They inculcated racial freedom, too. Enslaved New Yorkers were freed by 1827; by 1873 racial discrimination was outlawed in the city. Yet one consequence of the increased regulation of musical entertainment thereafter was segregation, as moralisers frowned on racial mixing. Thus "the spirit of Jim Crow started casting its long, dark shadow over New York's social, political, and cultural life."

The book's focus may seem narrow, but the vividness with which Mr Cockrell evokes a vanished world is compelling. The only thing missing is a soundtrack; readers will long to hear "Roll Me Around Like a Hoop My Dear", "Meet Me Tonight in Dreamland" or the "Boogie Man Rag". Even in silence, however, by the last page the author has proved his point: that the musical, terpsichorean and sensual turmoil of the great city made for "an explosive compound of sounds and rhythms that would prove quite impossible to extinguish." ■



CENTRAL BANK OF NIGERIA COLLABORATIVE POST GRADUATE PROGRAMME (CBN-CPP)
PARTNERING WITH THE UNIVERSITY OF NIGERIA, NSUKKA, UNIVERSITY OF IBADAN AND
AHMADU BELLO UNIVERSITY, ZARIA

**ACADEMIC STAFF VACANCIES
(INTERNAL AND EXTERNAL)**

The CBN-CPP is a flagship intervention programme of the Central Bank of Nigeria in the education sub-sector. The objective is to upscale the quality of teaching/learning that is at par with global standards and engender the supply of a critical mass of well-trained graduates for the financial services industry and the entire economy. The focus is on finance related courses, especially Economics, Banking and Finance, Accounting and Business Administration. The CBN-CPP will be hosted at the Centres of Excellence (CoE) which have been built at the designated universities. Academic programmes are expected to commence in October 2019. To this end, the Board of Trustees, CBN – CPP in partnership with the University of Nigeria, Nsukka, University of Ibadan, Ibadan and Ahmadu Bello University, Zaria, invite applications from experienced senior academics (Professors/Associate Professors and Senior lecturers) within and outside the host universities, Consultants, and Officials (serving or retired) of financial institutions to teach in the programme.

Requirements For The Positions:

(i) Professor:

Professors must possess PhD degree in their fields of specialization and in the discipline(s) they wish to apply for. They must show evidence of academic leadership with at least 10 years teaching, research and administrative experience in a university/research institute. Candidate must have adequate scholarly publications in both local and international peer reviewed journals, in line with the requirements of the Senate of each University.

(ii) Senior Lecturer:

Qualifications are the same as (i) above but with at least six (6) years teaching, research and administrative experience in a university/ research institute and evidence of at least eight (8) scholarly publications in both local and international journals.

(iii) Consultants and Officials of Financial Institutions:

Applicants must possess at least a Masters' degree in addition to professional qualification, and at least six (6) years' experience in senior managerial positions in consulting/practising firm or financial institution.

In addition, candidate should be a specialist in any of the under listed areas:

Economics: Microeconomics, Macroeconomics, Quantitative Techniques, Research Methodology, Econometrics, Development Economics, Monetary Economics, Financial Economics, International Economics/Macroeconomics, Operations Research, Managerial Economics, and Game Theory.

Banking and Finance: Quantitative methods in Banking & Finance/ Quantitative Finance, Research Methodology, Monetary and Banking Intermediate Theory and Policy, Financial Statement Analysis, Marketing of Financial Services, Corporate Finance/Financial Management, Bank Lending and Credit Administration, International Banking and Finance, Regulation of Financial Institutions, Securities Market and Portfolio Theory, Financial Planning and Control, Non-interest/Islamic Banking, Investment and Capital Market Theory, Futures and Derivatives, Fintech and Distributed Ledger Technology, Financial Econometrics, and Treasury Management.

Accounting: Accounting theory, Audit and Assurance, Quantitative analysis, Research methodology, Public sector accounting, Accounting Information System, Petroleum and Solid Minerals, Accounting, Forensic Accounting, Forensic Auditing, Financial Accounting, International Accounting, Management Accounting, Accounting Practice, and Integrated Reporting, Social and Environmental Accounting, Tax Audit and Tax Accounting, Estate and Gift Taxation, Financial Statement Linkages.

Business Administration: Business Ethics and Strategic Management; Entrepreneurship and Corporate Social responsibility; Corporate Policy, Strategy and Management; Corporate Governance and High Performance Board, Risk Management (credit, financial and Enterprise); Leadership (Business Organisations, Banking and Financial Institutions, Marketing Organizations and Accounting Organizations); Marketing Process and Practice; Taxation Theory, Marketing Process and Practice; Tax Administration; Tax laws; Machine Learning and Forecasting; Advanced Spreadsheet and Decision Support Systems; Big Data Analytics and Visualization; Simulation Modeling; Business Statistics with R; and Prescriptive Analysis for Decision Making.

Terms of Engagement:

These positions are part time and for a fixed term. The Modular course approach would be adopted.

Remuneration:

Salaries and conditions of service are competitive and negotiable. However, staff would be paid per module taught.

Method of Application:

Interested candidates should apply online through <https://cbncpp.org> along with signed detail curriculum vitae containing names of three referees and photocopies of credentials

Deadline for submission of application is August 26, 2019.

(Signed)
Uwatt B. Uwatt, Ph.D
Secretary, CBN-CPP BoT

CENTRAL BANK OF NIGERIA COLLABORATIVE POST GRADUATE PROGRAMME (CBN-CPP)
PARTNERING WITH THE UNIVERSITY OF NIGERIA NSUKKA, UNIVERSITY OF IBADAN, AND
AHMADU BELLO UNIVERSITY, ZARIA

**VACANCY FOR THE POSITION OF DIRECTOR,
CENTRE OF EXCELLENCE**

In an effort to improve the quality of postgraduate education in Nigeria and, in particular, increase the stock of well-trained graduates for the financial sub-sector of the Nigerian economy, the Central Bank of Nigeria (CBN) built Centres of Excellence (CoE) in selected Nigerian Universities, namely: Ahmadu Bello University, Zaria; University of Ibadan, Ibadan; and University of Nigeria, Nsukka. The Centres will host the CBN Collaborative Postgraduate Programme (CBN-CPP) in partnership with the host universities. The aim is to provide world class postgraduate studies in Economics, Accounting, Banking and Finance, and Business Administration comparable to what obtains in the best business schools across the globe. Accordingly, the Board of Trustees (BOT of the CBN-CPP) invites application from qualified candidates for the position of **Director, Centre of Excellence** in each of the host universities. The Director of the CoE will play a critical role in designing, implementing, and leading faculty development programmes in support of the CoE.

Essential Duties & Responsibilities:

The Director of the CoE would provide leadership and vision for the continuous improvement of teaching and learning at the CoE. The individual is directly responsible for developing strategies, services, and support for faculty and staff for effective teaching and students' success. The Director is expected to facilitate collaborative initiatives with academic and support units in the host universities and sister CoEs that foster best practices in teaching and learning.

In particular, the successful candidate will be expected to:

- Design, conduct, and evaluate faculty development programs including workshops and seminars that will create cross-campus partnerships and foster faculty communities around topics of common interest;
- Facilitate new initiatives and encourage collaborations among the various curricular and co-curricular programs that support effective teaching and learning through a variety of instructional modalities/ modules;
- Promote a culture that values and recognizes the importance of teaching excellence, collaboration and student-centered learning;
- Collaborate with the relevant units within the host universities and sister CoEs to provide curricular and classroom development in alignment with CBN-CPP mission and strategic plan. Support faculty with implementing and assessing instructional methods and technologies that complement teaching needs and individual learning styles;
- Facilitate and support collaborations in the scholarship of teaching and learning; stay abreast of literature on teaching and learning, as well as networking with national and international groups, organisations and individuals;
- Provide leadership and planning for all instructional and curricular development activities designed to support effective teaching and learning; and
- Promote multicultural teaching and the infusion of diversity into the curriculum/classroom.

Minimum Qualifications

Education:

An earned doctorate degree in relevant academic discipline.

Experience:

- An excellent record of teaching experience at the university level;
- Successful administrative and professional development experience with faculty, preferably in a teaching/learning center;
- Proven record of published scholarship in high impact journals and Scopus indexed;
- A minimum of two years of progressively responsible and successful academic leadership experience in a higher education institution; and
- Proven commitment to academic excellence and innovation.

Skills:

- Excellent communication and motivational skills;
- Knowledge of outcomes-based curricular design, program development, assessment of learning outcomes, student-centered learning and learning theories, and technology-enhanced teaching and learning;
- Demonstrated ability to provide collaborative leadership and management skills, and to work collaboratively with other administrative and academic units, as well as sister Centres of Excellence;
- Demonstrated ability to attract research grants to the CoE.

Preferred Qualifications:

- Knowledge of course management systems and effective online teaching methodologies;
- Knowledge and use of innovative teaching approaches (e.g. collaborative learning, civic learning and engagement, problem-based learning);
- Knowledge of use, implementation, and best practices for instructional technologies; and
- Demonstrated appreciation and advocacy for diversity.

Conditions of Service

The position is full time, and for a fix term of three (3) years renewable only once. Remuneration is very attractive and competitive, but negotiable based on experience.

Application Process

Candidates should apply online through <https://cbncpp.org> with the following supporting documents:

1. Letter of application addressing qualifications and interest for this position;
2. Current Curriculum Vitae;
3. A 500-word vision statement for the Centre of Excellence;
4. A 500-word statement on your philosophy of faculty professional development related to teaching and research;
5. Evidence of engaged quality teaching (e.g., summary of the last five years of student teaching evaluations (if any), teaching portfolio, teaching philosophy statement, peer comments from observations of your teaching, etc.);
6. Evidence of administrative experience in similar Centres.

Application Deadline:

Applications received by August 26, 2019 will be given full consideration.

(Signed)
Uwatt B. Uwatt Ph.D
Secretary, CBN-CPP BoT

Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units			
	% 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 \$	% change Aug 14th on year ago				
United States	2.3	Q2	2.1	2.2	1.8	Jul	2.0	3.7	Jul	-2.4		-4.7	1.6		-133	-	
China	6.2	Q2	6.6	6.2	2.8	Jul	2.8	3.6	Q2§	0.7		-4.5	2.9	§§	-44.0	7.02	-2.0
Japan	1.2	Q2	1.8	1.0	0.7	Jun	1.0	2.3	Jun	3.6		-3.0	-0.3		-34.0	106	4.8
Britain	1.2	Q2	-0.8	1.3	2.1	Jul	1.8	3.9	May††	-4.1		-1.6	0.6		-76.0	0.83	-6.0
Canada	1.3	Q1	0.4	1.6	2.0	Jun	2.0	5.7	Jul	-2.6		-0.9	1.1		-117	1.33	-1.5
Euro area	1.1	Q2	0.8	1.2	1.1	Jul	1.3	7.5	Jun	2.9		-1.1	-0.7		-99.0	0.90	-2.2
Austria	1.4	Q1	3.8	1.3	1.6	Jun	1.7	4.5	Jun	1.9		0.1	-0.4		-96.0	0.90	-2.2
Belgium	1.2	Q2	0.8	1.2	1.4	Jul	1.8	5.6	Jun	0.1		-0.9	-0.3		-104	0.90	-2.2
France	1.3	Q2	1.0	1.2	1.1	Jul	1.2	8.7	Jun	-0.9		-3.3	-0.3		-96.0	0.90	-2.2
Germany	0.4	Q2	-0.3	0.8	1.7	Jul	1.6	3.1	Jun	6.5		0.7	-0.7		-99.0	0.90	-2.2
Greece	0.9	Q1	0.9	1.8	nil	Jul	0.8	17.6	Apr	-3.0		0.1	2.1		-218	0.90	-2.2
Italy	nil	Q2	0.1	0.1	0.4	Jul	0.9	9.7	Jun	1.9		-2.5	1.5		-154	0.90	-2.2
Netherlands	2.0	Q2	2.1	1.7	2.5	Jul	2.6	4.2	Jun	9.7		0.6	-0.5		-92.0	0.90	-2.2
Spain	2.3	Q2	1.9	2.2	0.5	Jul	0.9	14.0	Jun	0.6		-2.3	0.2		-120	0.90	-2.2
Czech Republic	2.8	Q1	2.4	2.6	2.9	Jul	2.5	2.0	Jun‡	0.2		0.2	0.9		-126	23.2	-2.6
Denmark	2.4	Q1	3.2	1.8	0.4	Jul	0.9	3.8	Jun	6.8		1.0	-0.6		-92.0	6.69	-1.9
Norway	2.5	Q1	-0.3	1.8	1.9	Jul	2.3	3.4	May††	7.1		6.6	1.1		-60.0	8.96	-6.5
Poland	4.7	Q1	3.2	4.0	2.9	Jul	2.0	5.2	Jul§	-0.7		-2.0	1.8		-140	3.92	-3.3
Russia	0.9	Q2	na	1.3	4.6	Jul	4.8	4.4	Jun§	7.2		2.1	7.4		-103	66.0	0.8
Sweden	1.4	Q2	-0.3	1.7	1.7	Jul	1.9	7.6	Jun§	4.9		0.5	-0.4		-87.0	9.63	-5.4
Switzerland	1.7	Q1	2.3	1.6	0.3	Jul	0.5	2.3	Jul	9.6		0.5	-1.0		-95.0	0.97	2.1
Turkey	-2.6	Q1	na	-1.7	16.6	Jul	16.1	13.0	Apr§	-0.7		-2.3	15.0		-450	5.62	15.8
Australia	1.8	Q1	1.6	2.2	1.6	Q2	1.7	5.2	Jul	-0.4		0.1	0.9		-165	1.48	-6.8
Hong Kong	0.6	Q1	-1.2	1.7	3.2	Jun	2.6	2.8	Jun††	4.0		0.4	1.2		-97.0	7.85	nil
India	5.8	Q1	4.1	6.7	3.1	Jul	3.6	7.5	Jul	-1.8		-3.5	6.6		-120	71.3	-2.0
Indonesia	5.0	Q2	na	5.1	3.3	Jul	3.1	5.0	Q1§	-2.6		-1.9	7.4		-59.0	14,245	2.4
Malaysia	4.5	Q1	na	4.4	1.4	Jul	0.8	3.3	Jun§	2.5		-3.5	3.4		-63.0	4.19	-2.1
Pakistan	3.3	2019**	na	3.3	10.3	Jul	9.1	5.8	2018	-3.4		-7.1	13.8	†††	377	158	-21.7
Philippines	5.5	Q2	5.7	6.0	2.4	Jul	3.6	5.1	Q2§	-2.1		-2.3	4.4		-212	52.3	2.1
Singapore	0.1	Q2	-3.3	0.9	0.6	Jun	0.6	2.2	Q2	15.8		-0.6	1.7		-78.0	1.39	-0.7
South Korea	2.1	Q2	4.4	1.9	0.6	Jul	0.7	3.9	Jul§	4.0		0.6	1.2		-128	1,213	-7.0
Taiwan	2.4	Q2	4.7	1.7	0.4	Jul	0.5	3.7	Jun	13.0		-1.0	0.7		-18.0	31.4	-1.8
Thailand	2.8	Q1	4.1	3.3	1.0	Jul	1.2	0.9	Jun§	7.9		-2.9	1.4		-129	30.8	7.9
Argentina	-5.8	Q1	-0.9	-1.3	55.8	Jun‡	48.7	10.1	Q1§	-2.2		-3.4	11.3		562	58.5	-49.9
Brazil	0.5	Q1	-0.6	0.8	3.2	Jul	3.8	12.0	Jun§	-0.9		-5.8	5.5		-375	4.01	-3.5
Chile	1.6	Q1	-0.1	2.6	2.2	Jul	2.3	7.1	Jun§††	-2.5		-1.3	2.7		-176	711	-6.9
Colombia	2.3	Q1	nil	3.1	3.8	Jul	3.4	9.4	Jun§	-4.2		-2.5	5.8		-106	3,449	-13.0
Mexico	-0.7	Q2	0.4	0.4	3.8	Jul	3.7	3.5	Jun	-1.6		-2.5	7.2		-60.0	19.6	-3.1
Peru	2.3	Q1	-2.0	3.4	2.1	Jul	2.2	6.3	Jun§	-1.9		-2.0	5.6		64.0	3.39	-3.0
Egypt	5.7	Q2	na	5.5	8.7	Jul	11.8	7.5	Q2§	-1.2		-7.2	na		nil	16.6	7.8
Israel	3.3	Q1	5.0	3.3	0.8	Jun	1.2	4.1	Jun	2.5		-4.0	0.9		-112	3.52	4.5
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	4.5	Jun	4.6	29.0	Q2§	-4.1		-4.7	8.5		-48.0	15.4	-7.8

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	Index	% change on:	
		Aug 14th	Dec 31st 2018
United States S&P 500	2,840.6	-1.5	13.3
United States NAScomp	7,773.9	-1.1	17.2
China Shanghai Comp	2,808.9	1.5	12.6
China Shenzhen Comp	1,509.0	1.7	19.0
Japan Nikkei 225	20,655.1	0.7	3.2
Japan Topix	1,499.5	nil	0.4
Britain FTSE 100	7,147.9	-0.7	6.2
Canada S&P TSX	16,045.9	-1.3	12.0
Euro area EURO STOXX 50	3,288.7	-0.6	9.6
France CAC 40	5,251.3	-0.3	11.0
Germany DAX*	11,492.7	-1.4	8.8
Italy FTSE/MIB	20,020.3	-2.5	9.3
Netherlands AEX	536.7	-0.5	10.0
Spain IBEX 35	8,522.7	-2.6	-0.2
Poland WIG	55,634.7	-1.7	-3.6
Russia RTS, \$ terms	1,259.7	-2.0	18.2
Switzerland SMI	9,628.5	1.0	14.2
Turkey BIST	99,405.0	1.4	8.9
Australia All Ord.	6,677.5	1.4	17.0
Hong Kong Hang Seng	25,302.3	-2.7	-2.1
India BSE	37,311.5	1.7	3.4
Indonesia IDX	6,267.3	1.0	1.2
Malaysia KLSE	1,600.3	-0.3	-5.3

	index	% change on:	
	Aug 14th	one week	Dec 31st 2018
Pakistan KSE	29,429.1	-2.8	-20.6
Singapore STI	3,147.6	-1.2	2.6
South Korea KOSPI	1,938.4	1.5	-5.0
Taiwan TWI	10,427.7	0.4	7.2
Thailand SET	1,619.5	-3.0	3.6
Argentina MERV	29,920.7	-26.9	-1.2
Brazil BVSP	100,258.0	-2.5	14.1
Mexico IPC	38,650.1	-4.4	-7.2
Egypt EGX 30	14,540.6	4.8	11.5
Israel TA-125	1,471.1	-0.6	10.3
Saudi Arabia Tadawul	8,550.2	0.8	9.2
South Africa JSE AS	54,029.4	-2.2	2.5
World, dev'd MSCI	2,086.3	-1.3	10.7
Emerging markets MSCI	964.4	-0.8	-0.1

US corporate bonds, spread over Treasuries

	Basis points	
	latest	Dec 31st 2018
Investment grade	166	190
High-yield	527	571

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

Commodities

The Economist commodity-price index

2005=100	% change on			
	Aug 6th	Aug 13th*	month	year
Dollar Index				
All Items	132.7	132.2	-3.5	-6.2
Food	143.2	142.2	-3.7	-2.2
Industrials				
All	121.9	121.8	-3.3	-10.7
Non-food agriculturals	111.0	109.7	-3.2	-17.8
Metals	126.5	127.0	-3.3	-7.7
Sterling Index				
All items	198.4	199.2	-0.7	-0.9
Euro Index				
All items	147.5	147.0	-3.2	-4.7
Gold				
\$ per oz	1,473.7	1,501.3	6.5	25.3
West Texas Intermediate				
\$ per barrel	53.6	57.1	-0.9	-14.8

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

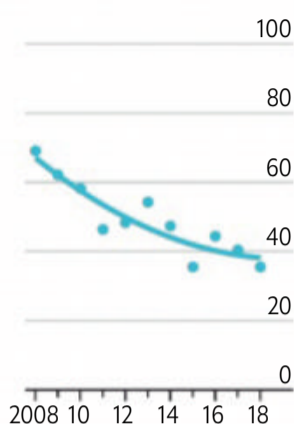
For more countries and additional data, visit [Economist.com/indicators](https://www.economist.com/indicators)

A century after gaining independence, Afghanistan is more violent than it has been for decades

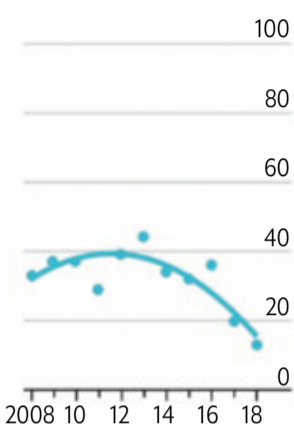
Timeline of Afghanistan's economic and military history



Afghans satisfied with personal freedoms, %

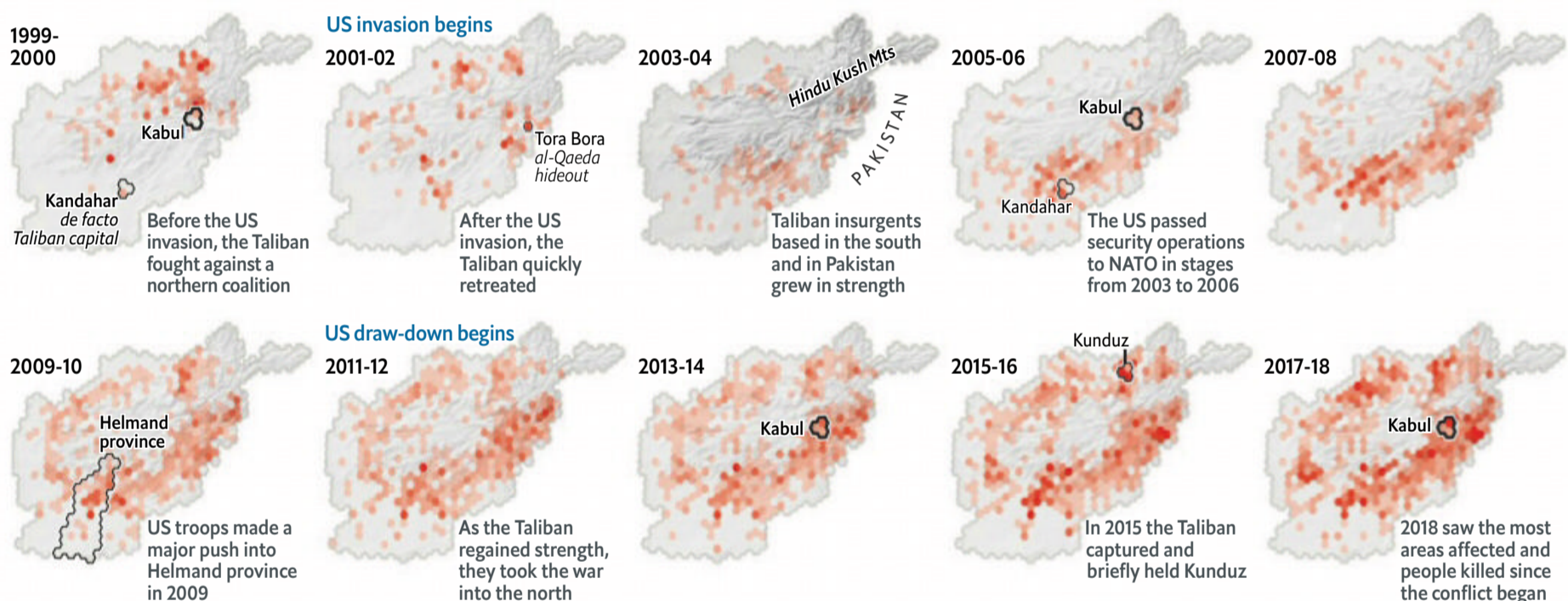


Afghans feeling safe walking alone at night, %



The Taliban's insurgency has spread from strongholds in the south to the entire country

Deaths due to conflict
By location



Sources: Gallup; Maddison Project; Peace Research Institute Oslo; Uppsala Conflict Data Program; World Bank

*2011 prices, at purchasing-power parity

Prisoners of war

Violence has not been this widespread since the Soviet withdrawal

ON AUGUST 19TH Afghans will take to the streets to mark 100 years of independence from Britain. They have more to protest about than to celebrate: their country has not known peace for 40 years.

Afghanistan's modern woes began in earnest in 1979, when the Soviet Union invaded to prop up a communist regime. In response, America funded *mujahideen* rebels, escalating a bloody proxy war. The Soviet withdrawal in 1989 was followed by infighting among warlords, and then by the brutal rule of the Taliban, an Islamist group that took over much of the country.

After al-Qaeda plotted the September

11th, 2001 attacks from Afghan camps, the United States and its allies invaded. NATO-led troops have been stationed there since 2003. American negotiators and the Taliban have recently held talks about a peace deal, but the Afghan government has yet to participate formally (see Asia section).

Westerners often assume that the war was fiercest in 2010, when the annual death toll for NATO forces peaked at 710. The coalition has pulled back since then, with the number of American troops falling from 100,000 to 14,000. As a result, just 94 NATO soldiers have died since the start of 2015. Donald Trump wants a full exit by 2020.

This hardly reflects a mission accomplished. Violence between Afghans has soared during NATO's retreat. In 2018 some 25,000 people were killed in the conflict—the most since at least the early 1990s, the earliest period in which detailed records based on contemporaneous reports are available. (Prior figures are estimated by historians, and are less reliable.) This toll is

greater than the 20,000 or so who died last year in Syria, where violence has declined.

Facing less pressure from NATO, the Taliban are overwhelming the Afghan army, spreading to cities such as Kunduz from their stronghold in the south. A majority of Afghans now live in areas controlled or contested by the Taliban, according to the Long War Journal, a website that tracks the conflict. Gallup, which has polled Afghans since 2008, finds that record numbers fear for their liberty and safety.

The survivors are destitute. Historical economic records are patchy, but Bill Byrd of the United States Institute of Peace, a think-tank, describes a "lost quarter-century of development" after the Soviet invasion. The Maddison Project, which makes back-dated GDP estimates, suggests a deep recession in the 1990s. A recovery since 2001, aided by foreign spending, has sputtered. Afghanistan is the only country in Asia or the Middle East where people are still poorer than those alive in 1950 were. ■



In her magnificence

Toni Morrison, writer, died on August 5th, aged 88

SHE DID not look away. When Toni Morrison's clear imagining gaze met uncomfortable things, she faced them down. A poisoned dog jerking round the yard like a toy. Human placenta in a field. The transparent underskin of a bobcat gutted on a kitchen table. The greyish panties, still round her ankles, of an 11-year-old girl raped by her father as she washed the dishes.

Especially she did not look away from the images of slavery she had been slowly, painfully dragged towards by the time she wrote "Beloved", in 1987. A man hanged in a sycamore tree, known by his shirt, but with head and feet missing. A red ribbon, fished from the river, with a curl of wet woolly hair attached to it and, to that, its bit of scalp. A fugitive slave crunching the breastbone of a dove before its heart had stopped beating. The wildness that shot up in a man's eye when his lips were yanked back to take the bit. Sethe, her heroine in "Beloved", serenely continuing to hold on her baby's face after she had cut its throat to save it from a slave's life.

Because these scenes sometimes brushed against beauty—the sycamores tall and souging, the dove eaten under flowering plum trees—and because her novels won prizes, notably the Nobel in 1993, critics tended to call them lyrical and poetic. Nothing made her madder. Lyricism meant that literary language was getting in the way. It had to be stripped down, freed up, opened up and teased to get the writerly-ness out. First drafts of her word-work, in number-two pencil on yellow legal pads, then went through as many as 13 revisions on the word-processor. Those 18 years as an editor at Random House had not been for nothing. She knew exactly what was needed to lead, sometimes throw, the reader into an alien world. It was not merely words but the silences between them, the unsaid things and the smoke they sent up, that gave her phrases their rhythm and their power.

Hers was a work to reclaim lost black voices. Slaves in wagons singing under their breath, ghosts and haints staring silently from

tree stumps, ancestors whose names were hidden in children's chants. Or simply girls like herself raised to womanhood in the Midwest, beside a steel mill, in a small house obsessively painted and sluiced with Fels-Naptha as though at any moment they might be forced to leave. Read as she might, there were no books about this world, in which someone like her took centre-stage. She determined to write one, whether or not it sold; this became "The Bluest Eye". Along with the voices she recovered black experience, but through culture, not the easy, lazy colour-fetish: through the sweet smell of Nu Nile Hair Oil, the sharp tang of mustard greens cooking, the inevitability of entering by back doors. The protagonist of "The Bluest Eye" longed to be like Shirley Temple, but in this book and those that followed her creator rejoiced in dark eyes, thick lips, flared noses. Who had instructed blacks in self-loathing? Who told them they were not beautiful? When she cleaned house for a richer woman as a girl, and paid her for cast-off clothes, she still felt proud. When she wrote, she felt magnificent.

Anger was not useful to dwell on. It was not creative. In interviews she suppressed it with steeliness, just as she guarded her words and herself from meddlesome intrusion. But she could explode at the craziness of racism, its distorting power, its pernicious notions of "purity", when the screaming red-mouthed baboon whites evoked lived under their own white skin. Disappointingly she found it even among blacks, with their talk of mocha, hazelnut, onyx, tar- and silt-black. There was such compulsion in human beings to classify by type and clan, to suspect and hate the Other, to refuse to vault the mere blue air that separated them. If oppression was no longer by actual ownership or actual violence, then language could be used to do the job with some efficiency. Politicians, misogynists, lawyers all knew how.

Who could rescue language, ensure it stayed supple, strong and alive? That it was un-arrogant, and would keep reaching towards the ineffable? Women could. Black women could. In her novels it was inevitably mothers, grandmothers, aunts, sisters who kept families and communities together with that mesh of loving bossiness: pull up your socks, comb your head, do your chores, hush your mouth. (She'd done the same, raising two sons, fitting her writing into chinks in the endless round of work and domestication.) In kitchens across the land black women stitched grey cotton, or poured soda into the crease of a palm to make biscuits. They brought order out of chaos, as her writing did. Women told the stories, superstitious, chill-inducing, full of myth and colour, that preserved links with dead generations. They made Memory sit down at the table with them. She had dismissed those tales for years before finding, especially in "Song of Solomon", deep grist for the worlds she had to recreate. She learned to watch for shadowy figures by the water at her Hudson river place and to listen for their whispers.

In particular she felt a reverence for old women, sometimes half-crazed, who nonetheless seemed to have a lock on wisdom. Her own great-grandmother, for one, for whom all the males in the family stood up without urging. Or Baby Suggs in "Beloved", who preached to her people in the woods that if they, the whites yonder, "do not love your neck unnoosed and straight... You got to love it... put a hand on it, grace it, stroke it and hold it up." Or the old woman she evoked in her lecture when she received the Nobel, who reminded her young interrogators that the future of language, a bird fluttering between life and death, was in their hands.

She gave lectures and advice when she was asked. Her post at Princeton required it from time to time. But writing fiction was her true freedom. She did it in the hours when no one had a claim on her. She owned it, and the characters were hers to control. If she wanted the hero of "Song of Solomon" to lift his beautiful black ass up in the sky and fly, he would. Shut up, she would tell him. I'm doing this. Steadily, morning by morning, she would get up in the dark and make a mug of coffee, drinking it as the light gathered. When it came, full-bore, enabling, she did not look away. ■

the evidence initiative™

A Project of The Economist Group & The Pew Charitable Trusts

September 19th, London

Evidence-based decision-making has reached new heights in the digital age. Data are the raw material for evidence and the foundation on which economies and countries are based. The proliferation of information has opened new possibilities for governance informed by data.

The Evidence Initiative invites representatives from both the private and public sectors to join us on September 19th in London as we explore the themes covered in our new Evidence Map: age and retirement, digital inclusion, disaster risk, financial inclusion and youth unemployment.

evidenceinitiative.org/events | [@EconomistEvents](https://twitter.com/EconomistEvents) | [#EvidenceInitiative](https://twitter.com/EvidenceInitiative)



APPLY TO ATTEND

Please scan the QR code using the camera on your smartphone and click the link.

FEATURED SPEAKERS



David Halpern
Chief executive
Behavioural Insights Team



Charlotte Watts
Chief scientific adviser and director
of the research and evidence division
Department for International Development



Shamina Singh
Founder and president, Centre for
Inclusive Growth
Mastercard



Sue Urahn
Executive vice-president and
chief program officer
The Pew Charitable Trusts